tag by tag

The Elsevier DTD 5 Family of XML DTDs

Bill Bernickus, Jos Migchielsen, Simon Pepping and Rob Schrauwen

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The authors are members of Elsevier's DTD Development & Maintenance Team. That team is responsible for development, maintenance and support of the Elsevier DTDs and XML schemas. Comments about the DTDs and their documentation, as well as change requests, can be sent to the team. Change requests will be considered for implementation in a future DTD.

The Elsevier DTDs, schemas, and a fully clickable PDF file of this documentation are available via http://www.elsevier.com/locate/xml.

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Chapter 1
Introduction

This is the documentation of the family of Elsevier's DTD 5 family of XML DTDs. This family is centred around the common element pool (CEP). In this version of the documentation, the following members of the family are described:

- the journal article (JA) DTD 5.0.1,
- the serial issue (SI) DTD 5.1.0,
- the EHS books DTD versions 5.1.0 and 5.1.1,
- the common element pool (CEP) versions 1.1.0–1.1.3.

Historical remarks

Elsevier has a long tradition of using SGML (Standard Generalized Markup Language) for its products. In the 1980s, the CAPCAS DTD (Document Type Definition) was created to capture article frontmatters. In 1992, the first DTD for full-length scientific articles was developed [2].

CAP (Computer-Aided Production) started as a project in the 1990s, and is now the regular production method for Elsevier's more than 1800 STM (science, technology and medical) journals and an increasing number of books, including all major reference works and book series. The consequence of CAP is that journal articles and book chapters are produced as full-text XML, and XML drives both the printed journals and books as well as the online versions on Elsevier platforms such as ScienceDirect (http://www.sciencedirect.com) and MDConsult (http://www.mdconsult.com), as well as many other platforms. Abstracts are extracted from the XML and find their way to destinations such as Scopus (http://www.scopus.com) and PubMed (www.ncbi.nlm.nih.gov).

Large-scale implementation of the "SGML-first workflow" began with the release of the full-length article DTD 3.0 in November 1995 and continued with the implementation of DTD 4.1, released in November 1997. Updates followed in February 2000 (DTD 4.2) and January and March 2001 (DTD 4.3). As from June 2005, SGML for journal articles was replaced by XML.

The DTDs 4.1–4.3 were described in the previous edition of the *Tag by Tag* [5].

DTD 5.0

The next generation of DTDs are XML DTDs. These were developed in 2001 and 2002. The business reasons for developing a new family of DTDs were as follows.

- The DTDs should cover all types of content, not just journal articles, but also book content, secondary publishing content, etc. They should be accompanied by new transport formats in the form of W3C schemas.
- The DTDs should be in XML.

- The DTDs should adopt Unicode. Unicode has become the standard for character sets. In the STIX project, Elsevier participated in order to ensure that the characters in the Elsevier Grid were represented in Unicode, although the chemical symbols were left out.
- The DTDs should incorporate MathML. The previous DTDs possessed their own, bespoke fragment for mathematical formulae. Some modifications were needed.
- The DTDs should incorporate CALS tables. CALS tables are widely used in other DTDs and software components for it are available. We have chosen the OASIS Exchange Format, and "extended CALS" tables had to be developed so that all tables occurring in STM articles can be captured.
- The DTDs should follow other XML standards. Where possible, and deemed useful, we have adopted the XLink standard, and we have used standard attribute names such as `xml:lang`.
- The DTDs should be more restrictive (in other words, more precise). The DTD has traditionally been very loose, meaning that it allowed constructs such as tables within footnotes within the first name of an author. Such constructs were prevented by semantic rules, enforced by the SGML quality control tools.

Adopting common international standards has not been without problems. Unicode contains a wealth of symbols, but at the time of introduction of the DTD, it lacked a number of symbols such as the chemical symbols present in the Elsevier Grid. MathML does not allow any parametrization. In particular, text portions appearing in displayed formulae cannot be structured — they must be plain characters. CALS tables turned out to be too poor for all varieties of tables encountered in scientific articles. Our desire to retain an "SGML/XML-First" workflow, i.e., a workflow in which the SGML/XML file is used to create all the products, be it print or electronic (see below), necessitated the introduction of table extensions. The fact that the CALS table model has no provision for namespaces complicated matters. In all these cases we were forced to modify the standards, with the risk of losing the benefits of adopting those standards.

The name "full-length article DTD" has been replaced by the more accurate name "journal article DTD".

In order to maintain a consistent set of XML DTDs, the concept of a *common element pool* was introduced, described in more detail later. The individual DTDs make use of this pool.

Additionally, a distinction is made between *input* and *output* DTDs, where "input" and "output" relate to Elsevier's Electronic Warehouse. The input DTD is geared towards supplying XML documents, whereas the output DTD facilitates rendering using stylesheets — the latter features, for instance, information about height and width of figures.

The project to create and implement the DTD 5 family of DTDs was called "Hawaii 5.0".

How to read this documentation

This documentation is not intended as an introduction into XML. It is assumed that the reader is familiar with XML terminology, and can read XML fragments.

This documentation alone is not sufficient to describe electronic deliveries to and from Elsevier. It should be read together with

- the Guide for MFC activities, containing copy-edit instructions;
- the Typographic Standardization and the journals' typesetting instructions, containing the default rendering of the SGML/XML files on paper;

- Electronic Warehouse input and output specifications, detailing the structure of electronic datasets.

CAP, CAPLite, CAPLitePlus

A CAP delivery of an item contains a PDF file (Portable Document Format from Adobe) and an XML file capturing the full item as well as all external files ("assets") referred to from the XML file.

For some types of content, e.g. camera-ready journals, delivery of full-article XML is not a viable alternative. For these types of content, the full-article PDF file is required, but only the head and the tail are captured in XML (the definition of "head" and "tail" are given in later chapters). In total, four varieties of XML capturing are distinguished:

- CONTENTS-ENTRY-ONLY. Only the title and authors are captured, also known as "ultralight" deliveries.
- HEAD-ONLY. Only the head is captured, also known as "CAPLite" deliveries.
- HEAD-AND-TAIL. Only the head and the tail are captured, also known as "CAPLitePlus" deliveries.
- Full CAP: the whole article is captured.

The DTDs support these different "XML manifestations", and they are also dealt with in this documentation. Fortunately, these manifestations limit themselves to a small number of publications.

There is a difference between a HEAD-ONLY document and a full CAP document that only contains a head. In the latter case, one can be sure that the document is nothing more than the head. In the former case a body and a tail may or may not have been present. Interpreting the XML file and concluding the file is HEAD-ONLY is therefore wrong. It must be concluded from the manifestation type indicated by the dataset description.

SGML/XML First

The core principle of the CAP workflow has always been "SGML/XML First". This means that all products, be it online or in print, are derived from the same source SGML/XML file. The PDF files used for print are as much derived from the XML as the online product.

If one would define XML First as "Give a valid XML file to any supplier, then each supplier will produce the same PDF file", one can say that XML First is achieved for the majority of journal titles. For some nonstandard titles, and for some book projects, the layout requirements are so important that full compliance to the XML First Principle is not always possible.

For PreCAP, where printed journal issues are scanned and delivered electronically, the principle obviously does not apply.

Chapter 2
Technical aspects

This chapter contains technical details of the Elsevier DTD family and the XML files that are structured according to these DTDs.

- The first section, The setup of the DTD family (p. 8), describes the general set-up of the DTD 5.0 family, with several DTDs calling in the common element pool, which in turn uses the MathML and CALS DTDs.
- The second section, The XML files (p. 11), explains general rules for each XML file, such as its UTF-8 encoding and whitespace rules.
- Each XML file structured according to one of the Elsevier DTDs begins with a doctype declaration and the declaration of external entities, if any. This is described in the third section, Entities and the DOCTYPE declaration (p. 13).
- The fourth section, The DTD version of an XML file and catalogs (p. 14), stresses that the authoritative version of the DTD with which an XML file is structured is found using the public identifier in the doctype declaration.
- Extensive use of namespaces has been made. This is detailed in the fifth section, Namespaces in the XML file (p. 16).
- The Unicode standard misses some crucial symbols that are used in Elsevier's XML files. The additional glyphs are listed in the sixth section, Elsevier's additional glyphs (p. 25).
- MathML formulae and extended CALS tables are accompanied by a graphical representation, called a strip-in. General rules for strip-ins are described in the final section of this chapter, strip-ins (p. 29).

The setup of the DTD family

This section describes the setup of the DTDs, the common element pool and the corresponding namespaces.

In order to manage a family of XML DTDs, a modular approach was adopted. The DTDs belonging to the DTD 5 family use a common element pool (CEP), consisting of elements shared by various DTDs. In turn, the common element pool includes other DTD fragments, e.g. MathML and CALS tables.

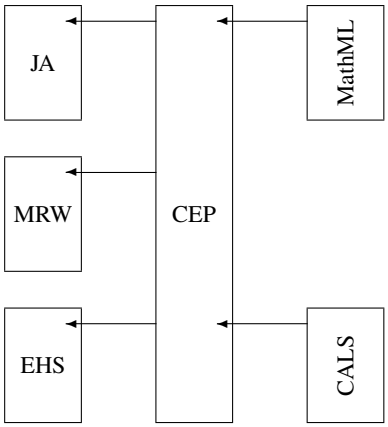

Figure 1: Modular structure of the DTDs

As a result, the individual DTDs are mostly fairly small; they describe the top-level structure of the content. Some DTDs are different by nature, such as the serials issue (SI) DTD and the Elsevier Health Science (EHS) DTD, and therefore use fewer common elements.

Namespaces

Even though DTDs, unlike, e.g., XML schemas, offer limited support for namespaces, these have been introduced in the DTD 5 family, and these play a role when processing files using namespace-aware software. For instance, XSLT stylesheets are aware of the namespace and unexpected results can be obtained when the namespace is not taken care of. The namespaces are named using URIs — these are abstract names not pointing to any page on the Elsevier corporate website. The following namespaces are the namespaces used in the DTD 5 family.

Namespace identifier	Elements
`http://www.elsevier.com/xml/ja/dtd`	JA DTD
`http://www.elsevier.com/xml/si/dtd`	SI DTD
`http://www.elsevier.com/xml/ehs-book/dtd`	EHS Books
`http://www.elsevier.com/xml/common/dtd`	Core CEP
`http://www.elsevier.com/xml/common/struct-bib/dtd`	Structured references
`http://www.elsevier.com/xml/common/table/dtd`	CALS extensions
`http://www.elsevier.com/xml/common/cals/dtd`	OASIS CALS
`http://www.w3.org/1999/xlink`	XLink
`http://www.w3.org/1998/Math/MathML`	MathML

The namespaces existing within the DTD and the common element pool are declared in the top-level element. The MathML namespace is declared in the MathML Qualified Names Module.

The convention is adopted that the elements indigenous to the DTD belong to the default namespace. Therefore within the family of DTDs two different elements with the same name can exist. Namespace-aware processors will treat each variant differently.

The other elements are explicitly prefixed in the DTD: all elements in the common element pool have been given a prefix `ce:` or, for elements for structured bibliographic references, `sb:`, or `tb:` for elements that extend the CALS table model. The MathML elements have been assigned a prefix `mml:`.

An unfortunate exception is formed by the elements in the CALS table fragment. Since that fragment lacks the option to declare a namespace prefix, they all have no prefix, even though they belong to the common element pool. In order to avoid that XML processors treat these elements as belonging to the default namespace of the DTD, the element `ce:table` resets the default namespace to the CALS namespace. The element `entry` resets the default namespace to that of the common element pool.

More details can be found in the section Namespaces in the XML file (p. 16).

MathML, CALS

The common element pool pulls in MathML and CALS fragments. It should be noted that it is important to use for these fragments the files belonging to the common element pool distribution, rather than files found elsewhere. These files contain the correct version, corresponding to the Public Identifiers defined in the common element pool.

Doctypes

In order to make the DTDs more precise, they may contain more than one top-level element, the *doctype*. Other documentation gives instructions about when a certain doctype is appropriate. For instance, `article` and `book-review` are doctypes defined by the journal article DTD (JA DTD 5.0). A full-length article begins as follows:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE article
  PUBLIC "-//ES//DTD journal article DTD version 5.0.1//EN//XML"
  "art501.dtd" []>
<article docsubtype="fla">
```

whereas a book review begins thus:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE book-review
  PUBLIC "-//ES//DTD journal article DTD version 5.0.1//EN//XML"
  "art501.dtd" []>
<book-review docsubtype="brv">
```

Similarly, the books DTDs contain doctypes (top-level elements) for the chapters, the index, the glossary, and the book “hub”.

Version numbering

It is likely that development of the individual DTDs will require changes to the common element pool. As a consequence, it is likely that different versions of the common element pool will be in use at any one time. For instance, the major reference works DTD might

need version 1.2 of the common element pool, while the journal article DTD does not need an update and continues to use the common element pool version 1.1.

The correct version number of the DTD is found in the public identifier of the DTD. (See the section The DTD version number and XML catalogs, p. 14.) A DTD change that results in a change of the second or third digit will always be a backward compatible one.

In case of a change to the third digit, note that the `version` attributes of the top-level elements do not contain the third digit. Therefore, a file structured according to version 5.2.0 will still parse with version 5.2.1 without any change to the XML file. The only thing an application needs to do is to change the catalog (p. 13) in such a way that the public identifier of the 5.2.0 DTD points to the 5.2.1 file.

Backward compatibility and downgradability

After a DTD has gone into production, limitations of backward compatibility and downgradability are put on the DTDs.

Backward compatibility means that applications that can handle documents conforming to a certain version, can also handle documents conforming to a previous version.

Downgradability means that applications that cannot yet handle documents conforming to a newer version, can downgrade these documents or receive documents already downgraded.

In complex situation where many thousands of web services, tools and applications use the XML content, it is impossible to lockstep migration with a DTD upgrade. Therefore these limitations are needed.

Making an element optional is backward compatible, but it is only downgradable if a default value can be supplied in case the element is not present in an XML file. For instance, when a `city` element in an address were to be made optional, older documents are still valid with the new DTD, but it is virtually impossible to scan the affiliation and automatically tag the city in order to downgrade the file.

Making an optional element mandatory is downgradable but not backward compatible as applications that only know about the new DTD will expect the potentially missing element in the XML file. However, for applications that could already handle the optional element the added precision that the element will henceforth always be present is only helpful.

Adding a new, optional element is both backward compatible and downgradable. Adding a new, mandatory element is neither backward compatible nor downgradable.

Only first-digit changes do not need to be backward compatible or downgradable. The 4.x DTDs have existed for 6.5 years and the family of 5.x DTDs will be with us for many years as well.

The XML file

This section describes various rules about the XML files themselves.

Valid files

Obviously, the XML file must be a valid XML instance. A consequence is that the file is well-formed: that it contains entities properly closed with a semi-colon, and that the < and & characters are only used as XML markup. The file must begin with the XML version declaration including the UTF-8 encoding statement

```
<?xml version="1.0" encoding="UTF-8" ?>
```

Nothing may appear before that statement, between that statement and the DOCTYPE declaration, and after the end tag of the top-level element.

UTF-8 encoding

Elsevier expects XML files to be delivered in UTF-8 encoding. This encoding, in which each Unicode point is stored as a sequence of one or more bytes, is the only encoding allowed.

Beside the native UTF-8 encoding of the Unicode point, it is also allowed to use explicit character numbers such as ` `. Alternatively, the entity name can be used if the entity belongs to one of the ISO characters sets pulled in by the MathML DTD or if it belongs to the `ESextra` collection. For MathML symbols in Plane One it is required to use math variants.

Hence, the following code results in three times "é ":

```
é &eacute; &#x000E9;
```

By the first we mean é in its native UTF-8 encoding. (Note that in that encoding the character is not hex `E9` but is encoded as the two-byte sequence `C3 A9`.)

All these three instances are *identical*. It is wrong to perform character manipulation on a raw XML file: it does not make sense to make a difference between the character entity and the other two variants.

Outside markup, <, " and & are always escaped and present in their pre-defined entity forms `<`, `"` and `&`.

Whitespace in the XML file

In this section, "whitespace" refers to the space character (ASCII 32), the linefeed (LF) character (ASCII 10) and the TAB character (ASCII 9). Each of these characters has the same effect: a space in the rendered document.

Unlike the SGML files structured according to DTDs prior to DTD 5, DTD 5 XML files may contain TABs and linefeed characters for ease of reading XML files with the human eye. The carriage-return (CR) character (ASCII 13) is not allowed; line breaks therefore do not follow the MSDOS pattern CRLF.

When a sequence of consecutive whitespace characters appears in an XML file, the effect is as if one space were present. These sequences may only occur at the beginning of a line.

Care should be taken when using whitespace at the beginning or end of mixed-content elements, i.e., with `#PCDATA` in their content model.

XML

```
<ce:caption>
  <ce:simple-para>This is a paragraph ending in a whitespace (the
    linefeed after the full stop); this is not correct.
  </ce:simple-para>
</ce:caption>
```

There are five whitespace characters between “(the” and “ “linefeed”, which is allowed; they count as one space. The three whitespaces after the full stop, however, are not correct. (It follows from the DTD that the three whitespace characters after `<ce:caption>` are ignored.)

It should be noted that in some of the examples in this documentation, erroneous extra spacing has sometimes been introduced to make the examples easier to read. The close-up sign ‿ is used in that case to make it clear that the XML files should have no spaces or linebreaks at this point.

XML

```
<ce:caption>
  <ce:simple-para>The close-up sign indicates that there should
    be no whitespace at the end of the paragraph; the end tag
    is placed on the next line only for reasons of readability.‿
  </ce:simple-para>
</ce:caption>
```

Entities and the DOCTYPE declaration

The relationship between the XML file and the artwork files and files containing electronic components is made via XML *entities*. These entities are used exclusively in the ce:link element and must be declared within the declaration subset of the XML file according to the rules described in this section.

Consider a journal article consisting of an XML file main.xml; three artwork files gr1.jpg, gr2.jpg and fx1.tif; an audio file au1.mp3 and a videoclip clip.avi.

The XML file of the article, structured with the journal article DTD, begins like this:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE article
  PUBLIC "-//ES//DTD journal article DTD version 5.0.1//EN//XML"
  "art501.dtd" [
    <!ENTITY loc1 SYSTEM "gr1" NDATA IMAGE>
    <!ENTITY loc2 SYSTEM "gr2" NDATA IMAGE>
    <!ENTITY loc3 SYSTEM "fx1" NDATA IMAGE>
    <!ENTITY loc4 SYSTEM "au1" NDATA AUDIO>
    <!ENTITY loc5 SYSTEM "clip" NDATA VIDEO>]>
<article docsubtype="fla">
   ...
</article>
```

The entities loc1–loc5 are used in the ENTITY-type attributes of the element ce:link. The system names are the file names without extension.

The actual link is established in a three-step process, starting with its usage within the document which looks like this:

```
<ce:biography id="vt1">
  <ce:link locator="loc3"/>
  <ce:simple-para>...</ce:simple-para>
</ce:biography>
```

The ce:link element instructs the rendering application to pull in an external file. It is the file referenced through the entity loc3, the value of the locator attribute, that is declared in the doctype declaration as the external entity with system name (i.e., file name) fx1. The *catalog* redirects this to fx1.tif.

In the declaration subset (between square brackets), it is only allowed to declare entities of the types NDATA. The notations defined in the DTD are TEXT, reserved for plain text; IMAGE, reserved for artwork formats such as GIF, JPEG and TIF; AUDIO, reserved for audio formats such as MP3 and WAV; VIDEO, reserved for video formats such as AVI and MPEG; APPLICATION, reserved for documents for other applications or for scripts and executables; and XML, reserved for external XML files, e.g. for scalable vector graphics or chemical object notations. (Not all these notations are currently used.) Precisely those entities needed in the document must be declared.

Applications that wish to check whether all external files are present should examine the declaration subset of the XML file and verify these against the dataset.

Obviously, only files referred to from the XML file are declared as entities as described above. Other files belonging to the item, such as PDF files, are not mentioned in the XML file.

An XML file's DTD version and catalogs

It is expected that the public identifier in the DOCTYPE declaration of the XML file is used to retrieve the DTD as well as its version number. The `version` attribute of the top element should not be used as it only contains the first two digits of the DTD version number for reasons of backward compatibility (p. 8).

XML

```
<!DOCTYPE simple-article
  PUBLIC "-//ES//DTD journal article DTD version 5.0.1//EN//XML"
  "art501.dtd">

<!DOCTYPE serial-issue
  PUBLIC "-//ES//DTD serials issue DTD version 5.1.0//EN//XML"
  "si510.dtd">

<!DOCTYPE ehs-book
  PUBLIC "-//ES//DTD ehs book DTD version 5.1.1//EN//XML"
  "ehs_book511.dtd">

<!DOCTYPE converted-article
  PUBLIC "-//ES//DTD journal article DTD version 4.5.2//EN//XML"
  "art452.dtd">
```

The string after the keyword `PUBLIC` contains the DTD associated with the XML file that has this DOCTYPE declaration. The system identifier does not contain that information. To map the public identifier to a file on the user's system XML catalogs should be used as explained below.

XML catalogs

Catalogs are an important tool in entity management: they allow XML tools to locate DTDs and other external files that are used by the XML file. Catalogs make entity management flexible: they allow us to associate system identifiers (file paths and names) to public identifiers, and to rewrite system identifiers.

During the SGML era the SGML Open Catalog (SOC) specification was developed [16]. James Clark's SP suite is a well-known application implementing SOC, and it was the only application that implemented system identifier rewriting.

XML has long done without its own entity resolution system. It had the new rule that even the declaration of a public identifier had to contain a system identifier, which allowed external entity handling to be simple. Some applications continued to use the SOC system. On 6 August 2001 and again on 24 October 2002 OASIS published its XML Catalog specification [17]. It can be seen as a continuation and a refinement of the SOC system. It provides powerful methods to map public identifiers to system identifiers, to rewrite system identifiers, and to modularize catalog management. At the time of this writing several XML toolsets contain implementations of this catalog specification; for an overview see the home page of OASIS' catalog committee [18].

XML

```
<?xml version="1.0" encoding="UTF-8" ?>
<catalog xmlns="urn:oasis:names:tc:entity:xmlns:xml:catalog"
```

```
        prefer="public">

  <public
    publicId="-//ES//DTD journal article DTD version 5.0.1//EN//XML"
    uri="file:///D:/home/xml/dtd/art500/art501.dtd"/>

  <group xml:base="file:///D:/home/article/">
    <system systemID="gr1" uri="main.assets/gr1.tif"/>
    <system systemID="gr2" uri="main.assets/gr2.tif"/>
  </group>

  <group xml:base="file:///D:/home/xml/dtd/">
    <nextCatalog catalog="mathml/xcatalog"/>
    <nextCatalog catalog="calstable/xcatalog"/>
  </group>

  <rewriteSystem systemIdStartString="file:///D:/home/article/"
         rewritePrefix="file:///G:/datasets/20030310/art5001/"/>

</catalog>
```

The above example catalog starts with specifying where the JA DTD 5.0 can be found. Note that this ignores the system identifier for this DTD in the XML file itself. Also note that this is a local implementation, on other systems the DTD may be located elsewhere.

Then the system identifiers for the images in the XML file discussed above are mapped to an existing file location. Note that a subdirectory is specified and a file name extension is given.

Then two other catalogs are included, for the MathML DTD and the CALS table DTD. This makes it possible to maintain separate catalogs for these subsystems.

Finally some system identifiers are rewritten. Rewriting applies to the start of the system identifier. Here a situation is described where all data for the article have been moved from one place to another.

XML catalogs provide more facilities for entity management. See the specification [17] for details.

Note that using catalogs in this way makes it possible to perform a third-digit update of the DTD by changing the catalog in such a way that the public identifier of the old and new versions both point to the new DTD.

Namespaces in the XML file

Namespaces are widely used in programming. XML has introduced namespaces to text structuring. Namespaces allow one to reuse commonly used names. For example, the element `title` may have a different content model in one namespace than in another. More importantly, namespaces allow one to group related elements together, and separate them off from other groups of elements.

Namespaces are indicated by their name. In XML, the name is a URI. Usually it is a URL, e.g. `http://www.elsevier.com/xml/common/dtd`. Sometimes it has a rather different form of URI, e.g. `urn:oasis:names:tc:entity:xmlns:xml:catalog`, which is the name of the namespace of an XML catalog.

In an XML document namespaces are indicated by prefixes. A prefix is an alias for a namespace name. Prefixes are defined according to a flexible system. Each element in an XML document may declare prefixes for one or more namespaces using the attribute `xmlns:pfx="name"`, where pfx is the newly declared prefix. This prefix is valid for this element and all its descendants, until it is redeclared by another `xmlns` attribute. One may also declare a default namespace, with the attribute `xmlns="name"`. This causes this element, if it does not have a prefix, as well as all its descendants without a prefix, to belong to the declared namespace. When there is no default namespace declaration, all elements without a prefix do not belong to a namespace. One could also say that they belong to the namespace with an empty name.

This flexible system does not fit well into the DTD system. A DTD is not namespace aware. In a DTD the prefix is a fixed part of an element's name. It must be used as determined by the DTD, and cannot be redeclared in the XML document. If one would redeclare a prefix as describe above, the document would become invalid according to the DTD. Some flexibility can be gained by writing the DTD in such a way that the prefix is determined by an entity. This allows one to declare a different prefix at the top of each XML document. The CEP does not use this flexibility, and fixes the prefixes used.

The CEP and the DTDs built on top of it, do all namespace declarations in the DTD, by means of attributes with fixed values. This has the advantage that no namespace declarations are required in the XML document. For a proper understanding that may be a disadvantage, because in the XML document the namespaces are rather invisible. Only by looking up the DTD can one find out in which namespaces the elements live.

In the XML world there are namespace-aware applications and non-namespace-aware applications. DTDs are not namespace aware. For a DTD the prefix is just a part of the element name, and a namespace declaration is an attribute like any other. Parsers may be namespace aware. This makes it possible to inquire in which namespace an element lives. In our first example we make use of this facility.

XSLT processors are namespace aware. They read the DTD and pick up any namespace declarations. Therefore they know in which namespace each element of the XML source document lives, including those without a prefix. If the stylesheet specifies a match with an element, the processor matches the element's name *and* the namespace. If the namespaces are not the same, there is no match. This may sometimes come as a surprise, especially for elements in the default namespace. In our second example we will demonstrate this.

Example 1

In this example we first show a short XML document according to the JA DTD. Then we show an outline of the document, and list for each element to which namespace it belongs. Finally we provide some explanation.

The namespace listing in this example was obtained from a SAX2 parser, which reports the namespace URI as the first argument of the callbacks `startElement` and `endElement`.

XML

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE article
  PUBLIC "-//ES//DTD journal article DTD version 5.0.1//EN//XML"
  "art501.dtd" []>
<article>
  <item-info>
    <jid>aad</jid>
    <aid>16</aid>
    <ce:pii>S0000-0000(03)00002-0</ce:pii>
    <ce:copyright type="society" year="2003">American
     Academy of Dermatology</ce:copyright>
    <ce:doctopics>
      <ce:doctopic>
        <ce:text>Continuing Medical Education</ce:text>
      </ce:doctopic>
    </ce:doctopics>
  </item-info>
  <ce:floats>
    <ce:table id="tbl1" frame="topbot" colsep="0" rowsep="0">
      <ce:label>Table 1</ce:label>
      <ce:caption>
        <ce:simple-para id="sp1">Colours</ce:simple-para>
      </ce:caption>
      <tgroup cols="3">
        <colspec colnum="1" colname="one" colwidth="3*"/>
        <colspec colnum="2" colname="two" colwidth="2*"/>
        <colspec colnum="3" colname="three" colwidth="4*"/>
        <thead>
          <row rowsep="1">
            <entry>Colour 1</entry>
            <entry>Colour 2</entry>
            <entry>Colour 3</entry>
          </row>
        </thead>
        <tbody>
          <row>
           <entry colsep="1"><tb:left-border/>Blue</entry>
           <entry morerows="1" colsep="1"><tb:top-border/>High
             Green</entry>
           <entry><tb:right-border/>Red</entry>
          </row>
          <row>
            <entry colsep="1" colname="one">Red</entry>
            <entry>Blue</entry>
          </row>
```

```
        </tbody>
      </tgroup>
    </ce:table>
  </ce:floats>
  <head>
    <ce:article-footnote>
      <ce:label>&z.star;</ce:label>
      <ce:note-para>This text was constructed.</ce:note-para>
    </ce:article-footnote>
    <ce:dochead>
      <ce:textfn>Continuing medical education</ce:textfn>
    </ce:dochead>
    <ce:title>Cutaneous photodamage</ce:title>
    <ce:author-group>
      <ce:author>
        <ce:given-name>Sheldon R.</ce:given-name>
        <ce:surname>Pinnell</ce:surname>
        <ce:degrees>MD</ce:degrees>
        <ce:cross-ref refid="aff1">a</ce:cross-ref>
      </ce:author>
      <ce:affiliation id="aff1">
        <ce:label>a</ce:label>
        <ce:textfn>Durham, North Carolina</ce:textfn>
      </ce:affiliation>
    </ce:author-group>
    <ce:abstract>
      <ce:abstract-sec>
        <ce:simple-para>New methods.</ce:simple-para>
      </ce:abstract-sec>
    </ce:abstract>
  </head>
  <body>
    <ce:sections>
      <ce:section>
        <ce:section-title>Photodamage</ce:section-title>
          <ce:para>Sunlight coupled <ce:cross-ref
              refid="ref1">[1]</ce:cross-ref></ce:para>
      </ce:section>
    </ce:sections>
</body>
<tail>
  <ce:bibliography>
    <ce:section-title>References</ce:section-title>
    <ce:bibliography-sec>
      <ce:bib-reference id="ref1">
        <ce:label>1.</ce:label>
        <sb:reference>
          <sb:contribution>
            <sb:authors>
              <sb:author>
                <ce:surname>Trautinger</ce:surname>
                <ce:given-name>F.</ce:given-name></sb:author>
            </sb:authors>
            <sb:title>
```

```
            <sb:maintitle>Mechanisms of photodamage</sb:maintitle>
          </sb:title>
        </sb:contribution>
        <sb:host>
          <sb:issue>
            <sb:series>
              <sb:title>
                <sb:maintitle>Clin Exp Dermatol</sb:maintitle>
              </sb:title>
              <sb:volume-nr>26</sb:volume-nr>
            </sb:series>
            <sb:date>2001</sb:date>
          </sb:issue>
          <sb:pages>
            <sb:first-page>573</sb:first-page>
          </sb:pages>
        </sb:host>
      </sb:reference>
    </ce:bib-reference>
  </ce:bibliography-sec>
 </ce:bibliography>
</tail>
</article>
```

The following table shows the namespaces with which the elements of the article are associated. In the right column the name of the namespace is given. Here the string `http://www.elsevier.com/xml/`, which is common to all namespace names in the CEP and the DTDs built on top of it, has been omitted for brevity. In the left column the element name is given. Here the structure of the article is indicated by indentation. If an element is indented with respect to a previous element, it is contained in that element.

See the explanation below the table.

Element	Namespace
article	ja/dtd
item-info	ja/dtd
jid	ja/dtd
aid	ja/dtd
ce:pii	common/dtd
ce:copyright	common/dtd
ce:doctopics	common/dtd
ce:doctopic	common/dtd
ce:text	common/dtd
ce:floats	common/dtd
ce:table	common/dtd
ce:label	common/dtd
ce:caption	common/dtd
ce:simple-para	common/dtd
tgroup	common/cals/dtd
colspec	common/cals/dtd
colspec	common/cals/dtd
colspec	common/cals/dtd
thead	common/cals/dtd

Element	Namespace
row	common/cals/dtd
entry	common/dtd
entry	common/dtd
entry	common/dtd
tbody	common/cals/dtd
row	common/cals/dtd
entry	common/dtd
tb:left-border	common/table/dtd
entry	common/dtd
tb:top-border	common/table/dtd
entry	common/dtd
tb:right-border	common/table/dtd
row	common/cals/dtd
entry	common/dtd
entry	common/dtd
head	ja/dtd
ce:article-footnote	common/dtd
ce:note-para	common/dtd
ce:dochead	common/dtd
ce:textfn	common/dtd
ce:title	common/dtd
ce:author-group	common/dtd
ce:author	common/dtd
ce:given-name	common/dtd
ce:surname	common/dtd
ce:degrees	common/dtd
ce:cross-ref	common/dtd
ce:affiliation	common/dtd
ce:label	common/dtd
ce:textfn	common/dtd
ce:abstract	common/dtd
ce:abstract-sec	common/dtd
ce:simple-para	common/dtd
body	ja/dtd
ce:sections	common/dtd
ce:section	common/dtd
ce:section-title	common/dtd
ce:para	common/dtd
ce:cross-ref	common/dtd
tail	ja/dtd
ce:bibliography	common/dtd
ce:section-title	common/dtd
ce:bibliography-sec	common/dtd
ce:bib-reference	common/dtd
ce:label	common/dtd
sb:reference	common/struct-bib/dtd
sb:contribution	common/struct-bib/dtd
sb:authors	common/struct-bib/dtd
sb:author	common/struct-bib/dtd

Element	Namespace
ce:surname	common/dtd
ce:given-name	common/dtd
sb:title	common/struct-bib/dtd
sb:maintitle	common/struct-bib/dtd
sb:host	common/struct-bib/dtd
sb:issue	common/struct-bib/dtd
sb:series	common/struct-bib/dtd
sb:title	common/struct-bib/dtd
sb:maintitle	common/struct-bib/dtd
sb:volume-nr	common/struct-bib/dtd
sb:date	common/struct-bib/dtd
sb:pages	common/struct-bib/dtd
sb:first-page	common/struct-bib/dtd

Explanation

The elements article, item-info, jid, aid, head, body and tail, which have no prefix, are in the namespace http://www.elsevier.com/xml/ja/dtd. This is so because on the article element the DTD declares the namespace http://www.elsevier.com/xml/ja/dtd as the default namespace.

All elements with the prefix ce are in the namespace http://www.elsevier.com/xml/common/dtd. This concerns most elements in a journal article.

A somewhat complicated situation arises at the ce:table element. On this element the DTD declares that the namespace http://www.elsevier.com/xml/common/cals/dtd becomes the default namespace. This means all elements below the ce:table element which do not have a prefix, belong to the namespace http://www.elsevier.com/xml/common/cals/dtd. This applies to the elements tgroup, colspec, thead, tbody and row. A few elements in the table have the prefix tb. This indicates that they are in the namespace http://www.elsevier.com/xml/common/table/dtd, which is the namespace of extensions to the CALS table model.

On the entry element the DTD declares that the namespace http://www.elsevier.com/xml/common/dtd becomes the default namespace. Despite the fact that the element entry does not have a prefix ce, it *does* belong to this namespace. This namepace emphasizes the fact that the content model of entry is determined by the CEP, not by the CALS table model.

Elements with the prefix sb only occur in structured references, starting with the top element sb:reference. They are in the namespace http://www.elsevier.com/xml/common/struct-bib/dtd. Structured references also contain a few elements that belong to the namespace http://www.elsevier.com/xml/common/dtd (prefix ce).

Example 2

In this example we first show a simple XSLT stylesheet, which we apply to the document of example 1. It contains two templates for each of the elements item-info, row and entry, one with and one without prefix. Only one template of each pair will produce a match. Next we show the resulting HTML document. Finally we provide some explanation.

XML

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0"
    xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
    xmlns:ce="http://www.elsevier.com/xml/common/dtd"
    xmlns:cals="http://www.elsevier.com/xml/common/cals/dtd"
    xmlns:tb="http://www.elsevier.com/xml/common/table/dtd"
    xmlns:mml="http://www.w3.org/1998/Math/MathML"
    xmlns:ja="http://www.elsevier.com/xml/ja/dtd"
    xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd"
    xmlns:xlink="http://www.w3.org/1999/xlink"
>

  <xsl:output encoding="UTF-8" method="html"/>
  <xsl:strip-space elements="*"/>

  <xsl:template match="item-info">
    <h2>Item info</h2>
    JID: <xsl:value-of select="jid"/><br/>
    AID: <xsl:value-of select="aid"/><br/>
    PII: <xsl:value-of select="ce:pii"/><br/>
  </xsl:template>

  <xsl:template match="ja:item-info">
    <h2>(JA:) Item info</h2>
    JID: <xsl:value-of select="ja:jid"/><br/>
    AID: <xsl:value-of select="ja:aid"/><br/>
    PII: <xsl:value-of select="ce:pii"/><br/>
  </xsl:template>

  <xsl:template match="row">
    <tr><td>row</td><xsl:apply-templates/></tr>
  </xsl:template>

  <xsl:template match="cals:row">
    <tr><td>cals:row</td><xsl:apply-templates/></tr>
  </xsl:template>

  <xsl:template match="entry">
    <td>entry: <xsl:apply-templates/></td>
  </xsl:template>

  <xsl:template match="ce:entry">
    <td>ce:entry: <xsl:apply-templates/></td>
  </xsl:template>

  <xsl:template match="/">
    <html>
      <body bgcolor="#FFFFFF">
        <xsl:apply-templates/>
      </body>
    </html>
  </xsl:template>
```

```
  <xsl:template match="ce:table">
    <table border="1">
      <caption>
        <xsl:value-of select="ce:label"/>
        <xsl:text>. </xsl:text>
        <xsl:value-of select="ce:caption"/>
      </caption>
      <xsl:apply-templates/>
    </table>
  </xsl:template>

  <xsl:template match="ja:article|ce:floats|ce:simple-para|cals:*">
    <xsl:apply-templates/>
  </xsl:template>

  <xsl:template match="*"/>

</xsl:stylesheet>
```

The following document is the output HTML document. It has been edited for line breaks.

XML

```
<html
    xmlns:xlink="http://www.w3.org/1999/xlink"
    xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd"
    xmlns:ja="http://www.elsevier.com/xml/ja/dtd"
    xmlns:mml="http://www.w3.org/1998/Math/MathML"
    xmlns:tb="http://www.elsevier.com/xml/common/table/dtd"
    xmlns:cals="http://www.elsevier.com/xml/common/cals/dtd"
    xmlns:ce="http://www.elsevier.com/xml/common/dtd">
<body bgcolor="#FFFFFF">
<h2>(JA:) Item info</h2>
    JID: aad<br>
    AID: 16<br>
    PII: S0000-0000(03)00002-0<br>
<table border="1">
<caption>Table 1. Colours</caption>
<tr>
<td>cals:row</td>
<td>ce:entry: Colour 1</td>
<td>ce:entry: Colour 2</td>
<td>ce:entry: Colour 3</td>
</tr>
<tr>
<td>cals:row</td>
<td>ce:entry: Blue</td>
<td>ce:entry: High Green</td>
<td>ce:entry: Red</td>
</tr>
<tr>
<td>cals:row</td>
<td>ce:entry: Red</td>
<td>ce:entry: Blue</td>
</tr>
</table>
```

```
</body>
</html>
```

Explanation

The XSLT stylesheet starts by declaring prefixes for all namespaces used in a JA article. It uses the same prefixes as the DTD. This is not required. One is free to use any prefix, regardless of the prefixes used in the source XML document. Of course, selecting the same prefixes adds clarity. Note that the stylesheet also declares a prefix for the namespace `http://www.elsevier.com/xml/ja/dtd`, which is the default namespace in the source XML document. In the stylesheet the default namespace has no name. This is required because its output is an HTML document, which does not use namespaces.

The output HTML document also starts with namespace declarations. The XSLT processor inserts all namespace declarations that it knows of. In this case it is quite useless, but because HTML browsers ignore attributes they do not recognize, it does not harm.

The XSLT stylesheet has two templates for the element `item-info`. One template matches the element in the default namespace. The other template matches the element in the namespace `http://www.elsevier.com/xml/ja/dtd`. Their output is slightly different. The latter template adds the string '(JA:) ' to the header.

The resulting HTML document makes it clear that only the template using the `ja` prefix has produced a match. The source document *does* contain an element `item-info` in the `http://www.elsevier.com/xml/ja/dtd` namespace, and it does *not* contain an element `item-info` without a namespace. This is despite the fact that the XML document itself does not show the namespace; the namespace declaration is hidden in the DTD.

Similarly, the XSLT stylesheet contains two templates for the element `row` and two for the element `entry`. Again they produce slightly different output. The resulting HTML file shows again that the templates with a prefix have a match, and those without a prefix do not. In agreement with the table in example 1, we use the `http://www.elsevier.com/xml/common/cals/dtd` namespace for the `row` element, and the `http://www.elsevier.com/xml/common/dtd` namespace for the `entry` element.

Elsevier's additional glyphs

Not all symbols used in our publications have been adopted by Unicode. Prior to DTD 5.0, these symbols were part of the "Elsevier Science Grid" [5]. The element `ce:glyph` has been introduced so that we can continue to support these additional symbols.

It is expected that some or all of the glyphs may be added to future versions of Unicode. In that case, it is not an error to use the `ce:glyph` element, but it is preferred that the Unicode character is used.

The list of glyph names allowed in `ce:glyph` is contained in the parameter entity `%glyph-names;`. The following two tables give an overview of the glyph names and the symbols to which they refer. The position refers to the position in the Grid [5]. When a Unicode code point has been assigned to a symbol, it is listed in the column Unicode.

Rendering applications need to store these glyphs, they are not delivered along with the XML files as are strip-ins (p. 29).

Glyphs ordered by grid coordinate

Position	Glyph name	Description	Unicode
Bd5	dlcorn	left bottom corner, long	
Bd6	smid	shortmid (Height of small x)	
Bd7	spar	short parallel (Height small x)	
Be5	drcorn	right bottom corner, long	
Be6	nsmid	nshortmid	
Be7	nspar	not short parallel	
Bfp	sqfne	square with filled N-E-corner	
Bfr	sqfsw	square with filled S-W-corner	
Bfv	sqft	square, top filled	
Bfw	sqfb	square, bottom filled	
Bgg	lozfl	lozenge, left filled	
Bgh	lozfr	lozenge, right filled	
Bgi	lozf	lozenge, filled	
Bh8	herma	hermaphrodite	
Bji	S	S-sign	
Bn3	lbd2td	2 bonds on the lefthand side, top double	
Bn4	lbd2bd	2 bonds on the lefthand side, bottom double	
Bn5	rbd2td	2 bonds on the righthand side, top double	
Bn6	rbd2bd	2 bonds on the righthand side, bottom double	
Bo0	rad	radical dot	
Bo1	pent	pentagon	
Bo3	pdbdtd	partial double bond, top dashed	
Bo5	ptbdtd	partial triple bond, top dashed	
Bo6	ptbdbd	partial triple bond, bottom dashed	
Bo7	sbnd	single bond	
Bo8	pdbond	Partial double bond	
Boq	dbnd	double bond; length as m-dash	
Bor	tbnd	triple bond; length as m-dash	
Bos	qbnd	quadruple bond; length as m-dash	
Bpq	dbnd6	6-point double bond; length half of m-dash	
Bpr	tbnd6	6-point triple bond; length half of m-dash	
Bps	qbnd6	six-point quadruple bond; length half of m-dash	

Position	Glyph name	Description	Unicode
Bpt	rbond3	3 bonds on the righthand side	
Bpu	lbond3	3 bonds on the lefthand side	
Bpv	rbond2	2 bonds on the righthand side	
Bpw	lbond2	2 bonds on the lefthand side	
Buc	camb	Cambrian (era)	
Can	bigdot	big dot above (accent)	
Cfi	jnodot	undotted l.c. j	
Pa8	ht	hooktop (phonetic symbol)	
Pb6	ggrave	extra low, accent (phonetic symbol)	
Pb8	ctl	curly tail (phonetic symbol)	
Pc3	sbw	subscript w (phonetic symbol)	
Pc6	hris	high rising, accent (phonetic symbol)	
Pc7	hriss	high rising, symbol (phonetic symbol)	002E6-002E5
Pd3	hbar	horizontal bar (phonetic symbol)	
Pd6	lris	low rising, accent (phonetic symbol)	
Pd7	lriss	low rising, symbol (phonetic symbol)	002E9-002E8
Pdk	resmck	small capital K, reversed (phonetic symbol)	
Pdp	phktp	p hooktop phonetic symbol)	001A5
Pe6	risfla	rising-falling, accent (phonetic symbol)	
Pe7	risfls	rising-falling, symbol (phonetic symbol)	002E6-002E5-002E6
Pfj	jnodot	j, undotted (phonetic symbol)	
Pgh	hrttrh	turned h, hook right tail (phonetic symbol)	
Phn	ncurt	curly-tail n (phonetic symbol)	
Pht	tcurt	curly-tail t (phonetic symbol)	
Pid	dcurt	curly-tail d (phonetic symbol)	
Pih	heng	heng (phonetic symbol)	
Pj1	pSlash	double Slash (phonetic symbol)	
Pk1	trisla	triple Slash (phonetic symbol)	
Pko	trnomeg	inverted omega (phonetic symbol)	
Plr	refhrl	reversed fish-hook r, long leg (phonetic symbol)	
Pt2	btmlig	bottom ligature (phonetic symbol)	

Glyphs ordered by glyph name

Glyph name	Position	Description	Unicode
bigdot	Can	big dot above (accent)	
btmlig	Pt2	bottom ligature (phonetic symbol)	
camb	Buc	Cambrian (era)	
ctl	Pb8	curly tail (phonetic symbol)	
dbnd	Boq	double bond; length as m-dash	
dbnd6	Bpq	6-point double bond; length half of m-dash	
dcurt	Pid	curly-tail d (phonetic symbol)	
dlcorn	Bd5	left bottom corner, long	
drcorn	Be5	right bottom corner, long	
ggrave	Pb6	extra low, accent (phonetic symbol)	
hbar	Pd3	horizontal bar (phonetic symbol)	
heng	Pih	heng (phonetic symbol)	
herma	Bh8	hermaphrodite	
hris	Pc6	high rising, accent (phonetic symbol)	
hriss	Pc7	high rising, symbol (phonetic symbol)	002E6-002E5
hrttrh	Pgh	turned h, hook right tail (phonetic symbol)	
ht	Pa8	hooktop (phonetic symbol)	
jnodot	Pfj	j, undotted (phonetic symbol)	
lbd2bd	Bn4	2 bonds on the lefthand side, bottom double	
lbd2td	Bn3	2 bonds on the lefthand side, top double	
lbond2	Bpw	2 bonds on the lefthand side	
lbond3	Bpu	3 bonds on the lefthand side	
lozf	Bgi	lozenge, filled	
lozfl	Bgg	lozenge, left filled	
lozfr	Bgh	lozenge, right filled	
lris	Pd6	low rising, accent (phonetic symbol)	
lriss	Pd7	low rising, symbol (phonetic symbol)	002E9-002E8
ncurt	Phn	curly-tail n (phonetic symbol)	
nsmid	Be6	nshortmid	
nspar	Be7	not short parallel	
pdbdtd	Bo3	partial double bond, top dashed	
pdbond	Bo8	Partial double bond	
pent	Bo1	pentagon	
phktp	Pdp	p hooktop (phonetic symbol)	001A5
pSlash	Pj1	double Slash (phonetic symbol)	
ptbdbd	Bo6	partial triple bond, bottom dashed	
ptbdtd	Bo5	partial triple bond, top dashed	
qbnd	Bos	quadruple bond; length as m-dash	
qbnd6	Bps	six-point quadruple bond; length half of m-dash	
rad	Bo0	radical dot	
rbd2bd	Bn6	2 bonds on the righthand side, bottom double	
rbd2td	Bn5	2 bonds on the righthand side, top double	
rbond2	Bpv	2 bonds on the righthand side	
rbond3	Bpt	3 bonds on the righthand side	
refhrl	Plr	reversed fish-hook r, long leg (phonetic symbol)	
resmck	Pdk	small capital K, reversed (phonetic symbol)	
risfla	Pe6	rising-falling, accent (phonetic symbol)	
risfls	Pe7	rising-falling, symbol (phonetic symbol)	002E6-002E5-002E6
S	Bji	S-sign	
sbnd	Bo7	single bond	
sbw	Pc3	subscript w (phonetic symbol)	

Glyph name	Position	Description	Unicode
smid	Bd6	shortmid (Height of small x)	
spar	Bd7	short parallel (Height small x)	
sqfb	Bfw	square, bottom filled	
sqfne	Bfp	square with filled N-E-corner	
sqfsw	Bfr	square with filled S-W-corner	
sqft	Bfv	square, top filled	
tbnd	Bor	triple bond; length as m-dash	
tbnd6	Bpr	6-point triple bond; length half of m-dash	
tcurt	Pht	curly-tail t (phonetic symbol)	
trisla	Pk1	triple Slash (phonetic symbol)	
trnomeg	Pko	inverted omega (phonetic symbol)	

Strip-in images

Since Elsevier began delivering SGML files for electronic products, the files have been accompanied with graphic representations of SGML expressions that are hard to render. Prior to DTD 5.0, these included all accent constructions, all formulae and all tables. Graphic representations of these constructs are called *strip-ins*. These strip-ins were created by Elsevier's Electronic Warehouse from the SGML source.

Strip-ins should not be confused with graphic images of *symbols* in the Elsevier Grid that cannot be represented in today's HTML-based browsers. Such images, seen on platforms such as ScienceDirect®, look the same as strip-ins, but are held in glyph libraries of the platforms. With the adoption of Unicode, graphic representation of symbols will become a thing of the past.

Some constructs in an XML file structured by one of the DTDs of the 5.0 family are still hard to render on today's browsers.

- MathML (Chapter 9) is not yet supported natively in the important browsers that Elsevier's readers use, although we expect that to change in the near future. After some time in which readers switch to the newer version, we can assume that MathML can be rendered without problem. At present, however, we continue to supply strip-ins for the element `mml:math`.
- We expect that native CALS tables (Chapter 10) can be rendered in today's web browsers, but the more complicated extended CALS tables are a different matter. These require complicated border styles or complicated alignment that is not possible. For `tgroup` elements with extensions with the `tb:` prefix, we also supply strip-ins. Unlike strip-ins for math, these strip-ins may well continue to be supplied in the future.

Both the `mml:math` and the `tgroup` elements possess an attribute `altimg` that contains the filename of the strip-in image. Note that unlike other external files, the link is not made via an entity (as described in the section Entities and the DOCTYPE declaration, p. 13).

XML

```
<mml:math altimg="si18.gif">...</mml:math>
<tgroup altimg="si103.gif">...</tgroup>
```

The strip-in images are GIF images of the typeset output found in the PDF file of the document. The GIF images are specified in more detail elsewhere. Some points to note:

- Strip-ins are cropped closely. The current specifications do not allow the baseline to be specified. This is only a potential problem for small inline formulae, not for displayed formulae or tables.
- Strip-ins of displayed formulas look identical to the PDF version, except when a column or page break appears right in the middle of them. So, in a two-column journal they might look narrow and in a one-column journal they will be wider.
- Strip-ins of inline formulas look identical to the PDF version except when a line break happens to appear in the middle of them. The strip-in image will appear unbroken.
- Strip-ins of `tgroup`s are always one GIF image, irrespective of the height and width of the table.

Chapter 3
Journal Article DTD

This chapter contains an alphabetic listing of the elements in the journal article DTD, JA DTD 5.0. This DTD is used for capturing journal articles. It is also applied for structuring chapters of certain types of books, e.g. chapters in volumes of book series.

The JA DTD is the successor of the SGML full-length article DTDs.

The journal article DTD defines four top-level elements: `article`, `simple-article`, `book-review` and `exam`.

The serial issue DTD, SI DTD 5.1, described in Chapter 4, is a related DTD. It is used for capturing the data belonging to a journal issue or a book series volume.

CEP version used in this DTD

The journal article DTD 5.0.1 described in this documentation uses the common element pool version 1.1.0.

Parameter entities

The journal article DTD 5.0.1 locally declares parameter entities `%cross-ref;` and `%cross-refs;` to consist of `ce:cross-ref` and `ce:cross-refs`, respectively.

```
<!ENTITY % cross-ref        "ce:cross-ref" >
<!ENTITY % cross-refs       "ce:cross-refs" >
```

As a result, it is impossible to use `ce:intra-ref` and `ce:intra-refs` in documents structured with the JA DTD.

aid

Declaration

Model

```
<!ELEMENT  aid                    ( %string.data; )*>
```

Description

The element aid contains the article number of the item.

Usage

The article ID is captured using aid.

See also

ce:doi, ce:pii, jid

article

Declaration

Model

```
<!ELEMENT  article              ( item-info, ce:floats?, head, body?,
                                   tail? )>
<!ATTLIST  article
           xmlns                CDATA             #FIXED %ESJA.xmlns;
           version              CDATA             #FIXED '5.0'
           xmlns:ce             CDATA             #FIXED %ESCE.xmlns;
           xmlns:sb             CDATA             #FIXED %ESSB.xmlns;
           xmlns:xlink          CDATA             #FIXED %XLINK.xmlns;
           xml:lang             %language;        'en'
           docsubtype           %docsubtype;      "fla">
```

Description

The element article contains a complete journal article or a complete book chapter.

Usage

The element article is one of the top-level elements (doctypes) of the JA DTD 5.0. It is used for structuring full-length articles and other articles of scientific importance.

There are several attributes of the element, as follows.

- The attribute docsubtype is the most important one. It defaults to fla; its complete list of values is described in the section Publication item types (p. 49). Under regular production conditions, articles with this attribute set to fla, rev, sco or ssu will be structured with article. However, a CONTENTS-ENTRY-ONLY full-length article may well be structured using simple-article. The precise rules are described in Electronic Warehouse Input specifications.
- The attribute xml:lang specifies the language in which the article is written. It can adopt the values English (en, default) French (fr), German (de), Portuguese (pt), Russian (ru), Spanish (es).
- The fixed attribute xmlns sets the default namespace for JA elements, and the other fixed attributes beginning with xmlns: set the prefix and the namespace of elements used in the DTD, e.g. those of the common element pool and of the XLink standard. Since these attributes are fixed, they need not be specified as they are inferred by the parser.
- version is fixed to 5.0, i.e. the first two digits of the version of the DTD.

See head for an example article opening.

See also

book-review, exam, simple-article

body

Declaration

Model

```
<!ELEMENT  body                ( ce:nomenclature?, ce:salutation?,
                                 ce:sections, ce:acknowledgment?,
                                 ce:appendices? )>
<!ATTLIST  body
           view                %view;            'all'>
```

Description

The element body contains the body of an item.

Usage

The main part of a document is contained in the body, body. It consists of an optional nomenclature (ce:nomenclature), an optional salutation (ce:salutation), a collection of paragraphs, sections, subsections, etc., contained in ce:sections, an optional acknowledgment (ce:acknowledgment), and optional appendices contained in ce:appendices.

Light reading

In HEAD-ONLY, HEAD-AND-TAIL and CONTENTS-ENTRY-ONLY deliveries, the body is not fully captured in XML. Such documents may still have a body, for instance in order to capture electronic components.

book-review

Declaration

Model

```
<!ELEMENT  book-review          ( item-info, ce:floats?, book-review-
                                  head, body?, simple-tail? )>
<!ATTLIST  book-review
           xmlns                CDATA             #FIXED %ESJA.xmlns;
           version              CDATA             #FIXED '5.0'
           xmlns:ce             CDATA             #FIXED %ESCE.xmlns;
           xmlns:sb             CDATA             #FIXED %ESSB.xmlns;
           xmlns:xlink          CDATA             #FIXED %XLINK.xmlns;
           xml:lang             %language;        'en'
           docsubtype           %docsubtype;      #FIXED "brv">
```

Description

The element book-review is used to structure a book review.

Usage

The element book-review is one of the top-level elements (doctypes) of the JA DTD 5.0. It is used for structuring book reviews.

There are several attributes of the element, as follows.

- The attribute docsubtype is fixed and equal to the publication item type (p. 49) brv.
- The attribute xml:lang specifies the language in which the article is written. It can adopt the values English (en, default) French (fr), German (de), Portuguese (pt), Russian (ru), Spanish (es).
- The fixed attribute xmlns sets the default namespace for JA elements, and the other fixed attributes beginning with xmlns: set the prefix and the namespace of elements used in the DTD, e.g. those of the common element pool and of the XLink standard. Since these attributes are fixed, they need not be specified as they are inferred by the parser.
- version is fixed to 5.0, i.e. the first two digits of the version of the DTD.

See book-review-head for an example article opening.

See also

article, exam, simple-article

book-review-head

Declaration

Model

```
<!ELEMENT  book-review-head      ( ce:article-footnote*, ( ( ce:title,
                                   ce:alt-title* ) | ( ce:dochead,
                                   ( ce:title, ce:alt-title* )? ) ),
                                   ( sb:reference | ce:other-ref )+,
                                   ce:author-group+, ce:date-received?,
                                   ce:date-revised*, ce:date-accepted?,
                                   ce:miscellaneous? )>
```

Description

The element book-review-head contains the head or frontmatter of a book review, structured according to book-review.

Usage

The head of a book review consists of the article footnotes (ce:article-footnote), the document heading (ce:dochead), the article title (ce:title), a sequence of titles each in an alternative language (ce:alt-title), a list of structured and unstructured bibliographic references, being the books under review (sb:reference and ce:other-ref), the author groups (ce:author-group), the article history (ce:date-received, ce:date-revised, ce:date-accepted) and ce:miscellaneous.

The book-review-head differs from a head in that head's subtitles have been replaced by information about the book or books under review. Moreover, ce:title is not mandatory; instead, there must be at least a ce:dochead or a ce:title. There is no dedication or presented by, and there are no keywords and (stereochemistry) abstracts.

An example of an opening of a book review is shown in Figs. 2 and 3.

Light reading

The complete head is part of HEAD-ONLY and HEAD-AND-TAIL files. A CONTENTS-ENTRY-ONLY file can only contain ce:article-footnote, ce:title and ce:subtitle, and within ce:author-group only ce:author and ce:collaboration.

See also

head, simple-head

ELSEVIER Science of Computer Programming 31 (1998) 383–385

Science of Computer Programming

Book review*

V. Stoltenberg-Hansen, I. Lindström and E.R. Griffor, *Mathematical Theory of Domains* (Cambridge Tracts in Theoretical Computer Science 22, 1994) 349 pp., Hardback.

Domain theory is the study of certain kinds of mathematical structure, *domains*, which model notions of approximation in computation. Such structures first arose in the development of denotational semantics of programming languages, where the notion of approximation was crucial for modelling recursion and recursively defined datatypes. From these roots, domain theory has blossomed into an interesting mathematical theory in its own right. Many varieties of domains have been identified and classified, with applications ranging from computation in continuous mathematics to abstract recursion theory.

Other recent textbooks in the area have been primarily concerned with the denotational semantics of programming languages, introducing domain theory as a necessary tool for the provision of such. *Mathematical Theory of Domains* takes an alternative approach, presenting domain theory very much from a pure mathematical standpoint. This approach is to be applauded. The mathematical theory of domains is more than sufficiently rich to deserve such a presentation, and previous expositions from this viewpoint have appeared only as unpublished notes, or as chapters in handbooks. Therefore, the authors have identified a genuine gap in the market. The question is how well they have filled it.

[...]

In summary, this book tackles the worthy goal of presenting domain theory as an interesting mathematical theory in its own right. Although the presentation is not completely to my taste, the book is well written and does contain a wealth of valuable material, especially in its second half. I would not entirely endorse it as an introductory textbook, but it is highly recommended as a useful and informative addition to any researcher's bookshelf.

Alex Simpson
University of Edinburgh

*Review copies of books which might be of interest to the readers of *Science of Computer Programming* should be sent to Prof. K. Apt (address: see inside front cover). Proceedings of conferences will not normally be reviewed.

PII S0167-6423(98)00009-4

Figure 2: Example of an article opening (a mocked-up example from which some text has been removed). Its XML coding can be found in Fig. 3.

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE book-review
  PUBLIC "-//ES//DTD full length article DTD version 5.0.1//EN//XML"
  "art501.dtd">
<book-review docsubtype="brv">
<item-info>
  <jid>SCICO</jid><aid>508</aid>
  <ce:pii>S0167-6423(98)00009-4</ce:pii>
  <ce:doi>10.1016/S0167-6423(98)00009-4</ce:doi>
  <ce:copyright type="unknown" yr="1998"></ce:copyright>
</item-info>
<book-review-head>
  <ce:article-footnote>
    <ce:label>*</ce:label>
    <ce:note-para>Review copies of books which might be of interest
      to the readers of ...</ce:note-para>
  </ce:article-footnote>
  <ce:dochead><ce:textfn>Book review</ce:textfn></ce:dochead>
  <sb:reference>
    <sb:contribution>
      <sb:authors>
        <sb:author>
          <ce:given-name>V.</ce:given-name><ce:surname>Stoltenberg-Hansen</ce:surname>
        </sb:author>
        <sb:author>
          <ce:given-name>I.</ce:given-name><ce:surname>Lindström</ce:surname>
        </sb:author>
        <sb:author>
          <ce;given-name>E.R></ce:given-name><ce:surname>Griffor</ce:surname>
        </sb:author>
      </sb:authors>
      <sb:title><sb:maintitle>Mathematical Theory of Domains</sb:maintitle></sb:title>
    </sb:contribution>
    <sb:host>
      <sb:book>
        <sb:book-series>
          <sb:series>
            <sb:title>
              <sb:maintitle>Cambridge Tracts in Theoretical Computer
                Science</sb:maintitle>
            </sb:title>
            <sb:volume-nr>22</sb:volume-nr>
          </sb:series>
        </sb:book-series>
        <sb:date>1994</sb:date>
      </sb:book>
    </sb:host>
    <sb:comment>349 pp., Hardback.</sb:comment>
  </sb:reference>
  <ce:author-group>
    <ce:author>
      <ce:given-name>Alex</ce:given-name><ce:surname>Simpson</ce:surname>
    </ce:author>
    <ce:affiliation>
      <ce:textfn>University of Edinburgh</ce:textfn>
    </ce:affiliation>
  </ce:author-group>
</book-review-head>
<body>
  <ce:sections>
    <ce:para>Domain theory is the study of certain kinds of mathematical
      structure, <ce:italic>domains</ce:italics>, which model notions
      of approximation in computation. ...
```

Figure 3: XML of the article opening shown in Fig. 2.

exam

Declaration

Model

```
<!ELEMENT  exam                ( item-info, ce:floats?, simple-
                                 head, ( ce:exam-answers | ce:exam-
                                 questions )+ )>
<!ATTLIST  exam
           xmlns               CDATA            #FIXED %ESJA.xmlns;
           version             CDATA            #FIXED '5.0'
           xmlns:ce            CDATA            #FIXED %ESCE.xmlns;
           xmlns:sb            CDATA            #FIXED %ESSB.xmlns;
           xmlns:xlink         CDATA            #FIXED %XLINK.xmlns;
           xml:lang            %language;       'en'
           docsubtype          %docsubtype;     #FIXED "exm">
```

Description

The element exam is used to structure an examination article.

Usage

The element exam is one of the top-level elements (doctypes) of the JA DTD 5.0. It is used for structuring examinations. Examinations, e.g. for continuous medical education (CME), contain questions and answers. They can occur in the tail of an article but also have an independent existence.

There are several attributes of the element, as follows.

- The attribute docsubtype is fixed and equal to the publication item type (p. 49) exm.
- The attribute xml:lang specifies the language in which the article is written. It can adopt the values English (en, default) French (fr), German (de), Portuguese (pt), Russian (ru), Spanish (es).
- The fixed attribute xmlns sets the default namespace for JA elements, and the other fixed attributes beginning with xmlns: set the prefix and the namespace of elements used in the DTD, e.g. those of the common element pool and of the XLink standard. Since these attributes are fixed, they need not be specified as they are inferred by the parser.
- version is fixed to 5.0, i.e. the first two digits of the version of the DTD.

See also

article, book-review, simple-article, ce:exam-questions

head

Declaration

Model

```
<!ELEMENT  head                  ( ce:article-footnote*, ce:dochead?,
                                   ce:title, ce:subtitle?, ( ce:alt-
                                   title, ce:alt-subtitle? )*,
                                   ce:presented?, ce:dedication?,
                                   ce:author-group+, ce:date-received?,
                                   ce:date-revised*, ce:date-accepted?,
                                   ce:miscellaneous?, ce:abstract*,
                                   ce:keywords*, ce:stereochem* )>
```

Description

The element head contains the head or frontmatter of an article.

Usage

The head of an article consists of the article footnotes (ce:article-footnote), the document heading (ce:dochead), the article title and subtitle (ce:title and ce:subtitle), a sequence of titles and subtitles in an alternative language (ce:alt-title and ce:alt-subtitle), presented-by and dedicated-to information (ce:presented and ce:dedication), the author groups (ce:author-group), article history (ce:date-received, ce:date-revised, ce:date-accepted and ce:miscellaneous) abstracts of various classes, each in several possible languages (ce:abstract), keywords and classification codes (ce:keywords), stereochemistry abstracts (ce:stereochem).

An example of an article opening is shown in Figs. 4 and 5.

The head differs from a simple-head in that the title (ce:title) and the author group (ce:author-group) are mandatory.

Light reading

The complete head is part of HEAD-ONLY and HEAD-AND-TAIL files. A CONTENTS-ENTRY-ONLY file can only contain ce:article-footnote, ce:title and ce:subtitle, and within ce:author-group only ce:author and ce:collaboration.

See also

book-review-head, simple-head

ELSEVIER

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SENSORS AND ACTUATORS A PHYSICAL

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Electroforming of 3D microstructures on highly structured surfaces ☆

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Abstract

Electrodeposition of photoresist on highly structured surfaces is combined with electroplating to fabricate three new types of advanced 3D metal microstructures. In one application, electroplated nickel cantilever arrays are formed on the sloped sidewalls of KOH etched silicon. The cantilevers are released by sacrificial etching of copper. In another application it is shown how KOH etched silicon V-grooves can be patterned by electrodeposited photoresist to generate versatile 3D electroforming moulds. To demonstrate the potential of this technology, an innovative all-nickel cantilever structure with V-shaped cross section and integrated reflection mirror for optical readout has been fabricated. Cantilevers with V-cross section can be designed to have significantly larger out of plane bending stiffness or higher resonant frequency compared to rectangular cantilevers with similar dimensions. A third application uses electrodeposited photoresist to fabricate copper solenoids on an oxidised silicon support.

Keywords: Electroplating; Electrodeposited photoresist; 3D fabrication; Cantilevers; Microcoils

1. Introduction

Conventional photoresist spin coating is an inherently planar technology and does not allow for conformal coating of highly structured surfaces. The advent of electrodeposited (ED) photoresists has made such conformal coatings possible. Due to the self-stopping deposition chemistry, ED resist can coat very uneven surfaces with a uniform layer thickness. The as-deposited resist film has a low water content and therefore only a small tendency to flow. Exposure can be carried out using standard UV mask aligners. Recently, X-ray exposure has also been employed, yielding very high pattern resolution at large mask gaps [1].

The above mentioned advantages of conformal coating have already resulted in a number of MEMS applications such as wafer feed-through leads [2,3], acoustic hole formation on the bottom of a KOH etched back plate for a condenser microphone [4], and patterning of 45° angled silicon mirrors [5]. The major drawback of ED resist is that only conducting surfaces can be coated. This might render it useless for applications where a conductive layer can not be applied. In electroplating processes however, a conductive seed layer is already present, and ED resist can easily be adapted as a plating mould. Since both electrodeposition and electroplating processes have the ability of covering complex topographies, a combination of these has great potential and has not yet been fully explored.

This paper presents three different demonstrations of how electrodeposition of photoresist on highly structured surfaces can be combined with electroplating to form new advanced metallic 3D structures. Hitherto, no releasing of microstructures defined by ED resist has been performed. Two of the demonstrators therefore show how novel released nickel cantilevers can be electroformed using ED photoresist moulds on non-planar surfaces, thus adding a new degree of freedom to microsystem design. The third application demonstrates an alternative fabrication of microsolenoids, made possible by ED moulds. All three

☆ This manuscript is based on a presentation (No. 2A2.4) delivered at the 10th International Conference on Solid-State Sensors and Actuators (Transducers '99). The title of the presentation was ''Improved Piezo-Resistive Sensor using Novel Nickel-Induced Laterally Crystallized Polycrystalline Silicon.''

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0924-4247/00/$ - see front matter
PII: S0924-4247(00)00346-0

Figure 4: Example of an article opening. Its XML coding can be found in Fig. 5.

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE article
  PUBLIC "-//ES//DTD full length article DTD version 5.0.1//EN//XML" "art501.dtd" [
<!ENTITY loc1 SYSTEM "gr1" NDATA IMAGE>]>
<article docsubtype="fla">
<item-info>
  <jid>SNA</jid><aid>123</aid><ce:pii>S0924-4247(00)00346-0</ce:pii>
  <ce:doi>10.1016/S0924-4247(00)00346-0</ce:doi>
  <ce:copyright type="full-transfer" yr="2000">Elsevier Science S.A.</ce:copyright>
</item-info>
<head>
  <ce:article-footnote><ce:label>&z.star;</ce:label>
    <ce:note-para>This manuscript is based on a presentation (No. 2A2.4)
      delivered at the 10th International Conference  ...</ce:note-para>
  </ce:article-footnote>
  <ce:title>Electroforming of 3D microstructures on highly structured surfaces</ce:title>
  <ce:author-group>
    <ce:author>
      <ce:given-name>L.S.</ce:given-name><ce:surname>Johansen</ce:surname>
      <ce:cross-ref refid="aff1"><ce:sup>a</ce:sup></ce:cross-ref>
      <ce:cross-ref refid="cor1"><ce:sup>&#x0204E;</ce:sup></ce:cross-ref>
      <ce:e-address type="email">lsj@mic.dtu.dk</ce:e-address>
    </ce:author>
    <ce:author>
      <ce:given-name>M.</ce:given-name><ce:surname>Ginnerup</ce:surname>
      <ce:cross-ref refid="aff1"><ce:sup>a</ce:sup></ce:cross-ref>
    </ce:author>
    <ce:author>
      <ce:given-name>P.T.</ce:given-name><ce:surname>Tang</ce:surname>
      <ce:cross-ref refid="aff2"><ce:sup>b</ce:sup></ce:cross-ref>
    </ce:author>
    <ce:author>
      <ce:given-name>N.</ce:given-name><ce:surname>Löchel</ce:surname>
      <ce:cross-ref refid="aff3"><ce:sup>c</ce:sup></ce:cross-ref>
      <ce:cross-ref refid="fn1"><ce:sup>1</ce:sup></ce:cross-ref>
    </ce:author>
    <ce:affiliation id="aff1"><ce:label>a</ce:label>
      <ce:textfn>Microelectronics Centre, Technical University
        of Denmark, Bldg. 345 East, DK-2800 Lyngby, Denmark</ce:textfn>
    </ce:affiliation>
    <ce:affiliation id="aff2"><ce:label>b</ce:label>
      <ce:textfn>Department of Manufacturing Engineering,
        Technical University of Denmark, Bldg. 204, DK-2800 Lyngby, Denmark</ce:textfn>
    </ce:affiliation>
    <ce:affiliation id="aff3"><ce:label>c</ce:label>
      <ce:textfn>Fraunhofer-Institut für Siliziumtechnologie, Dillenburger
        Straße 53, D-14199 Berlin, Germany</ce:textfn>
    </ce:affiliation>
    <ce:correspondence id="cor1"><ce:label>&#x0204E;</ce:label>
      <ce:text>Corresponding author. Tel.: +45-45-25-57-66/00; fax: +45-45-88-77-62.</ce:text>
    </ce:correspondence>
    <ce:footnote id="fn1"><ce:label>1</ce:label>
      <ce:note-para>B. Löchel is now with BESSY, Anwenderzentrum Mikrotechnik,
        Albert Einstein Straße 15, D-12489 Berlin, Germany.</ce:note-para>
    </ce:footnote>
  </ce:author-group>
  <ce:date-received day="7" month="6" year="1999"/>
  <ce:date-revised day="8" month="12" year="1999"/>
  <ce:date-accepted day="21" month="12" year="1999"/>
  <ce:abstract>
    <ce:section-title>Abstract</ce:section-title>
    <ce:abstract-sec><ce:simple-para>Electrodeposition of photoresist on
      highly ... oxidised silicon support.</ce:simple-para></ce:abstract-sec>
  </ce:abstract>
  <ce:keywords>
    <ce:keyword>Electroplating</ce:keyword><ce:keyword>Electrodeposited photoresist</ce:keyword>
    <ce:keyword>3D fabrication</ce:keyword><ce:keyword>Cantilevers</ce:keyword>
    <ce:keyword>Microcoils</ce:keyword>
  </ce:keywords>
</head>
<body>
  <ce:sections>
    <ce:section><ce:label>1</ce:label><ce:section-title>Introduction</ce:section-title>
      <ce:para>Conventional photoresist spin coating is an ...
```

Figure 5: XML of the article opening shown in Fig. 4.

item-info

Declaration

Model

```
<!ELEMENT  item-info            ( jid, aid?, ce:pii, ce:doi?,
                                  ce:document-thread?, ce:copyright,
                                  ce:doctopics?, ce:preprint? )>
```

Description

The element item-info contains information about the article.

Usage

Item information is contained within item-info. The Elsevier system code and article number are present in jid and aid. This is followed by the PII and optionally the DOI, ce:pii and ce:doi. The DOI is not always present, since it may be assigned only to items that will be published online.

A relationship with other articles can be made using ce:document-thread, e.g. to link an erratum to the original article or to create a discussion thread.

The mandatory ce:copyright contains the copyright owner and status of the item.

The ce:doctopics can be used to place the article in a topic hierarchy.

Finally, the subelement ce:preprint is to link the item with a preprint of the article residing on a preprint server.

For more information, see the subelements.

XML

```
<item-info>
  <jid>AQTOX</jid>
  <aid>1099</aid>
  <ce:pii>S0166-445X(99)00065-X</ce:pii>
  <ce:doi>10.1016/S0166-445X(99)00065-X</ce:doi>
  <ce:copyright type="full-transfer" year="2000">Elsevier
    Science B.V.</ce:copyright>
</item-info>
```

jid

Declaration

Model

```
<!ELEMENT  jid                    ( %string.data; )*>
```

Description

The element jid contains the Elsevier system code of the journal.

See also

aid, ce:pii, ce:doi

simple-article

Declaration

Model

```
<!ELEMENT  simple-article        ( item-info, ce:floats?, simple-head,
                                   body?, simple-tail? )>
<!ATTLIST  simple-article
           xmlns                 CDATA             #FIXED %ESJA.xmlns;
           version               CDATA             #FIXED '5.0'
           xmlns:ce              CDATA             #FIXED %ESCE.xmlns;
           xmlns:sb              CDATA             #FIXED %ESSB.xmlns;
           xmlns:xlink           CDATA             #FIXED %XLINK.xmlns;
           xml:lang              %language;        'en'
           docsubtype            %docsubtype;      #REQUIRED>
```

Description

The element simple-article is used to structure a simple article.

Usage

The element simple-article is one of the top-level elements (doctypes) of the JA DTD 5.0. It is used for structuring "simple" articles, such as editorials, obituaries, prefaces, etc. Ironically, simple articles are more complicated in an XML sense, since enforcing strict rules is not always possible due to the great variety of appearances of these articles.

Note that even a full-length article might be structured as a simple article, e.g. when it is delivered as CONTENTS-ENTRY-ONLY.

There are several attributes of the element, as follows.

- The attribute docsubtype is the most important one. It is mandatory; its complete list of values is described in the section Publication item types (p. 49).
- The attribute xml:lang specifies the language in which the article is written. It can adopt the values English (en, default) French (fr), German (de), Portuguese (pt), Russian (ru), Spanish (es).
- The fixed attribute xmlns sets the default namespace for JA elements, and the other fixed attributes beginning with xmlns: set the prefix and the namespace of elements used in the DTD, e.g. those of the common element pool and of the XLink standard. Since these attributes are fixed, they need not be specified as they are inferred by the parser.
- version is fixed to 5.0, i.e. the first two digits of the version of the DTD.

See also

article, book-review, exam

simple-head

Declaration

Model

```
<!ELEMENT  simple-head          ( ce:article-footnote*, ( ce:title
                                  | ( ce:dochead, ce:title? ) ),
                                  ce:subtitle?, ( ce:alt-title, ce:alt-
                                  subtitle? )*, ce:author-group*,
                                  ce:date-received?, ce:date-revised*,
                                  ce:date-accepted?, ce:miscellaneous?,
                                  ce:abstract*, ce:keywords* )>
```

Description

The element simple-head contains the head or frontmatter of a "simple" article or an examination item, simple-article or exam.

Usage

The head of a simple article consists of the article footnotes (ce:article-footnote), the document heading (ce:dochead), the article title and subtitle (ce:title, ce:subtitle), a sequence of titles and subtitles in an alternative language (ce:alt-title and ce:alt-subtitle), the author groups (ce:author-group), article history (ce:date-received, ce:date-revised, ce:date-accepted and ce:miscellaneous) abstracts of various classes, each in several possible languages (ce:abstract), keywords and classification codes (ce:keywords).

The simple-head differs from a head in that the title (ce:title) is mandatory in a head, whereas in a simple head there is at least a ce:dochead or a title; the author group (ce:author-group) is mandatory in a head; and in a simple head there is no presented by or dedicated to information and there are no stereochemistry abstracts.

Light reading

The complete head is part of HEAD-ONLY and HEAD-AND-TAIL files. A CONTENTS-ENTRY-ONLY file can only contain ce:article-footnote, ce:title and ce:subtitle, and within ce:author-group only ce:author and ce:collaboration.

See also

book-review-head, head

simple-tail

Declaration

Model

```
<!ELEMENT  simple-tail          ( ce:bibliography?, ce:further-
                                  reading? )>
<!ATTLIST  simple-tail
           view                 %view;            'all'>
```

Description

The element simple-tail contains the tail of a simple article or book review.

Usage

The tail of a simple article or a book review is contained within simple-tail. This element consists of two subelements: an optional ce:bibliography (containing the bibliographic references) and an optional ce:further-reading (containing the further-reading list).

See also

tail

tail

Declaration

Model

```
<!ELEMENT  tail                ( ce:bibliography?, ce:further-
                                 reading?, ce:glossary?, ce:biography*,
                                 ( ce:exam-answers | ce:exam-questions
                                 | ce:exam-reference )* )>
<!ATTLIST  tail
           view                %view;            'all'>
```

Description

The element `tail` contains the tail of an article.

Usage

The tail of an article or a book review is contained within `tail`. None of its constituents are mandatory, but the element must not be empty.

The tail consists of the bibliographic references (`ce:bibliography`), a further-reading list (`ce:further-reading`), a glossary (`ce:glossary`), a number of biographies of the authors (`ce:biography`), followed by a sequence of examination questions and answers, and references to earlier examinations (`ce:exam-questions`, `ce:exam-answers`, `ce:exam-reference`). For more information, see these elements.

See also

`simple-tail`

Journal article publication item types

The attribute `docsubtype` of the top-level elements of the journal article DTD contains the publication item type of the article. Its possible values are contained in `%docsubtype;` and are described here.

PIT	Short	Description
`abs`	Abstract	Abstract of a paper or oral presentation or poster, published as a separate item. A better name would be "very short communication". These mostly occur in fairly great numbers in conference proceedings, where not all authors are allowed to publish a full-length article. *Note.* Not to be confused with `lit` (*q.v.*). *Note.* `abs` refers to one single such thing.
`add`	Addendum	Publication item giving additional information regarding another publication item, mostly presenting additional results. *Note.* Needs a `ce:document-thread`.
`adv`	Advertisement	Advertisement (mostly commercial, but also including Elsevier's own).
`ann`	Announcement	Informative statement with a scope within the context of the publication in which it appears.
`brv`	Book review	Book review. *Note.* `brv` can only be assigned to a single book review, not to a collection of book reviews which appear under the heading "Book reviews".
`cal`	Calendar	List of forthcoming meetings, symposia, conferences and other events.
`cnf`	Conference	Information about a conference (can be a description of the venue, but also a visit report of a scientist who has attended a conference). *Note.* A scientific article in a conference proceedings is not `cnf`.
`con`	Contents list	List of publication items published in issue(s) or volume(s) of the publication at hand. *Note.* This includes volume contents. This PIT is only rarely used, in case a list of contents requires an XML delivery and is handled as a contents entry.
`cor`	Correspondence	Letter to the editor or a reply to the letter. *Note.* The reply needs a `ce:document-thread`.
`dis`	Discussion	Argumentative communication, like papers in a discussion, but also perspectives, commentaries, etc. *Note.* Subsequent discussion papers need a `ce:document-thread`.
`edb`	Editorial board	List containing the scientific editors, the managing and executive editors, etc., of the publication.
`edi`	Editorial	From the (guest-) editor of the publication. Can be Foreword, Editorial, Guest-Editorial, Preface, etc.

PIT	Short	Description
err	Erratum	Article in which errors are reported that were made in an earlier publication in the same journal. Can be Erratum but also Corrigendum. *Note.* Needs a ce:document-thread.
exm	Examination	Examination or quiz, with questions and answers.
fla	Full-length article	Complete report on original research.
ind	Index	Cross-reference of items against the location of occurrence. Can be Author index, Master index, Subject index, Materials index, etc.
lit	Literature alert	Publication item containing information on relevant literature. This includes lists of recently published books, and collections of abstracts of articles published, or to be published, elsewhere (in the same or another journal). *Note.* Such abstracts should not be confused with articles of type abs. Those are independent, small articles. These are sequences of abstracts of other articles whose bibliographic source is mentioned.
mis	Miscellaneous	All publication items that do not fit in any of the other publication item types mentioned and that do not merit the introduction of a new type.
nws	News	Publication item containing new information relevant to the audience of the publication.
ocn	Other contents	Contents list of another, related journal. *Note.* Must be another journal.
pnt	Patent report	Report on newly developed patents.
prp	Personal report	Bit of a misnomer: it is in fact a report about one or more (living or deceased) persons, e.g. an obituary, a biography, an award ceremony, etc., but it can also include personal historical overviews or reminiscences of the author.
prv	Product review	Product review, i.e. a review of software, hardware, medical products, etc. *Note.* Not book reviews: see brv. Not conference review: see cnf.
pub	Publisher's note	Publisher's note, which is a message from the Publisher to the readers.
req	Request for assistance	Publication item containing the description of a problem with an appeal to the audience for a solution.
rev	Review article	Substantial overview of original research, usually with a comprehensive bibliography, often with a table of contents. *Note.* Not a book review: see brv.
sco	Short communication	Short report or announcement of research, usually claiming certain results, usually with a shorter publication time than other papers in the same publication. Appear under many names, such as letter papers, preliminary notes, notes, etc.
ssu	Short survey	Short or mini-review, in appearance much like a short full-length article.

Chapter 4
Serial Issue DTD

This chapter contains an alphabetic listing of the elements in the serial issue DTD, SI DTD 5.1. This DTD is used for defining journal issues and book series volumes, i.e, it captures the exact composition of the issue in the form of pointers to the individual items, and it captures the issue's properties such as title, (guest) editors, cover date, etc. A document structured with the SI DTD is often called an *issue hub*.

The serial issue DTD defines one top-level element: `serial-issue`.

CEP version used in this DTD

The serial issue DTD 5.1.0 described in this documentation uses the common element pool version 1.1.3.

abbr-name

Declaration

Model

```
<!ELEMENT  abbr-name              ( %richstring.data; )*>
```

Description

The element abbr-name contains the official abbreviated name of a conference.

Usage

See conference-info.

conference-info

Declaration

Model

```
<!ELEMENT  conference-info       ( full-name?, abbr-name?, venue?,
                                   date-range? )>
```

Description

The element conference-info contains information about a conference.

Usage

Issues can be related to a conference or contain the proceedings of a conference. In that case, information about the conference is captured with conference-info.

The full-name contains the full name of the conference if it is different from the title of the issue. Often, a conference also has an commonly known abbreviated name, abbr-name. The location where the conference took place is captured with venue. A subelement date-range is provided for the date or date range when the conference took place. The four subelements are optional, but conference-info must not be empty.

XML

```
<conference-info>
   <full-name>Foundations of Software Science
      and Computation Structures</full-name>
   <abbr-name>FOSSACS 2001</abbr-name>
   <venue>Genova, Italy</venue>
   <date-range>
      <start-date>20010402</start-date>
      <end-date>20010404</end-date>
   </date-range>
</conference-info>
```

XML

```
<conference-info>
   <full-name>Periglacial Geomorphology at
      the Beginning of the 21st Century</full-name>
   <venue>Tokyo, Japan</venue>
   <date-range>
      <start-date>20010825</start-date>
   </date-range>
</conference-info>
```

See also

date-range

cover-date

Declaration

Model

```
<!ELEMENT  cover-date            ( date-range )>
```

Description

The element cover-date contains the cover date of the issue.

Usage

The cover date of the issue is contained within cover-date in the form of a date-range.

It is not always clear for each publication what the cover date is. Some serial publications do not carry a cover date on the cover of their printed issues. ScienceDirect®, however, displays the cover date prominently with each issue in the issue list for each journal or book series, and uses it to determine the publication year when it generates the bibliographic data for the items in the issue. For lack of a more precise definition, the date displayed there is the cover date contained in this element.

cover-image

Declaration

Model

```
<!ELEMENT  cover-image          ( ce:figure  )>
```

Description

The element cover-image contains the cover image of a serial issue.

Usage

Cover images are captured with the element cover-image.

Structurally, the cover image is associated with the issue using the ce:figure, which in this case may not be nested within itself. The ce:link element provides the link to the cover image file. An optional caption explaining the featured cover image, copyright information, etc., can be added, using the features of ce:figure.

XML

```
<cover-image>
  <ce:figure>
    <ce:label>Functional Specificity of Small GTPases</ce:label>
    <ce:caption>
      <ce:simple-para>The cover shows eight of the distinct cell
        morphology classes that were induced by expression of
        constitutively active Ras superfamily small GTPases. NIH3T3
        fibroblasts were transfected with 100 different mutant small
        GTPases and the observed morphologies were grouped into
        different classes. The cell in the middle is a cell
        transfected with a control construct. For further
        information, please see the article by Heo and Meyer in
        this issue (pp. <ce:inter-ref xlink:href="doi:10.1016/
        S0092-8674(03)00307-6">369-381</ce:inter-ref>).
      </ce:simple-para>
    </ce:caption>
    <ce:link locator="cover"/>
  </ce:figure>
</cover-image>
```

Presentation

See Figure 6 (p. 71) for a possible representation.

See also

ce:figure

date-range

Declaration

Model

```
<!ELEMENT  date-range            ( start-date, end-date? )>
```

Description

The element date-range contains the a date range in EFFECT date format.

Usage

The element date-range consists of a start-date and an optional end-date, both in EFFECT format.

The EFFECT date format has one of three EFFECT date *forms*.

- YYYY, denoting a year.
- YYYYMM, where YYYY is a year, and MM is a month, season or quarter. If MM ranges between 01 and 12, then it denotes a month (January to December). If MM ranges between 21 and 24, then it denotes a season (21: Spring, 22: Summer, 23: Autumn, 24: Winter). If MM ranges between 31 and 34, then it denotes a quarter (31: 1st Quarter, 32: 2nd Quarter, 33: 3rd Quarter, 34: 4th Quarter).
- YYYYMMDD, denoting a day.

The end-date must be of the same EFFECT date form as the start-date.

There is also an EFFECT date *range* format, containing a slash. This must not be used.

XML

```
<date-range><start-date>2003</start-date></date-range>
<date-range><start-date>200305</start-date></date-range>
<date-range><start-date>200331</start-date></date-range>
<date-range><start-date>20040229</start-date></date-range>
<date-range>
   <start-date>200305</start-date>
   <end-date>200307</end-date>
</date-range>
<date-range>
   <start-date>20030530</start-date>
   <end-date>20030601</end-date>
</date-range>
<date-range>
   <start-date>20030530</start-date>
   <end-date>20030531</end-date>
</date-range>
```

Presentation

2003
May 2003
First quarter 2003
29 February 2003
May – July 2003
30 May – 1 June 2003
30–31 May 2003

editors

Declaration

Model

```
<!ELEMENT  editors              ( %richstring.data; )*>
```

Description

The element editors contains the names of the (guest) editors of a serial issue in an unstructured format.

Usage

See title-editors-group.

XML

```
<editors>P. Johnson and K.S. Agarwal</editors>
```

This element is provided for backward compatibility with the EFFECT dataset.toc dataset description file.

end-date

Declaration

Model

```
<!ELEMENT  end-date              ( %string.data; )*>
```

Description

The element end-date contains the end date of a date range in EFFECT format.

Usage

See date-range.

full-name

Declaration

Model

```
<!ELEMENT  full-name              ( %richstring.data; )*>
```

Description

The element full-name contains the full name of a conference if it is different from the issue title.

Usage

See conference-info.

iss-first

Declaration

Model

```
<!ELEMENT  iss-first            ( %string.data; )*>
```

Description

The element iss-first contains the issue number, or the first issue number in an issue number range, of a serial issue.

Usage

See volume-issue-number.

iss-last

Declaration

Model

```
<!ELEMENT  iss-last              ( %string.data; )*>
```

Description

The element iss-last contains the the last issue number in an issue number range of a serial issue.

Usage

See volume-issue-number.

issue-body

Declaration

Model

```
<!ELEMENT  issue-body            ( ( ce:include-item | issue-sec )+ )>
```

Description

The element issue-body provides the link between the issue and the items in that issue. It is both a “hub” and the source for the table of contents.

Usage

The issue body consist of all items that belong to the issue. These items are referred to via the generic ce:include-item element. Thus it acts as hub for the whole issue, but it also acts as the table of contents of the issue. The items can be grouped in sections, issue-sec, that must have a section title. These sections can be nested. In this way, second-, third- and fourth-order headings within the table of contents are supported. Headings of higher order than that, though possible according to the DTD, are not allowed. In files structured according to the SI DTD, the title subelements of ce:include-item are not used.

XML

```
<issue-body>
   <issue-sec>
      <ce:section-title>Nuclear Structure
         and Dynamics</ce:section-title>
      <ce:include-item>
         <ce:pii>S0375-9474(02)01400-8</ce:pii>
         <ce:doi>10.1016/S0375-9474(02)01400-8</ce:doi>
         <ce:pages>
            <ce:first-page>355</ce:first-page>
            <ce:last-page>390</ce:last-page>
         </ce:pages>
      </ce:include-item>
      ...
      <ce:include-item>
         <ce:pii>S0375-9474(02)01372-6</ce:pii>
         <ce:doi>10.1016/S0375-9474(02)01372-6</ce:doi>
         <ce:pages>
            <ce:first-page>463</ce:first-page>
            <ce:last-page>477</ce:last-page>
         </ce:pages>
      </ce:include-item>
   </issue-sec>
   <issue-sec>
      <ce:section-title>Hadronic Physics</ce:section-title>
      <ce:include-item>
         <ce:pii>S0375-9474(02)01371-4</ce:pii>
         <ce:doi>10.16/S0375-9474(02)01371-4</ce:doi>
         <ce:pages>
            <ce:first-page>481</ce:first-page>
```

```
            <ce:last-page>501</ce:last-page>
         </ce:pages>
      </ce:include-item>
      ...
      <ce:include-item>
         <ce:pii>S0375-9474(02)01403-3</ce:pii>
         <ce:doi>10.1016/S0375-9474(02)01403-3</ce:doi>
         <ce:pages>
            <ce:first-page>632</ce:first-page>
            <ce:last-page>640</ce:last-page>
         </ce:pages>
      </ce:include-item>
   </issue-sec>
   <issue-sec>
      <ce:section-title>Intermediate and High Energy
         Heavy Ion Physics</ce:section-title>
      <ce:include-item>
         <ce:pii>S0375-9474(02)01399-4</ce:pii>
         <ce:doi>10.1016/S0375-9474(02)01399-4</ce:doi>
         <ce:pages>
            <ce:first-page>643</ce:first-page>
            <ce:last-page>670</ce:last-page>
         </ce:pages>
      </ce:include-item>
   </issue-sec>
   <issue-sec>
      <ce:section-title>Nuclear Astrophysics</ce:section-title>
      <ce:include-item>
         <ce:pii>S0375-9474(02)01397-0</ce:pii>
         <ce:doi>10.1016/S0375-9474(02)01397-0</ce:doi>
         <ce:pages>
            <ce:first-page>673</ce:first-page>
            <ce:last-page>695</ce:last-page>
         </ce:pages>
      </ce:include-item>
   </issue-sec>
   <issue-sec>
      <ce:section-title>Errata</ce:section-title>
      <ce:include-item>
         <ce:pii>S0375-9474(02)01363-5</ce:pii>
         <ce:doi>10.1016/S0375-9474(02)01363-5</ce:doi>
         <ce:pages>
            <ce:first-page>696</ce:first-page>
            <ce:last-page>698</ce:last-page>
         </ce:pages>
      </ce:include-item>
   </issue-sec>
   <ce:include-item>
      <ce:pii>S0375-9474(02)01580-4</ce:pii>
      <ce:doi>10.1016/S0375-9474(02)01580-4</ce:doi>
      <ce:pages>
         <ce:first-page>699</ce:first-page>
         <ce:last-page>727</ce:last-page>
      </ce:pages>
```

```
    </ce:include-item>
</issue-body>
```

Presentation

Nuclear Structure and Dynamics
T. von Egidy, C. Doll, J. Jolie, N.V. Warr, J. Kern, M. Crittin and L. Genilloud
Nuclear structure of ^{126}Te *studied with the* (n, γ) *reaction* 355
⋮
M. Sambataro
RPA-like calculations within limited particle–hole spaces 463
Hadronic Physics
F. Neumann, M. Buballa and M. Oertel
Mixed phases of color superconducting quark matter 481
⋮
M.P Rekalo and E. Tomasi-Gustafsson
Determination of the $g_{V_{\sigma\gamma}}$ *coupling constant through the process* $\gamma + N \rightarrow N + V$ *with circularly polarized photons* 632
Intermediate and High Energy Heavy Ion Physics
C. Fuchs and T. Gaitanos
Consequences of kinetc non-equilibrium for the nuclear equation-of-state in heavy ion collision 643
Nuclear Astrophysics
E. Holmlund and J. Suhonen
Microscopic nuclear structure calculations for the solar-neutrino detector ^{71}Ga *and close-lying isobars* 673
Errata
H. Nakada and M. Sato
Erratum to: "A method of implementing Hartree–Fock calculations with zero- and finite-range interactions" [Nucl. Phys. A 699 (2002) 511] 696

Cumulative author index 699

Add-on items, short commentaries that follow an item, are included with `ce:include-item`s. The main item does not possess a `role` attribute. The add-on items have the `role` attribute set to `add-on`.

The element `ce:include-item` possesses a `view` attribute. This can be used to include different items depending on the view. See the section on Views.

If an item comprises just one page, the `ce:last-page` is not present.

Rendering notes

It can happen that an `issue-sec` is not followed by another `issue-sec` but by further `ce:include-item`s. In the example given above, this is the case for the "Cumulative author index" at the end of the issue. Visual separation is required in order to prevent the impression that the item belongs to be preceding `issue-sec`.

issue-data

Declaration

Model

```
<!ELEMENT  issue-data            ( cover-date, ce:pages+, cover-image?,
                                   issue-designation?, title-editors-
                                   group*  )>
```

Description

The element issue-data contains the data belonging to the issue itself.

Usage

The element issue-data consists of cover-date, the mandatory cover date; ce:pages, a series of one or more page ranges, detailing the page ranges that occur in the issue; cover-image, an optional image of the (paper) issue's cover; issue-designation, an optional subtitle or section of the serial publication; and optional title, editors, conference information, etc., in title-editors-group.

The page ranges of the issue, captured with a series of ce:pages, include only the "interior" page ranges of the serial issue, unless front- or backmatter ranges are of great importance.

XML

```
<ce:pages>
  <ce:first-page>1</ce:first-page>
  <ce:last-page>300</ce:last-page>
</ce:pages>
<ce:pages>
  <ce:first-page>L1</ce:first-page>
  <ce:last-page>L38</ce:last-page>
</ce:pages>
```

Presentation

Possible rendering: *Pages 1–300, L1–L38*

A journal issue or book series volume can be associated with more than one conference, e.g. two thin special issues in one issue. For this reason there can be more than one title-editors-group. It is, however, impossible to indicate which items in the serial issue are associated with which title and editors group — this can only be made clear by using meaningful issue-secs.

For more information about the remaining subelements of issue-data, see these subelements.

issue-designation

Declaration

Model

```
<!ELEMENT  issue-designation     ( %richstring.data; )*>
```

Description

The element issue-designation contains a subtitle or section of the serial publication to which the issue belongs.

Usage

For some publications, the issues belong to a certain section or "sub-journal" or "sub-series". The element issue-designation can be used to store that information.

XML

```
<issue-designation>Logic, semantics and theory of
  programming</issue-designation>
```

XML

```
<issue-designation>Field Theory and
  Statistical Systems</issue-designation>
```

Explanation

The issues of the journal *Theoretical Computer Science* carry a subtitle "Algorithms, complexity and games" or "Logic, semantics and theory of programming". The issues of the journal *Nuclear Physics B* carry a subtitle "Field Theory and Statistical Systems", "Physical Mathematics" or "Particle Physics". This is the way to capture that property of the issue.

issue-info

Declaration

Model

```
<!ELEMENT  issue-info            ( ce:pii, ce:doi?, jid, ce:issn,
                                   volume-issue-number, ce:isbn? )>
```

Description

The element issue-info contains the identifiers that uniquely identify the issue.

Usage

An issue in a serial publication has several equivalent identifiers that can be used to retrieve the issue.

An issue has its own "publishable item identifier", PII, stored within ce:pii. An optional digital object identifier, DOI can also be assigned to the issue, ce:doi. The issue PII may have an "X" on the 15th position.

An alternative form of issue identification is by the Elsevier internal system code, called JID (an abbreviation of journal ID) and volume/issue number. The serial publication is identified in two ways: by code, jid and by the ISSN, ce:issn. In view of publication evolution and the importance of correctly assigning an issue to a publication, both are present. The volume/issue number is captured using the subelement volume-issue-number.

Finally, some serial publications assign ISBNs to their volumes or issues, e.g. in the case of all book series. The optional ce:isbn is used to store the ISBN.

XML

```
<issue-info>
  <ce:pii>S9999-9994(03)X7607-2</ce:pii>
  <jid>ENDEND</jid>
  <ce:issn>9999-9994</ce:issn>
  <volume-issue-number>
    <vol-first>31</vol-first>
    <iss-first>5</iss-first>
  </volume-issue-number>
</issue-info>
```

issue-sec

Declaration

Model

```
<!ELEMENT  issue-sec            ( ce:section-title?, ( ce:include-item |
                                  issue-sec )+ )>
<!ATTLIST  issue-sec
           id                   ID                  #IMPLIED
           role                 CDATA               #IMPLIED>
```

Description

The element issue-sec is used to group items within the issue under a common heading.

Usage

Many issues contain a hierarchical structure of their items. This structure usually reveals itself in the table of contents, that may contain first-order headings or higher-order headings. This grouping of items is accomplished using the element issue-sec. It consists of a ce:section-title containing the heading, a number of included items and/or nested item sections.

Although ce:section-title is declared optional in the DTD, it must always be present.

For more information, see issue-body.

jid

Declaration

Model

```
<!ELEMENT  jid                    ( %string.data; )*>
```

Description

The element jid contains the Elsevier system code of the serial publication.

See also

ce:pii, ce:doi

serial-issue

Declaration

Model

```
<!ELEMENT  serial-issue          ( issue-info, issue-data, issue-body )>
<!ATTLIST  serial-issue
           xmlns                 CDATA             #FIXED %ESSI.xmlns;
           version               CDATA             #FIXED '5.1'
           xmlns:ce              CDATA             #FIXED %ESCE.xmlns;
           xmlns:sb              CDATA             #FIXED %ESSB.xmlns;
           xmlns:xlink           CDATA             #FIXED %XLINK.xmlns;
           xml:lang              %language;        'en'>
```

Description

The element `serial-issue` contains a serial issue.

Usage

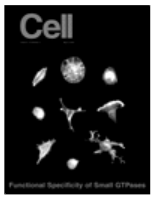
The element `serial-issue` is the top-level element (single doctype) of the SI DTD 5.1. It is used for structuring serial issues. It captures the data of the issue, and acts as a "hub" for the items in the issue.

There are several attributes of the element, as follows.

- The attribute `xml:lang` specifies the language in which the properties of the issue is written in the XML file. It can adopt the values English (`en`, default) French (`fr`), German (`de`), Italian (`it`), Portuguese (`pt`), Russian (`ru`), Spanish (`es`).
- The fixed attribute `xmlns` sets the default namespace for SI elements, and the other fixed attributes beginning with `xmlns:` set the prefix and the namespace of elements used in the DTD, e.g. those of the common element pool and of the XLink standard. Since these attributes are fixed, they need not be specified as they are inferred by the parser.
- `version` is fixed to `5.1`, i.e. the first two digits of the version of the DTD.

Figures 6 and 7 on the following pages show an example of a serial issue.

TABLE OF CONTENTS



May 2, 2003: 113 (3)

"Functional Specificity of Small GTPases"
[Cover Caption]

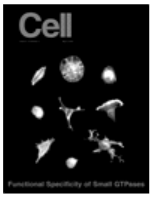
Browse Archive:

Previews	**Pages**
p53 and TGF-ß in Development: Prelude to Tumor Suppression? Malcolm Whitman and Frank McKeon **[Summary] [Full Text] [PDF]**	**275-276**
tRNA Structure Goes from L to » Paul Schimmel and Koji Tamura **[Summary] [Full Text] [PDF]**	**276-278**
Coordinate Regulation of an Extended Chromosome Domain Vincent C. Calhoun and Michael Levine **[Summary] [Full Text] [PDF]**	**278-280**

Minireview	**Pages**
The Stem Cell Concept in Plants: A Matter of Debate Thomas Laux **[Summary] [Full Text] [PDF]**	**281-283**

Articles	**Pages**
Stereotyped Pruning of Long Hippocampal Axon Branches Triggered by Retraction Inducers of the Semaphorin Family Anil Bagri, Hwai-Jong Cheng, Avraham Yaron, Samuel J. Pleasure, and Marc Tessier-Lavigne **[Summary] [Full Text] [PDF] [Supplementary Data]**	**285-299**

...



On the cover: The cover shows eight of the distinct cell morphology classes that were induced by expression of constitutively active Ras superfamily small GTPases. NIH3T3 fibroblasts were transfected with 100 different mutant small GTPases and the observed morphologies were grouped into different classes. The cell in the middle is a cell transfected with a control construct. For further information, please see the article by Heo and Meyer in this issue (pp. 369-381).

Figure 6: Example of an issue table of contents complete with cover image and a caption. (Based on a real-life example.) Its XML encoding can be found in Figure 7.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE serial-issue
   PUBLIC "-//ES//DTD serials issue DTD version 5.1.0//EN//XML"
  "si510.dtd" [
  <!ENTITY cover SYSTEM "cover" NDATA IMAGE>
]>
<serial-issue>
  <issue-info>
    <ce:pii>S0092-8674(03)X0400-6</ce:pii>
    <jid>CELL</jid>
    <ce:issn>0092-8674</ce:issn>
    <volume-issue-number>
      <vol-first>113</vol-first>
      <iss-first>3</iss-first>
    </volume-issue-number>
  </issue-info>
  <issue-data>
    <cover-date>
      <date-range>
        <start-date>20030502</start-date>
      </date-range>
    </cover-date>
    <ce:pages>
      <ce:first-page>275</ce:first-page>
      <ce:last-page>419</ce:last-page>
    </ce:pages>
    <cover-image>
      <ce:figure>
        <ce:label>Functional Specificity of Small GTPases</ce:label>
        <ce:caption>
           <ce:simple-para>The cover shows eight of the distinct cell
             morphology classes that were induced by expression of
             constitutively active Ras superfamily small GTPases. NIH3T3
             fibroblasts were transfected with 100 different mutant small
             GTPases and the observed morphologies were grouped into
             different classes. The cell in the middle is a cell
             transfected with a control construct. For further
             information, please see the article by Heo and Meyer in this
             issue (pp. <ce:inter-ref xlink:href="doi:10.1016/
             S0092-8674(03)00307-6">369-381</ce:inter-ref>).</ce:simple-para>
        </ce:caption>
        <ce:link locator="cover"/>
      </ce:figure>
    </cover-image>
  </issue-data>
  <issue-body>
    <issue-sec>
      <ce:section-title>Previews</ce:section-title>
      <ce:include-item>
        <ce:pii>S0092-8674(03)00317-9</ce:pii>
        <ce:doi>10.1016/S0092-8674(03)00317-9</ce:doi>
        <ce:pages>
          <ce:first-page>275</ce:first-page>
          <ce:last-page>276</ce:last-page>
        </ce:pages>
      </ce:include-item>
```

```
      <ce:include-item>
        <ce:pii>S0092-8674(03)00313-1</ce:pii>
        <ce:doi>10.1016/S0092-8674(03)00313-1</ce:doi>
        <ce:pages>
          <ce:first-page>276</ce:first-page>
          <ce:last-page>278</ce:last-page>
        </ce:pages>
      </ce:include-item>
      <ce:include-item>
        <ce:pii>S0092-8674(03)00309-X</ce:pii>
        <ce:doi>10.1016/S0092-8674(03)00309-X</ce:doi>
        <ce:pages>
          <ce:first-page>278</ce:first-page>
          <ce:last-page>280</ce:last-page>
        </ce:pages>
      </ce:include-item>
    </issue-sec>
    <issue-sec>
      <ce:section-title>Minireview</ce:section-title>
        <ce:include-item>
          <ce:pii>S0092-8674(03)00312-X</ce:pii>
          <ce:doi>10.1016/S0092-8674(03)00312-X</ce:doi>
          <ce:pages>
            <ce:first-page>281</ce:first-page>
            <ce:last-page>283</ce:last-page>
          </ce:pages>
        </ce:include-item>
    </issue-sec>
    <issue-sec>
      <ce:section-title>Articles</ce:section-title>
        <ce:include-item>
        <ce:pii>S0092-8674(03)00267-8</ce:pii>
        <ce:doi>10.1016/S0092-8674(03)00267-8</ce:doi>
        <ce:pages>
          <ce:first-page>285</ce:first-page>
          <ce:last-page>299</ce:last-page>
        </ce:pages>
      </ce:include-item>
      ...
    </issue-sec>
    ...
  </issue-body>
</serial-issue>
```

Figure 7: XML encoding of the issue table of contents shown in Figure 6.

sponsor

Declaration

Model

```
<!ELEMENT  sponsor              ( %richstring.data; )*>
```

Description

The element sponsor contains sponsor text for a conference.

Usage

See sponsors.

sponsors

Declaration

Model

```
<!ELEMENT  sponsors              ( sponsor+ )>
```

Description

The element sponsors contains information about one or more sponsors of a conference or sponsors of the serial issue.

Usage

When a conference or a journal issue or book series volume is sponsored, the element sponsors is used to capture this information.

The element sponsor does not generate any text itself, therefore the full "sponsored by" text is captured within sponsor.

XML

```
<sponsors>
  <sponsor>Sponsored by Reckitt Benckiser Pharmaceuticals</sponsor>
</sponsors>
```

XML

```
<sponsors>
  <sponsor>Sponsored by Reckitt Benckiser Pharmaceuticals
    and GlaxoSmithKline</sponsor>
</sponsors>
```

XML

```
<sponsors>
  <sponsor>This issue was partially funded by a grant from the
    Clay Mathematics Institute</sponsor>
</sponsors>
```

The second example shows that it is possible to have two sponsors within sponsor. If there is the need to have more than one sponsor text it is possible to use more sponsor elements. Examples of this are sponsor texts in different languages or texts of a different nature that one would like to separate.

XML

```
<sponsors>
  <sponsor>Sponsored by Reckitt Benckiser Pharmaceuticals</sponsor>
  <sponsor>The conference was made possible by a grant from the
    National Science Foundation</sponsor>
</sponsors>
```

XML

```
<sponsors>
  <sponsor>Sponsored by Reckitt Benckiser Pharmaceuticals</sponsor>
  <sponsor>Gesponsort durch Reckitt Benckiser Pharmaceuticals</sponsor>
</sponsors>
```

start-date

Declaration

Model

```
<!ELEMENT  start-date            ( %string.data; )*>
```

Description

The element start-date contains the start date of a date range in EFFECT format.

Usage

See date-range.

suppl

Declaration

Model

```
<!ELEMENT  suppl                ( %string.data; )*>
```

Description

The element suppl contains the supplementary designation within the volume/issue number of the journal issue, for supplements, parts and indexes.

Usage

See volume-issue-number.

title-editors-group

Declaration

Model

```
<!ELEMENT  title-editors-group   ( (%titles;)?, conference-info?, ( edi-
                                   tors | ce:editors )?, sponsors? )>
```

Description

The element title-editors-group contains information belonging to a serial issue.

Usage

The element title-editors-group contains information about the serial issue, such as its title, its editors, etc.

Journal issues are either “regular” or “special”. Special issues also include proceedings and thematical or topical issues. They have additional properties above those of a regular issue. In particular, they may possess a title, (guest) editors, and can belong to a conference.

A volume in a book series can also have one or more of these properties.

The element title-editors-group is provided for capturing the above-mentioned properties of a serial issue. An issue can have zero or more of these elements. If it has none, then the issue must be regular. If it has more than one, then it indicates that the issue in fact contains more than one “special issue”; there is, however, no means to link the items with this element.

The title of the serial issue can be captured with ce:title. In addition to the title, there can optionally be a subtitle (ce:subtitle), titles in an alternative language (ce:alt-title), and subtitles in an alternative language (ce:alt-subtitle).

If the serial issue is related to a conference, then the details of that conference is contained in conference-info.

Serial issues may have (guest) editors. These can be captured in two alternative ways. One is in the form of an unstructured string of names (editors), the other is a structured list of editors (ce:editors, for more information see the description of that element). These (guest) editors should not be confused with the Editorial Board members. Those are captured in a separate document with docsubtype equal to edb.

One or more sponsors can be associated with the issue (or with the conference). These are captured within sponsors.

XML

```
<title-editors-group>
  <ce:title>Restless Legs Syndrome</ce:title>
  <ce:editors>
    <ce:author-group>
      <ce:author>
        <ce:degrees>Dr</ce:degrees>
        <ce:given-name>Sudhansu</ce:given-name>
        <ce:surname>Chokroverty</ce:surname>
```

```
      </ce:author>
      <ce:affiliation>
        <ce:textfn>Saint Vincents Hospital and
          Medical Center, 153 West 11th St., Cronin 466,
          New York, NY 10011, USA</ce:textfn>
      </ce:affiliation>
    </ce:author-group>
  </ce:editors>
</title-editors-group>

<title-editors-group>
  <ce:title>Buprenorphine and Buprenorphine/Naloxone:
    A Guide For Clinicians</ce:title>
  <editors>Paul J. Fudala and T. Peter Bridge</editors>
  <sponsors>
    <sponsor>Supported by Reckitt Benckiser Pharmaceuticals
      Inc.</sponsor>
  </sponsors>
</title-editors-group>

<title-editors-group>
  <ce:title>Statphys-Taiwan-2002:
    Lattice Models and Complex Systems</ce:title>
  <conference-info>
    <venue>Taipei and Taichung, Taiwan</venue>
    <date-range>
       <start-date>20020526</start-date>
       <end-date>20020601</end-date>
    </date-range>
  </conference-info>
  <editors>Chin-Kun Hu and K.-t. Leung</editors>
</title-editors-group>
```

Element editors is provided for backward compatibility with the EFFECT `dataset.toc` dataset description file.

venue

Declaration

Model

```
<!ELEMENT  venue                ( %richstring.data; )*>
```

Description

The element venue contains the location where the conference took place.

Usage

See conference-info.

vol-first

Declaration

Model

```
<!ELEMENT  vol-first            ( %string.data; )*>
```

Description

The element vol-first contains the volume number, or the first volume in a volume number range, of a serial issue.

Usage

See volume-issue-number.

vol-last

Declaration

Model

```
<!ELEMENT  vol-last              ( %string.data; )*>
```

Description

The element vol-last contains the the last volume in a volume number range of a serial issue.

Usage

See volume-issue-number.

volume-issue-number

Declaration

Model

```
<!ELEMENT  volume-issue-number   ( vol-first, (( vol-last, suppl ) |
                                   ( iss-first, iss-last?, suppl? ) |
                                   suppl ))>
```

Description

The element volume-issue-number contains the volume/issue number of the issue.

Usage

Each issue has a “volume/issue number”, which can be broken into different parts: the volume or volume range, the issue or issue range, and the supplementary information. This is captured in up to five elements, vol-first, vol-last, iss-first, iss-last, suppl.

The suppl element may only contain the following:

- C, for “complete”
- P, for “part”, optionally followed by a single digit or a capital letter
- F, for “spin-off”, optionally followed by a single digit or a capital letter
- I, for “index”, optionally followed by a single digit or a capital letter
- S, for “supplement”, optionally followed by a single digit or a capital letter
- R, or R followed by any of the above, for reprint issues

XML

```
<volume-issue-number>
   <vol-first>4</vol-first>
   <iss-first>4</iss-first>
</volume-issue-number>

<volume-issue-number>
   <vol-first>192</vol-first>
   <iss-first>1</iss-first>
   <iss-last>3</iss-last>
</volume-issue-number>

<volume-issue-number>
   <vol-first>227</vol-first>
   <vol-last>228</vol-last>
   <suppl>C</suppl>
</volume-issue-number>

<volume-issue-number>
   <vol-first>50</vol-first>
   <suppl>I</suppl>
</volume-issue-number>

<volume-issue-number>
   <vol-first>73</vol-first>
```

```
      <suppl>S1</suppl>
    </volume-issue-number>

    <volume-issue-number>
      <vol-first>42</vol-first>
      <vol-last>45</vol-last>
      <suppl>PB</suppl>
    </volume-issue-number>
```

Presentation

4/4
192/1–3
227–228
Vol. 50, Master Index
Vol. 73, Supplement 1
Vols. 42–45, Part B

Chapter 5
EHS Books DTD

This chapter contains an alphabetic listing of the elements in the EHS Books DTD 5.1. This DTD has the following top-level elements: ehs-book, introduction, chapter, examination, fb-non-chapter, glossary, bibliography, index. These top-level elements provide the option to define the *structure* of the book (ehs-book) and the *content* of the book (the other top-level elements). The former contains metadata and hierarchy of the book project, and it "calls" the chapters, the index, etc. using the ce:include-item element. This is why it is often referred to as the "hub" of the book.

In serial publications, items and issue hubs are structured with two different DTDs, the JA DTD and the SI DTD. This is due to historical reasons. In a future release, all doctypes could be combined into one file. In the EHS Books DTD, all aspects are supported.

CEP version used in this DTD

The EHS Books DTDs 5.1.0 and 5.1.1 described in this documentation make use of common element pools 1.1.2 and 1.1.3, respectively.

Parameter entities

The EHS Books DTD 5.1 uses the local parameter entities %local.spar.data; and %local.par.data; to add element ce:index-flag to parameter entities %spar.data; and %par.data;. The effect is that ce:index-flag can be used in any element that has %spar.data; or %par.data; in its model.

```
<!ENTITY % local.spar.data "| ce:index-flag">
<!ENTITY % local.par.data  "| ce:index-flag">
```

bibliography

Declaration

Model

```
<!ELEMENT  bibliography          ( info, ce:further-reading+ )>
<!ATTLIST  bibliography
           id                    ID                 #REQUIRED
           xmlns                 CDATA              #FIXED %ES.xmlns;
           version               CDATA              #FIXED '5.1'
           xmlns:ce              CDATA              #FIXED %ESCE.xmlns;
           xmlns:xlink           CDATA              #FIXED %XLINK.xmlns;
           xml:lang              %language;         'en'
           docsubtype            %docsubtype;       #FIXED "bib">
```

Description

The element bibliography is used to capture book-level bibliographies that can appear in a book's back matter.

Usage

The bibliography element is used to capture a book-level bibliography when it appears in the back matter of a book. When used, bibliography will always appear as a top-level element, with its own DOCTYPE declaration and PUBLIC identifier appearing at the top of the XML file. A bibliography gets called into the book's hub file by a ce:include-item element.

The content for bibliography consists of required info followed by required/repeatable ce:further-reading.

It has several required attributes:

- id
- xmlns: http://www.elsevier.com/xml/ehs-book/dtd
- version: 5.1
- xmlns:ce: http://www.elsevier.com/xml/common/dtd
- xmlns:xlink: http://www.w3.org/1999/xlink
- xml:lang: en (default value)
- docsubtype: bib

XML

```
<!DOCTYPE bibliography
  PUBLIC "-//ES//DTD ehs book DTD version 5.1.1//EN//XML"
  "ehs_book511.dtd" []>
<bibliography id="bibliog">
  <info>
    <ce:pii>B0-323-01679-0/10003-4</ce:pii>
    <ce:isbn>0-323-01679-0</ce:isbn>
    <ce:copyright type="full-transfer"
      year="2003">Mosby, Inc.</ce:copyright>
  </info>
  <ce:further-reading>
```

```
      ...
    </ce:further-reading>
  </bibliography>
```

Version history

The `docsubtype` attribute was added in EHS Books DTD 5.1.0.

body

Declaration

Model

```
<!ELEMENT  body                ( volume | part | section | ce:include-
                                 item )+>
```

Description

The element body is used to capture all of the material that appears between the front and rear of Elsevier Health Science books.

Usage

The body element is used to delimit and capture the material that appears between the front and rear in Elsevier Health Science books. It consists of required and repeatable volumes and/or parts and/or sections and/or ce:include-items.

The element body, child of ehs-book, appears in the hub file for the book. If present, any hierarchy above chapters (e.g. volume, parts, sections) should also be captured using this content model within the hub file.

Lower-level items (doctypes chapter, introduction, and examination) within the body get called in to the hub file using ce:include-item elements. Other doctypes may not be called into body.

XML

```
<body>
  <volume id="vI"><ce:label>Volume I</ce:label>
    <part id="pA"><ce:label>Part A</ce:label>
      <ce:title>GENERAL ISSUES AND APPROACH TO DISEASE
        IN PRIMARY CARE MEDICINE</title>
      <ce:include-item>
       <ce:pii>B0-323-01679-0/10027-7</ce:pii>
        <ce:title>Introduction</ce:title>
        <ce:pages>
          <ce:first-page>1</ce:first-page>
          <ce:last-page>8</ce:last-page>
        </ce:pages>
      </ce:include-item>
      <section id="s1"><ce:label>Section 1</ce:label>
        <ce:title>Core Issues and Special Groups
          in Primary Care</ce:title>
        <ce:include-item>
          <ce:pii>B0-323-01679-0/10003-4</ce:pii>
          <ce:title>Core Issues in Primary Care</ce:title>
          <ce:pages>
            <ce:first-page>9</ce:first-page>
            <ce:last-page>18</ce:last-page>
          </ce:pages>
        </ce:include-item>
        ...
```

```
        </section>
        ...
      </part>
      ...
    </volume>
  </body>
```

chapter

Declaration

Model

```
<!ELEMENT  chapter              ( info, ce:floats?, ce:label, ce:title,
                                  ce:subtitle?, ce:author-group*,
                                  ce:displayed-quote?, poem?, outline?,
                                  objectives?, ce:nomenclature?,
                                  ce:intro?, ( ce:sections | subchapter
                                  | exam )+, ( ( ce:bibliography |
                                  ce:further-reading )+, ( ce:section |
                                  exam )* )? )>
<!ATTLIST  chapter
           id                   ID                 #REQUIRED
           xmlns                CDATA              #FIXED %ES.xmlns;
           version              CDATA              #FIXED '5.1'
           xmlns:ce             CDATA              #FIXED %ESCE.xmlns;
           xmlns:xlink          CDATA              #FIXED %XLINK.xmlns;
           xml:lang             %language;         'en'
           docsubtype           %docsubtype;       #FIXED "chp">
```

Description

The element chapter is used to capture book chapters as individual XML files.

Usage

The chapter element is used to capture all the material that appears within a book chapter. There is a PUBLIC identifier and a DOCTYPE declaration for chapter, and individual chapter files get called into the book's hub file using the ce:include-item element.

Although the DTD does not restrict where lower-level book doctypes get called into the hub file, the intent is for chapter only to be called into body, not in front or rear.

Content for chapter consists of a required info and the optional ce:floats container. The chapter begins with the ce:label, containing the name of the chapter ("Chapter 4"), the chapter title, ce:title, with optional ce:subtitle and optional and repeatable ce:author-group containing authors and their affiliations. The optional subelements ce:displayed-quote, poem, outline, objectives, and ce:nomenclature also belong to the "head" of the chapter. An introduction or summary is contained in the optional ce:intro.

The main body of the chapter consists of a sequence of ce:sections, subchapter and/or exam elements, followed by optional/repeatable ce:bibliography and/or ce:further-reading, possibly followed by more ce:sections and/or exams.

It has several required attributes:

- id
- xmlns: http://www.elsevier.com/xml/ehs-book/dtd
- version: 5.1
- xmlns:ce: http://www.elsevier.com/xml/common/dtd
- xmlns:xlink: http://www.w3.org/1999/xlink

- xml:lang: en (default value)
- docsubtype: chp

XML

```
<!DOCTYPE chapter
  PUBLIC "-//ES//DTD ehs book DTD version 5.1.1//EN//XML"
  "ehs_book511.dtd" []>
<chapter id="ch1">
  <info>
    <ce:pii>B0-323-01679-0/10003-4</ce:pii>
    <ce:isbn>0-323-01679-0</ce:isbn>
    <ce:copyright type="full-transfer"
      year="2003">Mosby, Inc.</ce:copyright>
  </info>
  <ce:floats>
    ...
  </ce:floats>
  <ce:label>Chapter 1</ce:label>
  <ce:title>Core Issues in Primary Care</ce:title>
  <ce:author-group>
    ...
  </ce:author-group>
  <ce:intro>
    <ce:para>Text of opening paragraph...</ce:para>
  </ce:intro>
  <ce:sections>
    <ce:section>
      <ce:label>1.1</ce:label>
      <ce:section-title>Summary of Primary Care
        Today</ce:section-title>
      <ce:para>Text of opening paragraph...</ce:para>
      <ce:para>Text second paragraph...</ce:para>
    </ce:section>
    <ce:section>
      <ce:label>1.2</ce:label>
      <ce:section-title>Core Issues</ce:section-title>
      <ce:para>Text of opening paragraph...</ce:para>
      <ce:para>Text second paragraph...</ce:para>
    </ce:section>
  </ce:sections>
  <ce:bibliography>
    ...
  </ce:bibliography>
</chapter>
```

Version history

In EHS Books DTD 5.1.1 the occurrence indicator for ce:author-group changed from ? to *. Element examination was replaced by exam and the docsubtype attribute was added. Elements poem, outline and objectives were added. Element ce:section was changed to ce:sections to allow chapters to begin with regular paragraphs.

ehs-book

Declaration

Model

```
<!ELEMENT  ehs-book              ( info, top, ce:floats?, front, body,
                                   rear )>
<!ATTLIST  ehs-book
           xmlns                 CDATA             #FIXED %ES.xmlns;
           version               CDATA             #FIXED '5.1'
           xmlns:ce              CDATA             #FIXED %ESCE.xmlns;
           xmlns:xlink           CDATA             #FIXED %XLINK.xmlns;
           xml:lang              %language;        'en'
           docsubtype            %docsubtype;      #FIXED "ehs">
```

Description

The element ehs-book is the top-level element for Elsevier Health Science books. A majority of books should be able to be captured using the content model from this DTD.

Usage

An EHS Books dataset can be used to capture most Elsevier Health Science book publications.

Book content consists of a hub file used to reflect hierarchy in body above chapter, as well as to call all of the lower-level doctypes (e.g. chapter, index) into the book. Contrary to serial publications, where the item and the hub have different DTDs for historical reasons, the hub and items of an EHS book are structured with different top-level elements (doctypes) of the same DTD.

The hub's top-level element is ehs-book. It consists of required info and top, optional ce:floats and required front, body, and rear elements.

It has several required attributes:

- xmlns: http://www.elsevier.com/xml/ehs-book/dtd
- version: 5.1
- xmlns:ce: http://www.elsevier.com/xml/common/dtd
- xmlns:xlink: http://www.w3.org/1999/xlink
- xml:lang: en (default value)
- docsubtype: ehs

XML

```
<!DOCTYPE ehs-book
  PUBLIC "-//ES//DTD ehs book DTD version 5.1.1//EN//XML"
  "ehs_book511.dtd" []>
<ehs-book>
  <info>
    ...
  </info>
  <top>
    ...
```

```
    </top>
    <front>
      ...
    </front>
    <body>
      ...
    </body>
    <rear>
      ...
    </rear>
  </ehs-book>
```

Version history

In EHS Books DTD 5.1 the new element `top` was added and the attribute `docsubtype`.

exam

Declaration

Model

```
<!ELEMENT  exam                  ( ce:title?, ce:exam-questions,
                                   ce:exam-answers? )>
```

Description

The element exam is used to capture review questions that appear within many different types of books.

Usage

Content for exam consists of an optional ce:title, required ce:exam-questions and optional ce:exam-answers.

XML

```
<exam id="quiz_sec1">
  <ce:title>Quiz from Section 1</ce:title>
  <ce:exam-questions>
    <ce:section-title>Questions</ce:section-title>
    <ce:para>...</ce:para>
  </ce:exam-questions>
  <ce:exam-answers>
    <ce:section-title>Answers</ce:section-title>
    <ce:para>...</ce:para>
  </ce:exam-answers>
</exam>
```

Version history

This element was introduced in EHS Book DTD 5.1.0.

See also

examination

examination

Declaration

Model

```
<!ELEMENT  examination          ( info, ce:floats?, ce:label?, ce:title,
                                  ce:author-group*, ce:intro?, exam+ )>
<!ATTLIST  examination
           id                   ID                 #REQUIRED
           xmlns                CDATA              #FIXED %ES.xmlns;
           version              CDATA              #FIXED '5.1'
           xmlns:ce             CDATA              #FIXED %ESCE.xmlns;
           xmlns:xlink          CDATA              #FIXED %XLINK.xmlns;
           xml:lang             %language;         'en'
           docsubtype           %docsubtype;       #FIXED "exm">
```

Description

The element examination is used to capture review questions that appear as their own item within many different types of books.

Usage

The examination element is one of the top-level elements (doctypes) of the EHS Books DTD. It is used to capture a series of review questions when they appear as a separate item in their own XML file, using the examination DOCTYPE and PUBLIC identifier, and is called into the central hub file for the book using the ce:include-item element.

The content for examination consists of required info, optional ce:floats, optional ce:label, followed by required ce:title, optional/repeatable ce:author-group, optional ce:intro, followed by required/repeatable exam.

It has several required attributes:

- id
- xmlns: http://www.elsevier.com/xml/ehs-book/dtd
- version: 5.1
- xmlns:ce: http://www.elsevier.com/xml/common/dtd
- xmlns:xlink: http://www.w3.org/1999/xlink
- xml:lang: en (default value)
- docsubtype: exm

XML

```
<!DOCTYPE examination PUBLIC "-//ES//DTD ehs book DTD
  version 5.1.1//EN//XML" "ehs_book511.dtd" []>
<examination id="exm1" docsubtype="exm">
  <info>
    <ce:pii>B0-323-01679-0/10003-4</ce:pii>
    <ce:isbn>0-323-01679-0</ce:isbn>
    <ce:copyright type="full-transfer"
      year="2003">Mosby, Inc.</ce:copyright>
  </info>
  <ce:floats>
```

```
    ...
  </ce:floats>
  <ce:label>Unit 1</ce:label>
  <ce:title>Core Issues in Primary Care</ce:title>
  <ce:author-group>
    ...
  </ce:author-group>
  <ce:intro>
    <ce:para>Text of opening paragraph...</ce:para>
  </ce:intro>
  <exam>
    <ce:title>Section 1</ce:title>
    <ce:exam-questions>
      <ce:section-title>Questions</ce:section-title>
      <ce:para>...</ce:para>
    </ce:exam-questions>
    <ce:exam-answers>
      <ce:section-title>Answers</ce:section-title>
      <ce:para>...</ce:para>
    </ce:exam-answers>
  </exam>
  <exam>
    <ce:title>Section 2</ce:title>
    <ce:exam-questions>
      <ce:section-title>Questions</ce:section-title>
      <ce:para>...</ce:para>
    </ce:exam-questions>
    <ce:exam-answers>
      <ce:section-title>Answers</ce:section-title>
      <ce:para>...</ce:para>
    </ce:exam-answers>
  </exam>
</examination>
```

Version history

In EHS Books DTD 5.1.0 the `info` element was made mandatory, and the elements `ce:author-group` and `ce:intro` were added. The different questions and answers “sections” are now captured with one or more `exam` elements.

The element was made a top-level element and hence the top-level attributes were added as well as the attribute `docsubtype`.

fb-non-chapter

Declaration

Model

```
<!ELEMENT  fb-non-chapter        ( info, ce:floats?, ce:label?,
                                   ce:title, ( ce:author-group
                                   | ce:nomenclature | ce:para |
                                   ce:section )*, ce:bibliography? ,
                                   ce:further-reading? )>
<!ATTLIST  fb-non-chapter
           id                    ID                 #REQUIRED
           xmlns                 CDATA              #FIXED %ES.xmlns;
           version               CDATA              #FIXED '5.1'
           xmlns:ce              CDATA              #FIXED %ESCE.xmlns;
           xmlns:xlink           CDATA              #FIXED %XLINK.xmlns;
           xml:lang              %language;         'en'
           docsubtype            %docsubtype;       #REQUIRED>
```

Description

The element fb-non-chapter is used to capture special front and back matter non-chapter divisions as individual XML files.

Usage

The fb-non-chapter top-level element is used to capture material that appears in items that occur within the front (such as foreword, preface, about the author, etc.) and back matter (such as appendices) of books. The element should not be used to capture chapters within the book body.

There is a PUBLIC identifier and DOCTYPE declaration for fb-non-chapter, and individual XML files get called into the front and rear of the book's central hub file using the ce:include-item element.

A docsubtype attribute is required. The possible values for this attribute include:

- app: Appendix
- bio: Biography or About the Author
- for: Foreword
- pre: Preface
- ack: Acknowledgments
- ctr: Contributors
- rev: Reviewers
- htu: How to Use this Publication

Other values should not be used with fb-non-chapter.

The content of fb-non-chapter consists of a required info, optional ce:floats, an optional ce:label, required ce:title, followed by optional and repeatable group of ce:author-group ce:nomenclature and/or ce:para and/or ce:sections (the order is the order as these appear in the book) followed by an optional ce:bibliography, followed by optional ce:further-reading.

It has several required attributes:

- id
- xmlns: http://www.elsevier.com/xml/ehs-book/dtd
- version: 5.1
- xmlns:ce: http://www.elsevier.com/xml/common/dtd
- xmlns:xlink: http://www.w3.org/1999/xlink
- xml:lang: en (default value)
- docsubtype

XML

```
<!DOCTYPE fb-non-chapter
  PUBLIC "-//ES//DTD ehs book DTD version 5.1.1//EN//XML"
  "ehs_book511.dtd" []>
<fb-non-chapter docsubtype="app" id="appA">
  <info>
    <ce:pii>B0-323-01679-0/10003-4</ce:pii>
    <ce:isbn>0-323-01679-0</ce:isbn>
    <ce:copyright type="full-transfer"
      year="2003">Mosby, Inc.</ce:copyright>
  </info>
  <ce:floats>
    ...
  </ce:floats>
  <ce:label>Appendix A</ce:label>
  <ce:title>Color Plates</ce:title>
  <ce:author-group>
    ...
  </ce:author-group>
  <ce:para>Text of opening paragraph...</ce:para>
  <ce:section>
    <ce:section-title>...</ce:section-title>
    <ce:para>...</ce:para>
  </ce:section>
  <ce:bibliography>
    ...
  </ce:bibliography>
</fb-non-chapter>
```

Version history

Element ce:further-reading was added in EHS Books DTD 5.1.1 to allow for unnumbered references.

front

Declaration

Model

```
<!ELEMENT  front                ( ce:include-item )+>
```

Description

The element front is used to capture the front matter of Elsevier Health Science books.

Usage

The front element is used to delimit and capture the front matter material in Elsevier Health Science books. It consists of required and repeatable ce:include-item elements. The element front, child of ehs-book, appears in the hub file for the book.

- The table of contents will be only be delivered as part of the "fat" PDF file for printing. An electronic version of the table of contents is replicated by the hub file and could be used by downstream applications for this purpose.
- The list of contributing authors (docsubtype: ctr) and/or reviewers (docsubtype: rev) should each be converted as a separate fb-non-chapter file and called into front using ce:include-item elements.
- Foreword (docsubtype: for), Preface (docsubtype: pre), Acknowledgments (docsubtype: ack), and Biography (docsubtype: bio), should also be converted as separate fb-non-chapter files and called into front using ce:include-item elements.
- Information for title, copyright, and dedication pages should be captured using the top element and should not be converted as separate items within front.

XML

```
<front>
  <ce:include-item>
    <ce:pii>B0-323-01679-0/10027-7</ce:pii>
    <ce:title>Contributors</ce:title>
    <ce:pages>
      <ce:first-page>v</ce:first-page>
      <ce:last-page>vii</ce:last-page>
    </ce:pages>
  </ce:include-item>
  <ce:include-item>
    <ce:pii>B0-323-01679-0/10001-0</ce:pii>
    <ce:title>Reviewers</ce:title>
    <ce:pages>
      <ce:first-page>viii</ce:first-page>
      <ce:last-page>viii</ce:last-page>
    </ce:pages>
  </ce:include-item>
  <ce:include-item>
    <ce:pii>B0-323-01679-0/10002-2</ce:pii>
    <ce:title>Preface</ce:title>
    <ce:pages>
```

```
        <ce:first-page>ix</ce:first-page>
        <ce:last-page>x</ce:last-page>
      </ce:pages>
    </ce:include-item>
    <ce:include-item>
      <ce:pii>B0-323-01679-0/10003-4</ce:pii>
      <ce:title>Acknowledgments</ce:title>
      <ce:pages>
        <ce:first-page>xi</ce:first-page>
        <ce:last-page>xi</ce:last-page>
      </ce:pages>
    </ce:include-item>
  </front>
```

Version history

In EHS Books DTD 5.1.0 element `front` can no longer directly contain the elements `ce:author-group` and `ce:section`. That information should now be part of the included items.

glossary

Declaration

Model

```
<!ELEMENT  glossary              ( info, ce:glossary+ )>
<!ATTLIST  glossary
           id                    ID                 #REQUIRED
           xmlns                 CDATA              #FIXED %ES.xmlns;
           version               CDATA              #FIXED '5.1'
           xmlns:ce              CDATA              #FIXED %ESCE.xmlns;
           xmlns:xlink           CDATA              #FIXED %XLINK.xmlns;
           xml:lang              %language;         'en'
           docsubtype            %docsubtype;       #FIXED "gls">
```

Description

The element glossary is used to capture glossaries of special terms that can appear in a book's back matter.

Usage

The glossary element is used to capture a glossary of special terms when they appear in the back matter of a book. When used, glossary will always appear as a top-level element, with its own DOCTYPE declaration and PUBLIC identifier appearing at the top of the XML file. A glossary gets called into the book's hub file by a ce:include-item element.

Content for glossary consists of required info followed by required/repeatable ce:glossary.

It has several required attributes:

- id
- xmlns: http://www.elsevier.com/xml/ehs-book/dtd
- version: 5.1
- xmlns:ce: http://www.elsevier.com/xml/common/dtd
- xmlns:xlink: http://www.w3.org/1999/xlink
- xml:lang: en (default value)
- docsubtype: gls

XML

```
<!DOCTYPE glossary
  PUBLIC "-//ES//DTD ehs book DTD version 5.1.1//EN//XML"
  "ehs_book511.dtd" []>
<glossary id="gloss" docsubtype="gls">
  <info>
    <ce:pii>B0-323-01679-0/10003-4</ce:pii>
    <ce:isbn>0-323-01679-0</ce:isbn>
    <ce:copyright type="full-transfer"
      year="2003">Mosby, Inc.</ce:copyright>
  </info>
  <ce:glossary>
    <ce:section-title>Glossary</section-title>
    <glossary-sec>
```

```
        <ce:section-title>A</ce:section-title>
        <ce:glossary-entry>
          <ce:glossary-heading>aardvark</ce:glossary-heading>
          <ce:glossary-def>An unusual-looking, long-nosed creature
            that eats ants.</ce:glossary-def>
        </ce:glossary-entry>
        ...
      </glossary-sec>
    </ce:glossary>
  </glossary>
```

Version history

The docsubtype attribute was added in EHS Books DTD 5.1.0.

index

Declaration

Model

```
<!ELEMENT  index                ( info, ce:index+ )>
<!ATTLIST  index
           id                   ID                 #REQUIRED
           xmlns                CDATA              #FIXED %ES.xmlns;
           version              CDATA              #FIXED '5.1'
           xmlns:ce             CDATA              #FIXED %ESCE.xmlns;
           xmlns:xlink          CDATA              #FIXED %XLINK.xmlns;
           xml:lang             %language;         'en'
           docsubtype           %docsubtype;       #FIXED "idx">
```

Description

The element index is used to tag indices of terms which usually appear in a book's back matter.

Usage

The index element will always appear as a top-level element, with its own DOCTYPE declaration and PUBLIC identifier appearing at the top of the XML file. An index gets called into the book's hub file by a ce:include-item element.

Content for index consists of required info followed by required/repeatable ce:index elements.

Multiple indices (e.g. Subject Index, Author Index, etc.) should be handled as separate index files, called into the book's hub file with separate ce:include-item elements.

Each index should be organized according to the following conventions:

- One ce:index element which encapsulates the complete index.
- The ce:section-title, child of ce:index, would contain the title (e.g. "Index") for the complete index.
- Each ce:index element would contain multiple ce:index-sec elements, one for each letter of the alphabet.
- If the terms are separated by alphas that appear in the hardcopy, the ce:section-title, child of ce:index-sec, should contain the letter of the alphabet for each index section.

Due to their large size, it is envisioned that large index files will be developed in smaller pieces at book typesetters, then combined into a single, large file prior to delivery.

It is quite common in hardcopy book indices, in an effort to save space (and paper) that the first second-level index term appears on the same line as its parent primary index term. Therefore, this needs to be tagged as in the following example (where ce:index-heading, etc., have been left out for clarity):

Swallowing, assessment of
pediatric variations in

Great care must be taken to ensure that such situations are tagged properly in the following manner:

XML

```
<ce:index-entry id="idx824">Swallowing,
  <ce:index-entry id="idx825a">assessment of,</ce:index-entry>
  <ce:index-entry id="idx825b">pediatric variations in,</ce:index-entry>
</ce:index-entry>
```

index has several required attributes:

- id
- xmlns: http://www.elsevier.com/xml/ehs-book/dtd
- version: 5.1
- xmlns:ce: http://www.elsevier.com/xml/common/dtd
- xmlns:xlink: http://www.w3.org/1999/xlink
- xml:lang: en (default value)
- docsubtype: idx

XML

```
<!DOCTYPE index PUBLIC "-//ES//DTD ehs book DTD
  version 5.1.1//EN//XML" "ehs_book511.dtd" []>
<index version="5.1" docsubtype="idx" id="index" xml:lang="en"
  xmlns="http://www.elsevier.com/xml/ehs-book/dtd"
  xmlns:ce="http://www.elsevier.com/xml/common/dtd"
  xmlns:xlink="http://www.w3.org/1999/xlink">
  <info>
    <ce:pii>B0122270857000016</ce:pii>
    <ce:isbn>0-7216-9204-4</ce:isbn>
    <ce:copyright tpe="full-transfer"
      year="2003">Mosby, Inc.</ce:copyright>
  </info>
  <ce:index>
    <ce:section-title>Index</ce:section-title>
    <ce:index-sec>
      <ce:section-title>A</ce:section-title>
      <ce:index-entry>
        <ce:index-heading>aardvark</ce:index-heading>
        <ce:intra-ref href="...">1</ce:intra-ref>
      </ce:index-entry>
      <ce:index-entry>
        ...
      </ce:index-entry>
      ...
    </ce:index-sec>
  </ce:index>
</index>
```

Version history

The docsubtype attribute was added in EHS Books DTD 5.1.0.

info

Declaration

Model

```
<!ELEMENT  info                ( ce:pii, ce:doi?, ce:isbn, ce:issn?,
                                 ce:document-thread?, ce:copyright,
                                 ce:imprint?, ce:doctopics? )>
```

Description

The element info is a placeholder element for book-level metadata elements.

Usage

The info element contains book-project level metadata for the book item and hub. It duplicates a few items from the metadata transport scheme, but only enough to confirm that the book item and book project match. It contains the metadata of all top-level elements of the EHS Books DTD: ehs-book, introduction, chapter, examination, fb-non-chapter, glossary, bibliography, and index.

Content for the info element consists of required ce:pii, optional ce:doi, required ce:isbn, optional ce:issn, optional ce:document-thread, optional ce:copyright, optional ce:imprint, and optional ce:doctopics.

XML

```
<info>
  <ce:pii>B0-323-01679-0/10003-4</ce:pii>
  <ce:isbn>0-323-01679-0</ce:isbn>
  <ce:copyright type="full-transfer"
    year="2003">Elsevier Inc.</ce:copyright>
</info>
```

introduction

Declaration

Model

```
<!ELEMENT  introduction          ( info, ce:floats?, ce:title?,
                                   ce:author-group*, ce:sections,
                                   ce:bibliography* )>
<!ATTLIST  introduction
           id                    ID                #REQUIRED
           xmlns                 CDATA             #FIXED %ES.xmlns;
           version               CDATA             #FIXED '5.1'
           xmlns:ce              CDATA             #FIXED %ESCE.xmlns;
           xmlns:xlink           CDATA             #FIXED %XLINK.xmlns;
           xml:lang              %language;        'en'
           docsubtype            %docsubtype;      #FIXED "itr">
```

Description

The element introduction is used to capture introductory material which often appears at the beginning of parts or sections used to divide/introduce chapters by topic within the body of a book.

Usage

Since parts and/or sections often contain their own introductory material, the top-level introduction element is needed to properly capture this content. It gets called into the book's hub file using the ce:include-item.

The introduction element consists of optional ce:floats, an optional ce:title, an optional/repeatable ce:author-group, followed by optional/repeatable ce:sections, followed by optional/repeatable ce:bibliographys.

It has several required attributes:

- id
- xmlns: http://www.elsevier.com/xml/ehs-book/dtd
- version: 5.1
- xmlns:ce: http://www.elsevier.com/xml/common/dtd
- xmlns:xlink: http://www.w3.org/1999/xlink
- xml:lang: en (default value)
- docsubtype: itr

XML

```
<!DOCTYPE introduction
  PUBLIC "-//ES//DTD ehs book DTD version 5.1.1//EN//XML"
  "ehs_book511.dtd" []>
<introduction id="part1-intro" docsubtype="itr">
  <info>
    <ce:pii>B0-323-01679-0/10003-4</ce:pii>
    <ce:isbn>0-323-01679-0</ce:isbn>
    <ce:copyright type="full-transfer"
      year="2003">Mosby, Inc.</ce:copyright>
```

```
    </info>
    <ce:floats>
      ...
    </ce:floats>
    <ce:title>Introduction</ce:title>
    <ce:author-group>
      ...
    </ce:author-group>
    <ce:sections>
      <ce:para>Paragraph of introductory
        text for part or section.</ce:para>
    </ce:sections>
  </introduction>
```

Version history

In EHS Books DTD 5.1.0 the element `ce:author-group` was made optional and the mandatory element `ce:sections` replaced the optional list of `ce:section` and `ce:para` elements.

The element was made a top-level element and hence the top-level attributes were added as well as the attribute `docsubtype`.

line

Declaration

Model

```
<!ELEMENT  line                  ( %richstring.data; )*>
```

Description

The element line is used to capture a line of text from a poem.

Usage

The content for line consists of %richstring.data;.

XML

```
<line>Roses are red</line>
```

Version history

This element first appeared in EHS Books DTD 5.1.1.

See also

poem, stanza

objectives

Declaration

Model

```
<!ELEMENT  objectives           ( ce:section-title?, ce:para+ )>
```

Description

The element objectives is used to capture the objectives of a chapter. This information often appears at the beginning of a book chapter.

Usage

The content for objectives consists of an optional ce:section-title, and required and repeatable ce:para.

XML

```
<objectives>
  <ce:section-title>Objectives</ce:section-title>
  <ce:para>The objectives for this chapter are
    for the student to ...</ce:para>
</objectives>
```

Version history

This element first appeared in EHS Books DTD 5.1.1.

outline

Declaration

Model

```
<!ELEMENT  outline              ( ce:list )>
```

Description

The element outline is used to capture the outline of a chapter. This material often appears at the beginning of a book chapter.

Usage

The content for outline consists of a required ce:list.

XML

```
<outline>
  <ce:list>
    <ce:section-title>Chapter Outline</ce:section-title>
    <ce:list-item>
      <ce:para>Introduction</ce:para>
    </ce:list-item>
    <ce:list-item>
      <ce:para>Background</ce:para>
    </ce:list-item>
    ...
  </ce:list>
</outline>
```

Version history

This element first appeared in EHS Books DTD 5.1.1.

part

Declaration

Model

```
<!ELEMENT  part                ( ce:label, ce:title?, ce:author-
                                 group*, ( section | ce:include-item |
                                 ce:further-reading )+ )>
<!ATTLIST  part
           id                  ID              #REQUIRED>
```

Description

The element part is used to capture the hierarchy above chapter and/or section when they occur within an Elsevier Health Science book.

Usage

The element part is a child of body and of volume. It is used when a large book is divided into parts in order to organize sections and/or chapters into groups. The element part, child of appears in the hub file for the book.

The part elements can sometimes have their own introductions. These should be tagged as introduction and called into the hub file using ce:include-item.

The part element consists of a required ce:label, followed by an optional ce:title, an optional/repeatable ce:author-group, then a required and repeatable grouping of sections and/or ce:include-items and/or ce:further-reading.

It has one required attribute, id.

XML

```
<part id="pA"><ce:label>Part A</ce:label>
  <ce:title>GENERAL ISSUES AND APPROACH TO DISEASE
    IN PRIMARY CARE MEDICINE</title>
  <ce:include-item>
     <ce:pii>B0-323-01679-0/10027-7</ce:pii>
     <ce:title>Introduction</ce:title>
     <ce:pages>
       <ce:first-page>1</ce:first-page>
       <ce:last-page>8</ce:last-page>
     </ce:pages>
   </ce:include-item>
   <section id="s1"><ce:label>Section 1</ce:label>
      <ce:title>Core Issues and Special Groups
        in Primary Care</ce:title>
      <ce:include-item>
        <ce:pii>B0-323-01679-0/10003-4</ce:pii>
        <ce:title>Core Issues in Primary Care</ce:title>
        <ce:pages>
          <ce:first-page>9</ce:first-page>
          <ce:last-page>18</ce:last-page>
        </ce:pages>
```

```
        </ce:include-item>
        ...
      </section>
      ...
    </part>
```

Version history

In EHS Books DTD 5.1.1 the occurrence indicator for ce:author-group changed from ? to *. Element introduction became a top-level element in EHS Books DTD 5.1.0. Since all top-level items are called into the book hub file with ce:include-item, introduction was removed. Element ce:bibliography was replaced by ce:further-reading.

poem

Declaration

Model

```
<!ELEMENT  poem                ( ce:title?, ce:author?, stanza+,
                                 ce:source? )>
```

Description

The element poem is used to capture poetry that sometimes appears at the beginning of some book chapters.

Usage

The content for poem consists of an optional ce:title, optional ce:author, required and repeatable stanza and optional ce:source.

XML

```
<poem>
  <ce:title>Roses are Red</ce:title>
  <stanza>
    <line>Roses are red</line>
    <line>violets are blue</line>
    ...
  </stanza>
</poem>
```

Version history

This element first appeared in EHS Books DTD 5.1.1.

See also

stanza, line

rear

Declaration

Model

```
<!ELEMENT  rear                  ( rearpart+ )>
```

Description

The element rear is used to capture all of the material that appears in the back matter of Elsevier Health Science books.

Usage

The rear element is used to delimit and capture the material that appears in the back matter of Elsevier Health Science books. It is used in the book's hub file and consists of required and repeatable rearparts.

Lower-level doctypes — glossary, bibliography, index, and fb-non-chapter (appendices) — within the rear get called in using ce:include-item elements.

Although the DTD does not restrict where lower-level book doctypes get called into the hub file, doctypes other than those listed above should not be called into rear.

XML

```
<rear>
  <rearpart id="rearpart1">
    <ce:title>Appendices</ce:title>
    <ce:include-item>
      <ce:pii>B0-323-01679-0/10027-7</ce:pii>
      <ce:title>Appendix A</ce:title>
      <ce:pages>
        <ce:first-page>1000</ce:first-page>
        <ce:last-page>1001</ce:last-page>
      </ce:pages>
    </ce:include-item>
    <ce:include-item>
      <ce:pii>B0-323-01679-0/10001-0</ce:pii>
      <ce:title>Appendix B</ce:title>
      <ce:pages>
        <ce:first-page>1002</ce:first-page>
        <ce:last-page>1003</ce:last-page>
      </ce:pages>
    </ce:include-item>
  </rearpart>
  <rearpart id="rearpart2">
    <ce:include-item>
      <ce:pii>B0-323-01679-0/10002-2</ce:pii>
      <ce:title>Glossary</ce:title>
      <ce:pages>
        <ce:first-page>1004</ce:first-page>
        <ce:last-page>1020</ce:last-page>
      </ce:pages>
```

```
      </ce:include-item>
      <ce:include-item>
        <ce:pii>B0-323-01679-0/10003-4</ce:pii>
        <ce:title>Index</ce:title>
        <ce:pages>
          <ce:first-page>1021</ce:first-page>
          <ce:last-page>1099</ce:last-page>
        </ce:pages>
      </ce:include-item>
    </rearpart>
  </rear>
```

rearpart

Declaration

Model

```
<!ELEMENT  rearpart              ( ce:label?, ce:title?, ce:include-
                                   item+ )>
<!ATTLIST  rearpart
           id                    ID                #REQUIRED>
```

Description

The element rearpart is used to provide organizational divisions to material (usually appendices) that appears in the back matter of Elsevier Health Science books.

Usage

The rearpart element is usually used to give named or numbered divisions to material that appears within the back matter of Elsevier Health Science books, usually appendices. If the rear is not divided into parts, then there will be one rearpart. The element appears in the book's hub file.

It consists of an optional ce:label, optional ce:title, then one or more ce:include-items.

XML

```
<rearpart id="rearpart1">
  <ce:label>I</ce:label>
  <ce:title>Graphical Appendices</ce:title>
  <ce:include-item>
    <ce:pii>B0-323-01679-0/10027-7</ce:pii>
    <ce:title>Appendix A</ce:title>
    <ce:pages>
      <ce:first-page>1000</ce:first-page>
      <ce:last-page>1001</ce:last-page>
    </ce:pages>
  </ce:include-item>
  <ce:include-item>
    <ce:pii>B0-323-01679-0/10001-0</ce:pii>
    <ce:title>Appendix B</ce:title>
    <ce:pages>
      <ce:first-page>1002</ce:first-page>
      <ce:last-page>1003</ce:last-page>
    </ce:pages>
  </ce:include-item>
</rearpart>
<rearpart id="rearpart2">
  <ce:title>Tabular Appendices</ce:title>
  <ce:include-item>
    <ce:pii>B0-323-01679-0/10002-2</ce:pii>
    <ce:title>Appendix C</ce:title>
    <ce:pages>
      <ce:first-page>1004</ce:first-page>
```

```
      <ce:last-page>1005</ce:last-page>
    </ce:pages>
  </ce:include-item>
  <ce:include-item>
    <ce:pii>B0-323-01679-0/10003-4</ce:pii>
    <ce:title>Appendix D</ce:title>
    <ce:pages>
      <ce:first-page>1006</ce:first-page>
      <ce:last-page>1007</ce:last-page>
    </ce:pages>
  </ce:include-item>
</rearpart>
```

section

Declaration

Model

```
<!ELEMENT  section              ( ce:label, ce:title?, ce:author-group*,
                                  ( ce:include-item | ce:further-
                                  reading )+ )>
<!ATTLIST  section
           id                   ID                #REQUIRED>
```

Description

The element section is used to capture the hierarchy above chapter if/when they occur within Elsevier Health Science books.

Usage

A section is used in large books to organize ce:include-items (chapters or examinations) into groups. It is a child of body and volume and should not be confused with the common element ce:section that is used for subdivisions within items such as chapters.

A section can sometimes have its own introduction. These should be tagged as introduction and called into the hub file using ce:include-item.

The section element consists of a required ce:label, followed by an optional ce:title, an optional/repeatable ce:author-group, then one or more groupings of ce:include-items and/or ce:sections and/or ce:further-reading.

It has one required attribute, id.

XML

```
<section id="s1"><ce:label>Section 1</ce:label>
  <ce:title>Core Issues and Special Groups
    in Primary Care</ce:title>
  <ce:include-item>
    <ce:pii>B0-323-01679-0/10003-4</ce:pii>
    <ce:title>Core Issues in Primary Care</ce:title>
    <ce:pages>
      <ce:first-page>1</ce:first-page>
      <ce:last-page>8</ce:last-page>
    </ce:pages>
  </ce:include-item>
  <ce:include-item>
    <ce:pii>B0-323-01679-0/10027-7</ce:pii>
    <ce:title>Special Groups in Primary Care</ce:title>
    <ce:pages>
      <ce:first-page>9</ce:first-page>
      <ce:last-page>18</ce:last-page>
    </ce:pages>
  </ce:include-item>
  ...
</section>
```

Version history

In EHS Books DTD 5.1.0 the occurrence indicator for `ce:author-group` changed from `?` to `*`. Element `introduction` became a top-level element in EHS Books DTD 5.1.1. Since all top-level items are called into the book hub file with `ce:include-item`, `introduction` was removed. Element `ce:bibliography` was replaced by `ce:further-reading`.

stanza

Declaration

Model

```
<!ELEMENT  stanza                ( line+ )>
```

Description

The element stanza is used to capture a block of lines from a poem.

Usage

The content for stanza consists of required/repeatable lines.

XML

```
<stanza>
  <line>Roses are red</line>
  <line>violets are blue</line>
  ...
</stanza>
```

Version history

This element first appeared in EHS Books DTD 5.1.1.

See also

poem, line

subchapter

Declaration

Model

```
<!ELEMENT  subchapter          ( ce:label?, ce:title, ce:author-group*,
                                 ce:displayed-quote?, ce:nomenclature?,
                                 ce:intro?, ( ce:sections | subchapter
                                 | exam )+, ( ce:bibliography |
                                 ce:further-reading )+, ( ce:section |
                                 exam )* )>
<!ATTLIST  subchapter
           id                  ID              #REQUIRED>
```

Description

The element subchapter is used to capture large portions of hierarchy that occur within book chapters.

Usage

Quite frequently, book chapters are so large, that the subchapter element is needed to capture the complex hierarchy that occurs within them. Such divisions of chapters are often written by separate authors and will often contain their own references. For this DTD, the hierarchy below chapter that has its own author(s) and/or references will always be a subchapter. Hierarchy below chapter which does not have its own author(s) or references should be done as ce:sections.

Content for the subchapter element is similar to the structure of its parent, chapter, and consists of an optional ce:label, required ce:title, optional and repeatable ce:author-group, optional ce:displayed-quote and ce:nomenclature, optional introductory text in ce:intro, followed by required/repeatable ce:sectionss and/or nested subchapters and/or exams, followed by optional/repeatable ce:bibliography and/or ce:further-reading, followed by optional/repeatable ce:sections and/or exams.

It has one required attribute, id.

XML

```
<subchapter id="sc11">
  <ce:label>1.1</ce:label>
  <ce:title>Summary of Primary Care Today</ce:title>
  <ce:author-group>
    ...
  </ce:author-group>
  <ce:intro>
    <ce:para>Text of introductory paragraph...</ce:para>
  </ce:intro>
  <ce:section>
    <ce:title>Opening section title</ce:title>
    <ce:para>Text of first paragraph...</ce:para>
    <ce:para>Text of second paragraph...</ce:para>
  </ce:section>
  <ce:bibliography>
```

```
      ...
    </ce:bibliography>
  </subchapter>
```

Version history

In EHS Books DTD 5.1.1 the occurrence indicator for `ce:author-group` changed from `?` to `*`. Element `examination` was replaced by `exam` and the `docsubtype` attribute was added. Element `ce:section` was changed to `ce:sections` to allow subchapters to begin with regular paragraphs.

top

Declaration

Model

```
<!ELEMENT  top                    ( %titles;, ce:edition, ce:copyright-
                                    line, ce:editors?, ce:author-group*,
                                    ce:dedication*, ce:sections )>
```

Description

The element top is a placeholder element for book-level metadata elements.

Usage

The top element, child of the hub top-level element ehs-book, contains book-project level metadata for the book item. It also contains material intended to render the following non-item material: title page, copyright page, and dedication (if present).

Content for the top element consists of required ce:title, optional ce:subtitle, optional/repeatable combination of required ce:alt-title, optional ce:alt-subtitle, followed by required ce:edition, required ce:copyright-line, optional ce:editors optional/repeatable ce:author-group, optional/repeatable ce:dedication, and paragraphs and sections in ce:sections.

XML

```
<top>
  <ce:title>Mosby's Clinical Nursing</ce:title>
  <ce:edition>5th Edition</ce:edition>
  <ce:editors>
    <ce:author-group>...</ce:author-group>
    <ce:author-group>...</ce:author-group>
  </ce:editors>
  <ce:copyright-line>Copyright &copy; 2002
    Mosby, Inc.</ce:copyright-line>
  <ce:dedication>For my dad...</ce:dedication>
  <ce:sections>
    <ce:para>Previous editions copyrighted ...</ce:para>
    <ce:para>All rights reserved. No part of this publication
      may be reproduced...</ce:para>
  </ce:sections>
</top>
```

Version history

This element first appeared in EHS Books DTD 5.1.0, and ce:dedication was made repeatable EHS Books DTD 5.1.1.

volume

Declaration

Model

```
<!ELEMENT  volume                ( ce:label, ( part | section |
                                   ce:include-item )+ )>
<!ATTLIST  volume
           id                    ID                #REQUIRED>
```

Description

Unlike journals, where a volume is a collection of journal issues, volumes in Health Science books are used only due to limitations of binding. The element volume is used to capture material that appears between separately bound volumes of a multi-volume book if they occur within Elsevier Health Science books.

Usage

The volume element, a child of body, is used to delimit and capture the material that appears between each separately bound volume if/when they occur. It should be noted that only the ce:include-items and hierarchy above them (material within body) appears within volume. This differs from many hardcopy multi-volume books where front and back matter gets repeated in each separately bound volume.

The volume element consists of a required ce:label (often a Roman numeral), followed by required/repeatable parts and/or sections and/or ce:include-items.

It has one required attribute, id.

XML

```
<volume id="vI">
  <ce:label>Volume I</ce:label>
  <part id="pA"><ce:label>Part A</ce:label>
    <ce:title>GENERAL ISSUES AND APPROACH TO DISEASE
      IN PRIMARY CARE MEDICINE</title>
    <ce:include-item>
     <ce:pii>B0-323-01679-0/10027-7</ce:pii>
     <ce:title>Introduction</ce:title>
     <ce:pages>
        <ce:first-page>1</ce:first-page>
        <ce:last-page>8</ce:last-page>
     </ce:pages>
     </ce:include-item>
     <section id="s1"><ce:label>Section 1</ce:label>
       <ce:title>Core Issues and Special Groups
         in Primary Care</ce:title>
         <ce:include-item>
           <ce:pii>B0-323-01679-0/10003-4</ce:pii>
           <ce:title>Core Issues in Primary Care</ce:title>
           <ce:pages>
             <ce:first-page>9</ce:first-page>
             <ce:last-page>18</ce:last-page>
```

```
      </ce:pages>
            </ce:include-item>
            ...
        </section>
        ...
    </part>
    <part id="pB">
      <ce:label>Part B</ce:label>
      <ce:title>Title of Second Part</title>
      ...
    </part>
  </volume>
```

Chapter 6

The Common Element Pool

The common element pool (CEP), a phrase coined by Jabin White, contains elements that are common to all or some of the Elsevier DTDs. The common elements are subdivided in five namespaces:

- the "core" common element pool, whose elements are described in Chapter 7,
- the elements for structured bibliographic references, described in Chapter 8,
- the MathML elements, with Elsevier modifications, described in Chapter 9,
- the CALS table elements and the Extended CALS table elements, both described in Chapter 10.

This chapter (Chapter 6) contains general notions regarding the common element pool and the XML files that are structured according to the DTDs that use it. When individual elements are mentioned, their details can be found in the above-mentioned chapters.

Observe that the common element pool is used by several DTDs and contains elements shared by several of these DTDs, but not necessarily all. For instance, the JA DTD 5.0 does not contain elements such as `ce:isbn`, `ce:index`, `ce:index-flag` or `ce:intra-ref`. In some cases this is accomplished by parametrization using parameter entities.

Versions of the common element pool

This section describes the changes in the common element pool (CEP) since its first release as version 1.0.0. It also lists which DTDs make use of that particular version of the common element pool.

CEP 1.1.0

- The following elements were added: ce:isbn, ce:issn, ce:include-item, ce:pages, ce:first-page, ce:last-page, ce:copyright-line, ce:index-flag, ce:index-flag-term, ce:index-flag-see, ce:index-flag-see-also.
- The following parameter entities were added: %common-altimg.att;, %common-view.att;, %tbl.tgroup.att;.
- Parameter entity %titles; was renamed to %sb.titles; and a new parameter entity %titles; was introduced.
- Element ce:article-thread was replaced by ce:document-thread and element ce:refers-to-article was replaced by ce:refers-to-document.
- Element sb:comment's model was changed to allow for more content.
- Elements ce:glossary and ce:index now contain ce:intro in their models.
- Element ce:textbox-tail now contains ce:glossary and ce:biography in its model.
- Element ce:author now has an attribute author-id.
- Attribute xml:lang of ce:abstract now takes its values in %iso639;.
- The following elements now have an attribute view: ce:appendices, ce:bibliography, ce:further-reading, ce:glossary, ce:index, ce:biography, ce:exam-reference, ce:exam-questions, ce:exam-answers.
- The following elements now use %sb.titles; instead of %titles;: sb:contribution, sb:series, sb:book, sb:edited-book.

CEP 1.1.0 patch level 1

The journal article (JA) DTD 5.0.1 makes use of this version of the CEP.

- The model of element ce:e-component was repaired to allow for multiple nested ce:link and ce:e-component subelements instead of just one.

CEP 1.1.1

- Element ce:imprint was added.
- The notation declarations were extended with system identifiers.
- Value it was added to parameter entity %language;.
- The titles in element ce:include-item were made optional.

CEP 1.1.2

The EHS Books DTD 5.1.0 makes use of this version of the CEP.

- The following elements were added: ce:edition, ce:editors, ce:br.
- The following parameter entities were added: %copyright;, %external-file.att;, %tbl.colspec.att;, %tbl.row.att;.
- Parameter entity %size-info.att; was removed.

- Element ce:br was added to parameter entity %cell.data;.
- The following elements now have parameter entity %cross-ref; instead of element ce:cross-ref in their model: ce:collaboration, ce:author.
- The following elements now have parameter entity %copyright; instead of element ce:copyright in their model: ce:figure, ce:textbox, ce:e-component.
- The attribute list of ce:link was changed; it now consists of attributes id and locator.
- Element ce:caption now has an attribute list with attributes role and xml:lang.
- The models of elements ce:e-component, ce:alt-e-component, ce:figure and ce:textbox were changed to allow for more than one ce:caption.
- The model of parameter entity %tbl.titles; was changed to allow for more than one ce:caption; it now also contains parameter entity %copyright;.

CEP 1.1.3

The serial issue DTD 5.1.0 and the EHS Books DTD 5.1.1 make use of this version of the CEP.

- The following elements were added: ce:source, ce:reader-see.
- Parameter entity %see; was introduced.
- Element ce:index-entry now uses element ce:reader-see, and parameter entity %see; instead of element ce:see.
- Element ce:source was added to the models of elements ce:figure, ce:textbox, ce:e-component, and to the model of parameter entity %tbl.titles;.

Cross-references and the ce:label element

Cross-referencing with the one-to-many ce:cross-refs is complicated. The content of that element is popularly thought of as the text to click on — but there is only one text to click on while there are multiple destinations. An online rendering of the document will want to present the user with a list of possible destinations. In this section, we assume that that list is in the form of a drop-down menu with destinations; in practice applications have often chosen to present the destinations inline. (For more details about that, see ce:cross-refs.)

The element ce:cross-refs must have more than one destination. The element ce:cross-ref is used for a simple link. Each destination is a valid id in the document. Elements may have ids whether or not they are being referred to.

The structure of the document must guarantee that such a drop-down list of destinations can be created. A crucial role is played by the ce:label elements of the destinations, because their content is used to fabricate the drop-down list. (In fact, this is a simplification, because not all elements possess a ce:label, but it is a concept worth remembering; more precise details are found below.)

The elements ce:intra-refs and ce:inter-refs are different. These elements conform to the XLink standard, and contain the names of the destinations in their subelements ce:intra-ref-title and ce:inter-ref-title. In the *Output DTD* each ce:cross-ref can be converted to ce:intra-ref.

In order to make one-to-many links work it is wrong, and even impossible, to analyze the *content* of the ce:cross-refs. The application should rely on the XML structure. To this end, there is a collection of *rules* which are described in this section. Roughly, the rules subscribe to the "drop-down menu principle", which states that the destinations of the one-to-many link are the ce:label elements of the destination objects.

As an example, consider a document containing displayed equations Eqs. (2)–(14). The equations (4)–(13) are supplied on a graphic and they are shown in Scheme 6 (i.e., not captured in XML); the other equations are captured in XML. The following figure illustrates what happens if reference is made in the text to "Eqs. (2)–(14)".

```
see <ce:cross-refs refid="fd2 fd3 sch6 fd14">Eqs. (2)&ndash;(14)</cross-ref>
```

see Eqs. (2)–(14)

(2)	⟶	`<ce:formula id="fd2"><ce:label>(2)</ce:label>`
(3)	⟶	`<ce:formula id="fd3"><ce:label>(3)</ce:label>`
Scheme 6	⟶	`<ce:figure id="sch6"><ce:label>Scheme 6</ce:label>`
(14)	⟶	`<ce:formula id="fd14"><ce:label>(14)</ce:label>`

The "drop-down" menu, indicated above by the box underneath the "Eqs. (2)–(14)" (the text to click on), contains the ce:label elements of the four destinations, not all of which are displayed equations.

The rules for cross-referencing depend on the element. For each situation, a suggested "drop-down menu item" text is given below. In some cases, it is not even allowed to use ce:cross-refs to certain destinations.

Even though the XML validation checks the validity of the rules, rendering applications should be able to deal with exceptions and error situations. The `id` itself, for instance, could be used as a last resort.

No ce:cross-refs allowed

It is not allowed to use the one-to-many `ce:cross-refs` to the following destinations:

`ce:abstract`, `ce:affiliation`, `ce:anchor`, `ce:acknowledgment`, `ce:author`, `ce:biography`, `ce:collaboration`, `ce:def-term`, `ce:displayed-quote`, `ce:glossary-entry`, `ce:index-entry`, `ce:index-flag`, `ce:inter-ref`, `ce:inter-refs-text`, `ce:intra-ref`, `ce:intra-refs-text`, `ce:link`, `ce:note-para`, `ce:para`, `ce:section-title`, `ce:simple-para`, `ce:text`, `ce:textfn`, `ce:textref`.

It is, of course, allowed to use `ce:cross-ref`.

Mandatory ce:label

If the following elements are the target of a `ce:cross-refs`, they must have a `ce:label` element:

`ce:bib-reference` (*), `ce:correspondence` (*), `ce:e-component`, `ce:enunciation` (*), `ce:figure`, `ce:footnote` (*), `ce:list-item`, `ce:table`, `ce:table-footnote` (*), `ce:textbox`.

(*) Ensured by the DTD. The suggested "drop-down" text is the content of `ce:label`.

Mandatory ce:section-title

If the following elements are the target of a `ce:cross-refs` they must have a `ce:section-title` element:

`ce:bibliography` (*), `ce:bibliography-sec`, `ce:exam-answers`, `ce:exam-questions`, `ce:further-reading` (*), `ce:further-reading-sec` `ce:glossary` (*), `ce:glossary-sec`, `ce:index` (*), `ce:index-sec`.

(*) Ensured by the DTD. The suggested "drop-down" text is the content of the `ce:section-title`.

Mandatory ce:label or ce:section-title

If the following elements are the target of a `ce:cross-refs` (plural), they must have a `ce:label` and/or a `ce:section-title` element:

`ce:def-list`, `ce:list`, `ce:section`.

The suggested "drop-down" text is the concatenation of the `ce:label` and the `ce:section-title`.

Element *ce:formula*

If the `ce:formula` does not contain nested `ce:formula`e, then it must have a `ce:label` subelement if it is the target of `ce:cross-ref` or `ce:cross-refs`.

If the `ce:formula` has nested `ce:formula` subequations, then the following rules apply.

1. If the top `ce:formula` is the target of a cross-reference (`ce:cross-ref` or `ce:cross-refs`), either it must possess a `ce:label` element itself or all nested `ce:formula`e must possess one.

2. If a nested ce:formula is the target of a cross-reference, it must have a ce:label element.

3. A ce:label may not occur on both the top and the nested level.

The suggested "drop-down menu" item text belonging to an id contains the content of the ce:label or the ce:labels of the sublevel.

Elements *sb:reference*, *ce:other-ref*

If beside an sb:reference the parent ce:bib-reference does not contain any other sb:reference nor any ce:other-refs, then the sb:reference may not be the target of a cross-reference. (The reference must be made to the ce:bib-reference.)

If beside a ce:other-ref the parent ce:bib-reference does not contain any other ce:other-ref nor any sb:references, then the ce:other-ref may not be the target of a cross-reference. (The reference must be made to the ce:bib-reference.)

Any elements sb:reference and ce:other-ref that are the target of a cross-reference, must have a ce:label subelement.

All bibliographic references within ce:bibliography must be referred to from within the document (unless the XML file is of the HEAD-AND-TAIL variety). This means that for each ce:bib-reference at least one reference is made to either the id of the ce:bib-reference (and to zero or more child-sb:references and child-ce:other-refs) *or* to the ids of all child-sb:references and all child-ce:other-refs.

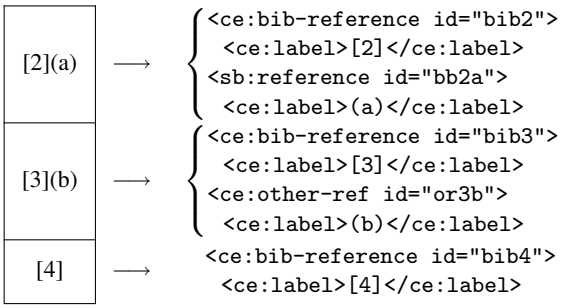
The elements sb:reference and ce:other-ref are "incomplete" cross-reference targets: their ce:label element is not meaningful for cross-referencing purposes without the ce:label element of their parent. This means that, in a one-to-many link with sb:reference and/or ce:other-ref elements, the "drop-down menu" (see earlier in this section) should show a combination of the ce:label elements of the cross-referenced sb:reference or ce:other-ref and that of the parent ce:bib-reference element.

XML

```
<ce:para>...
  Refs. <ce:cross-refs refid="bb2a or3b bib4">[2a,3b,4]</cross-refs>
...
<ce:bibliography>...
  <ce:bib-reference id="bib2"><ce:label>[2]</ce:label>
    <sb:reference id="bb2a"><ce:label>(a)</ce:label>...
    <sb:reference id="bb2b"><ce:label>(b)</ce:label>...
  </ce:bib-reference>
  <ce:bib-reference id="bib3"><ce:label>[3]</ce:label>
    <sb:reference id="bb3a"><ce:label>(a)</ce:label>...
    <other-ref id="or3b"><ce:label>(b)</ce:label>...
  </ce:bib-reference>
  <ce:bib-reference id="bib4"><ce:label>[4]</ce:label>...
  </ce:bib-reference>
```

Presentation

see Refs. [2a,3b,4]



Text effects

The text effect elements are listed in the parameter entity %text-effect; and include the elements ce:sup, ce:inf, ce:hsp, ce:vsp, the font-decoration elements ce:underline, ce:cross-out, as well as the five font-changing elements. The element ce:br is also considered to be a text effect element.

The content of the font-changing and font-decoration elements and the text effects ce:sup and ce:inf is described by the parameter entity %richstring.data;. They may contain text, but no footnotes, anchors, cross-references and MathML formulae.

Font-changing and font-decoration elements

The opening tag of a font-changing or font-decoration element changes the properties of the font. The font-decoration elements and most font-changing elements, the font-*style* changing elements, change only one aspect of the current font, but other font-changing elements, the font-*family* changing elements, replace the current font. The closing tag undoes the changes and restores the font properties to the values that were in effect at the opening tag.

The font-changing elements are listed in the parameter entity %font-change;. Their meaning is listed in Table 4.

Table 4: The font-changing and font-decoration elements.

Element	Sample input	Sample output
Font-decoration elements		
ce:underline	<ce:underline>any</ce:underline>	any
ce:cross-out	<ce:cross-out>any</ce:cross-out>	~~any~~
Font-style changing elements		
ce:italic	<ce:italic>any</ce:italic>	*any*
ce:bold	<ce:bold>P</ce:bold>(x)	**P**(x)
ce:small-caps	<ce:small-caps>Goldfarb</ce:small-caps>	GOLDFARB
Font-family changing elements		
ce:monospace	<ce:monospace>var</ce:monospace>	var
ce:sans-serif	<ce:sans-serif>A</ce:sans-serif>	A

The default font, i.e. the font that is used when no font-changing element is open, is defined by the journal style. In print that is the journal's typesetting instructions. There are no font-changing elements to set the font to the default font. One can only revert to the default font by closing all font-changing elements.

Combinations of font-changing and font-decoration elements

For all types of font-changing and font-decoration elements that can be combined with each other, the order in which they are opened is irrelevant.

Font-family changing elements ce:sans-serif, ce:monospace. The font-family changing elements ce:sans-serif and ce:monospace are mutally exclusive. If these elements

are nested, the outer font-family changing element loses its effect until the inner font-family changing element is closed.

Font-style changing elements ce:italic, ce:bold and ce:small-caps and font-decoration elements ce:cross-out, ce:underline. The font-style changing elements ce:italic, ce:bold and ce:small-caps and the font-decoration elements ce:cross-out and ce:underline can be combined with each other and with each of the font-family changing elements. The font-style changing elements have the effect of changing the style of the current font. The font-decoration elements have the effect of adding underlining or cross-out to the current font.

Text effect element ce:br. Text element ce:br can only be used in cells.

Copy edit considerations

Care must be taken that font-changing elements are switched off to avoid unwanted effects. For instance, compare the following two examples where a formula is structured outside MathML (which is to be avoided):

XML

```
<ce:italic>f(x<ce:sup>2</ce:sup>)</ce:italic>
```

Presentation

$f(x^2)$

Explanation

Observe that the parentheses and the superior 2 are italicized.

XML

```
<ce:italic>f</ce:italic>(<ce:italic>x</ce:italic><ce:sup>2</ce:sup>)
```

Presentation

$f(x^2)$

Font-changing and font-decoration elements cannot contain anchors and cross-references. When such an element occurs in a text with a font change or decoration, the font-changing or font-decoration elements must be closed before the element, opened at the start of the element's content and closed again at its end, and opened again after the element.

XML

```
<ce:italic>See
</ce:italic><ce:cross-ref refid="bib2"><ce:italic>Ref.
[2]</ce:italic></ce:cross-ref><ce:italic> for
an important restriction.</ce:italic>
```

Presentation

See Ref. [2] for an important restriction.

Font-changing elements should not be used to introduce a style. For instance, if titles are to be displayed in caps and small caps, this should be handled by the document style and not by the use of the element ce:small-caps.

Rendering notes

Rendering applications should be aware that certain glyphs may change appearance when a font-changing element is applied (e.g. a sans-serif "jnodot").

Version history

Prior to DTD 5.0, elements `ce:italic`, `ce:bold`, `ce:small-caps`, `ce:monospace` and `ce:sans-serif` were called `it`, `b`, `scp`, `ty` and `ssf`, respectively.

As open-face, German (fraktur) and script characters should only appear in math mode, the elements `of`, `ge` and `sc` have no counterparts in DTD 5.0. See the chapter on MathML (Chapter 9, p. 405) for more information.

The elements `ce:cross-out` and `ce:underline` were introduced in DTD 5.0 by popular demand.

Parameter entities

Here we list the parameter entities that are used in the DTD. Parameter entities are used to define common parts of the DTD, i.e., parts that are (or could be) used several times. We distinguish three groups of parameter entities, according to their role in the DTD.

Data entities

Data entities contain elements that appear within the text; each data entity contains a group of elements that play a similar role in the structuring of an article, and that therefore appear as alternatives of each other.

```
<!ENTITY % font-change     "ce:bold|ce:italic|ce:monospace|ce:sans-serif|
                            ce:small-caps">

<!ENTITY % text-effect     "%font-change;|ce:sup|ce:inf|ce:underline|
                            ce:cross-out|ce:hsp|ce:vsp">

<!ENTITY % lists           "ce:def-list|ce:list">

<!ENTITY % display         "ce:display|ce:displayed-quote|ce:enunciation">

<!ENTITY % string.data     "#PCDATA %local.string.data;">

<!ENTITY % richstring.data "#PCDATA|ce:glyph|%text-effect;|
                            ce:inline-figure %local.richstring.data;">

<!ENTITY % text.data       "%richstring.data;|mml:math %local.text.data;">

<!ENTITY % textfn.data     "%text.data;|ce:footnote|
                            %cross-ref-s; %local.textfn.data;">

<!ENTITY % textref.data    "%text.data;|%cross-ref-s;|
                            %inter-ref-s; %local.textref.data;">

<!ENTITY % nondisplay.data "%textref.data;|ce:footnote|
                            ce:anchor %local.nondisplay.data;">

<!ENTITY % note.data       "%textref.data;|%display;|%lists;|
                            ce:anchor %local.note.data;">

<!ENTITY % cell.data       "%textref.data;|%display;|%lists;|%cell-borders;|
                            tb:alignmark|ce:br %local.cell.data;">

<!ENTITY % spar.data       "%textref.data;|%display;|%lists;|ce:footnote|
                            ce:anchor %local.spar.data;">

<!ENTITY % par.data        "%textref.data;|ce:float-anchor|%display;|
                            %lists;|ce:footnote|ce:anchor %local.par.data;">
```

The “local” entities, e.g. `%local.par.data`, are all declared to be empty in the common element pool. However, they can be used by DTDs to add elements to the content of the data entities. For example, in books it is useful to add information to the text that can later be used to generate an index. This can be done with `ce:index-flag`. The EHS Books DTD therefore declares the following two “local” entities:

```
<!ENTITY % local.spar.data "| ce:index-flag">
<!ENTITY % local.par.data  "| ce:index-flag">
```

The effect is that `ce:index-flag` can appear in any element that has `%par.data;` or `%spar.data;` in its content model.

Table 5: Content model of data elements

Parameter entity	Elements with that data model
%string.data;	ce:copyright, ce:doi, ce:edition, ce:indexed-name, ce:initials, ce:isbn, ce:issn, ce:pii, sb:isbn, sb:issn
%richstring.data;	ce:anchor, ce:bold, ce:copyright-line, ce:cross-out, ce:degrees, ce:first-page, ce:given-name, ce:imprint, ce:inf, sb:issue-nr, ce:italic, ce:last-page, ce:monospace, ce:ranking, ce:roles, ce:sans-serif, ce:small-caps, ce:suffix, ce:sup, ce:underline, sb:date, sb:edition, sb:first-page, sb:issue-nr, sb:last-page, sb:location, sb:name, sb:volume-nr
%text.data;	ce:collab-aff, ce:compound-formula, ce:compound-name, ce:cross-ref, ce:cross-refs, ce:def-term, ce:e-address, ce:glossary-def, ce:index-flag-term, ce:index-flag-see, ce:index-flag-see-also, ce:inter-ref, ce:inter-ref-title, ce:inter-refs-text, ce:intra-ref, ce:intra-ref-title, ce:intra-refs-text, ce:label, ce:miscellaneous, ce:salutation, ce:see, ce:see-also, ce:surname, ce:text, sb:collaboration, sb:conference, sb:maintitle, sb:subtitle
%textfn.data;	ce:alt-title, ce:alt-subtitle, ce:chem, ce:dedication, ce:presented, ce:subtitle, ce:textfn, ce:title
%textref.data;	ce:glossary-heading, ce:index-heading, ce:textref
%nondisplay.data;	ce:section-title, sb:comment, mml:mtext
%note.data;	ce:note-para
%cell.data;	entry
%spar.data;	ce:simple-para
%par.data;	ce:para

The above .data entities were introduced to make the DTD more restrictive. Table 5 shows which elements in the common element pool have which parameter entity as content model.

The general-purpose elements ce:text, ce:textfn and ce:textref use these data entities also and are used as containers in order to avoid mixed content.

To find out which elements can be used in e.g. %textfn.data; the parameter entities in its model need to be expanded. Parameter entities in an expanded model also need to be expanded, etc. If we take the "local" entities to be empty, then it becomes clear that %textfn.data; can contain everything %text.data; can contain as well as the elements ce:footnote, ce:cross-ref, ce:cross-refs, ce:inter-ref and ce:inter-refs. Entity %textref.data; can contain the same elements as %textfn.data; except for ce:footnote; additionally elements ce:inter-ref and ce:inter-refs are allowed.

The elements ce:note-para and ce:simple-para are variants of the paragraph element in which fewer structures are allowed. The following elements consist of simple paragraphs: ce:abstract-sec, ce:biography, ce:caption, ce:legend, ce:note (in the bibliography), ce:displayed-quote. The following elements consist of note paragraphs: ce:article-footnote, ce:footnote, ce:table-footnote.

Content model entities

Content model entities contain pieces of content model that are shared by several elements.

```
<!ENTITY % copyright       "ce:copyright">

<!ENTITY % name            "( ( ce:given-name, ce:surname ) | ( ce:surname,
                            ce:given-name? ) ), ce:suffix?">

<!ENTITY % parsec          "( ce:para | ce:section )+">

<!ENTITY % titles          "( ce:title, ce:subtitle?, ( ce:alt-title,
                            ce:alt-subtitle? )* )">

<!ENTITY % sb.titles       "( ( sb:title, sb:translated-title? ) |
                            sb:translated-title )">

<!ENTITY % cross-ref-s     "%cross-ref;|%cross-refs;">

<!ENTITY % inter-ref-s     "ce:inter-ref|ce:inter-refs">

<!ENTITY % cell-borders    "tb:top-border|tb:left-border|tb:bottom-border|
                            tb:right-border">
```

The following parameter entities are overruled by other DTDs. The local declarations are described in the documentation of the other DTDs. Below are the default values.

```
<!ENTITY % see             "ce:see">

<!ENTITY % cross-ref       "ce:cross-ref|ce:intra-ref">

<!ENTITY % cross-refs      "ce:cross-refs|ce:intra-refs">
```

Attribute type entities

Attribute type entities contain sets of possible values for attributes.

```
<!ENTITY % abstract-class  "(author|editor|graphical|teaser)">

<!ENTITY % copyright-type  "(full-transfer|limited-transfer|no-transfer|
                            unknown|us-gov|crown|society|other|joint)">

<!ENTITY % e-address-type  "(email|url)">

<!ENTITY % hline           "(bar|tcub|bcub|tsqb|bsqb|circ|tilde|larr|rarr|
                            harr|lharu|rharu|tpar|bpar)">

<!ENTITY % language        "(de|en|es|fr|it|pt|ru)">

<!ENTITY % language-type   "(en|non-en|iso|unknown)">

<!ENTITY % loc             "(pre|post)">

<!ENTITY % style           "(s|d|t|da|dot|b|bl|n)">

<!ENTITY % view            "(compact|standard|extended|compact-standard|
                            standard-extended|all)">

<!ENTITY % vline           "(lpar|rpar|lsqb|rsqb|lcub|rcub|lang|rang|vb|sol|
                            bsol|lceil|rceil|lfloor|rfloor|dharr|uharr|darr|
                            uarr|varr)">
```

In addition there are the attribute type entities `%iso639;` and `%glyph-names;`.

Entity `%iso639;` contains the ISO 639 list of language codes. These codes are described in a separate section (p. 141).

Entity `%glyph-names;` contains the names of additional allowed glyphs (not present as Unicode characters). They are described in the section Elsevier's additional glyphs (p. 25). See also the description of `ce:glyph`.

```
<!ENTITY % iso639-cur      "aa|ab|af|am|ar|as|ay|az|ba|be|bg|bh|bi|bn|bo|br|
                            ca|co|cs|cy|da|de|dz|el|en|eo|es|et|eu|fa|fi|fj|
                            fo|fr|fy|ga|gd|gl|gn|gu|ha|he|hi|hr|hu|hy|ia|id|
                            ie|ik|is|it|ja|jw|ka|kk|kl|km|kn|ko|ks|ku|ky|la|
                            ln|lo|lt|lv|mg|mi|mk|ml|mn|mo|mr|ms|mt|my|na|ne|
                            nl|no|oc|om|or|pa|pl|ps|pt|qu|rm|rn|ro|ru|rw|sa|
                            sd|sg|si|sk|sl|sm|sn|so|sq|sr|ss|st|su|sv|sw|ta|
                            te|tg|th|ti|tk|tl|tn|to|tr|ts|tt|tw|uk|ur|uz|vi|
                            vo|wo|xh|yi|yo|zh|zu">

<!ENTITY % iso639-obs      "">

<!ENTITY % iso639          "(%iso639-cur; %iso639-obs;)">

<!ENTITY % glyph-names     "'(S|bigdot|btmlig|camb|ctl|dbnd|dbnd6|dcurt|
                            dlcorn|drcorn|ggrave|hbar|heng|herma|hris|hriss|
                            hrttrh|ht|jnodot|lbd2bd|lbd2td|lbond2|lbond3|
                            lozf|lozfl|lozfr|lris|lriss|ncurt|nsmid|nspar|
                            pSlash|pdbdtd|pdbond|pent|phktp|ptbdbd|ptbdtd|
                            qbnd|qbnd6|rad|rbd2bd|rbd2td|rbond2|rbond3|
                            refhrl|resmck|risfla|risfls|sbnd|sbw|smid|spar|
                            sqfb|sqfne|sqfsw|sqft|tbnd|tbnd6|tcurt|trisla|
                            trnomeg)'">
```

ISO 639 list of language codes

This section gives a description of the two-letter languages codes from International Standard ISO 639. See `ce:abstract` and `sb:contribution`, whose `xml:lang` attributes take their values in this list (`%iso639;`). Other elements use the subset `%language;`.

language	Language	language	Language	language	Language
ab	Abkhazian	is	Icelandic	ro	Romanian
aa	Afar	id	Indonesian	rn	Rundi
af	Afrikaans	ia	Interlingua	ru	Russian
sq	Albanian	ie	Interlingue	sm	Samoan
am	Amharic	ik	Inupiaq	sg	Sango
ar	Arabic	ga	Irish Gaelic	sa	Sanskrit
hy	Armenian	it	Italian	gd	Scots Gaelic
as	Assamese	ja	Japanese	sr	Serbian
ay	Aymara	jw	Javanese	sn	Shona
az	Azerbaijani	kl	Kalaallisut	sd	Sindhi
ba	Bashkir	kn	Kannada	si	Sinhalese
eu	Basque	ks	Kashmiri	sk	Slovak
bn	Bengali	kk	Kazakh	sl	Slovenian
bh	Bihari	km	Khmer	so	Somali
bi	Bislama	rw	Kinyarwanda	st	Southern Sotho
br	Breton	ky	Kirghiz	es	Spanish
bg	Bulgarian	ko	Korean	su	Sudanese
my	Burmese	ku	Kurdish	sw	Swahili
be	Belarusian	lo	Lao	ss	Swati
ca	Catalan	la	Latin	sv	Swedish
zh	Chinese	lv	Latvian	tl	Tagalog
co	Corsican	ln	Lingala	tg	Tajik
hr	Croatian	lt	Lithuanian	ta	Tamil
cs	Czech	mk	Macedonian	tt	Tatar
da	Danish	mg	Malagasy	te	Telugu
nl	Dutch	ms	Malay	th	Thai
dz	Dzongkha	ml	Malayalam	bo	Tibetan
en	English	mt	Maltese	ti	Tigrinya
eo	Esperanto	mi	Maori	to	Tonga
et	Estonian	mr	Marathi	ts	Tsonga
fo	Faroese	mo	Moldavian	tn	Tswana
fj	Fijian	mn	Mongolian	tr	Turkish
fi	Finnish	na	Nauru	tk	Turkmen
fr	French	ne	Nepali	tw	Twi
fy	Frisian	no	Norwegian	uk	Ukrainian
gl	Gallegan	oc	Occitan	ur	Urdu
ka	Georgian	or	Oriya	uz	Uzbek
de	German	om	Oromo	vi	Vietnamese
el	Greek	pa	Panjabi	vo	Volapük
gn	Guarani	fa	Persian	cy	Welsh
gu	Gujarati	pl	Polish	wo	Wolof
ha	Hausa	pt	Portuguese	xh	Xhosa
he	Hebrew	ps	Pushto	yi	Yiddish
hi	Hindi	qu	Quechua	yo	Yoruba
hu	Hungarian	rm	Rhaeto-Romance	zu	Zulu

Views

The need to distinguish several product types and to support these from a single source XML file, has led to the introduction of the `view` attribute. The following common elements possess a `view` attribute: `ce:appendices`, `ce:bibliography`, `ce:biography`, `ce:exam-answers`, `ce:exam-questions`, `ce:exam-reference`, `ce:further-reading`, `ce:glossary`, `ce:include-item`, `ce:index`, `ce:para`, `ce:section` and `ce:simple-para`. Some elements in the DTDs also possess this attribute, e.g. `body` in the JA DTD 5.0.

The values that this attribute can take are listed in `%view;`, they are: `compact`, `standard`, `extended`, `compact-standard`, `standard-extended` and `all` (default, meaning all three views). If no view attribute is specified, this is the same as `all`.

In this model, an application decides it is either "compact", "standard" or "extended". An application that has, say, extended views displays all elements whose `view` attribute has values `all`, `standard-extended` and `extended` and ignores all elements with other values.

Application	Render only elements with views
compact	`all`, `compact`, `compact-standard`
standard	`all`, `standard`, `compact-standard`, `standard-extended`
extended	`all`, `extended`, `standard-extended`

Online applications such as ScienceDirect® are typically "extended" applications, while the printed version typically is "standard". Palmtop devices and such could be "compact".

Online versus extended

While it is useful to visualize "extended" as the online product and standard as the print product, this is not necessarily the case. It should be perfectly possible to print an extended product — or, create a web PDF file for it. There are numerous cases of products where a PDF file appears online of a full journal article, while the printed issue only contains the abstract.

Views should not be confused with electronic components. Electronic components are captured with `ce:e-component`. These are external files that in principle could contain anything. It is mistake to think that these can only appear in "extended" views; indeed, they can appear in compact, standard and extended views. On paper, this means showing the `ce:alt-e-component` subelement, only in electronic products one can, of course, benefit from the real electronic component. Note that a web PDF file, although an "electronic file", is not suitable for e-components, yet, as explained above, it may well contain the extended view.

Floats (figures, tables, textboxes, electronic components) that only appear within some views, say only in extended views, are contained within `ce:floats` along with the other floats. Their `ce:float-anchor` can be found within an extended section or paragraph.

Hence, e-component vs. conventional and standard view vs. extended view are two independent things, indeed all four combinations make sense, including:

- A figure within an extended view. This is a figure that satisfies all the CAP specifications for artwork regarding file types and resolution.

- An e-component within *any* view. This can, in principle, be any external component varying: audio, video, spreadsheets, source documents. Still images can also be e-components: this signals that the artwork has not undergone the stringent CAP validation. In media that cannot handle the e-component, `ce:alt-e-component` is used.

Views within views

Applications choose to be exactly one of "compact", "standard", or "extended". If an application encounters an element with a view that is not meant for it, it should skip the element completely, irrespective of what it contains.

For instance, if an "extended" application encounters a section with view `compact-standard`, it ignores that whole section completely. If, within that section there happen to be paragraphs or sections with views `extended`, then these will *not* display in the extended application at all, and also the paragraphs with the default view `all` will not be picked up by the extended application. Consequently, views within views only make sense if they narrow down the view.

Example 1.

The first example deals with a collection of electronic components that are added to the online version. The printed version only contains a link to the online version.

XML

```
<ce:appendices>
  <ce:section view="compact-standard">
    <ce:label>Appendix A</ce:label>
    <ce:section-title>Background data</ce:section-title>
    <ce:para>The online version of this article contains additional
      background data in the form of Microsoft Excel
      spreadsheets and in additional maps. Please visit
      <ce:inter-ref xlink:href="doi:10.1016/j.cagd.2004.01.003">
      http://dx.doi.org/10.1016/j.cagd.2004.01.003</ce:inter-ref>.
    </ce:para>
  </ce:section>
  <ce:section view="extended">
    <ce:label>Appendix A</ce:label>
    <ce:section-title>Background data</ce:section-title>
    <ce:para>The results of the experiments of the previous sections
      are included as Microsoft Excel spreadsheets. The first
      spreadsheet, <ce:cross-ref refid="ec1">Spreadsheet
      1</ce:cross-ref><ce:float-anchor refid="ec1"/> is ordered
      by country, while <ce:cross-refs refid="ec2 ec3">Spreadsheets
      2 and 3</ce:cross-refs><ce:float-anchor refid="ec2"/>
      <ce:float-anchor refid="ec3"/> are ordered by population.
    </ce:para>
    <ce:para>Furthermore, the data is displayed in thirty-seven
      maps of the largest world cities, <ce:cross-refs refid="map1
      map2 ... map37">Maps I&ndash;XXXVII</ce:cross-refs>
      <ce:float-anchor refid="map1"/>...
      <ce:float-anchor refid="map37"/>.
  </ce:section>
```

Explanation

The printed product would display the first `ce:section`, explaining that the online version contains additional background data. The second `ce:section` would be displayed by

ScienceDirect®.
The float anchors refer to electronic components within `ce:floats`.

Example 2

In some publications, it is common to publish the appendices only online. The printed product only contains the main body of the text. This is achieved using `ce:appendices` with an extended view.

Similarly, there are journals for which some less important articles only appear full text online; the printed product merely contains the head of the article. This is achieved by furnishing `body` and `tail` with an extended view only.

Cross-referencing to the right view

It is only allowed to cross-reference to a destination that is contained within equal or wider view than where the cross-reference appears, so as to avoid linking to a destination that does not exist in a certain rendering.

Suppose that there are two sections, one compact-standard and one extended, created in order to obtain two parallel views of the section. Suppose both sections contain a version of the same enunciation Theorem 1. Then the only way to cross-reference to Theorem 1 from within a portion of the text is to also create two parallel paragraphs with different views, each containing a `ce:cross-ref` to the appropriate version of the enunciation.

Chapter 7
The Elements of the CEP

This chapter contains an alphabetic listing of the elements in the "core" common element pool; i.e., it excludes the elements for structuring bibliographic references, MathML and Extended CALS tables.

ce:abstract

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:abstract          ( ce:section-title?, ce:abstract-sec+,
                                  ce:figure? )>
<!ATTLIST  ce:abstract
           id                   ID                 #IMPLIED
           class                %abstract-class;   "author"
           xml:lang             %iso639;           #IMPLIED>
```

Description

The element ce:abstract is used to capture abstracts in a variety of forms.

Usage

The word “abstract” has various different meanings in publishing. For instance, a very short article, often in conference proceedings, is called an abstract, and so are short summaries of articles or chapters appearing in the frontmatter. The element ce:abstract is used to capture abstracts in the latter sense. It consists of an optional title, one or more abstract-sections, and an optional figure. It has three attributes, id (required), class and xml:lang. For each combination of class and xml:lang, only one abstract may exist in the document.

The language of the abstract, when different from the language of the article, should be specified in the xml:lang attribute. It takes its values in the ISO 639 set of entities (p. 141).

The type of abstract is specified by the class attribute, which takes its values in %abstract-class; containing the following values.

- author (default) is used for abstracts supplied by the author.
- editor is used for abstracts supplied by the editor.
- graphical is used for graphical abstracts. Only these abstracts may contain the optional ce:figure.
- teaser is used for short “teaser” abstracts that attract the attention of the reader. Usually, the teaser abstracts are not found in the rendering of the item itself; instead, they are commonly used to create an extended table of contents of an issue (i.e., a table of contents interspersed with teaser abstracts).

XML

```
<ce:abstract>
  <ce:section-title>Abstract</ce:section-title>
  <ce:abstract-sec>
    <ce:simple-para>In this document, we introduce the new
      XML DTD.</ce:simple-para>
  </ce:abstract-sec>
</ce:abstract>
<ce:abstract xml:lang="fr">
  <ce:section-title>Résumé</ce:section-title>
  <ce:abstract-sec>
    <ce:simple-para>Dans ce document, on présente le nouveau
```

```
        DTD XML.</ce:simple-para>
    </ce:abstract-sec>
</ce:abstract>
```

Abstract sections may have a section title, and each `ce:abstract-sec` except the first must have a section title.

Rendering notes

Abstracts, especially of the non-author classes, are not necessarily presented in the article. It is not uncommon for abstracts to be presented in an extended table of contents.

Copyright lines appended to the abstract are implied by the `ce:copyright` element.

Version history

Prior to DTD 5.0, this element was called `abs`. Then the heading was generated automatically, it did not contain an `id` attribute, and the `class` attribute had no default value. As from CEP 1.1.0 the `xml:lang` attribute takes its values in `%iso639;`.

ce:abstract-sec

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:abstract-sec       ( ce:section-title?, ce:simple-para+ )>
```

Description

The element ce:abstract-sec contains a section within the abstract.

Usage

See ce:abstract.

ce:acknowledgment

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:acknowledgment     ( ce:section-title?, ce:para+ )>
<!ATTLIST  ce:acknowledgment
           id                    ID                #IMPLIED>
```

Description

The element ce:acknowledgment is used to capture the acknowledgment section within the body.

Usage

The acknowledgment section has an optional section title and consists of one or more paragraphs.

XML

```
<ce:acknowledgment>
  <ce:section-title>Acknowledgment</ce:section-title>
  <ce:para>The authors thank Jeroen Hogendorp,
    Chris Sturhann and Michael Ward
    for their helpful comments.</ce:para>
</ce:acknowledgment>
```

Version history

Prior to DTD 5.0, this element was called ack. Then it did not have a ce:section-title.

ce:affiliation

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:affiliation        ( ce:label?, ce:textfn )>
<!ATTLIST  ce:affiliation
           id                    ID               #IMPLIED
           role                  CDATA            #IMPLIED>
```

Description

Affiliations are captured using the element ce:affiliation.

Usage

An author group (ce:author-group) may contain any number of affiliations.

It is allowed to have affiliations with no associated authors or collaborations. Such affiliations cannot have an id, because each affiliation with an id must be referred to. An affiliation with an id must have a ce:label element.

The ce:label element does not contain presentational elements, only the label of the affiliation. Linking of affiliations to authors is described under the ce:author-group element.

The actual content of the affiliation is found within the ce:textfn container subelement.

XML

```
<ce:affiliation id="aff1">
  <ce:label>a</ce:label>
  <ce:textfn>Elsevier, Radarweg 29,
    1043 NX Amsterdam, The Netherlands</ce:textfn>
</ce:affiliation>
<ce:affiliation id="aff2">
  <ce:label>b</ce:label>
  <ce:textfn>Elsevier Inc., P.O. Box 945, New York,
    NY 10159-0945, USA</ce:textfn>
</ce:affiliation>
<ce:affiliation id="aff3">
  <ce:label>c</ce:label>
  <ce:textfn>Elsevier Ltd, The Boulevard, Langford Lane,
    Kidlington, Oxford OX5 1GB, UK</ce:textfn>
</ce:affiliation>
```

See also

ce:author-group

ce:alt-e-component

Declaration

Model (CEPs 1.1.0, 1.1.1)

```
<!ELEMENT  ce:alt-e-component    ( ce:link | ( ce:caption, ce:link? ) )>
```

Model (CEPs 1.1.2, 1.1.3)

```
<!ELEMENT  ce:alt-e-component    ( ce:link | ( ce:caption+, ce:link? ) )>
```

Description

The element ce:alt-e-component contains an alternative to an electronic component, e.g. a frame of a movie.

Usage

See ce:e-component.

Version history

As from CEP 1.1.2 the caption is repeatable.

ce:alt-subtitle

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:alt-subtitle       ( %textfn.data; )*>
<!ATTLIST  ce:alt-subtitle
           xml:lang              %language;        #REQUIRED>
```

Description

The element ce:alt-subtitle contains the subtitle of an article, chapter, or other item.

Usage

The element ce:alt-subtitle is used to capture the subtitle of an item, e.g. a journal article or book chapter, in an alternative language. The following languages may be specified: English (en), French (fr), German (de), Italian (it), Portuguese (pt), Russian (ru), and Spanish (es).

For more information about subtitles, see ce:subtitle.

XML

```
<ce:title>The Common Element Pool</ce:title>
<ce:subtitle>A modular approach to DTD design</ce:subtitle>
<ce:alt-title xml:lang="de">Der Pool der gemeinsamen
   Elemente</ce:alt-title>
<ce:alt-subtitle xml:lang="de">Eine modulare Weise des DTD
  Entwurfs</ce:alt-subtitle>
```

Version history

In DTDs prior to DTD 5.0, the element sbt fulfilled the function of both ce:subtitle and ce:alt-subtitle; the language was specified in the parent atl element. In CEP 1.1.1 the value it was added to parameter entity %language;.

See also

ce:alt-title, ce:subtitle, ce:title

ce:alt-title

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:alt-title          ( %textfn.data; )*>
<!ATTLIST  ce:alt-title
           xml:lang              %language;        #REQUIRED>
```

Description

The element ce:alt-title contains a title of an article, chapter, or other item, in an alternative language.

Usage

The element ce:alt-title is used to capture a title in a language different from the language of the item; it occurs one or more times within its parent element. It has one mandatory attribute xml:lang. The following languages may be specified: English (en), French (fr), German (de), Italian (it), Portuguese (pt), Russian (ru), and Spanish (es).

XML

```
<ce:title>The Common Element Pool (CEP)</ce:title>
<ce:alt-title xml:lang="fr">Le Dépôt des Eléments Communs
  (DEC)</ce:alt-title>
```

Version history

In DTDs prior to DTD 5.0, the element atl fulfilled the function of both ce:title and ce:alt-title; moreover, it contained the subtitle within it. In CEP 1.1.1 the value it was added to parameter entity %language;.

See also

ce:alt-subtitle, ce:subtitle, ce:title

ce:anchor

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:anchor            ( %richstring.data; )*>
<!ATTLIST  ce:anchor
           id                   ID                #REQUIRED
           role                 CDATA             #IMPLIED>
```

Description

The element ce:anchor is a piece of text that can be the target of a cross-reference.

Usage

An anchor is a (possibly empty) piece of text that can be the target of a cross-reference. It is similar to <A NAME="..."> in HTML.

Anchor is special because it may have empty content, and it is an element referred without possessing a ce:label element.

XML

```
<ce:anchor id="anc1">CH<ce:inf>3</ce:inf>C<ce:glyph
  name="tbnd6"/>N (<ce:bold>23</ce:bold>)</ce:anchor>
...
a solution containing 20mmol of
<ce:cross-ref refid="anc1"><ce:bold>23</ce:bold></ce:cross-ref>
```

The attribute role can be used to attach a certain meaning to the anchor. Currently no roles have been defined.

Light reading

ce:anchor may not be used in CONTENTS-ENTRY-ONLY, HEAD-ONLY or HEAD-AND-TAIL files.

ce:appendices

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:appendices        ( ce:section+ )>
<!ATTLIST  ce:appendices
           view                 %view;           'all'>
```

Description

The element ce:appendices contains the appendix matter (consisting of one or more appendices, each a ce:section) of a document.

XML

```
<ce:appendices>
  <ce:section id="app1">
    <ce:label>Appendix A</ce:label>
    <ce:section-title>Answers to the exercises</ce:section-title>
    ...
  </ce:section>
  <ce:section id="app2">
    <ce:label>Appendix B</ce:label>
    <ce:section-title>Basic skills</ce:section-title>
    ...
  </ce:section>
</ce:appendices>
```

Presentation

Appendix A. Answers to the exercises

...

Appendix B. Basic skills

...

XML

```
<ce:appendices>
  <ce:section id="app1e" view="extended">
    <ce:label>Appendix A</ce:label>
    <ce:section-title>Supplementary data</ce:section-title>
    <ce:para>Supplementary data associated with this
      article ...
  </ce:section>
  <ce:section id="app1cs" view="compact-standard">
    <ce:label>Appendix A</ce:label>
    <ce:section-title>Supplementary data</ce:section-title>
    <ce:para>This appendix contains background data of
      our experiment in the form of four spreadsheets.
      ...
  </ce:section>
</ce:appendices>
```

Presentation

Appendix A. Supplementary data

Supplementary data associated with this article can be found in the online version, at doi:10.1016/j.endend.2003.07.001.

Explanation

The above presentation is the compact-standard version.

Version history

The `view` attribute was added in CEP 1.1.0.

See also

`ce:section`

ce:article-footnote

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:article-footnote   ( ce:label?, ce:note-para+ )>
```

Description

The element ce:article-footnote is used to capture "article footnotes". These are footnotes that are commonly displayed at the title, and that contain information relevant to the whole article. Important information that must be presented with any rendering of the article, such as acknowledgment of grants, is usually the content of the ce:article-footnote.

Usage

Each article footnote is a separate ce:article-footnote which consists of the footnote symbol in ce:label and a sequence of note paragraphs, ce:note-para.

XML

```
<ce:article-footnote>
  <ce:label>&z.star;</ce:label>
  <ce:note-para>An earlier version of this article
    appeared in ...</ce:note-para>
</ce:article-footnote>
<ce:article-footnote>
  <ce:label>&z.star;&z.star;</ce:label>
  <ce:note-para>This work was supported by NSF NYI grant
    CCR-9457806.</ce:note-para>
</ce:article-footnote>
```

Version history

Prior to DTD 5.0, the element was called atlfn. Then it did not contain a separate element for the footnote label.

ce:author

Declaration

Model (CEPs 1.1.0, 1.1.1)

```
<!ELEMENT  ce:author            ( ce:initials?, ce:indexed-name?,
                                  ce:degrees?, %name;, ce:degrees?,
                                  ce:ranking?, ce:roles?, ce:cross-ref*,
                                  ce:e-address*, ce:link? )>
<!ATTLIST  ce:author
           id                   ID                #IMPLIED
           role                 CDATA             #IMPLIED
           author-id            CDATA             #IMPLIED
           biographyid          IDREF             #IMPLIED>
```

Model (CEPs 1.1.2, 1.1.3)

```
<!ELEMENT  ce:author            ( ce:initials?, ce:indexed-name?,
                                  ce:degrees?, %name;, ce:degrees?,
                                  ce:ranking?, ce:roles?, ( %cross-
                                  ref; )*, ce:e-address*, ce:link? )>
<!ATTLIST  ce:author
           id                   ID                #IMPLIED
           role                 CDATA             #IMPLIED
           author-id            CDATA             #IMPLIED
           biographyid          IDREF             #IMPLIED>
```

Description

Each author of the item is captured using ce:author.

Usage

The element ce:author consists of optional initials, if these cannot be inferred from the first name (ce:initials), an optional name under which the author should appear in an index (ce:indexed-name), optional degrees (ce:degrees), a possible first (given) name (ce:given-name) followed or preceded by a surname (family name, ce:surname), an optional indication for the generation (ce:suffix), more optional degrees (ce:degrees), an optional indication of the importance of the author (ce:ranking), optionally the roles the author has (ce:roles), cross-references to the author's affiliation(s) and to author footnotes (ce:cross-ref), a number of electronic addresses of the author (ce:e-address), and a link to a picture of the author (ce:link).

For more details, see these subelements. A ce:cross-ref should refer to a ce:footnote in a ce:author-group (possibly different from the current one). The surname may precede the first name; the order of these elements within ce:author determines the order in which they must be rendered.

The ce:author element has an attribute biographyid which is used to refer to a biography (ce:biography) of the author.

The attribute id can be used to link to the author. The attribute author-id is meant to contain a unique identification of the author, coming from a central Elsevier author database.

In many cases, it is not clear or it is unknown which part of an author name constitutes the first name and which the surname. In some cultures, people may have just a single name, which is treated as the surname. This may contradict how the author's culture feels about this, but the reason is purely functional: what matters is that an author is indexed under the surname; the first name may be abbreviated in the index or the running heads.

If the author is not a person, e.g. an institution or a government body, `ce:author` is also used, and the name is captured within `ce:surname`. This should not be confused with a named group of scientists, i.e. a collaboration, which is captured using `ce:collaboration`.

XML

```
<ce:author>
  <ce:surname>Liszt</ce:surname>
  <ce:given-name>Ferenc</ce:given-name>
</ce:author>
<ce:author>
  <ce:surname>Govinda</ce:surname>
</ce:author>
<ce:author>
  <ce:surname>National Board of Transport Safety</ce:surname>
</ce:author>
```

XML

```
<ce:author>
  <ce:degrees>Prof.</ce:degrees>
  <ce:given-name>Elizabeth M.C.</ce:given-name>
  <ce:surname>Square</ce:surname>
  <ce:suffix>Sr.</ce:suffix>
  <ce:degrees>D.Phil. (Oxon)</degrees>
  <ce:ranking>*</ce:ranking>
  <ce:roles>Chair, Royal Commission for Biomedical Research</ce:roles>
  <ce:cross-ref refid="aff1"><ce:sup>a</ce:sup></ce:cross-ref>
  <ce:cross-ref refid="aff5"><ce:sup>e</ce:sup></ce:cross-ref>
  <ce:cross-ref refid="fn2"><ce:sup>2</ce:sup></ce:cross-ref>
  <ce:e-address>emc.square@hotmail.com</ce:e-address>
  <ce:link locator="fx1"/>
</ce:author>
```

If the author is deceased, this cannot be indicated within `ce:author`; a footnote following the author is to be used.

If the author has only supplied initials instead of a full given name, then these are also captured in `ce:given-name`.

XML

```
<ce:author>
  <ce:given-name>A.P.</ce:given-name>
  <ce:surname>Ershov</ce:surname>
</ce:author>
```

In order to help applications to render the correct initials from a given name, the element `ce:initials` has been provided. If (and only if) the initials of the author cannot be inferred from the `ce:given-name` element by taking the first letter of each name, preserving dashes, the subelement `ce:initials` is used to capture the author's correct initials. It is used for rendering author names with initials instead of full given names, e.g. in tables of contents and in running heads. Note that `ce:initials` does not replace `ce:given-name`.

XML

```
<ce:author biographyid="bio2">
  <ce:initials>Ph.E.</ce:initials>
  <ce:given-name>Philippe E.</ce:given-name>
  <ce:surname>Shepherd</ce:surname>
</ce:author>
```

In order to help applications to correctly alphabetize a name, the element ce:indexed-name has been provided. If (and only if) it is common to alphabetize the name at a place which cannot be inferred from the ce:surname, the subelement ce:indexed-name is used. This is only for very exceptional cases, because it is assumed that indexing programs can cope with all names with accented characters.

XML

```
<ce:author>
  <ce:indexed-name>Gamma-Corporation</ce:indexed-name>
  <ce:surname>&Gamma;-Corporation</ce:surname>
</ce:author>
```

The element ce:link can be used to add a picture of the author. This should not be confused with a picture of the author within the biography.

Version history

Prior to DTD 5.0, this element was called au; it did not contain the initials or indexed name, cross-references and the electronic addresses at this level. The author-id attribute was added in CEP 1.1.0. Parameter entity %cross-ref; was introduced in CEP 1.1.2.

See also

ce:author-group, ce:collaboration

ce:author-group

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:author-group      ( ( ce:collaboration | ce:author )+,
                                  ce:affiliation*, ce:correspondence*,
                                  ce:footnote* )>
```

Description

The element ce:author-group contains authors and their affiliations.

Usage

The element ce:author-group is an important part of the head of an item. It contains a group of authors and/or collaborations with associated information. Some document types allow more than one author group; this is needed for implicit author–affiliation couplings (see below).

The element ce:author-group is also used in a structured list of editors of an issue, ce:editors, to capture a group of editors.

Each author group consists of a sequence of authors (ce:author) and/or collaborations (ce:collaboration), followed by a list of affiliations (ce:affiliation), correspondence information (ce:correspondence) and footnotes (ce:footnote).

The affiliation list contains all the affiliations in this author group. Each author or collaboration may either be coupled to several affiliations, or all authors share the same uncoupled affiliations. The authors and/or collaborations on the one hand and affiliations on the other hand can be related to each other in two ways.

- *Explicit.* The relationship between authors and affiliations is indicated by adding a ce:cross-ref element within ce:author, referring to an id of an affiliation. In this case, authors always require a ce:cross-ref to an affiliation; collaborations require an affiliation if there are no authors in the same author group. When using explicit coupling, it is allowed to have affiliations without associated authors or collaborations. It is not allowed to couple an author with an affiliation in another author group.
- *Implicit.* All authors in an author group are related to all affiliations present in that author group. Typically, but not necessarily, there will be only one affiliation in the author group. The authors do not have a ce:cross-ref element, and the affiliations do not need a ce:label subelement.

Especially for the editors of an issue it may occur that some, or usually all, editors are listed without affiliation. In such a case it is important not to create unnecessary ce:author-groups. The following rule must be applied: consecutive authors or editors without an affiliation must be captured in a single ce:author-group.

The following example shows *explicit* author–affiliation coupling.

XML

```
<ce:author-group>
  <ce:author biographyid="vt1">
    <ce:given-name>J.J.</ce:given-name>
    <ce:surname>Niemela</ce:surname>
    <ce:ranking>*</ce:ranking>
    <ce:cross-ref refid="aff1"><ce:sup>a</ce:sup></ce:cross-ref>
    <ce:cross-ref refid="fn1"><ce:sup>1</ce:sup></ce:cross-ref>
  </ce:author>
  <ce:author biographyid="vt2">
    <ce:given-name>K.R.</ce:given-name>
    <ce:surname>Sreenivasan</ce:surname>
    <ce:cross-ref refid="aff1"><ce:sup>a</ce:sup></ce:cross-ref>
    <ce:cross-ref refid="aff2"><ce:sup>b</ce:sup></ce:cross-ref>
  </ce:author>
  <ce:author>
    <ce:given-name>R.J.</ce:given-name>
    <ce:surname>Donnelly</ce:surname>
    <ce:cross-ref refid="aff1"><ce:sup>a</ce:sup></ce:cross-ref>
    <ce:cross-ref refid="cor1">&#x0204E;</ce:cross-ref>
    <ce:e-address>russ@vortex.uoregon.edu</ce:e-address>
  </ce:author>
  <ce:affiliation id="aff1">
    <ce:label>a</ce:label>
    <ce:textfn>Cryogenic Helium Turbulence Laboratory,
      Department of Physics, University of Oregon, Eugene, OR
      97403, USA</ce:textfn>
  </ce:affiliation>
  <ce:affiliation id="aff2">
    <ce:label>b</ce:label>
    <ce:textfn>Mason Laboratory, Yale University, New Haven, CT
      06520-8286, USA</ce:textfn>
  </ce:affiliation>
  <ce:correspondence id="cor1">
    <ce:label>&#x0204E;</ce:label>
    <ce:text>Correspondence and requests for materials should be
      addressed to R.J. Donnelly.</ce:text>
  </ce:correspondence>
  <ce:footnote id="fn1">
    <ce:label>1</ce:label>
    <ce:note-para>Supported by NSF Grant ...</ce:note-para>
  </ce:footnote>
</ce:author-group>
```

Presentation

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⋮

[*] Correspondence and requests for materials should be addressed to R.J. Donnelly.

[1] Supported by NSF Grant ...

The following example is an example of *implicit* author–affiliation coupling. Unlike the previous example, there are no labels “a” and “b” that make the coupling explicit. All the

authors in the author group belong to the affiliation in this author group.

XML

```
<ce:author-group>
  <ce:author>
    <ce:given-name>Akira</ce:given-name>
    <ce:surname>Hirose</ce:surname>
  </ce:author>
  <ce:author>
    <ce:given-name>Hirofumi</ce:given-name>
    <ce:surname>Onishi</ce:surname>
  </ce:author>
  <ce:affiliation>
    <ce:textfn>Research Center for Advanced Science and Technology
      (RCAST), The University of Tokyo, 4-6-1 Komaba, Meguro-ku,
      Tokyo 153, Japan</ce:textfn>
  </ce:affiliation>
</ce:author-group>
```

Presentation

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ce:bibliography

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:bibliography      ( ce:section-title, ce:bibliography-
                                  sec+ )>
<!ATTLIST  ce:bibliography
           id                   ID                #IMPLIED
           role                 CDATA             #IMPLIED
           view                 %view;            'all'>
```

Description

The element ce:bibliography is used for the reference list of a document.

Usage

The element ce:bibliography contains bibliographic references of the document. It can consists of several subsections, ce:bibliography-sec. Often there is just one reference list, in which case the bibliography contains only one ce:bibliography-sec without a ce:section-title. Each ce:bibliography-sec except the first must have a ce:section-title, for the first this is optional.

The subelement ce:section-title of ce:bibliography contains the name of the bibliography, e.g. “References” or “Bibliography”.

Each ce:bibliography-sec contains one or more bibliographic references, ce:bib-reference. Each ce:bib-reference must be referred to by means of ce:cross-ref. References which are not being referred to, may find a place in the further-reading list, ce:further-reading.

Version history

Prior to DTD 5.0, the element bibl contained the bibliographic references. It is comparable to ce:bibliography-sec, and ce:bibliography is a container of the bibliography sections. The view attribute was added in CEP 1.1.0.

Light reading

ce:bibliography is part of HEAD-AND-TAIL material.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

ce:bibliography-sec

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:bibliography-sec   ( ce:section-title?, ce:bib-
                                   reference+ )>
<!ATTLIST  ce:bibliography-sec
           id                    ID               #IMPLIED
           role                  CDATA            #IMPLIED>
```

Description

The element ce:bibliography-sec is a section within the bibliographic references.

Usage

See ce:bibliography.

ce:bib-reference

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:bib-reference      ( ce:label, ( ce:note | ( ( sb:reference
                                   | ce:other-ref )+, ce:note? ) ) )>
<!ATTLIST  ce:bib-reference
           id                    ID                #REQUIRED>
```

Description

The element ce:bib-reference is used to capture a bibliographic reference within the reference list or within the further-reading section.

Usage

Each entry in a list of bibliographic references (ce:bibliography) or a further-reading list (ce:further-reading) is a ce:bib-reference.

The ce:bib-reference may be either just a ce:note (an endnote), or a sequence of one or more bibliographic references followed by a ce:note. The core of each bibliographic reference is a structured reference (sb:reference) or an unstructured reference (ce:other-ref).

The ce:bib-reference must have an id attribute and a ce:label subelement. For numbered references, the ce:label contains the number (no punctuation is generated by this instance of ce:label) and for name/date references it contains name and date in the way the reference is referred to in the text without parentheses. Several possible formats are shown below. Note in particular the full stop in the second example and the “1999a” in the fifth example.

XML

```
<ce:bib-reference id="bib37"><ce:label>[37]</ce:label>
<ce:bib-reference id="bib37"><ce:label>37.</ce:label>
<ce:bib-reference id="bib37"><ce:label>[Go78]</ce:label>
<ce:bib-reference id="bib37"><ce:label>Böhm et al., 1999</ce:label>
<ce:bib-reference id="bib37"><ce:label>Böhm et al., 1999a</ce:label>
```

Name/date references

In case of the name/date referencing style the bibliographic references are printed without a label before the reference, and thus their ce:label element is not shown, and may seem irrelevant. However, in name/date references with the same authors and the same year, the “a” and “b” after the year is stored within the ce:label element. This is the only place where the “a” or “b” can be found; the sb:date does not contain it as it is not a property of the reference but of the document in which the reference appears.

Moreover, some publications may choose to show the ce:label element in their presentation. One case in which this happens in almost all applications, is when a reference is one of the targets in a one-to-many cross-reference. In electronic publications such a one-to-many cross-reference may be represented with a “drop-down menu”, which is built up via the ce:label elements of the targets (see the section Cross-references and the label element, p. 130).

XML

```
<ce:bib-reference id="bib12">
  <ce:label>Sheen, 1999a</ce:label>
  <sb:reference>
    <sb:contribution>
      <sb:authors>
        <sb:author>
          <ce:given-name>J.</ce:given-name>
          <ce:surname>Sheen</ce:surname>
        </sb:author>
      </sb:authors>
      <sb:title>
        <sb:maintitle>C<ce:inf>4</ce:inf> gene expression</sb:maintitle>
      </sb:title>
    </sb:contribution>
    <sb:host>
      <sb:issue>
        <sb:series>
          <sb:title>
            <sb:maintitle>Ann. Rev. Plant Physiol. Plant
              Mol. Biol.</sb:maintitle>
          </sb:title>
          <sb:volume>50</sb:volume>
        </sb:series>
        <sb:date>1999</sb:date>
      </sb:issue>
      <sb:pages>
        <sb:first-page>187</sb:first-page>
        <sb:last-page>217</sb:last-page>
      </sb:pages>
    </sb:host>
  </sb:reference>
</ce:bib-reference>
```

Presentation

Sheen, J., 1999a. C_4 gene expression. Ann. Rev. Plant Physiol. Mol. Biol. 50, 187–217.

Multiple bibliographic references in one *ce:bib-reference* element

It is possible to group more than one bibliographic reference within a ce:bib-reference element. These may be a mixed sequence of structured and unstructured references.

When one or more of the references in the ce:bib-reference element are cited individually, they *all* need to have a ce:label element, and at least the ones cited individually need to have an id attribute. When there is a single reference in a ce:bib-reference element, this single reference (sb:reference or ce:other-ref) is not allowed to have a ce:label element and an id attribute.

For cross-references to a sb:reference element, see the section Cross-references and the label element (p. 130).

XML

```
<ce:bib-reference id="bib1">
  <ce:label>[1]</ce:label>
  <ce:other-ref>
    <ce:textref>H.P. Nilles, Nucl. Phys. B 499 (1997) 3</ce:textref>
```

```
    </ce:other-ref>
    <sb:reference>
      <sb:contribution>
        <sb:authors>
          <sb:author>
            <ce:given-name>T.</ce:given-name>
            <ce:surname>Banks</ce:surname>
          </sb:author>
          <sb:author>
            <ce:given-name>M.</ce:given-name>
            <ce:surname>Dine</ce:surname>
          </sb:author>
        </sb:authors>
      </sb:contribution>
      <sb:host>
        <sb:issue>
          <sb:series>
            <sb:title>
              <sb:maintitle>Nucl. Phys. B.</sb:maintitle>
            </sb:title>
            <sb:volume-nr>479</sb:volume-nr>
            <sb:date>1996</sb:date>
          </sb:series>
        </sb:issue>
        <sb:pages>
          <sb:first-page>173</sb:first-page>
        </sb:pages>
      </sb:host>
    </sb:reference>
  </ce:bib-reference>
```

Presentation

[1] H.P. Nilles, Nucl. Phys. B 499 (1997) 3;
T. Banks, M. Dine, Nucl. Phys. B 479 (1996) 173.

XML

```
<ce:bib-reference id="bib2">
  <ce:label>[2]</ce:label>
  <sb:reference id="bb2a">
    <ce:label>(a)</ce:label>
    <sb:contribution>...
  </sb:reference>
  <ce:other-ref id="or2b"><
    <ce:label>(b)</ce:label>
    <ce:textref>Y. Koide, ...</ce:textref>
  </ce:other-ref>
</ce:bib-reference>
```

Presentation

[2] (a) A. Szczepaniak, Phys. Rev. D 54 (1996) 1167;
(b) Y. Koide, Z. Phys. C 71 (1996) 459.

With the name/date referencing style, grouping of several `sb:reference` or `ce:other-ref` elements is discouraged.

Version history

Prior to DTD 5.0, this element was called `bib`.

Light reading

In HEAD-AND-TAIL SGML files, `ce:bib-reference`s need not be referred to.

Known bugs, hacks and problems

It is not possible to have a comment to a multiple reference.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

ce:biography

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:biography          ( ce:link?, ce:simple-para+ )>
<!ATTLIST  ce:biography
           id                    ID                #IMPLIED
           view                  %view;            'all'>
```

Description

Some journals publish short biographies in their articles. The element ce:biography is used for this purpose.

Usage

The biography element ce:biography contains a short biography of a person, mostly the author in the form of one or more "simple" paragraphs, ce:simple-para. It has an id; the link with the author is established through the biographyid attribute of ce:author. It is also possible to link a name in the text to a ce:biography via a ce:cross-ref.

If the biography contains a photograph of the author, the first subelement ce:link is used to reference the file containing the photograph. It is not appropriate to use ce:inline-figure for the photograph.

XML

```
<!ENTITY pic1 SYSTEM "fx1" NDATA IMAGE>
...
<ce:biography id="bio1">
  <ce:link locator="pic1"/>
  <ce:simple-para><ce:bold>Stephen Hawking</ce:bold> holds
    the chair once held by Isaac Newton as Lucasian
    Professor in Mathematics at the University of
    Cambridge...</ce:simple-para>
</ce:biography>
```

In some journals or books there are no biographies, but a picture of each author is displayed near the author's name in the document head. For this, ce:link in ce:author is used.

Version history

Prior to DTD 5.0, this element was called vt. Then it did not contain the ce:link subelement; the graphic file was associated to the biography with an attribute. The view attribute was added in CEP 1.1.0.

ce:bold

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:bold              ( %richstring.data; )*>
```

Description

The element ce:bold is a font changing element (p. 134). It is used to obtain bold.

Usage

XML

```
<ce:bold>This text is in bold</ce:bold>
```

Presentation

This text is in bold

Version history

Prior to DTD 5.0, this element was called b.

See also

For more information see the section on text effects (p. 134). See also ce:cross-out, ce:italic, ce:monospace, ce:sans-serif, ce:small-caps, ce:underline.

ce:br

Declaration

Model (CEPs 1.1.2, 1.1.3)

```
<!ELEMENT  ce:br                EMPTY>
```

Description

The element ce:br is used to create an explicit line break.

Usage

If the need arises to indicate an explicit line break ce:br can be used within certain context, e.g. within a table cell.

XML

```
...
<row>
  <entry>Dairy</entry>
  <entry>8 oz milk<ce:br/>8 oz cottage cheese<ce:br/>8 oz ice
    cream<ce:br/>1 oz hard cheese<ce:br/>1 cup yogurt
  </entry>
  <entry>6 servings per day</entry>
  <entry>8 servings per day</entry>
  <entry>10 servings per day</entry>
  <entry>12 servings per day</entry>
</row>
...
```

Presentation

Menu Guidelines

Food group	Serving size	Singleton	Twins	Triples	Quads
Dairy	8 oz milk 8 oz cottage cheese 8 oz ice cream 1 oz hard cheese 1 cup yogurt	6 servings per day	8 servings per day	10 servings per day	12 servings per day
...					

Explanation

The line breaks in the second column are a result of the use of element ce:br whereas the line breaks in columns 3–6 are created by the rendering application. Note that in the above XML example the header rows are omitted for brevity.

Version history

This element was introduced in CEP 1.1.2.

ce:caption

Declaration

Model (CEPs 1.1.0, 1.1.1)

```
<!ELEMENT  ce:caption            ( ce:simple-para+ )>
```

Model (CEPs 1.1.2, 1.1.3)

```
<!ELEMENT  ce:caption            ( ce:simple-para+ )>
<!ATTLIST  ce:caption
           role                  CDATA             #IMPLIED
           xml:lang              %iso639;          #IMPLIED>
```

Description

Captions are tagged with ce:caption.

Usage

Figures, tables, e-components and textboxes possess captions, structured with ce:caption, that give a description of the object. A ce:caption consists of one or more simple paragraphs, ce:simple-para.

The attribute xml:lang, with values in the ISO 639 set of entities (p. 141), indicates the language of the caption, by default the language of the document. This is to support publications that publish captions in different languages.

Version history

The xml:lang and role attributes were added in CEP 1.1.2.

See also

ce:alt-e-component, ce:e-conmponent, ce:figure, ce:table, ce:textbox

ce:chem

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:chem              ( %textfn.data; )*>
```

Description

A displayed chemical formula is captured using ce:chem.

Usage

The element ce:chem is one of the possible subelements of ce:formula. It contains the text of the chemical formula to be displayed. The equation number is separately captured in the ce:label child element of the ce:formula parent.

XML

```
<ce:formula id="ch2">
  <ce:label>(2)</ce:label>
  <ce:chem>TLC (CH<ce:inf>2</ce:inf>C<ce:inf>12</ce:inf>/MeOH):
    <ce:it>R</ce:it><ce:inf>f</ce:inf>=0.45; IR:
    3423 cm<ce:sup>-1</ce:sup> (NH).</ce:chem>
</ce:formula>
```

Inline chemical formulae may be entered as part of the running text, without a special tag.

Version history

Prior to DTD 5.0, both displayed mathematical and displayed chemical formulae were captured in the element fd.

Rendering notes

The content is rendered within the formula area of ce:formula, possibly followed by the equation number.

ce:collab-aff

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:collab-aff         ( %text.data; )*>
```

Description

The element ce:collab-aff adds an affiliation-like phrase to a collaboration.

Usage

See ce:collaboration.

ce:collaboration

Declaration

Model (CEPs 1.1.0, 1.1.1)

```
<!ELEMENT  ce:collaboration      ( ce:indexed-name?, ce:text, ce:cross-
                                   ref*, ce:collab-aff? )>
<!ATTLIST  ce:collaboration
           id                    ID                #IMPLIED
           role                  CDATA             #IMPLIED>
```

Model (CEPs 1.1.2, 1.1.3)

```
<!ELEMENT  ce:collaboration      ( ce:indexed-name?, ce:text, ( %cross-
                                   ref; )*, ce:collab-aff? )>
<!ATTLIST  ce:collaboration
           id                    ID                #IMPLIED
           role                  CDATA             #IMPLIED>
```

Description

The name of a collaboration is captured in the ce:collaboration element.

Usage

A collaboration denotes a group of authors who present themselves under a common name: the collaboration name. The element ce:collaboration is used to capture such a collaboration. It contains an optional name under which the collaboration should appear in an index (ce:indexed-name), a container for the actual name (ce:text), optional cross-references to affiliations or footnotes (ce:cross-ref), and an optional collaboration affiliation (ce:collab-aff).

XML

```
<ce:collaboration>
  <ce:text>ALPHA Collaboration</ce:text>
  <ce:cross-ref refid="fn1"><sup>1</sup></ce:cross-ref>
</ce:collaboration>
...
<ce:footnote id="fn1">
  <ce:label>1</ce:label>
  <ce:note-para>Operated by the Universities of ...</ce:note-para>
</ce:footnote>
```

The collaboration name can be used in an author group ce:author-group instead of or in addition to the names of its member authors. A ce:collaboration element can be the only element in an author group, or its author group can contain the names of other collaborations and the names of individual authors.

XML

```
<ce:author-group>
  <ce:author>
    <ce:given-name>Th.J.</ce:given-name>
    <ce:surname>Jansen</ce:surname>
```

```
    </ce:author>
    <ce:collaboration>
      <ce:text>The ISOLDE Collaboration</ce:text>
      <ce:collab-aff>Cryogenic Helium Turbulence
        Laboratory ...</ce:collab-aff>
    </ce:collaboration>
  </ce:author-group>
```

If (and only if) it is common to alphabetize the name at a place which cannot be inferred from the ce:collaboration, the subelement ce:indexed-name is used. This is only for very exceptional cases, because it is assumed that indexing programs can cope with all names with accented characters.

XML

```
<ce:collaboration>
  <ce:indexed-name>Alpha Collaboration</ce:indexed-name>
  <ce:text>&alpha; Collaboration</ce:text>
</ce:collaboration>
```

Sometimes a collaboration adds an affiliation-like phrase to its name. This can be captured in the ce:collab-aff element.

XML

```
<ce:collaboration>
  <ce:text>ALPHA Collaboration</ce:text>
  <ce:collab-aff>Stockholm&ndash;London&ndash;Amsterdam</ce:collab-aff>
</ce:collaboration>
```

Presentation

ALPHA Collaboration

Stockholm–London–Amsterdam

A collaboration should not be confused with a non-person author (captured using ce:surname).

Version history

Parameter entity %cross-ref; was introduced in CEP 1.1.2.

See also

ce:author, ce:author-group, ce:collab-aff, ce:indexed-name

ce:compound-formula

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:compound-formula   ( %text.data; )*>
```

Description

The formula of a chemical compound within a stereochemistry abstract is captured using ce:compound-formula.

Usage

See ce:stereochem.

Version history

Prior to DTD 5.0, this element was called compound-f.

ce:compound-info

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:compound-info      ( ce:list-item+ )>
```

Description

Part of a stereochemistry abstract is additional itemized information about a chemical compound. The element ce:compound-info provides a way to capture this.

Usage

See ce:stereochem.

ce:compound-name

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:compound-name      ( %text.data; )*>
```

Description

The name of a chemical compound within a stereochemistry abstract is captured using ce:compound-name.

Usage

See ce:stereochem.

ce:compound-struct

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:compound-struct    ( ce:link )>
```

Description

The purpose of the element ce:compound-struct, part of a stereochemistry abstract, is to provide a link to a graphic file showing a chemical structure.

Usage

See ce:stereochem.

ce:copyright

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:copyright          ( %string.data; )*>
<!ATTLIST  ce:copyright
           type                  %copyright-type;  #REQUIRED
           year                  NMTOKEN           #REQUIRED>
```

Description

The element ce:copyright contains information about the copyright owner of the document, or of a component of the document.

Usage

The element ce:copyright is used to capture the copyright holder and status of an item. As an optional element within ce:figure, ce:textbox and ce:e-component, it can also be used to indicate the copyright holder of such an object.

It has two mandatory attributes, type and year. The latter contains the copyright year while the former, which takes its values in %copyright-type;, contains the copyright status, indicated by the following values (the copyright statuses refer to [20]):

- crown is used when the author claims Crown copyright. [Copyright status: 004.]
- full-transfer: this value is used when a full transfer to one of the publisher's companies has been received. [Copyright status: 002.]
- joint is used when a full transfer has been received for an article in a journal whose copyright is owned jointly by one of the publisher's companies and a society. [Copyright status: 002.]
- limited-transfer is used when the author has granted only limited rights; special care must be taken for its production. [Copyright status: 005.]
- no-transfer is used when there is an unresolvable copyright problem and the article may not be published (in principle, documents with this copyright status cannot occur). This should not be confused with copyright status 001, when copyright has not yet been transferred. Within ce:figure, ce:textbox or ce:e-component it is used to signal that the object may not appear online. [Copyright status: 007.]
- other is used when copyright owner is different from the journal's copyright owner, e.g. the authors or their employing institutions. This copyright type is also used in the ce:copyright within a ce:figure, ce:textbox or ce:e-component. [Copyright status: 006.]
- society is used when a full transfer has been received for an article in a journal whose copyright is owned by a society. [Copyright status: 002.]
- unknown: this value is used when the article may be published but the actual status is unknown. This is, for instance, the case when the copyright transfer form has not yet been received from the author. [Copyright status: 001.]
- us-gov is used when the author is a US government employee and will not transfer copyright. [Copyright status: 003.]

The content of ce:copyright is the copyright holder. Only if the value of type is crown, no-transfer, other, unknown or us-gov, may the content be empty.

The presentation of the copyright notice of an article depends on (i) the article's copyright status, (ii) the content of the ce:copyright element, and (iii) the base data of the journal or book, in particular its copyright owner. It is explained in full detail in [21]. Some examples are given below.

XML

```
<ce:copyright type="full-transfer" year="2003">Elsevier
  Ireland Ltd</ce:copyright>
<ce:copyright type="society" year="2003">Society of
  Cardiology</ce:copyright>
<ce:copyright type="unknown" year="2003"></ce:copyright>
```

Presentation

© 2003 Elsevier Ireland Ltd. All rights reserved.
© 2003 Society of Cardiology. Published by Elsevier Inc. All rights reserved.
© 2003 Published by Elsevier B.V.

Explanation

Note that in the second example, the publishing company is inferred from the base data, it is not present in the XML file. Moreover, in the third example, the "published by" information is also inferred from the journal base data. The text would be different if the journal's copyright holder is not one of the publisher's companies.

ce:copyright-line

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:copyright-line     ( %richstring.data; )*>
```

Description

The element ce:copyright-line contains a verbatim text to be used as copyright line.

Usage

The element ce:copyright-line contains verbatim text to be used as copyright line. It is used in output DTDs, generated from the ce:copyright element, and in DTDs where the copyright statuses as defined in ce:copyright are not (yet) applicable.

XML

```
<ce:copyright-line>&copy; 2003 Elsevier B.V.</ce:copyright-line>
```

Version history

This element was introduced in CEP 1.1.0.

ce:correspondence

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:correspondence     ( ce:label, ce:text )>
<!ATTLIST  ce:correspondence
           id                    ID                #REQUIRED>
```

Description

The element ce:correspondence is used to indicate the corresponding author or authors, and possibly the correspondence address.

Usage

The element ce:correspondence is used to indicate that each author linked to it is a corresponding author. The link is established through a ce:cross-ref within ce:author, and it must be the target of at least one such cross-reference. To this end, the element ce:correspondence has an id attribute and a ce:label subelement — the latter contains the symbol displayed at the footnote.

It is also possible to have several corresponding authors, each with their own id and ce:label element.

The content can be merely "Corresponding author." or it can contain the correspondence address, which might differ from the author's affiliation.

XML

```
<ce:correspondence id="cor1">
  <ce:label>&#x0204E;</ce:label>
  <ce:text>Correspondence to: R. Schrauwen, Central Application
    Management, Production, Elsevier, Radarweg 29,
    1043 NX Amsterdam, The Netherlands.
    Tel.: +31 20 4852408; fax: +31 20 4853266.</ce:text>
</ce:correspondence>
```

See also

ce:author-group

ce:cross-out

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:cross-out          ( %richstring.data; )*>
```

Description

The element ce:cross-out is related to the font changing elements (p. 134). It is used to obtain crossed-out text.

Usage

To obtain crossed-out (strike-through) text, use ce:cross-out.

XML

```
<ce:cross-out>This text is crossed-out</ce:cross-out>
```

Presentation

~~This text is crossed-out~~

See also

For more information see the section on text effects (p. 134). See also ce:bold, ce:italic, ce:monospace, ce:sans-serif, ce:small-caps, ce:underline.

ce:cross-ref

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:cross-ref          ( %text.data; )*>
<!ATTLIST  ce:cross-ref
           refid                 IDREF            #REQUIRED>
```

Description

Simple cross-references to targets within the same document instance are tagged using ce:cross-ref.

Usage

A cross-reference is a reference to another element in the document instance. The mandatory attribute refid contains a valid ID.

XML

```
see <ce:cross-ref refid="tbl4">Table 4</ce:cross-ref>
according to <ce:cross-ref refid="enun7">Lemma 1.6</ce:cross-ref>
in (<ce:cross-ref refid="bib37">Smith et al., 1998</ce:cross-ref>)
<ce:cross-ref refid="fn2"><ce:sup>2</ce:sup></ce:cross-ref>
```

Presentation

see Table 4
according to Lemma 1.6
in (Smith et al., 1998)
[2]

The content of ce:cross-ref is popularly referred to as “the text to click on”. In an electronic rendering, clicking on the text immediately leads to the destination. The content is the full designation of the destination, e.g. “Fig. 4” rather than “4”. Presentation, such as superior for a reference to a footnote, is tagged explicitly.

The element ce:cross-ref may be empty. This can happen, for instance, in a glossary or index. The rendering application must then provide another way to reach the destination.

Version history

In DTD 4, the element cross-ref allows one-to-many links. The new element ce:cross-refs has been introduced for that purpose.

Rendering notes

Element ce:cross-ref has no influence on where its target appears in the paper or online versions. For instance, float placement is arranged using ce:float-anchor; where the ce:cross-ref that points to the float appears is immaterial.

Copy edit considerations

It sometimes happens that cross-references, especially to bibliographic references, only appear within artwork. It is then required to change the text, e.g. the figure caption, in such a way that the object can be referred to using ce:cross-ref.

See also

For more information, see the section Cross-references and the label element (p. 130), as well as the elements `ce:cross-refs`, `ce:intra-ref`, `ce:intra-refs`, `ce:inter-ref`, `ce:inter-refs`.

ce:cross-refs

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:cross-refs          ( %text.data; )*>
<!ATTLIST  ce:cross-refs
           refid                  IDREFS            #REQUIRED>
```

Description

Extended cross-references to multiple targets within the same document instance are tagged using ce:cross-refs.

Usage

An extended cross-reference is a reference to several other elements in the document instance. The mandatory attribute refid contains a list of valid IDs. There must be more than one target; for single targets ce:cross-ref is used.

XML

```
see <ce:cross-refs refid="tbl4 tbl5">Tables 4 and 5</ce:cross-refs>
see <ce:cross-refs refid="pl2 pl3 pl4">Plates II&ndash;IV</ce:cross-refs>
in <ce:cross-refs refid="bib1 bib2 bib3">[1&ndash;3]</ce:cross-refs>
in (<ce:cross-refs refid="bib19 bib20">Jones, 2001a,b</ce:cross-refs>)
```

Presentation

see Tables 4 and 5
see Plates II–IV
in [1–3]
in (Jones, 2001a,b)

The content is the full designation of the destination, e.g. “Figs. 4 and 5” or “Tables 7–10”. Presentation, such as superior for a reference to a footnote, is tagged explicitly.

Due to the one-to-many nature of ce:cross-refs, it is a complicated element. The content of ce:cross-refs is popularly referred to as “the text to click on”. When users click on this text, the rendering application may provide the user with a list of the targets that this ce:cross-refs points to. An important role is played by the ce:label elements of the destinations, that can be used to construct such a list. For more information, see the section Cross-references and the label element (p. 130).[1]

The element ce:cross-refs may be empty. This can happen, for instance, in a glossary or index. The rendering application must then provide another way to reach the destination.

Version history

In DTD 4, the element cross-ref was used for both one-to-one and one-to-many links. The element ce:cross-ref now only allows one-to-one links.

1. In XML files used for online rendering, it is possible to convert ce:cross-refs to the XLink-compliant ce:intra-refs, which already contains the designations of the targets.

Copy edit considerations

It sometimes happens that cross-references, especially to bibliographic references, only appear within artwork. It is then required to change the text, e.g. the figure caption, in such a way that the object can be referred to using ce:cross-ref.

Rendering notes

This section deals with the *online* rendering of one-to-many links.

Rendering one-to-many links is, of course, cumbersome. In the PDF rendering, the content of ce:cross-refs is displayed, and a link to only the first destination is made. In an online rendering, this is inadequate. An important role is played by the ce:label element of the target.[2] These labels are used to create a drop-down menu of targets, or they are rendered sequentially in-line.

Since the inline representation is the most popular, we describe it in more detail here.

XML

```
see Refs. <ce:cross-refs refid="bib7 bib8 bib9 bib10">[7&ndash;10]
</ce:cross-refs> for more information.
```

Presentation

see Refs. [7], [8], [9], and [10] for more information.

Explanation

The hyperlinks to the four bibliographic references are *not* created by examining the content of the ce:cross-refs element, but by pulling out the content of the ce:label elements of the targets. The content of ce:cross-refs is in fact a collapsed version of these ce:labels.

It is wrong to examine the content of the element ce:cross-refs and to build logic for expanding the text. A situation that is not uncommon is that an author refers to five chemical reactions (21)–(25), but that three of them are actually presented on a graphic, say Scheme VII. Since these are not coded in XML, it is impossible to refer to the individual reactions. This is done as follows.

XML

```
... reactions <ce:cross-refs refid="f21 sc7 f25">(21)&ndash;(25)
</ce:cross-refs> ...
```

Presentation

... reactions (21), Scheme VII, (25) ...

Explanation

The ce:label elements of the targets lead the reader to the correct destination.

The previous example also shows the difficulty of keeping the sentence correct. Copy edit rules guarantee that in most cases the sentence will run on correctly. The safest solution, however, is to present the original content of the ce:cross-refs followed by a parenthetical remark containing an expansion of all the ce:labels of the target objects.

XML

```
... in <ce:cross-refs refid="fig4 fig5">Figs. 4(a)
and 5(a)</ce:cross-refs> ...
```

Presentation

... in Figs. 4(a) and 5(a) (Fig. 4, Fig. 5) ...

2. Note that this is a simplification, used for brevity. In truth, the section title or other portions of the destination also play a role. This is explained in the section Cross-references and the label element (p. 130). In this section we talk about the ce:label element to explain the general concept.

See also

For more information, see the section Cross-references and the label element (p. 130), as well as the elements `ce:cross-refs`, `ce:intra-ref`, `ce:intra-refs`, `ce:inter-ref`, `ce:inter-refs`.

ce:date-accepted

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:date-accepted      EMPTY>
<!ATTLIST  ce:date-accepted
           day                   NMTOKEN          #IMPLIED
           month                 NMTOKEN          #REQUIRED
           year                  NMTOKEN          #REQUIRED>
```

Description

The ce:date-accepted element is used to capture the acceptance date of the article. It is an optional, empty element within the frontmatter.

Usage

Three attributes, day, month, year are used to store the day, month and year respectively. The latter two attributes are mandatory. The values are numbers, not padded with zero.

XML

```
<ce:date-accepted day="29" month="2" year="2000"/>
```

Presentation

Accepted 29 February 2000

XML

```
<ce:date-accepted month="8" year="2002"/>
```

Presentation

Accepted August 2002

Version history

In DTDs prior to DTD 5.0, this element was called `acc`.

See also

ce:date-received, ce:date-revised

ce:date-received

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:date-received      EMPTY>
<!ATTLIST  ce:date-received
           day                   NMTOKEN          #IMPLIED
           month                 NMTOKEN          #REQUIRED
           year                  NMTOKEN          #REQUIRED>
```

Description

The ce:date-received element is used to capture the received date of the article. It is an optional, empty element within the frontmatter.

Usage

Three attributes, day, month, year are used to store the day, month and year respectively. The latter two attributes are mandatory. The values are numbers, not padded with zero.

XML

```
<ce:date-received day="20" month="5" year="1964"/>
```

Presentation

Received 20 May 1964

Version history

In DTDs prior to DTD 5.0, this element was called `re`.

See also

ce:date-accepted, ce:date-revised

ce:date-revised

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:date-revised       EMPTY>
<!ATTLIST  ce:date-revised
           day                   NMTOKEN          #IMPLIED
           month                 NMTOKEN          #REQUIRED
           year                  NMTOKEN          #REQUIRED>
```

Description

The ce:date-revised element is used to capture the revised date(s) of the article, also known as “revised version received” date.

It is an optional, empty element within the frontmatter, where it may occur multiple times.

Usage

Three attributes, day, month, year are used to store the day, month and year respectively. The latter two attributes are mandatory. The values are numbers, not padded with zero.

XML

```
<ce:date-revised day="1" month="4" year="1998"/>
<ce:date-revised day="23" month="11" year="1999"/>
```

Presentation

Revised 1 April 1998 and 23 November 1999

XML

```
<ce:date-revised day="14" month="7" year="2003"/>
<ce:date-revised day="5" month="4" year="2004"/>
<ce:date-revised day="19" month="4" year="2004"/>
```

Presentation

Revised 14 July 2003, 5 April 2004 and 19 April 2004

Version history

In DTDs prior to DTD 5.0, this element was called `rv`.

See also

ce:date-accepted, ce:date-received

ce:dedication

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:dedication        ( %textfn.data; )*>
```

Description

A dedication within the head of an article is captured using ce:dedication.

Usage

The element ce:dedication is an optional subelement of the head of a document. It contains the full text of a dedication.

XML

```
<ce:dedication>Dedicated to Professor C. Böhm on the occasion
  of his 60th birthday.</ce:dedication>
```

Version history

Prior to DTD 5.0, this element was called ded.

Rendering notes

The text “Dedicated to” is not generated.

ce:def-description

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:def-description    ( ce:para+ )>
```

Description

The element ce:def-description is used to capture the description within an entry in a ce:def-list.

Usage

See ce:def-list.

Version history

Prior to DTD 5.0, this element was called dd.

ce:def-list

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:def-list          ( ce:label?, ce:section-title?,
                                  ( ce:def-term, ce:def-description? )+ )>
<!ATTLIST  ce:def-list
           id                   ID                #IMPLIED>
```

Description

The element ce:def-list contains a list of terms and definitions.

Usage

The element ce:def-list, definition list, is modeled after HTML's DL. Its purpose is to capture terms and definitions.

A definition list has an optional label (ce:label) and an optional title (ce:section-title). It has an optional id attribute so that it can become the target of cross-references.

The list itself is a sequence of definition terms, ce:def-term, and optional definition descriptions, ce:def-description, which consist of one or more paragraphs, ce:para. The ce:def-term may possess an id so that it can be referred to, but due to the efforts needed to create these cross-references, this seldom happens in practice.

If used to capture terms and definitions, as in ce:nomenclature, the term is always contained in the ce:def-term immediately preceding the ce:def-description.

Version history

Prior to DTD 5.0, this element was called dl.

See also

ce:list, ce:nomenclature

ce:def-term

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:def-term          ( %text.data; )*>
<!ATTLIST  ce:def-term
           id                   ID              #IMPLIED>
```

Description

The element ce:def-term is used to capture the term defined or explained in an entry of a ce:def-list.

Usage

See ce:def-list.

Version history

Prior to DTD 5.0, this element was called dt.

ce:degrees

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:degrees            ( %richstring.data; )*>
```

Description

Titles before or after an author name are captured using ce:degrees.

Usage

The element ce:degrees is used for academic degrees, titles of nobility or dignity, military or police ranks, etc. It may occur before and/or after the name.

XML

```
<ce:degrees>Prof. Dr. Ing.</ce:degrees>
<ce:given-name>Wolfgang</ce:given-name>
<ce:surname>Böhm</ce:surname>
```

XML

```
<ce:degrees>Sir</ce:degrees>
<ce:given-name>Michael</ce:given-name>
<ce:surname>Attiya</ce:surname>
<ce:degrees>Ph.D. (Oxon), KBE, FRCS</ce:degrees>
```

XML

```
<ce:degrees>Captain</ce:degrees>
<ce:given-name>Jean-Luc</ce:given-name>
<ce:surname>Picard</ce:surname>
```

XML

```
<ce:given-name>Patricia D.</ce:given-name>
<ce:surname>Smith</ce:surname>
<ce:degrees>(Mrs.)</ce:degrees>
```

Presentation

Prof. Dr. Ing. Wolfgang Böhm
Sir Michael Attiya, Ph.D. (Oxon), KBE, FRCS
Captain Jean-Luc Picard
Patricia D. Smith (Mrs.)

The element should not be confused with ce:suffix or ce:roles.

Rendering notes

The second ce:degrees generates a comma, unless it begins with a parenthesis.

Version history

Prior to DTD 5.0, this element was called degs.

See also

ce:author, ce:suffix, ce:roles

ce:display

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:display            ( ce:figure | ce:table | ce:textbox |
                                   ce:e-component | ce:formula )>
```

Description

The element ce:display is a container element for displayed figures, tables, textboxes, e-components and formulae.

Usage

To indicate that a figure, table, textbox, e-component or formula is "displayed" — which means that it must appear free-standing with white space above and below at the exact position where the element occurs in the document — it should be embedded in a ce:display element.

See also

ce:e-component, ce:figure, ce:table, ce:formula, ce:textbox

ce:displayed-quote

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:displayed-quote    ( ce:simple-para+ )>
<!ATTLIST  ce:displayed-quote
           id                    ID               #IMPLIED
           role                  CDATA            #IMPLIED>
```

Description

The element ce:displayed-quote is used to capture displayed quotes.

Usage

Displayed quotes are pieces of text, mostly but not necessarily quotations, often presented with a certain indent and some white space above and below. They contain one or more simple paragraphs, ce:simple-para.

XML

```
<ce:displayed-quote>
  <ce:simple-para>&ldquo;Everything has a version number&rdquo; and
    &ldquo;Who is in the dark, should switch on the light&rdquo;
    are CAM mottos.</ce:simple-para>
</ce:displayed-quote>
```

The attribute role allows one to categorize displayed quotes. For instance, it makes it possible to mark “poetry” displayed quotes, and handle these in different ways than ordinary displayed quotes. Applications should treat displayed quotes with roles unknown to them as ordinary displayed quotes, i.e., unknown roles must be ignored. The role must belong to a list validated by the XML validation tools. The following value for role has been defined:

- poetry signals that the ce:displayed-quote contains a table which is used for the stanza of a poem, and that the rows should be printed with the normal line distance.

  XML

  ```
  <ce:displayed-quote role="poetry">
    <ce:simple-para><ce:display>
        <ce:table rowsep="0" colsep="0">
          <tgroup cols="1">
            <colspec colname="col1"/>
            <tbody>
  <row><entry>Just before our love got lost you said</entry></row>
  <row><entry>I am as constant as a northern star</entry></row>
  <row><entry>And I said, constant in the darkness</entry></row>
  <row><entry>Where’s that at?</entry></row>
  <row><entry>If you want me I’ll be in the bar</entry></row>
            </tbody>
          </tgroup>
        </ce:table>
      </ce:display><ce:display>
  ```

```
            <ce:table rowsep="0" colsep="0">
              <tgroup cols="1">
                <colspec colname="col1"/>
                <tbody>
<row><entry>On the back of a cartoon coaster</entry></row>
<row><entry>In the blue tv screen light</entry></row>
<row><entry>I drew a map of Canada</entry></row>
<row><entry>Oh Canada</entry></row>
<row><entry>And your face sketched on it twice</entry></row>
                </tbody>
              </tgroup>
            </ce:table>
          </ce:display></ce:simple-para>
</ce:displayed-quote>
```

Presentation

Just before our love got lost you said
I am as constant as a northern star
And I said, constant in the darkness
Where's that at?
If you want me I'll be in the bar

On the back of a cartoon coaster
In the blue tv screen light
I drew a map of Canada
Oh Canada
And your face sketched on it twice

Version history

Prior to DTD 5.0, this element was called `qd`.

Light reading

`ce:displayed-quote` may not be used in CONTENTS-ENTRY-ONLY, HEAD-ONLY or HEAD-AND-TAIL files.

See also

`ce:textbox` (for pull-quotes)

ce:dochead

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:dochead            ( ce:textfn, ce:dochead? )>
```

Description

The element ce:dochead contains the document heading or article type of the article.

Usage

A document heading or article type usually appears above the title. There is a wide variety of examples, such as “Short Communication”, “Erratum”, “Fundamental Study”. Such headings are captured using ce:dochead.

XML

```
<ce:dochead>
  <ce:textfn>Short Communication</ce:textfn>
</ce:dochead>
```

It is possible to nest a ce:dochead to obtain a second-order document heading. It is not allowed to nest deeper.

Although usually items with the same ce:dochead are grouped in a table of contents under a similar heading, e.g. “Short communications”, this heading must not be inferred from the document headings of the items. The ce:dochead is only used to display a document heading above the title.

Some article types contain a ce:dochead but no ce:title.

Light reading

The ce:dochead appears also in HEAD-ONLY and HEAD-AND-TAIL as well as in CONTENTS-ENTRY-ONLY files.

See also

ce:doctopics

ce:doctopic

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:doctopic          ( ce:text, ce:doctopic? )>
<!ATTLIST  ce:doctopic
           role                 CDATA            #IMPLIED>
```

Description

The element ce:doctopic contains a topic in a topic hierarchy.

Usage

See ce:doctopics.

ce:doctopics

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:doctopics          ( ce:doctopic+ )>
```

Description

The element ce:doctopics is used to associate an item with one or more topic hierarchies.

Usage

The table of contents of a book or journal issue is only one way to list the items it consists of. It is contained in a file structured according to a books DTD or content-transport schema. For instance, the proceedings of a large conference may be published in the order of the presentations at that conference. Besides this, it may be useful to associate the item with one or more topic hierarchies, in order to group items of the same scientific relevance. These hierarchies provide other ways to gain access to the items of a book or journal issue; in a sense tables of content different from the one that represents the physical publication can be generated from the topic hierarchies.

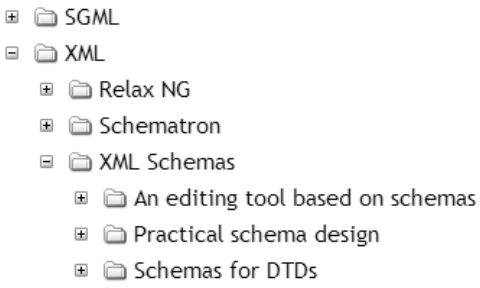
For instance, a proceedings about document structuring, whose articles appear in the order of the time when the presentations were given, might contain articles about “XML”, “SGML”, etc., and within the first category, articles about “XML schemas”, “Schematron”, “Relax NG”; but the proceedings might have another division depending on whether the article concerns theoretical aspects, practical aspects or actual implementations in software. The following example illustrates this.

XML

```
<ce:doctopics>
  <ce:doctopic role="languages">
    <ce:text>XML</ce:text>
    <ce:doctopic>
      <ce:text>XML schemas</ce:text>
    </ce:doctopic>
  </ce:doctopic>
  <ce:doctopic role="theory and practice">
    <ce:text>Parsers</ce:text>
  </ce:doctopic>
</ce:doctopics>
```

Presentation

This would generate no output for the item itself, but the item, entitled “An editing tool based on schemas” might appear thus in an online rendering of the topic hierarchy, which resembles a common directory structure:



All articles with equal topic hierarchy end up in the same leaf node of the hierarchy.

The optional attribute `role` can be used to name topic hierarchies.

Keywords and classification codes, captured with `ce:keywords` are another way to apply structure to a collection of items. Keywords are mostly designed to ease searching, and typically apply to documents that may occur in many different products. For instance, the mathematics subject classification applies to items of many different journals as well as to books and book chapters. The topic hierarchies, however, are meant mostly for creating alternative tables of content depending on criteria of, say, one certain multi-volume book project.

See also

`ce:dochead`, `ce:keywords`

ce:document-thread

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:document-thread    ( ce:refers-to-document+ )>
```

Description

The element ce:document-thread contains a sequence of document identifiers related to the item.

Usage

A document thread consist of one or more references to other items, captured with element ce:refers-to-document. It is used, for instance, to link an erratum to the original document, or to link the items in a discussion thread together.

It is used, for instance, to link an erratum to the original document. An online application can then create a link from the erratum to the original document and, perhaps more importantly, a link from the original document to the erratum.

Discussion threads can be quite complex: In a discussion thread of five documents, the documents could refer to the first one (except the first one itself of course) while the fifth document could also refer to the second and fourth document. An online application could then generate all the links as described in the previous paragraph (12 in total).

XML

```
<ce:document-thread>
  <ce:refers-to-document>
    <ce:pii>S0165-0114(04)00081-8</ce:pii>
    <ce:doi>doi:10.1016/j.fss.2004.02.012</ce:doi>
  </ce:refers-to-document>
  <ce:refers-to-document>
    <ce:pii>S0165-0114(02)00276-2</ce:pii>
    <ce:doi>10.1016/S0165-0114(02)00276-2</ce:doi>
  </ce:refers-to-document>
</ce:document-thread>
```

Version history

This element was introduced in CEP 1.1.0 and replaced ce:article-thread.

See also

ce:refers-to-document

ce:doi

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:doi                ( %string.data; )*>
```

Description

The element ce:doi contains the DOI of the item.

Usage

Each item can have a DOI, a *digital object identifier*, see http://www.doi.org. To identify the document, ce:doi is populated with the DOI of the document.

The DOI co-exists beside the PII. An item can have a PII, but not a DOI, for instance if the journal does not have an online appearance.

The DOI of a bibliographic reference can also be captured with ce:doi.

XML

```
<ce:doi>10.1016/j.sedgeo.2003.11.025</ce:doi>
```

Presentation

doi:10.1016/j.sedgeo.2003.11.025

XML

```
<ce:bib-reference id="b111">
  <ce:label>Lesch, 2004</ce:label>
  <sb:reference>
    ....
    <sb:host>
      ...
      <ce:doi>10.1016/j.compag.2004.11.004</ce:doi>
    </sb:host>
  </sb:reference>
</ce:bib-reference>
```

Presentation

Lesch, S.M., 2004. Sensor-directed spatial response sampling designs for characterizing spatial variation of soil properties. Comp. Electron. Agric., doi:10.1016/j.compag.2004.11.004.

Rendering notes

The text “doi:” is never present in ce:doi. However, a DOI is always published with the text “doi:” before it.

See also

aid, jid, ce:pii

ce:e-address

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:e-address          ( %text.data; )*>
<!ATTLIST  ce:e-address
           type                  %e-address-type;  "email">
```

Description

The purpose of the ce:e-address element is to capture the electronic address(es) of the authors of the document.

Usage

Each author can have zero or more electronic addresses which are tagged using ce:e-address. The attribute type denotes the type of the electronic address. Its two values (collected in %e-address-type;) are email and url. email, the default value, is an email address, and url is a complete URL, beginning with http://.

XML

```
<ce:e-address>g.thooft@phys.uu.nl</ce:e-address>
<ce:e-address type="url">http://www.phys.uu.nl/~thooft</ce:e-address>
```

Character entities are not allowed in the content of ce:e-address with the exception of & (used for an ampersand within a URL).

Version history

Prior to DTD 5.0, this element was called ead.

See also

ce:author

ce:e-component

Declaration

Model (CEPs 1.1.0, 1.1.1)

```
<!ELEMENT  ce:e-component        ( ce:label?, ce:caption?, ce:copyright?,
                                   ( ( ce:link, ce:alt-e-component? ) |
                                   ce:e-component )+ )>
<!ATTLIST  ce:e-component
           id                    ID                #IMPLIED>
```

Model (CEP 1.1.2)

```
<!ELEMENT  ce:e-component        ( ce:label?, ce:caption*, ( %copy-
                                   right; )?, ( ( ce:link, ce:alt-e-
                                   component? ) | ce:e-component )+ )>
<!ATTLIST  ce:e-component
           id                    ID                #IMPLIED>
```

Model (CEP 1.1.3)

```
<!ELEMENT  ce:e-component        ( ce:label?, ce:caption*, ce:source?,
                                   ( %copyright; )?, ( ( ce:link, ce:alt-
                                   e-component? ) | ce:e-component )+ )>
<!ATTLIST  ce:e-component
           id                    ID                #IMPLIED>
```

Description

Electronic components are objects such as applets and video and audio sources, spreadsheets, etc., as well as images that do not satisfy the CAP requirements for ce:figure. The element ce:e-component is provided for this purpose.

Usage

The element ce:e-component, short for electronic component, contains objects that exist in electronic form, and need to be presented to the reader of an electronic rendition of the document. The element has an optional subelement ce:alt-e-component which is used instead in media that cannot handle the electronic component, e.g. in print or in a web PDF file. Below we call these media "non-electronic media" and it is worth remembering that that includes the web PDF file.

Electronic components should not be confused with "views", see Views (p. 142).

XML structure of an electronic component

As for other cases where ce:link is used, the type of destination can be inferred from the entity's declaration. For a ce:e-component, NDATA types APPLICATION, AUDIO, VIDEO and XML can appear — these are exclusively used in ce:e-component. The NDATA type IMAGE can also appear, this is used for "Non-CAP" artwork, i.e., artwork meant for online display not satisfying the CAP artwork specifications.

The ce:e-component can be "floating" or "displayed". While the distinction "floating" and "display" may make little difference in most online representations, it does for the embedded ce:alt-e-component.

A *displayed* e-component is contained in a ce:display element. In an electronic rendering, the displayed e-component should appear at the position where the ce:display occurs. What this means for each e-component type (e.g., audio) is up to the application. Non-electronic media display the embedded ce:alt-e-component instead, as if it were a displayed figure, see below.

A *floating* e-component is contained within ce:floats. A ce:float-anchor appears in the text, and acts as an anchor near to which the e-component should appear. Each floating e-component must have exactly one ce:float-anchor. Non-electronic media render the embedded ce:alt-e-component instead, as if it were a floating figure, see below.

The subelement ce:label contains the name or label of the electronic component. The caption (ce:caption), consisting of one or more paragraphs (ce:simple-para), contains descriptive text about the e-component. There can be multiple captions for different roles and/or languages; each caption must have a different role or language.

The optional subelement ce:source is used to describe the source of the figure. The optional ce:copyright element can be used if the copyright owner differs from the article's copyright owner.

Alternative e-component

An optional ce:alt-e-component can be included in the e-component. This contains a ce:link to an object that is suitable for presentation in non-electronic media. For example, a significant frame (still image) from a video is an example of content of the alternative e-component.

Each ce:alt-e-component should be treated exactly like a ce:figure. All rules for figures apply. If the e-component is floating or displayed, the ce:alt-e-component will behave like a floating or displayed figure, respectively. Its label is the ce:label of the parent e-component, and its caption is the ce:alt-e-component's own caption. If the caption is absent this means that the alternative e-component has no caption; it does not mean that the parent's caption should be used.

Even if ce:alt-e-component is encountered in electronic media it can be meaningful, because it can be the basis for a thumbnail for the e-component. If there is no ce:alt-e-component, then it is up to the application to find a suitable presentation.

Quite the opposite situation occurs if ce:alt-e-component is *not* encountered within a certain e-component in *non*-electronic media. It is up to the document's style to decide what to do with the e-component in such a situation; the default is to ignore the e-component altogether, another style might print a list of e-component captions.

Cross-referencing and nesting

The attribute id can be the target of a cross-reference or of a link from a foreign document. The ce:e-component can be, but does not have to be, referred to from within the text.

If a cross-reference is made to the ce:e-component, it must have an embedded ce:alt-e-component.

The element ce:e-component may be nested; this is mainly to be able to furnish each subcomponent with its own caption. The rules are identical to the rules for ce:figure. Within a nested ce:e-component it is not allowed to nest further ce:e-components.

Background

The element ce:e-component behaves much like ce:figure and ce:textbox. It is important to realize the implication of this. In HTML, the external files might well be referenced *directly*, i.e. they are accessed via the A element, e.g.

```
for more detail, see CNN's <A HREF="korea.mpg">report of
President Kim Dae-jung's visit to North-Korea</A>..
```

In XML files the element ce:inter-ref — the counterpart of HTML's A element — are *not* used to access external files belonging to the document. Instead, these files are accessed through the ce:link element embedded in ce:figure, ce:e-component, etc., and cross-references within the document are made using ce:cross-ref.

XML

```
<!ENTITY korea SYSTEM "korea" NDATA VIDEO>
<!ENTITY korea-f SYSTEM "korea-frame" NDATA IMAGE>
...
for more detail, see CNN's <ce:cross-ref refid="ec1">report
of President Kim Dae-jung's visit to North-Korea</cross-ref>.
<ce:e-component id="ec1">
  <ce:label>Video 1</ce:label>
  <ce:caption>
    <ce:simple-para>Coverage of South-Korean President Kim
    Dae-jung's historic visit to North-Korea and welcome by
    Dear Leader Kim Jong-il on Pyongyang International
    Airport.</ce:simple-para>
  </ce:caption>
  <ce:copyright type="other" year="2000">CNN</ce:copyright>
  <ce:link locator="korea"/>
  <ce:alt-e-component>
    <ce:link locator="korea-f"/>
  </ce:alt-e-component>
</ce:e-component>
```

Version history

Prior to DTD 5.0, the element upi existed. It had a different purpose: the ce:e-component is specifically for electronic components such as audio and video clips and spreadsheets, etc., whereas upi could contain *any* object that should not appear in print (hence the name, unprinted item). The ce:e-component *can* appear in print — the ce:alt-e-component is shown instead.

In order to create portions of text, which may include figures, tables or electronic components, that should only appear in certain renditions of the document, the view attribute of various elements can be used, see Views (p. 142).

In CEP 1.1.0 a list of subelements ce:link and ce:e-component became possible. As from CEP 1.1.2, the caption has become repeatable for different languages and roles. Parameter entity %copyright; was introduced as well. Subelement ce:source was introduced in CEP 1.1.3.

ce:edition

Declaration

Model (CEPs 1.1.2, 1.1.3)

```
<!ELEMENT  ce:edition            ( %string.data; )*>
```

Description

ce:edition contains the edition of an item.

Usage

The element ce:edition is used to capture the text that describes the edition of an item. The text contains no closing punctuation.

XML

```
<ce:edition>Fourth edition</ce:edition>
```

Version history

This element was introduced in CEP 1.1.2.

ce:editors

Declaration

Model (CEPs 1.1.2, 1.1.3)

```
<!ELEMENT  ce:editors            ( ce:author-group+ )>
```

Description

The element ce:editors is a container element that is used for capturing the editors and their affiliations.

Usage

If the need arises to capture the names, degrees, affiliations of editors, the ce:editors container element is used, that consists of one or more ce:author-group elements. Within this container, the editor names and affiliations are captured as if they were authors. The fact that the ce:author-group elements are contained within ce:editors indicates that the persons, institutions or collaborations captured with ce:author or ce:collaboration are editors. In other words, the container element ce:editors gives the instruction “for author, read editor”.

All the rules for ce:author-group apply, including the rules for implicit and explicit couplings with the affiliations.

Version history

This element was introduced in CEP 1.1.2.

ce:enunciation

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:enunciation        ( ce:label, ce:section-title?,
                                   ce:para+ )>
<!ATTLIST  ce:enunciation
           id                    ID              #IMPLIED
           role                  CDATA           #IMPLIED>
```

Description

The element ce:enunciation is used to capture enunciations. Enunciations is the catch-all phrase given to the category of structure elements that occur frequently in, e.g., mathematical papers: theorems, lemmas, propositions, proofs, corollaries, definitions, remarks, etc. However, enunciations are not restricted to mathematics.

Usage

The element ce:enunciation consists of a mandatory ce:label element, an optional title ce:section-title and one or more paragraphs. The ce:enunciation can be cross-referenced and therefore has an id attribute.

The ce:label contains the full designation of the enunciation, e.g. “Lemma 1.6” or “Remark”. The ce:section-title is used to capture additional information, e.g. “Fermat’s Theorem”.

XML

```
<ce:enunciation id="enun37">
  <ce:label>Theorem 1.12</ce:label>
  <ce:para id="p1">
    <ce:italic>Let</ce:italic>
    <mml:math altimg="si301.gif">
      <mml:mrow>
        <mml:mi>V</mml:mi>
      </mml:mrow>
    </mml:math>
    <ce:italic>be a set. Then the cardinality
      of the powerset of</ce:italic>
    <mml:math altimg="si302.gif">
      <mml:mrow>
        <mml:mi>V</mml:mi>
      </mml:mrow>
    </mml:math>,
    <mml:math altimg="si303.gif">
      <mml:mrow>
        <mml:mi mathvariant="script">P</mml:mi>
        <mml:mo stretchy="false">(</mml:mo>
        <mml:mi>V</mml:mi>
        <mml:mo stretchy="false">)</mml:mo>
      </mml:mrow>
```

```
    </mml:math>,
    <ce:italic>is strictly greater than the cardinality of</ce:italic>
    <mml:math altimg="si304.gif">
      <mml:mrow>
        <mml:mi>V</mml:mi>
      </mml:mrow>
    </mml:math>.
  </ce:para>
</ce:enunciation>
<ce:enunciation id="enun37proof">
  <ce:label>Proof</ce:label>
  <ce:para id="p2">
    Suppose not, and
    <mml:math altimg="si305.gif">
      <mml:mrow>
        <mml:mi>V</mml:mi>
        <mml:mo>&ne;</mml:mo>
        <mml:mi>&empty;</mml:mi>
      </mml:mrow>
    </mml:math>
    (for
    <mml:math altimg="si306.gif">
      <mml:mrow>
        <mml:mi>V</mml:mi>
        <mml:mo>=</mml:mo>
        <mml:mi>&empty;</mml:mi>
      </mml:mrow>
    </mml:math>
    the theorem is clear). Then there is a bijective mapping
    <mml:math altimg="si307.gif">
      <mml:mrow>
        <mml:mi>f</mml:mi>
        <mml:mo>:</mml:mo>
        <mml:mi>V</mml:mi>
        <mml:mo>&rarr;</mml:mo>
        <mml:mi mathvariant="script">P</mml:mi>
        <mml:mo stretchy="false">(</mml:mo>
        <mml:mi>V</mml:mi>
        <mml:mo stretchy="false">)</mml:mo>
      </mml:mrow>
    </mml:math>
    Let
    <mml:math altimg="si308.gif">
      <mml:mrow>
        <mml:mi>a</mml:mi>
        <mml:mo>=</mml:mo>
        <mml:msup>
          <mml:mi>f</mml:mi>
          <mml:mrow>
            <mml:mo>-</mml:mo>
            <mml:mn>1</mml:mn>
          </mml:mrow>
        </mml:msup>
        <mml:mo stretchy="false">(</mml:mo>
```

```
        <mml:mo stretchy="false"></mml:mo>
        <mml:mi>x</mml:mi>
        <mml:mo>&isin;</mml:mo>
        <mml:mi>V</mml:mi>
        <mml:mo stretchy="false">|</mml:mo>
        <mml:mi>x</mml:mi>
        <mml:mo>&notin;</mml:mo>
        <mml:mi>f</mml:mi>
        <mml:mo stretchy="false">(</mml:mo>
        <mml:mi>x</mml:mi>
        <mml:mo stretchy="false">)</mml:mo>
        <mml:mo stretchy="false"></mml:mo>
        <mml:mo stretchy="false">)</mml:mo>
      </mml:mrow>
    </mml:math>.
    Then
    <mml:math altimg="si309.gif">
      <mml:mrow>
        <mml:mi>a</mml:mi>
        <mml:mo>&isin;</mml:mo>
        <mml:mi>f</mml:mi>
        <mml:mo stretchy="false">(</mml:mo>
        <mml:mi>a</mml:mi>
        <mml:mo stretchy="false">)</mml:mo>
        <mml:mo>&LeftRightArrow;</mml:mo>
        <mml:mi>a</mml:mi>
        <mml:mo>&notin;</mml:mo>
        <mml:mi>f</mml:mi>
        <mml:mo stretchy="false">(</mml:mo>
        <mml:mi>a</mml:mi>
        <mml:mo stretchy="false">)</mml:mo>
      </mml:mrow>
    </mml:math>. Contradiction.<ce:hsp/>&squ;
  </ce:para>
</ce:enunciation>
```

Presentation

Theorem 1.12. *Let V be a set. Then the cardinality of the powerset of V, $\mathcal{P}(V)$, is strictly greater than the cardinality of V.*

Proof. Suppose not, and $V \neq \emptyset$ (for $V = \emptyset$ the theorem is clear). Then there is a bijective mapping $f : V \to \mathcal{P}(V)$. Let $a = f^{-1}(\{x \in V \mid x \notin f(x)\})$. Then $a \in f(a) \Leftrightarrow a \notin f(a)$. Contradiction. □

Explanation

Note that in this example certain spaces are "generated" by the XML. For instance, the space between "*Let*" and "V" is generated by the whitespace characters between `</ce:italic>` and `<mml:math altimg="si301.gif">`. See also the section Whitespace in the XML file (p. 11).

XML

```
<ce:enunciation id="25">
  <ce:label>Theorem 1.25</ce:label>
  <ce:section-title>Pythagoras' Theorem</ce:section-title>
  <ce:para><ce:italic>In a right-angled triangle the sum of the square
    of the hypotenuse is equal to the sum of the squares of the other
    two sides.</ce:italic></ce:para>
```

```
</ce:enunciation>
```

Presentation

Theorem 1.25 (Pythagoras' Theorem)**.** *In a right-angled triangle the sum of the square of the hypotenuse is equal to the sum of the squares of the other two sides.*

Version history

Prior to DTD 5.0, this element was called `enun`.

Copy edit considerations

It is well-known that certain enunciations, such as theorems and lemmas, are usually rendered in italics while others, such as definitions, are not. The `ce:enunciation` element has no provision to indicate a type; italics must be indicated explicitly.

Rendering notes

The `ce:label` element is rendered in the style of the journal — i.e, if the style is to present the `ce:label` in bold, this should not be explicitly marked up. The `ce:section-title`, whose standard presentation is italics, generates parentheses. Closing full stops are generated.

Light reading

`ce:enunciation` may not be used in CONTENTS-ENTRY-ONLY, HEAD-ONLY or HEAD-AND-TAIL files.

ce:exam-answers

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:exam-answers       ( ce:section-title?, %parsec; )>
<!ATTLIST  ce:exam-answers
           id                    ID                #IMPLIED
           role                  CDATA             #IMPLIED
           view                  %view;            'all'>
```

Description

ce:exam-answers is used to capture the answers for a Continuous Medical Examination or similar.

Usage

ce:exam-answers has a similar content model to ce:section. Therefore it can accommodate a wide range of forms of examination answers. However, it can neither have a ce:label nor subsections.

XML

```
<ce:exam-answers>
  <ce:section-title>Answers ...</ce:section-title>
  <ce:para>Identification...</ce:para>
  <ce:para>
    <ce:display>
      <ce:table id="cme-ans" frame="none">
        <ce:caption>Questions 1-30, ...</ce:caption>
        <tgroup cols="4" colsep="0" rowsep="0" align="char">
          <tbody>
            <colspec colnum="1" colwidth="5pc" char="." charoff="50">
            <colspec colnum="2" colwidth="5pc" char="." charoff="50">
            <colspec colnum="3" colwidth="5pc" char="." charoff="50">
            <colspec colnum="4" colwidth="5pc" char="." charoff="50">
            <row>
              <entry>1. c</entry>
              <entry>9. b</entry>
              <entry>17. a</entry>
              <entry>25. a</entry>
            </row>
            ...
          </tbody></tgroup>
        </ce:table>
      </ce:display>
    </ce:para>
</ce:exam-answers>
```

Version history

This element is new in DTD 5. The view attribute was added in CEP 1.1.0.

ce:exam-questions

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:exam-questions     ( ce:section-title?, %parsec; )>
<!ATTLIST  ce:exam-questions
           id                    ID               #IMPLIED
           role                  CDATA            #IMPLIED
           view                  %view;           'all'>
```

Description

ce:exam-questions is used to capture the questions for a Continuous Medical Examination or similar.

Usage

ce:exam-questions has a similar content model to ce:section. Therefore it can accommodate a wide range of forms of examination questions. However, it can neither have a ce:label nor subsections.

An example of examination questions is shown in Figs. 8 and 9.

Version history

This element is new in DTD 5. The view attribute was added in CEP 1.1.0.

***FERTILITY AND STERILITY*®**
CONTINUING MEDICAL EDUCATION QUESTIONS

To obtain the 15 Category I CME credits, the **entire** examination of lessons from Volume 81 of *Fertility and Sterility*® must be taken. The answer sheet will be available in the June 2004 issue and will be graded. A 70% passing score must be achieved and documentation will be mailed with the corrected examination to the participant.

SART and ASRM. 81:1207–20 (Lesson 16)

Objective: To summarize the procedures and outcomes of assisted reproductive technologies (ART) initiated in the United States during 2000

1. For all IVF cycles in the Society for Assisted Reproductive Technology (SART) 2000 registry, what was the approximate percentage of singleton deliveries?
   a) 60%
   b) 65%
   c) 70%
   d) 75%
   e) 80%
2. Using deliveries per transfer from the SART 2000 data, what is the approximate reduced likelihood for success in a woman aged >40 compared with a woman <35 years?
   a) 40%
   b) 50%
   c) 60%
   d) 70%
   e) 80%

Virro et al. 81:1289–95 (Lesson 17)

Objective: To determine the relationship between sperm chromatin structure assay parameters (DNA fragmentation index, DFI; high DNA stainability, HDS) and IVF and IVF/intracytoplasmic sperm injection outcomes

1. When fertilization is on day 1 and blastocyst development is on day 5, on which day does embryo genome expression begin?
   a) day 1
   b) day 2
   c) day 3
   d) day 4
   e) day 5

⋮

Figure 8: An example of Continuing Medical Education Questions. Its XML coding can be found in Fig. 9.

```
<ce:exam-questions>
  <ce:section-title><ce:italic>FERTILITY AND STERILITY</ce:italic>&reg;
    CONTINUING MEDICAL EDUCATION QUESTIONS</ce:section-title>
  <ce:para>To obtain the 15 Category I CME credits, the
    <ce:bold>entire</ce:bold> examination of lessons from Volume 81 of
    <ce:italic>Fertility and Sterility</ce:italic>&reg; must be
    taken. The answer sheet will be available in the June 2004 issue
    and will be graded. A 70% passing score must be achieved and
    documentation will be mailed with the corrected examination to the
    participant.</ce:para>
  <ce:section>
    <ce:section-title>SART and ASRM. 81:1207&ndash;20 (Lesson 16)</ce:section-title>
    <ce:para><ce:italic>Objective:</ce:italic> To summarize the
      procedures and outcomes of assisted reproductive technologies
      (ART) initiated in the United States during 2000</ce:para>
    <ce:list>
      <ce:list-item>
        <ce:label>1.</ce:label>
        <ce:para>For all IVF cycles in the Society for Assisted
          Reproductive Technology (SART) 2000 registry, what was the
          approximate percentage of singleton deliveries?</ce:para>
        <ce:list>
          <ce:list-item><ce:label>a)</ce:label><ce:para>60%</ce:para></ce:list-item>
          <ce:list-item><ce:label>b)</ce:label><ce:para>65%</ce:para></ce:list-item>
          <ce:list-item><ce:label>c)</ce:label><ce:para>70%</ce:para></ce:list-item>
          <ce:list-item><ce:label>d)</ce:label><ce:para>75%</ce:para></ce:list-item>
          <ce:list-item><ce:label>e)</ce:label><ce:para>80%</ce:para></ce:list-item>
        </ce:list>
      </ce:list-item>
      <ce:list-item>
        <ce:label>2.</ce:label>
        <ce:para>Using deliveries per transfer from the SART 2000
          data, what is the approximate reduced likelihood for success
          in a woman aged &gt;40 compared with a woman &lt;35
          years?</ce:para>
        <ce:list>
          <ce:list-item><ce:label>a)</ce:label><ce:para>40%</ce:para></ce:list-item>
          <ce:list-item><ce:label>b)</ce:label><ce:para>50%</ce:para></ce:list-item>
          <ce:list-item><ce:label>c)</ce:label><ce:para>60%</ce:para></ce:list-item>
          <ce:list-item><ce:label>d)</ce:label><ce:para>70%</ce:para></ce:list-item>
          <ce:list-item><ce:label>e)</ce:label><ce:para>80%</ce:para></ce:list-item>
        </ce:list>
      </ce:list-item>
    </ce:list>
  </ce:section>
  <ce:section>
    <ce:section-title>Virro et al. 81:1289&ndash;95 (Lesson 17)</ce:section-title>
    <ce:para><ce:italic>Objective:</ce:italic> To determine the
      relationship between sperm chromatin structure assay parameters
      (DNA fragmentation index, DFI; high DNA stainability, HDS) and
      IVF and IVF/intracytoplasmic sperm injection outcomes</ce:para>
    <ce:list>
      <ce:list-item>
        <ce:label>1.</ce:label>
        <ce:para>When fertilization is on day 1 and blastocyst
          development is on day 5, on which day does embryo genome
          expression begin?</ce:para>
        <ce:list>
          <ce:list-item><ce:label>a)</ce:label><ce:para>day 1</ce:para></ce:list-item>
          <ce:list-item><ce:label>b)</ce:label><ce:para>day 2</ce:para></ce:list-item>
          <ce:list-item><ce:label>c)</ce:label><ce:para>day 3</ce:para></ce:list-item>
          <ce:list-item><ce:label>d)</ce:label><ce:para>day 4</ce:para></ce:list-item>
          <ce:list-item><ce:label>e)</ce:label><ce:para>day 5</ce:para></ce:list-item>
        </ce:list>
      </ce:list-item>
      .
      .
      .
    </ce:list>
  </ce:section>
  ...
</ce:exam-questions>
```

Figure 9: XML of the examination questions shown in Fig. 8.

ce:exam-reference

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:exam-reference     ( ce:inter-ref )>
<!ATTLIST  ce:exam-reference
           view                  %view;            'all'>
```

Description

The element ce:exam-reference is used to create a link to an associated examination that is in a separate article.

Usage

Sometimes the examination associated with an article is not published as part of the article but as a separate article. The element ce:exam-reference can be used to create a link in the article to the examination.

Only the values pii and doi for the scheme in xlink:href are allowed.

XML

```
<ce:exam-reference>
  <ce:inter-ref id="interref7"
    xlink:href="pii:S0004-3702(02)00193-5">See the examination
    questions in the following article.</ce:inter-ref>
</ce:exam-reference>
```

Version history

This element is new in DTD 5. The view attribute was added in CEP 1.1.0.

Rendering notes

The text of ce:exam-reference, i.e., the text of the contained ce:inter-ref element, is rendered as a separate paragraph.

ce:figure

Declaration

Model (CEPs 1.1.0, 1.1.1)

```
<!ELEMENT  ce:figure            ( ce:label?, ce:caption?, ce:copyright?,
                                  ( ce:link | ce:figure )+ )>
<!ATTLIST  ce:figure
           id                   ID                #IMPLIED>
```

Model (CEP 1.1.2)

```
<!ELEMENT  ce:figure            ( ce:label?, ce:caption*, ( %copy-
                                  right; )?, ( ce:link | ce:figure )+ )>
<!ATTLIST  ce:figure
           id                   ID                #IMPLIED>
```

Model (CEP 1.1.3)

```
<!ELEMENT  ce:figure            ( ce:label?, ce:caption*, ce:source?,
                                  ( %copyright; )?, ( ce:link |
                                  ce:figure )+ )>
<!ATTLIST  ce:figure
           id                   ID                #IMPLIED>
```

Description

The element ce:figure is used to insert a figure in the document.

Usage

Most articles contain artwork in one form or another, and the element ce:figure is used to insert the figure. The attribute id is used when referring to the figure.

XML

```
<ce:cross-ref refid="fig4">Fig. 4</ce:cross-ref>
<ce:cross-ref refid="fig4">Fig. 4(a)</ce:cross-ref>
```

Explanation

It is common that the text refers to parts of a figure while in fact the whole figure is cross-referenced. Indeed, in most cases the subfigure will be an integral part of the external artwork file.

Three kinds of figure are distinguished: floating and displayed figures, and figures in graphical abstracts. Floating figures are embedded in a ce:floats element, displayed figures are embedded in a ce:display element, and a figure in a graphical abstract is the (optional) subelement of ce:abstract behind ce:abstract-sec. The latter play a special role in a graphical abstract (ce:abstract): these are floating, and are not referred to. Their placement is governed by the style of the graphical abstract. There can be only one such figure per abstract. Otherwise, no floating figures may occur in an abstract. (Cross-references to figures are, however, allowed, albeit highly discouraged.)

Floating figures are figures which appear near a point in the text where they are mentioned, mostly at the top or the bottom of the page, spanning one or more columns if needed. Floating figures must be referred to from within the document. To indicate where a floating figure should appear, the element ce:float-anchor is used, referring to a ce:figure

within ce:floats. Hence, a floating figure has at least one ce:cross-ref or ce:cross-refs pointing to it, and exactly one ce:float-anchor.

XML

```
<ce:cross-ref refid="fig4">Fig. 4</ce:cross-ref>
<ce:float-anchor refid="fig4"/>
```

XML

```
<ce:cross-refs refid="fig6 fig7">Figs. 6 and 7</ce:cross-ref>
<ce:float-anchor refid="fig6"/><ce:float-anchor refid="fig7"/>
```

A displayed figure, obtained by embedding the figure in a ce:display element, is a figure which is displayed on a line of its own, separated from the surrounding text by white space, on the spot where it appears in the file.

Figures can be nested one level deep, i.e., a figure within a figure cannot contain yet another figure.

The subelement ce:label contains the name of the figure, e.g. “Fig. 2”, “Diagram B”, “Scheme 6” or “Plate III”. For floating figures it is mandatory.

The optional subelement ce:caption contains descriptive text of the figure in the form of one or more simple paragraphs, ce:simple-para. As from CEP 1.1.2, multiple captions for different languages and/or roles are supported. Different captions must have a different role or language.

The optional subelement ce:source is used to describe the source of the figure. The optional subelement ce:copyright is used if the copyright owner of the figure is different from that of the article.

Figures without subfigures

In this subsection it is assumed that the ce:figure does not contain any ce:figure subelements.

One or more ce:link elements provide the link with the external artwork file(s). The artwork files are to be displayed in the order of the ce:link elements.

XML

```
<!ENTITY loc2a SYSTEM "gr2ab" NDATA IMAGE>
<!ENTITY loc2c SYSTEM "gr2c" NDATA IMAGE>
...
<ce:figure id="fig2">
  <ce:label>Fig. 2</ce:label>
  <ce:caption>
    <ce:simple-para>Caption, caption, caption ...</ce:simple-para>
  </ce:caption>
  <ce:link locator="loc2a"/>
  <ce:link locator="loc2c"/>
</ce:figure>
</ce:float>
```

Presentation

Fig. 2. Caption, caption, caption ...

Figures with nested figures

Instead of just ce:links, the top-level figure may contain any combination of ce:link and ce:figure. Nested ce:figures are used if the subfigures need their own captions or copyright statement. A nested ce:figure may only contain ce:links, no ce:figures.

The qualification “displayed” or “floating” is irrelevant for a subfigure. The subfigures are displayed within the main figure in the order which they appear.

Nested figures may have an id and may be the target of a ce:cross-ref. However, the effect is undefined: “clicking” on the cross-reference may lead to the whole figure or the nested figure alone. It is recommended only to cross-reference the top-level figure.

XML

```
<!ENTITY loc2a SYSTEM "gr2ab" NDATA IMAGE>
<!ENTITY loc2c SYSTEM "gr2c" NDATA IMAGE>
...
<ce:figure id="fig2">
  <ce:label>Fig. 2</ce:label>
  <ce:caption>
    <ce:simple-para>(a) Caption. (b) Caption.
      (c) Caption ...</ce:simple-para>
  </ce:caption>
  <ce:link locator="loc2a"/>
  <ce:figure>
    <ce:copyright type="other" yr="2000">Copyright</ce:copyright>
    <ce:link locator="loc2c"/>
  </ce:figure>
</ce:figure>
```

Presentation

Fig. 2. (a) Caption. (b) Caption. (c) Caption ...

XML

```
<!ENTITY gr3a SYSTEM "gr3a" NDATA IMAGE>
<!ENTITY gr3b SYSTEM "gr3b" NDATA IMAGE>
...
<ce:figure id="fig3">
  <ce:label>Fig. 3</ce:label>
  <ce:caption>
    <ce:simple-para>Caption, caption, caption ...</ce:simple-para>
  </ce:caption>
  <ce:figure>
    <ce:caption>
      <simple-para>(a) Sub I.</ce:simple-para>
    </ce:caption>
    <ce:link locator="gr3a"/>
  </ce:figure>
  <ce:figure>
    <ce:caption>
      <ce:simple-para>(b) Sub II.</ce:simple-para>
    </ce:caption>
    <ce:link locator="gr3b"/>
```

```
    </ce:figure>
  </ce:figure>
```

Presentation

(a) Sub I. (b) Sub II.

Fig. 3. Caption, caption, caption ...

External entities

In practice, the external entities used in the `ce:link` element within a figure will be of notation data type `IMAGE`. Usage of the other notation types is presently undefined.

Version history

Prior to DTD 5.0, this element was called `fig`. As from CEP 1.1.2, multiple captions are supported. Parameter entity `%copyright;` was introduced as well. Subelement `ce:source` was introduced in CEP 1.1.3.

Copy edit considerations

In some articles, figures called, say, "Fig. 5(a)" and "Fig. 5(b)" exist, which are to be treated as floating or displayed objects in their own right. These figures are called *improper subfigures*. In such cases, it is inappropriate to use the nested `ce:figure` construction; these figures are independent top-level `ce:figure`s.

Light reading

No floating `ce:figure` may be used in CONTENTS-ENTRY-ONLY, HEAD-ONLY or HEAD-AND-TAIL files.

See also

`ce:abstract`, `ce:display`, `ce:float-anchor`, `ce:floats`, `ce:inline-figure`

ce:first-page

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:first-page          ( %richstring.data; )*>
```

Description

The first page of an item called by a hub file is captured using ce:first-page.

Usage

See ce:pages.

Version history

This element was added in CEP 1.1.0.

See also

ce:include-item, ce:last-page

ce:float-anchor

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:float-anchor       EMPTY>
<!ATTLIST  ce:float-anchor
           refid                 IDREF            #REQUIRED>
```

Description

The element ce:float-anchor is a marker to indicate that a floating figure, table, textbox or e-component must appear in the vicinity.

Usage

To indicate that a figure, table, textbox or e-component is “floating”, it is embedded within ce:floats, collected at the beginning of the document.

The anchor, in the form of the empty ce:float-anchor element with a refid attribute pointing to the figure, table, textbox or e-component within ce:floats, tells the rendering application that the float should be placed at a suitable place near the anchor. This anchor is often, but not always, placed after the first cross-reference to that object. There must be exactly one anchor for each floating object.

The ce:float-anchor itself generates no presentation, it marks the place near which the floating object must appear. Its refid attribute may not point to any object outside ce:floats.

See also

ce:display, ce:e-component, ce:figure, ce:floats, ce:table

ce:floats

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:floats            ( ce:figure*, ce:table*, ce:textbox*,
                                  ce:e-component* )>
```

Description

The element ce:floats is a container element for floating figures, tables, textboxes and e-components.

Usage

To indicate that a figure, table, textbox or e-component is "floating", it should be embedded in a ce:floats element, a container for all floats located at the beginning of the document, as a child of the top element.

The approximate position of the floating object is indicated by a ce:float-anchor element. This anchor is often, but not always, placed near the first cross-reference to that object.

Version history

Prior to DTD 5.0, floats were placed within the in-line text.

See also

ce:display, ce:e-component, ce:figure, ce:float-anchor, ce:table

ce:footnote

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:footnote          ( ce:label, ce:note-para+ )>
<!ATTLIST  ce:footnote
           id                   ID              #REQUIRED>
```

Description

Footnotes are captured using ce:footnote.

Usage

The element ce:footnote is used for footnotes. Footnotes are objects, which in print appear at the bottom of the page. The ce:footnote element contains the footnote text and additionally it is an “anchor” nearest to which the footnote should appear. The actual reference in the text is made by a ce:cross-ref.

Each footnote must be referred to. It has an attribute id so that it can be referenced. The mandatory subelement ce:label contains the number of the footnote. The footnote text itself consists of one or more note paragraphs, ce:note-para.

XML

```
<ce:cross-ref refid="fn1"><ce:sup>1</ce:sup></ce:cross-ref>
<ce:footnote id="fn1">
  <ce:label>1</ce:label>
  <ce:note-para>In XML files used for online rendering, it is
    possible ... </ce:note-para>
</ce:footnote>
```

See also

ce:article-footnote, ce:table-footnote, ce:cross-refs

ce:formula

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:formula          ( ce:label?, ( mml:math | ce:chem |
                                 ce:link | ce:formula+ ) )>
<!ATTLIST  ce:formula
           id                  ID              #IMPLIED>
```

Description

A displayed formula is captured using ce:formula.

Usage

The element ce:formula is one of the possible subelements of ce:display. It contains a mathematical formula mml:math, a chemical formula ce:chem, a ce:link to the image of a formula, or nested ce:formula elements. The number of the formula is captured in the optional ce:label element.

A mml:math element in a ce:formula should not have the value block for the display attribute, but rather the default value inline. This is so because it is inline with respect to the containing ce:formula and to the formula number that the element ce:label generates.

XML

```
<ce:formula id="ch2">
  <ce:label>(2)</ce:label>
  <ce:chem>TLC (CH<ce:inf>2</ce:inf>C<ce:inf>12</ce:inf>/MeOH):
    <ce:it>R</ce:it><ce:inf>f</ce:inf>=0.45; IR:
    3423 cm<ce:sup>-1</ce:sup> (NH).</ce:chem>
</ce:formula>
```

Presentation

TLC (CH_2C_{12}/MeOH): $R_f = 0.45$; IR: 3423 cm^{-1} (NH). (2)

XML

```
<ce:formula><ce:label>(7a)</ce:label>
<mml:math altimg="si56.gif">
  <mml:mi>&alpha;</mml:mi>
  <mml:mo>=</mml:mo>
  <mml:mo>&int;</mml:mo>
  <mml:mfrac>
    <mml:mrow>
      <mml:msup>
        <mml:mi mathvariant="normal">d</mml:mi>
        <mml:mn>3</mml:mn>
      </mml:msup>
      <mml:mi>k</mml:mi>
    </mml:mrow>
    <mml:msup>
      <mml:mrow>
        <mml:mo>(</mml:mo>
```

```
          <mml:mn>2</mml:mn>
          <mml:mi>&pi;</mml:mi>
          <mml:mo>)</mml:mo>
        </mml:mrow>
        <mml:mn>3</mml:mn>
      </mml:msup>
    </mml:mfrac>
    <mml:mrow>
      <mml:mo>&langle;</mml:mo>
      <mml:mi mathvariant="bold">k</mml:mi>
      <mml:mo>|</mml:mo>
      <mml:mi mathvariant="bold">k</mml:mi>
      <mml:mo>+</mml:mo>
      <mml:mi mathvariant="bold">q</mml:mi>
      <mml:mo>&rangle;</mml:mo>
    </mml:mrow>
  </mml:math>
  </ce:formula>
```

Presentation

$$\alpha = \int \frac{\mathrm{d}^3 k}{(2\pi)^3} \, \langle \mathbf{k} | \mathbf{k} + \mathbf{q} \rangle \tag{7a}$$

Numbers and nesting depth

A displayed formula (`ce:formula` element) may contain other displayed formulae, in which case the main (outer) `ce:formula` may only consist of an optional `ce:label` element and one or more nested `ce:formula`s. Displayed formulae contained in a displayed formula may *not* themselves contain displayed formulae.

Like all referenceable elements, a displayed formula must have a `ce:label` element and a value for the `id` attribute if it is referred to. This holds both for top-level and for lower-level `ce:formula` elements.

The rule is more complicated for a complicated displayed formula, i.e. a displayed formula that contains nested subformulae. If a complicated displayed formula is referred to, it need not have a `ce:label` element, provided all of its subformulae have a `ce:label` element.

This is summarized in the following example:

XML

```
<ce:formula id="eq04"><ce:label>(4)</ce:label> ..... </ce:formula>
<ce:formula id="eq05">
  <ce:formula><ce:label>(5a)</ce:label> ..... </ce:formula>
  <ce:formula><ce:label>(5b)</ce:label> ..... </ce:formula>
</ce:formula>

Eqs. <ce:cross-refs refid="eq04 eq05">(4) and (5)</ce:cross-refs>
```

The requirements for nested displayed formulae are described by three rules. The first two are:

1. The `ce:label` element may occur at the nested level.
2. `ce:label` elements may not occur at both the main level and the nested level.

These rules imply the following error table for nested equations. Here a 0 or 1 means that an `id` or a `ce:label` is absent or present.

Table 6: Error table for nested equations

	Main level		Nested level		
Case	id	no	id's	no's	Error status
1	0	0	0	0	OK
2	0	0	0	1	OK
3	0	0	1	0	Error: Referenceable object should have a `ce:label` element
4	0	0	1	1	OK
5	0	1	0	0	OK
6	0	1	0	1	Error: Formula with `ce:label` element in formula with `ce:label` element
7	0	1	1	0	Error: Referenceable object should have a `ce:label` element
8	0	1	1	1	Error: Formula with `ce:label` element in formula with `ce:label` element
9	1	0	0	0	Error: Referenceable object should have a `ce:label` element
10	1	0	0	1	OK
11	1	0	1	0	Error: Referenceable object should have a `ce:label` element
12	1	0	1	1	OK
13	1	1	0	0	OK
14	1	1	0	1	Error: Formula with `ce:label` element in formula with `ce:label` element
15	1	1	1	0	Error: Referenceable object should have a `ce:label` element
16	1	1	1	1	Error: Formula with `ce:label` element in formula with `ce:label` element

Additionally there is a rule that if the `id` attribute appears at the main level, it is not possible to mix unnumbered and numbered subequations. For example, in the example above, it is not allowed to leave out one of the `ce:label` elements (5a) or (5b). To be precise:

3. If there is an `id` attribute at the main level and a `ce:label` element at the nested level, then all nested formulae must have a `ce:label` element.

Version history

Prior to DTD 5.0, displayed formulae were directly captured in the element `fd`, without top `mml:math` or `ce:chem` element.

Rendering notes

A formula element is rendered in the block that is generated by its parent `ce:display` element. If it has a label, its space is split into two areas. In the formula area, which is the larger (usually left-hand) area, the contained formula is rendered as an inline formula. In the label area, which is the other area, the formula label is rendered.

ce:further-reading

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:further-reading    ( ce:section-title, ce:further-reading-
                                   sec+ )>
<!ATTLIST  ce:further-reading
           id                    ID              #IMPLIED
           role                  CDATA           #IMPLIED
           view                  %view;          'all'>
```

Description

The element ce:further-reading contains a list of bibliographic references which are meant as further reading material.

Usage

The element ce:further-reading is an optional part of the tail. It contains bibliographic references which are meant for further reading.

A further-reading list has an optional ce:section-title, which contains the name of the list, e.g. "Further reading". The list itself contains one or more sections, ce:further-reading-sec. Each ce:further-reading-sec can also have a ce:section-title, which is a second-order heading. All further-reading sections except the first must have a ce:section-title, for the first this is optional.

The further-reading section contains any combination of bibliographic references, ce:bib-reference, and paragraphs, ce:para. Unlike the ce:bib-references within an ordinary bibliography (ce:bibliography), each ce:bib-reference may or may not be referred to by means of ce:cross-ref or ce:cross-refs. In further-reading lists, the references are often interspersed with text; this is why paragraphs can be inserted between the entries. This is different from the sb:comment and ce:note which exist within ce:bib-reference, since those elements belong uniquely to the specific reference.

Version history

The view attribute was added in CEP 1.1.0.

Light reading

ce:further-reading is part of HEAD-AND-TAIL material.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

ce:further-reading-sec

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:further-reading-sec( ce:section-title?, ( ce:para |
                                   ce:bib-reference )+ )>
<!ATTLIST  ce:further-reading-sec
           id                     ID                 #IMPLIED
           role                   CDATA              #IMPLIED>
```

Description

The element ce:further-reading-sec is a section within the further-reading list.

Usage

See ce:further-reading.

ce:given-name

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:given-name        ( %richstring.data; )*>
```

Description

The given name of an author or editor (also known as forename, Christian name) is tagged using ce:given-name.

Usage

For non-Western persons, the ce:given-name is unreliable, and therefore the ce:given-name and ce:surname should always be used together.

XML

```
<ce:author>
  <ce:given-name>Franklin D.</ce:given-name>
  <ce:surname>Roosevelt</ce:surname>
</ce:author>
```

See also

ce:author

ce:glossary

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:glossary          ( ce:section-title, ce:intro?,
                                  ce:glossary-sec+ )>
<!ATTLIST  ce:glossary
           id                   ID                 #IMPLIED
           role                 CDATA              #IMPLIED
           view                 %view;             'all'>
```

Description

A glossary is a list of terms or symbols, sometimes with a definition, and sometimes with a reference to the occurrence in the text, appearing in the backmatter of an article.

Usage

A glossary consists of one or more ce:glossary-secs, each containing a subsection within the glossary.

The section title, ce:section-title, contains the title of the glossary, e.g. “Glossary”.

The subelement ce:intro, consisting of one or more paragraphs, is an introductory section at the beginning of the glossary.

Often, a glossary is not subdivided into subsections, in which case it contains just one ce:glossary-sec. If there are subsections, each subsequent ce:glossary-sec must have a ce:section-title, whereas this is optional for the first.

A glossary (section) contains one or more entries, described under ce:glossary-entry.

Version history

The view attribute was added in CEP 1.1.0. The optional ce:intro was introduced in CEP 1.1.1.

ce:glossary-def

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:glossary-def       ( %text.data; )*>
```

Description

Within a glossary entry, ce:glossary-def is used to capture the definition of a glossary item.

Usage

See ce:glossary-entry.

ce:glossary-entry

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:glossary-entry     ( ce:glossary-heading, ce:glossary-def*,
                                   ( %cross-ref; )*, ce:glossary-
                                   entry* )>
<!ATTLIST  ce:glossary-entry
           id                    ID              #IMPLIED
           role                  CDATA           #IMPLIED>
```

Description

The glossary or a glossary section consists of one or more glossary entries. The element ce:glossary-entry is provided in order to capture such an entry.

Usage

A ce:glossary-entry consists of a mandatory ce:glossary-heading, followed by zero or more ce:glossary-defs, an optional list of ce:cross-ref and ce:intra-ref (provided the DTD supports this element), and zero or more nested glossary entries.

A glossary entry has an optional id attribute, which can be used to make cross-references from expressions in the text to the terms in the glossary.

Glossary heading and definition

A glossary heading, ce:glossary-heading contains the term.

A glossary entry may or may not have accompanying definitions. An example where it has none is when it contains nested entries. The following has one or two definitions per entry.

XML

```
<ce:glossary-entry>
  <ce:glossary-heading><ce:italic>a</ce:italic></ce:glossary-heading>
  <ce:glossary-def>acceleration
    (m/s<ce:sup>2</ce:sup>)</ce:glossary-def>
</ce:glossary-entry>
<ce:glossary-entry>
  <ce:glossary-heading><ce:italic>e</ce:italic></ce:glossary-heading>
  <ce:glossary-def>charge of an electron
     (1.6022&middot;10<ce:sup>&minus;19</ce:sup><ce:hsp sp="0.25"/>C)
  <ce:glossary-def>base of natural logarithm
     (2.718281828)
</ce:glossary-entry>
<ce:glossary-entry>
  <ce:glossary-heading><ce:italic>F</ce:italic></ce:glossary-heading>
  <ce:glossary-def>force (N)</ce:glossary-def>
</ce:glossary-entry>
```

Presentation

a, acceleration (m/s^2)
e, charge of an electron ($1.6022 \cdot 10^{-19}$ C),
base of natural logarithm (2.718281828)
F, force (N)

Cross-references

If there are page numbers or section numbers referring to the place in the text where term is used, they can be tagged using the ce:cross-ref and ce:intra-ref subelements, see the first example above. Depending on the value of %cross-ref; the ce:intra-ref may or may not be present; this depends on which DTD the glossary is structured with.

Of course, reference to *page* numbers is not appropriate in electronic media. Therefore, the ce:cross-ref and ce:intra-ref may also be empty here, meaning that the rendering application must provide another way to establish a "clickable" link, e.g. by turning the whole entry into a hyperlink or by providing a button.

Nested glossary entries

Glossary entries can be nested. Two sublevels are allowed.

XML

```
<ce:glossary-entry>
  <ce:glossary-heading>
    <ce:monospace>biographyid</ce:monospace>, attribute of
    <ce:monospace>author</ce:monospace>
  </ce:glossary-heading>
  <ce:glossary-def>
    link to the author's biography
  </ce:glossary-def>
</ce:glossary-entry>
<ce:glossary-entry>
  <ce:glossary-heading>
    <ce:monospace>year</ce:monospace>
  </ce:glossary-heading>
  <ce:glossary-entry>
    <ce:glossary-heading>
      attribute of <ce:monospace>date-accepted</ce:monospace>
    </ce:glossary-heading>
    <ce:glossary-def>year of acceptance</ce:glossary-def>
  </ce:glossary-entry>
  <ce:glossary-entry>
    <ce:glossary-heading>
      attribute of <ce:monospace>copyright</ce:monospace>
    </ce:glossary-heading>
    <ce:glossary-def>copyright year</ce:glossary-def>
  </ce:glossary-entry>
</ce:glossary-entry>
```

Presentation

biographyid, attribute of author, link to the author's biography
year
attribute of date-accepted, year of acceptance
attribute of copyright, copyright year

ce:glossary-heading

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:glossary-heading   ( %textref.data; )*>
```

Description

Within a glossary entry, ce:glossary-heading is used to capture the item that is defined.

Usage

See ce:glossary-entry.

ce:glossary-sec

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:glossary-sec       ( ce:section-title?, ce:intro?,
                                   ce:glossary-entry+ )>
<!ATTLIST  ce:glossary-sec
           id                    ID                #IMPLIED
           role                  CDATA             #IMPLIED>
```

Description

The element ce:glossary-sec is a section within the glossary.

Usage

See ce:glossary.

ce:glyph

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:glyph              EMPTY>
<!ATTLIST  ce:glyph
           name                  %glyph-names;     #REQUIRED>
```

Description

Symbols for which no Unicode code point exists, may be captured in a ce:glyph element.

Usage

The Elsevier Grid contains a small number of symbols for which no Unicode code point exists. This concerns especially symbols for chemistry and linguistics. Such symbols can be captured using the ce:glyph element. It has a required name attribute, which contains the name of the glyph. Its value must be one of a list of names enumerated in the DTD. See the section on glyphs (p. 25) for an overview.

It is expected that newer versions of Unicode will incorporate some or all of the glyphs defined by ce:glyph. Unicode characters are always preferred over ce:glyphs.

XML

```
Bi(NO<inf>3</inf>)<ce:glyph name="rad"/>5H<inf>2</inf>O
```

XML

```
C<ce:glyph name="dbnd"/>N bond
```

Version history

Prior to DTD 5.0, all non-ascii symbols were entered as character entities.

Rendering notes

A glyph element is rendered with the glyph of that name that is shown in the Elsevier Grid, or with a similar glyph in a different font/style.

ce:hsp

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:hsp                EMPTY>
<!ATTLIST  ce:hsp
           sp                    NMTOKEN          "1.0">
```

Description

The element ce:hsp is used to create explicit horizontal space.

Usage

The element ce:hsp should be used as little as possible. Should the need arise to indicate explicitly the insertion of spaces, ce:hsp can be used. The element has one attribute, sp, which denotes the width of the space measured in “em”s of the current font. The default value if sp is omitted is 1.0.

XML

```
... concludes the proof.<ce:hsp sp="1.0"/>&squ;
```

Presentation

... concludes the proof. □

The value of sp is a positive floating number. It is not possible to use ce:hsp for kerning or creating compound symbols.

See also

 ,

ce:imprint

Declaration

Model (CEPs 1.1.1–1.1.3)

```
<!ELEMENT  ce:imprint            ( %richstring.data; )*>
```

Description

The imprint of e.g. a book project can be captured with element ce:imprint.

Usage

The element ce:imprint is used in the identification portions of books DTDs and identifies the imprint under which the book project is published.

XML

```
<ce:imprint>Academic Press</ce:imprint>
<ce:imprint>Churchill Livingstone</ce:imprint>
```

Version history

This element was added in CEP 1.1.1.

ce:include-item

Declaration

Model (CEP 1.1.0)

```
<!ELEMENT  ce:include-item       ( ce:pii, ce:doi?, %titles;,
                                   ce:pages* )>
<!ATTLIST  ce:include-item
           role                  CDATA            #IMPLIED
           view                  %view;           'all'>
```

Model (CEPs 1.1.1–1.1.3)

```
<!ELEMENT  ce:include-item       ( ce:pii, ce:doi?, ( %titles; )?,
                                   ce:pages* )>
<!ATTLIST  ce:include-item
           role                  CDATA            #IMPLIED
           view                  %view;           'all'>
```

Description

The element ce:include-item is used to call documents (articles, chapters, appendices, etc.) into the central hub XML file for books or journal issues.

Usage

The ce:include-item element is used to call lower-level files such as chapters into the central hub XML file for books or journal issues.

The subelements ce:pii and ce:doi are used to identify the called document. Its attribute role can be used to inform the application about the type of document to expect, e.g. a chapter, and index or a glossary. Currently only the role add-on is defined.

The ce:include-item element also contains a title (ce:title) and possibly a subtitle (ce:subtitle), and it may contain a sequence of titles (ce:alt-title) and subtitles (ce:alt-subtitle) in an alternative language. The page range or page ranges of the included item can be given in ce:pages. These elements are present to aid in identifying the referred documents, but more importantly, to enable rendering a table of contents using the hub XML file.

In journal issue files the titles are *not* used. In case a hub file does contain titles, the title elements can be used to display a different title, e.g. an abbreviated one.

XML

```
<ce:include-item>
  <ce:pii>B0-12-227085-1/00001-1</ce:pii>
  <ce:title>Core Issues in Primary Care</ce:title>
</ce:include-item>
<ce:include-item>
  <ce:pii>B0-12-227085-1/00002-3</ce:pii>
  <ce:title>Subject index</ce:title>
</ce:include-item>
```

XML

```
<ce:include-item>
  <ce:pii>S0010-2180(03)00289-X</ce:pii>
  <ce:doi>10.1016/j.combustflame.2003.11.005</ce:doi>
  <ce:pages>
    <ce:first-page>371</ce:first-page>
    <ce:last-page>376</ce:last-page>
  </ce:pages>
</ce:include-item>
<ce:include-item>
  <ce:pii>S0010-2180(03)00298-0</ce:pii>
  <ce:doi>10.1016/j.combustflame.2003.12.001</ce:doi>
  <ce:pages>
    <ce:first-page>428</ce:first-page>
  </ce:pages>
</ce:include-item>
```

XML

```
<issue-body>
  <issue-sec>
    <ce:include-item>
      <ce:pii>S9999-9943(97)00432-4</ce:pii>
      <ce:doi>10.1016/j.ttrh.1990.06.078</ce:doi>
      <ce:pages>
        <ce:first-page>1</ce:first-page>
        <ce:last-page>73</ce:last-page>
      </ce:pages>
    </ce:include-item>
    <ce:include-item>
      <ce:pii>S9999-9943(97)00433-6</ce:pii>
      <ce:doi>10.1016/j.ttrh.1990.06.079</ce:doi>
      <ce:pages>
        <ce:first-page>74</ce:first-page>
        <ce:last-page>155</ce:last-page>
      </ce:pages>
    </ce:include-item>
    <ce:include-item role="add-on">
      <ce:pii>S9999-9943(97)00434-8</ce:pii>
      <ce:doi>10.1016/j.ttrh.1990.06.080</ce:doi>
      <ce:pages>
        <ce:first-page>155</ce:first-page>
      </ce:pages>
    </ce:include-item>
    <ce:include-item role="add-on">
      <ce:pii>S9999-9943(97)00435-X</ce:pii>
      <ce:doi>10.1016/j.ttrh.1990.06.081</ce:doi>
      <ce:pages>
        <ce:first-page>156</ce:first-page>
      </ce:pages>
    </ce:include-item>
    ...
  </issue-sec>
</issue-body>
```

The attribute `role` allows one to categorize the included items. For instance, it makes it possible to mark “add-on” items, and handle these in different ways than ordinary items.

Applications should treat ce:include-items with roles unknown to them as ordinary items, i.e., unknown roles must be ignored. The role must belong to a list validated by the XML validation tools. The following value for role has been defined:

- add-on is used in the issue hub to indicate that the item is an add-on item. The main item does not use this attribute.
  Included items that belong to a section of abstracts, or news items, etc., do not possess this attribute.

Version history

This element was introduced in CEP 1.1.0. In CEP 1.1.1 the titles were made optional.

ce:index

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:index              ( ce:section-title, ce:intro?, ce:index-
                                   sec+ )>
<!ATTLIST  ce:index
           id                    ID                 #IMPLIED
           role                  CDATA              #IMPLIED
           view                  %view;             'all'>
```

Description

An index is a list of terms (index entries) and references to places in the text that are relevant to each term.

Usage

An index is a list of terms (index entries) and references to places in the text that are relevant to each term. The index entries are divided in sections. It is possible to nest terms.

The subelement ce:intro, consisting of one or more paragraphs, is an introductory section at the beginning of the index.

If there is more than one ce:index-sec, then each must have a ce:section-title, except for the first which is optional.

Different types of indexes are possible, e.g. subject index, name index, and formula index. An entry in a subject index is a concept described in the work for which the subject index is compiled; an entry in a name index is the name of a person referred to in the text of the work; an entry in a formula index is a (chemical) formula occurring in the text of the work. The type of index can be indicated by the attribute role.

Index sections are lists of index entries, ce:index-entry. Each index entry starts with text describing the index entry, the index heading (ce:index-heading). This can be followed by a "see" reference or a number of cross-references. These can be followed by "see also" references and nested index entries in an arbitrary order.

Cross-references within the index can occur and are of two types: "see" (ce:see) and "see also" (ce:see-also). A "see" reference points to a term that is *preferred* over the present one. A "see also" reference points to a term that is *related* to the present one.

Most index entries point to one or more places in the text that is relevant to that index entry. This is achieved through the ce:cross-ref or ce:intra-ref element. The latter is to be used for referencing to documents that are part of a collection, for instance a major reference work.

The following example is based on a major reference work:

XML

```
<ce:index>
  <ce:section-title>Subject Index</ce:section-title>
  ...
```

```
<ce:index-sec>
  <ce:index-entry id="idx33">
    <ce:index-heading>continuing professional
      education (CPE)</ce:index-heading>
    <ce:index-entry id="idx34">
      <ce:index-heading>in clinical psychology</ce:index-heading>
      <ce:intra-ref
        xlink:href="pii:B0895560666020439#p035">5</ce:intra-ref>
      <ce:index-entry id="idx35">
        <ce:index-heading>initiatives</ce:index-heading>
        <ce:intra-ref
          xlink:href="pii:B0895560666020439#p254">45</ce:intra-ref>
      </ce:index-entry>
    </ce:index-entry>
    <ce:index-entry id="idx36">
      <ce:index-heading>and cognitive style</ce:index-heading>
      <ce:intra-ref
        xlink:href="pii:B0895560666020439#p523">205</ce:intra-ref>
      <ce:index-entry id="idx37">
        <ce:index-heading>categories</ce:index-heading>
        <ce:intra-ref
          xlink:href="pii:B0895560666020439#p108">80</ce:intra-ref>
      </ce:index-entry>
      <ce:index-entry id="idx38">
        <ce:index-heading>criticisms</ce:index-heading>
        <ce:intra-ref
           xlink:href="pii:B0895560666020439#p431">200</ce:intra-ref>
      </ce:index-entry>
      <ce:index-entry id="idx39">
        <ce:index-heading>for practitioners</ce:index-heading>
        <ce:intra-ref
          xlink:href="pii:B0895560666020439#p512">150</ce:intra-ref>
      </ce:index-entry>
    </ce:index-entry>
    <ce:index-entry id="idx40">
      <ce:index-heading>credits</ce:index-heading>
      <ce:index-entry id="idx41">
        <ce:index-heading>mandatory requirements</ce:index-heading>
        <ce:intra-ref
          xlink:href="pii:B0895560666020427#p735">195</ce:intra-ref>
      </ce:index-entry>
      <ce:index-entry id="idx42">
        <ce:index-heading>and recredentialing</ce:index-heading>
        <ce:intra-ref
          xlink:href="pii:B0895560666020427#p599">185</ce:intra-ref>
      </ce:index-entry>
    </ce:index-entry>
    <ce:index-entry id="idx43">
      <ce:index-heading>definitions</ce:index-heading>
      <ce:intra-ref
        xlink:href="pii:B0895560666020439#p771">25</ce:intra-ref>
    </ce:index-entry>
    <ce:see-also refid="idx97">mandatory continuing professional
      education (MCPE)</ce:see-also>
```

```
      </ce:index-entry>
      <ce:index-entry id="idx44">
        <ce:index-heading>continuity theory, and
          bereavement</ce:index-heading>
        <ce:intra-ref
          xlink:href="pii:B0895560666070235#p974">250</ce:intra-ref>
      </ce:index-entry>
      <ce:index-entry id="idx45">
        <ce:index-heading>conversion disorder</ce:index-heading>
        <ce:see refid="idx46">conversion neurosis</ce:see>
      </ce:index-entry>
      <ce:index-entry id="idx46">
        <ce:index-heading>conversion neurosis</ce:index-heading>
        <ce:intra-ref
          xlink:href="pii:B0895560666052541#p961">25</ce:intra-ref>
      </ce:index-entry>
      ...
      <ce:index-entry id="idx97">
        <ce:index-heading>mandatory continuing professional
          education (MCPE)</ce:index-heading>
        <ce:intra-ref
          xlink:href="pii:B0895560666052541#p683">255</ce:intra-ref>
      </ce:index-entry>
    </ce:index-sec>
  ...
  </ce:index>
```

Presentation

Subject Index

...
continuing professional education (CPE)
  in clinical psychology 5
    initiatives 45
  and cognitive style 205
    categories 80
    criticisms 200
    for practitioners 150
  credits
    mandatory requirements 195
    and recredentialing 185
  definitions 25
  see also mandatory continuing professional education (MCPE)
continuity theory, and bereavement 250
conversion disorder
  see conversion neurosis
conversion neurosis 25
...
mandatory continuing professional education (MCPE) 255
...

Version history

The `view` attribute was added in CEP 1.1.0. The optional `ce:intro` was introduced in CEP 1.1.1.

See also

ce:index-entry, ce:index-sec, ce:see, ce:see-also

ce:indexed-name

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:indexed-name       ( %string.data; )*>
```

Description

If the author's or collaboration's name is to be alphabetized differently than expected, the element ce:indexed-name is used.

Usage

See ce:author.

Version history

Prior to DTD 5.0, the element was called index.

ce:index-entry

Declaration

Model (CEPs 1.1.0–1.1.2)

```
<!ELEMENT  ce:index-entry        ( ce:index-heading, ( ce:see | ( %cross-
                                   ref; )+ )?, ( ce:see-also | ce:index-
                                   entry )* )>
<!ATTLIST  ce:index-entry
           id                    ID                #IMPLIED
           role                  CDATA             #IMPLIED>
```

Model (CEP 1.1.3)

```
<!ELEMENT  ce:index-entry        ( ce:index-heading, ( ( %see; ) |
                                   ( %cross-ref; )+ )?, ( ce:see-also |
                                   ce:index-entry | ce:reader-see )* )>
<!ATTLIST  ce:index-entry
           id                    ID                #IMPLIED
           role                  CDATA             #IMPLIED>
```

Description

Every index entry is captured using ce:index-entry.

Usage

The element ce:index-entry consists of a ce:index-heading, which is optionally followed by a "see" reference to another index entry (ce:see) or a number of cross-references, optionally followed by a mixture of "see-also" references to other index entries (ce:see-also), sub-index entries and general references (ce:reader-see).

The cross-references can be either a ce:cross-ref or a ce:intra-ref. The latter is to be used for referencing to documents that are part of a set, for instance a major reference work. For some examples, see ce:see and ce:see-also.

Version history

Parameter entity %see; and element ce:reader-see were introduced in CEP 1.1.3.

See also

ce:index, ce:see, ce:see-also, ce:reader-see

ce:index-flag

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:index-flag          ( ce:index-flag-term, ce:index-flag-
                                    see?, ( ce:index-flag-see-also |
                                    ce:index-flag )* )>
<!ATTLIST  ce:index-flag
           id                     ID                #REQUIRED
           role                   CDATA             #IMPLIED>
```

Description

The element ce:index-flag is envisioned for possible utilization by book indexers to use to aid in the a to-be-developed process used to generate back-of-book indices.

Usage

The element ce:index-flag allows a term to be marked for inclusion in an index. Its content model is closely related to that of ce:index-entry, and it is possible to generate an index entry from the flagged index term.

Content for index-flag consists of a required index-flag-term, followed by optional/repeatable index-flag-see and/or index-flag-see-also and/or other nested index-flags.

Index has one required attribute, id.

XML

```
<ce:para>One of the enemies of the ant is the
  aardvark<index-flag id="a1234">
            <index-flag-term>aardvark</index-flag-term>
            <index-flag-see-also>anteater</index-flag-see-also>
          </index-flag> ...
</ce:para>
```

Version history

This element was introduced in CEP 1.1.0.

Rendering notes

This element should not be rendered in either electronic or hardcopy versions of the book.

ce:index-flag-see

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:index-flag-see     ( %text.data; )*>
```

Description

The element ce:index-flag-see is used to delimit a term to be indexed, within the content model of the ce:index-flag element.

Usage

Within ce:index-flag, the element ce:index-flag-see is used to create a “see” entry. This corresponds to a ce:see within an index entry.

XML

```
<ce:para>text text ...
  <index-flag id="a1234">
    <index-flag-term>acquired immune deficiency syndrome</index-flag-term>
    <index-flag-see>AIDS</index-flag-see>
  </index-flag> ... end of paragraph.
</ce:para>
```

Version history

This element was introduced in CEP 1.1.0.

See also

ce:index-flag

ce:index-flag-see-also

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:index-flag-see-also( %text.data; )*>
```

Description

The element ce:index-flag-see-also is used to delimit a term to be indexed, within the content model of the index-flag element.

Usage

In order to flag a term for a “see also” index entry, the element ce:index-flag-see-also is used. It corresponds to a ce:see-also within an index entry.

See ce:index-flag for a usage example.

Version history

This element was introduced in CEP 1.1.0.

ce:index-flag-term

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:index-flag-term    ( %text.data; )*>
```

Description

The element ce:index-flag-term is used to delimit a term to be indexed, within the content model of the ce:index-flag element.

Usage

The ce:index-flag-term contains the term to be indexed within a ce:index-flag element. It corresponds with the ce:index-heading within a ce:index-entry.

Content for index-flag-term consists of the text.data parameter entity from the Common Element Pool (CEP). See ce:index-flag for a usage example.

Version history

This element was introduced in CEP 1.1.0.

ce:index-heading

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:index-heading      ( %textref.data; )*>
```

Description

The heading of an index entry is captured using ce:index-heading.

Usage

Each index entry starts with a descriptive text, the heading.

For some examples, see ce:see and ce:see-also.

See also

ce:index, ce:index-entry, ce:see, ce:see-also

ce:index-sec

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:index-sec          ( ce:section-title?, ce:intro?,
                                   ce:index-entry+ )>
<!ATTLIST  ce:index-sec
           id                    ID                #IMPLIED
           role                  CDATA             #IMPLIED>
```

Description

The element ce:index-sec is a section within the index.

Usage

See ce:index.

ce:inf

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:inf              ( %richstring.data; )*>
<!ATTLIST  ce:inf
           loc                 %loc;            "post">
```

Description

Subscripts are captured using ce:inf.

Usage

Subscripts (inferior text) are captured using ce:inf.

The optional attribute loc can have the values pre and post, the latter is equivalent to omitting the attribute altogether. If loc is equal to pre this is to signify that the element belongs to the subsequent object.

XML

```
<ce:sup loc="pre">238</ce:sup><ce:inf loc="pre">92</ce:inf>U
```

Presentation

$$^{238}_{92}\mathrm{U}$$

By default, a super- and subscript appearing at one object will be displayed stacked, i.e. above each other. Staggered super- and subscripts (for example, $R^{i}{}_{j}{}^{k}$) can only be used in math mode.

See also

ce:sup

ce:initials

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:initials          ( %string.data; )*>
```

Description

In order to assist applications that need to determine the correct initials based on the given name, the element ce:initials has been provided. It is only used if the initials cannot be inferred from the given name by taking the first letters, preserving dashes.

The element is used by applications that want initials in running heads or in tables of content rather than the full given name.

Note that ce:initials does not replace ce:given-name if the author only supplied initials.

XML

```
<ce:author>
  <ce:initials>J.W.Th.</ce:initials>
  <ce:given-name>Joannes Wilhelmus Theodorus</ce:given-name>
  ...
</ce:author>
```

Usage

See ce:author.

Version history

Prior to DTD 5.0, the element was called inits.

ce:inline-figure

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:inline-figure      ( ce:link )>
<!ATTLIST  ce:inline-figure
           baseline              NMTOKEN          "0.0">
```

Description

The element ce:inline-figure is used to insert an image in the running text, e.g. a symbol that does not occur in the standard character set.

Usage

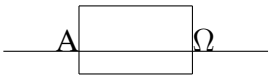
An in-line figure, also less accurately known as fixed graphic, is a figure that occurs exactly at the point where it occurs in the document instance. It consists of one ce:link element, which refers to the external artwork file.

The bounding box of an in-line figure is as tight as possible. The vertical position of the in-line figure is controlled by the attribute baseline, whose default value is 0.0. It denotes the fraction of the height that appears below the baseline.

XML

```
A<ce:inline-figure baseline="0.33">
   <ce:link locator="fx1"/></ce:inline-figure>&Omega;
```

Presentation



Explanation

Since the value of baseline is 0.33, the baseline is at one-third of the in-line figure, represented by the box, i.e., one-third of the graphic is below the baseline.

An inline-figure appears in the running text like a character would do. No spaces or newlines are generated before or after an in-line figure. This makes it different from a displayed figure which appears on a line of its own with vertical space above and below it, see ce:figure. The graphic file is shown as is, i.e. it will not adapt to the surrounding font size or style, as would a ce:glyph.

In-line figures should not occur too deeply in the parse tree of the document.

Version history

Prior to DTD 5.0, this element was called inline-fig.

See also

ce:figure, ce:glyph

ce:inter-ref

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:inter-ref          ( %text.data; )*>
<!ATTLIST  ce:inter-ref
           id                    ID               #IMPLIED
           xlink:type            ( simple )       #FIXED "simple"
           xlink:role            CDATA            #IMPLIED
           xlink:href            CDATA            #REQUIRED>
```

Description

The ce:inter-ref element is used to reference an object "not under control of the publisher". Examples are HTML pages on the World-Wide Web, records in third-party on-line databases. The ce:inter-ref element is a simple link according to the XLink standard.

Usage

The ce:inter-ref is a versatile element used to refer to foreign objects. Its content is popularly seen as "text to click on", but it may be empty.

The attribute xlink:href determines the actual link. Its value is a URI-reference (URI: Universal Resource Identifier) according to RFC2396. The URI-reference consists of three parts:

- the protocol or scheme, which is the part up to the colon; the allowed schemes are documented below;
- the resource identifier, which is the part from the colon to the end or up to the hash sign; in the text below we will refer to it as the locator;
- the fragment identifier, which is the part after the hash sign; it may be an ID in the target document, or a more complicated XPath expression; the fragment identifier is optional.

For rules regarding the encoding of URI-references, see the sections on rendering and copy edit considerations below.

The attribute xlink:role is used to indicate what kind of object is to be expected at the other end of the link. Its value is a URI of the form

http://www.elsevier.com/xml/linking-roles/<role name>.

Currently, there are only three role names: "preprint", "inspec", and any MIME type.

A number of schemes to be used in xlink:href are documented. For each value of the scheme different rules may apply. These are described below.

The scheme in *xlink:href* is equal to *aoi*

The locator is an astronomical object identifier (aoi). It consists of the doi of the article, followed by the text & or &, followed by the agreed object name. No roles are to be specified. Note that, if there is a space in the aoi, it is encoded as %20.

XML

```
<ce:inter-ref id="interref1"
    xlink:href="aoi:10.1016/j.newast.2003.11.001&#x0026;CF%20Pup">
       CF Pup</ce:inter-ref>
```

The scheme in *xlink:href* is equal to *doi*

The locator is a digital object identifier (DOI, see www.doi.org). No roles are to be specified. The path may contain an ID within the target document, in the form of a fragment identifier.

XML

```
<ce:inter-ref id="interref2"
    xlink:href="doi:10.1016/S0004-3702(02)00193-5">...</ce:inter-ref>
```

Standards Note: The `doi` scheme is officially recognized as part of the `info` URI scheme. In this scheme the above `xlink:href` would become

```
xlink:href="info:doi:10.1016/S0004-3702(02)00193-5"
```

The form according to the `info` URI scheme is not (yet) allowed in the Common Element Pool.

The scheme in *xlink:href* is equal to *fiz*

The locator addresses a document in the FIZ database (www.fiz-karlsruhe.de). The attribute `xlink:role` is mandatory here; currently the only allowed value is `inspec` (denoting an inspec record). Note that the colon in the FIZ code is encoded as `%3A`.

XML

```
<ce:inter-ref id="interref3"
    xlink:role="http://www.elsevier.com/xml/linking-roles/inspec"
    xlink:href="fiz:85%3A2535122">...</ce:inter-ref>
```

The scheme in *xlink:href* is equal to *genbank*

The locator is a Genbank accession number, assigned by the NIH genetic sequence database (an annotated collection of all publicly available DNA sequences, www.ncbi.nlm.nih.gov). No roles are to be specified.

XML

```
<ce:inter-ref id="interref4"
    xlink:href="genbank:AB026824">...</ce:inter-ref>
```

Standards Note: The `genbank` scheme is officially recognized as part of the `info` URI scheme under the name `ddbj-embl-genbank`. In this scheme the above `xlink:href` would become

```
xlink:href="info:ddbj-embl-genbank:AB026824"
```

The form according to the `info` URI scheme is not (yet) allowed in the Common Element Pool.

Standards Note: The Genbank accession numbers are accommodated by the Life Sciences IDentifier (LSID), a proposed standard of the OMG. In this scheme the above `xlink:href` would become something like

```
xlink:href="URN:LSID:ncbi.nlm.nih.gov:GenBank.accession:AB026824"
```

The form according to the LSID URI scheme is not (yet) allowed in the Common Element Pool.

The scheme in *xlink:href* is equal to *embl*

The locator is an EMBL accession number, assigned by the EMBL nucleotide sequence database, www.ebi.ac.uk/embl. No roles are to be specified.

XML

```
<ce:inter-ref id="interref4"
    xlink:href="embl:AB026824">...</ce:inter-ref>
```

The `embl` scheme is a synonym for the `genbank` scheme. Only the assigning authority is different.

The scheme in *xlink:href* is equal to *pii*

The locator is a valid PII number of an article that is guaranteed to come from the same publisher as the article in which the `ce:inter-ref` appears. No roles are to be specified. The path may contain an ID within the target document, in the form of a fragment identifier.

XML

```
<ce:inter-ref id="interref5"
    xlink:href="pii:S0004-3702(02)00193-5">...</ce:inter-ref>
```

This scheme is used, for instance, if an editorial refers to articles in an issue.

The scheme in *xlink:href* is equal to *http*, *https*, *ftp*, or *mailto*

The locator is a URL. Optionally a role can be specified: it must then be a MIME type. The path may contain a named location within the target document (this is the part which comes after the `#` in the `HREF` attribute of HTML's `A` element), in the form of a fragment identifier. `http`, `ftp`, and `mailto` are officially recognized URI schemes.

XML

```
<ce:inter-ref id="interref6"
    xlink:role="http://www.elsevier.com/xml/linking-roles/text/html"
    xlink:href="http://www.elsevier.com">Elsevier</ce:inter-ref>
```

XML

```
<ce:inter-ref id="interref7"
    xlink:href="mailto:r.schrauwen@elsevier.com">
    r.schrauwen@elsevier.com</ce:inter-ref>
```

The scheme in *xlink:href* is equal to *arxiv*

The locator is an address of the arXiv.org e-Print archive (www.arxiv.org). The attribute `xlink:role` is mandatory here; currently the only allowed value is `preprint`.

XML

```
<ce:inter-ref id="interref8"
    xlink:role="http://www.elsevier.com/xml/linking-roles/preprint"
    xlink:href="arxiv:/hep-th/9112009"></ce:inter-ref>
```

The scheme in *xlink:href* is equal to *sid*

The locator holds the non-formatted PII of the article itself, a slash and the so-called anchortext corresponding to the enclosed structure reference. No roles are to be specified.

XML

```
<ce:inter-ref id="interref9"
    xlink:href="sid:S0040403901014216/2"><ce:bold>2</ce:bold>
    </ce:inter-ref>
```

This scheme is used for Dymond linking (i.e. external object linking for chemical structures).

Relation with DTD 4

Prior to DTD 5, `inter-ref` had three attributes: `locator-type`, `locator` and `object-type`.

`locator-type` corresponds to the scheme part of `xlink:href`. The schemes have the same names as the former `locator-type` attribute, except for `xxx-archive`, which now is called `arxiv`, in agreement with the change of name of the preprint service it refers to.

`locator` corresponds to the path part of `xlink:href`.

`object-type` corresponds to `xlink:role`. The roles have the same names as the former `object-type` attribute, prepended by the string

`http://www.elsevier.com/xml/linking-roles/`.

XLink aspects

`ce:inter-ref` has an attribute `xlink:type` with the fixed value `simple`. This makes it into a simple link according to the XLink standard. The `xlink:href` and `xlink:role` attributes comply with the XLink requirements for a simple link. Thus `ce:inter-ref` can be processed by general XLink software.

Rendering notes

If the rendering application cannot deal with `ce:inter-ref`, or the scheme in `xlink:href`, it should not complain and merely output the content of the element. If the content is empty, then the rendering application may provide another method to reach the destination, e.g. a button or a hyperlink containing the `xlink:href` attribute. The element `ce:inter-ref` does not generate any presentation.

Decoding the URI

The value of the attribute `xlink:href` is a URI-reference. Therefore it is encoded according to the rules for URIs. It is also XML encoded. The URI-encoded `xlink:href` values can be used in web products as follows.

First the XML encoding (character entities) must be resolved, which is automatically done by parsers and other XML tools.

In the `http`, `ftp`, or `mailto` schemes the `xlink:href` values are URLs or email addresses. They can be used directly as URLs in web products.

In the other schemes the `xlink:href` values are not URLs. When URLs are constructed from these values, they must be properly encoded. The identifiers in the `xlink:href` values may contain special characters, esp. `&` and `?`. These characters have a reserved meaning in a URL. Therefore they must be escaped as `%26` and `%3F`.

For example, the following is (theoretically) a valid `xlink:href` value:

`doi:10.1049/S0004&3702(02)00193?5`

But the following URL, derived from it, is not valid:

`http://dx.doi.org/10.1049/S0004&3702(02)00193?5`

The valid form of the derived URL is

`http://dx.doi.org/10.1049/S0004%263702(02)00193%3F5`

Linking services

The xlink:href attribute uses a number of privately defined schemes, which can only be resolved by special algorithms containing knowledge of the specific scheme. Often such an algorithm resolves the ce:inter-ref element to a hyperlink on the web with an http URL. Collections of such resolved hyperlinks may be held in linking services. The links in such services are so-called third-party links, one end of which is the ce:inter-ref element in the article, the other end being the resolved URL. To make it easier to use a ce:inter-ref element as a link end for such third-party links, it has a required ID attribute.

Copy edit considerations

The value of the attribute xlink:href is a URI-reference. Therefore it must be encoded according to the rules for URIs. After its URI-encoded form has been determined, it must also be XML encoded, i.e., the XML-reserved characters must be encoded as character entities, esp. &, must be encoded as &.

In the http, ftp, or mailto schemes the xlink:href values are URLs or email addresses. It may be assumed that the URL as given by the author in the manuscript is correct, and can be inserted as is in the XML file, after XML encoding (esp. &).

It is useful to check whether the general form of the URL is correct. http and ftp URLs have the following general form:

http://server.domain.cy/path/to/file?arg1=value1&arg2=value2#name

where the CGI arguments (the part between the ? and the #) and the fragment identifier (the part after the #) are optional. A mailto email address has the following general form:

mailto:i.person@domain.cy

For the other URI schemes, aoi, doi, fiz, genbank, pii, arxiv, and sid, usually only the identifier is given in the manuscript, and the proper URI form must be determined. The following rules are applicable.

- The URI-encoded form of the identifier may only consist of alphanumeric characters and characters from the set
  "-" | "_" | "." | "!" | "~" | "*" | "'" | "(" | ")"
- In addition, in URIs of the doi, arxiv, and sid schemes, the character "/" may appear, as follows:
  doi. doi:10.publid/identifier
  arxiv. arxiv:/category/number
  sid. sid:pii/fid
- All other characters must be escaped. The escaped form is of the form %hex, where hex denotes the hexadecimal ASCII value of the character, e.g. %3A for the colon and %20 for the space.

For example, the FIZ identifier 85:2535122 and the astronomical object 'LC 123' must be marked up with the following xlink:href values:

```
xlink:href="fiz:85%3A2535122"
xlink:href="aoi:LC%20123"
```

See also

ce:cross-ref, ce:cross-refs, ce:inter-refs, ce:intra-ref, ce:intra-refs

ce:inter-ref-end

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:inter-ref-end      ( ce:inter-ref-title? )>
<!ATTLIST  ce:inter-ref-end
           xlink:type            ( locator )       #FIXED "locator"
           xlink:label           ( inter-ref-end ) #FIXED "inter-ref-end"
           xlink:role            CDATA             #IMPLIED
           xlink:href            CDATA             #REQUIRED>
```

Description

Each ce:inter-ref-end element denotes a link target within an ce:inter-refs element.

Usage

See ce:inter-refs

ce:inter-ref-title

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:inter-ref-title    ( %text.data; )*>
<!ATTLIST  ce:inter-ref-title
           xlink:type            ( title )         #FIXED "title">
```

Description

The ce:inter-ref-title element contains the text for one destination, to show for the parent ce:inter-ref-end element when multiple links are shown in a selection list.

Usage

See ce:inter-refs.

ce:inter-refs

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:inter-refs          ( ce:inter-refs-text?, ce:inter-ref-
                                    end+, ce:inter-refs-link )>
<!ATTLIST  ce:inter-refs
           xlink:type             ( extended )      #FIXED "extended">
```

Description

The ce:inter-refs element is the one-to-many-links version of ce:inter-ref, *q.v.* It is an extended link according to the XLink standard.

Usage

The ce:inter-refs element contains a ce:inter-refs-text element, one or more ce:inter-ref-end elements and a ce:inter-refs-link element.

The ce:inter-refs-text element contains the text that is popularly seen as "text to click on"; it may be absent. It is the text seen in a rendering of the document, e.g. "Parts I–IV". Both the hyperlinks to the individual destinations and descriptive labels (e.g., "Part III") are included in the other subelements of the parent ce:inter-refs.

Each ce:inter-ref-end element denotes a link target. Its attribute xlink:href determines the actual link. Its attribute xlink:role is used to indicate what kind of object is to be expected at the other end of the link. Both attributes follow the same rules as the attributes of the same name of ce:inter-ref, *q.v.* The subelement ce:inter-ref-end contains an optional ce:inter-ref-title element, whose content is the text to show for this link when multiple links are shown in a selection list.

The ce:inter-refs-link element is empty. Its presence is required by the XLink standard.

XML

```
<ce:inter-refs>
  <ce:inter-refs-text id="interref3">
    AI631510&ndash;AI631512</ce:inter-refs-text>
  <ce:inter-ref-end xlink:href="genbank:AI631510">
    <ce:inter-ref-title>AI631510</ce:inter-ref-title>
  </ce:inter-ref-end>
  <ce:inter-ref-end xlink:href="genbank:AI631511">
    <ce:inter-ref-title>AI631511</ce:inter-ref-title>
  </ce:inter-ref-end>
  <ce:inter-ref-end xlink:href="genbank:AI631512">
    <ce:inter-ref-title>AI631512</ce:inter-ref-title>
  </ce:inter-ref-end>
  <ce:inter-refs-link/>
</ce:inter-refs>
```

Presentation

AI631510–AI631512 (in the PDF file)
AI631510, AI631511 and AI631512 (in a fictive online environment)

XLink aspects

ce:inter-refs has an attribute xlink:type with the fixed value extended. This makes it into an extended link according to the XLink standard. Its child elements also have several fixed xlink attributes, which determine their XLink meaning, in compliance with the XLink standard. Thus ce:inter-refs can be processed by general XLink software.

The same example, with all fixed attributes shown explicitly:

XML

```
<ce:inter-refs xlink:type="extended">
  <ce:inter-refs-text id="interref3" xlink:type="resource"
    xlink:label="inter-refs-start">
    AI631510&ndash;AI631512</ce:inter-refs-text>
  <ce:inter-ref-end xlink:type="locator"
    xlink:label="inter-ref-end" xlink:href="genbank:AI631510">
    <ce:inter-ref-title
      xlink:type="title">AI631510</ce:inter-ref-title>
  </ce:inter-ref-end>
  <ce:inter-ref-end xlink:type="locator"
    xlink:label="inter-ref-end" xlink:href="genbank:AI631511">
    <ce:inter-ref-title
      xlink:type="title">AI631511</ce:inter-ref-title>
  </ce:inter-ref-end>
  <ce:inter-ref-end xlink:type="locator"
    xlink:label="inter-ref-end" xlink:href="genbank:AI631512">
    <ce:inter-ref-title
      xlink:type="title">AI631512</ce:inter-ref-title>
  </ce:inter-ref-end>
  <ce:inter-refs-link xlink:type="arc"
    xlink:from="inter-refs-start" xlink:to="inter-ref-end"/>
</ce:inter-refs>
```

Its interpretation in terms of the XLink standard is as follows. A link is indicated from the current position (the local resource) to some other positions not in this document (the remote resources).

The ce:inter-refs-text element is the local resource, which is indicated by its attribute xlink:type="resource".

The ce:inter-ref-end elements are the remote resources, which is indicated by their xlink:type="locator" attribute.

The actual links are created by the ce:inter-refs-link element, which is indicated by its xlink:type="arc" attribute. It links from xlink:from="inter-refs-start" to xlink:to="inter-ref-end". The former points to the ce:inter-refs-text element, which has the xlink:label="inter-refs-start" attribute. The latter points to both ce:inter-ref-end elements, which both have the xlink:label="inter-ref-end" attribute.

Each of the ce:inter-ref-end elements has an optional ce:inter-ref-title element, with an xlink:type="title" attribute. They serve as a human readable title of the ce:inter-ref-end element, making it easier for applications to create the selection list for one-to-many links.

Linking services

The same considerations regarding linking services apply as for ce:inter-ref, *q.v.* The ce:inter-ref-title has a required ID attribute, since it is the local resource, which can be the link end of third-party links.

Rendering notes

The text contained ce:inter-refs-text appears in any rendering. The destinations contained in ce:inter-ref-title can be used to obtain a selection list.

See also

ce:cross-ref, ce:cross-refs, ce:inter-ref

ce:inter-refs-link

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:inter-refs-link    EMPTY>
<!ATTLIST  ce:inter-refs-link
           xlink:type            ( arc )           #FIXED "arc"
           xlink:from            ( inter-refs-start )
                                                   #FIXED "inter-refs-start"
           xlink:to              ( inter-ref-end ) #FIXED "inter-ref-end">
```

Description

The ce:inter-refs-link element is empty. Its presence in ce:inter-refs is required by the XLink standard.

Usage

See ce:inter-refs.

ce:inter-refs-text

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:inter-refs-text    ( %text.data; )*>
<!ATTLIST  ce:inter-refs-text
           id                    ID                #IMPLIED
           xlink:type            ( resource )      #FIXED "resource"
           xlink:label           ( inter-refs-start )
                                                   #FIXED "inter-refs-start">
```

Description

The ce:inter-refs-text element contains the text that is popularly seen as “text to click on” within a ce:inter-refs element. Clicking on this text may lead to more than one destination.

Usage

See ce:inter-refs.

ce:intra-ref

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:intra-ref          ( %text.data; )*>
<!ATTLIST  ce:intra-ref
           id                    ID               #IMPLIED
           xlink:type            ( simple )       #FIXED "simple"
           xlink:role            CDATA            #IMPLIED
           xlink:href            CDATA            #REQUIRED>
```

Description

The ce:intra-ref element is used to reference an object "under control of the publisher". Examples are cross-references to destinations within other chapters of the same book. The ce:intra-ref element is a simple link according to the XLink standard.

Usage

The ce:intra-ref is a versatile element used to refer to foreign objects. Its content is popularly seen as "text to click on", but it may be empty. Its function is identical to ce:inter-ref, but the existence of the destination is guaranteed.

An example is a cross-reference to a section in another chapter of a book. The element ce:cross-ref cannot be used, since the destination ID must be in the same file. The XML validation tools, run on the whole collection of files belonging to the book, check that the destination IDs exist. The element ce:inter-ref does not have such a check — its destinations can be on foreign web sites, so such checks would be impossible.

The attribute xlink:href determines the actual link. The attribute xlink:role is used to indicate what kind of object is to be expected at the other end of the link. Both attributes follow the same general rules as the attributes of the same name of ce:inter-ref, *q.v.* In the element ce:intra-ref there are only two valid values for the scheme in xlink:href: doi and pii. Neither scheme allows a value for the xlink:role attribute.

XML

```
<ce:intra-ref id="intraref1"
    xlink:href="doi:10.1016/S0004-3702(02)00193-5">...</ce:intra-ref>
```

The pii scheme is most commonly used for referring to destinations within other chapters of the same book. The destination ID is found after the #.

XML

```
<ce:intra-ref id="intraref2"
    xlink:href="pii:S0004-3702(02)00193-5">...</ce:intra-ref>
```

XML

```
<ce:intra-ref id="intraref3"
    xlink:href="pii:S0004-3702(02)00193-5#sec7">...</ce:intra-ref>
```

Relation with DTD 4

The element intra-ref of DTD 4.3 and earlier was used in the context of linked textboxes. Since linked textboxes are now an integral part of the item, ce:cross-ref can be used for that purpose.

XLink aspects

ce:intra-ref has an attribute xlink:type with the fixed value simple. This makes it into a simple link according to the XLink standard. The xlink:href and xlink:role attributes comply with the XLink requirements for a simple link. Thus ce:intra-ref can be processed by general XLink software. For more information, see ce:inter-ref.

Version history

Prior to DTD 5.0, intra-ref used a location mechanism based on entities. It was only useful for cross-referencing between linked textboxes and the main document. Linked textboxes are now included in the main file itself, and the usage has changed to cross-references between book chapters, indexes, etc.

Rendering notes

If the rendering application cannot deal with ce:intra-ref, or the scheme in xlink:href, it should not complain and merely output the content of the element. If the content is empty, then the rendering application may provide another method to reach the destination, e.g. a button or a hyperlink containing the xlink:href attribute. The element ce:intra-ref does not generate any presentation.

See also

ce:cross-ref, ce:cross-refs, ce:inter-ref, ce:inter-refs, ce:intra-refs

ce:intra-ref-end

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:intra-ref-end      ( ce:intra-ref-title? )>
<!ATTLIST  ce:intra-ref-end
           xlink:type            ( locator )       #FIXED "locator"
           xlink:label           ( intra-ref-end ) #FIXED "intra-ref-end"
           xlink:role            CDATA             #IMPLIED
           xlink:href            CDATA             #REQUIRED>
```

Description

Each ce:intra-ref-end element denotes a link target within an ce:intra-refs element.

Usage

See ce:intra-refs.

ce:intra-ref-title

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:intra-ref-title    ( %text.data; )*>
<!ATTLIST  ce:intra-ref-title
           xlink:type            ( title )         #FIXED "title">
```

Description

The ce:intra-ref-title element contains the text for one destination, to show for the parent ce:intra-ref-end element when multiple links are shown in a selection list.

Usage

See ce:intra-refs.

ce:intra-refs

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:intra-refs          ( ce:intra-refs-text, ce:intra-ref-end+,
                                    ce:intra-refs-link )>
<!ATTLIST  ce:intra-refs
           xlink:type             ( extended )      #FIXED "extended">
```

Description

The ce:intra-refs element is the one-to-many-links version of ce:intra-ref, *q.v.* It is an extended link according to the XLink standard.

Usage

The function of the element ce:intra-refs is identical to ce:inter-refs, but the existence of the destinations is guaranteed. This is similar to the simple-link variant ce:intra-ref.

The ce:intra-refs element contains a ce:intra-refs-text element, one or more ce:intra-ref-end elements and a ce:intra-refs-link element.

The ce:intra-refs-text element contains the text that is popularly seen as "text to click on"; it may be absent. It is the text seen in a rendering of the document, e.g. "[37, Sections 7–10]". Both the hyperlinks to the individual destinations and descriptive labels (e.g., "[37, Section 9]") are included in the other subelements of the enclosing ce:intra-refs.

Each ce:intra-ref-end element denotes a link target. Its attribute xlink:href determines the actual link. Its attribute xlink:role is used to indicate what kind of object is to be expected at the other end of the link. Both attributes follow the same rules as the attributes of the same name of ce:intra-ref, *q.v.* The subelement ce:intra-ref-end contains an optional ce:intra-ref-title element, whose content is the text to show for this link when multiple links are shown in a selection list.

The ce:intra-refs-link element is empty. Its presence is required by the XLink standard.

XML

```
<ce:intra-refs>
  <ce:intra-refs-text id="intraref8">Figs. 1 and 2
    in Chapter 2</ce:intra-refs-text>
  <ce:intra-ref-end xlink:href="pii:S0167-8396(00)00009-1#fig1">
    <ce:intra-ref-title>Fig. 1</ce:intra-ref-title>
  </ce:intra-ref-end>
  <ce:intra-ref-end xlink:href="pii:S0167-8396(00)00009-1#fig2">
    <ce:intra-ref-title>Fig. 2</ce:intra-ref-title>
    </ce:intra-ref-end>
  <ce:intra-refs-link/>
</ce:intra-refs>
```

XLink aspects

ce:intra-refs has an attribute xlink:type with the fixed value extended. This makes it into a extended link according to the XLink standard. Its child elements also have several fixed xlink attributes, which determine their XLink meaning, in compliance with the XLink standard. Thus ce:intra-refs can be processed by general XLink software. Please refer to ce:inter-refs, where a more detailed illustration is given.

Linking services

The same considerations regarding linking services apply as for ce:intra-ref, *q.v.* The ce:intra-ref-title has a required ID attribute, since it is the local resource, which can be the link end of third-party links.

Rendering notes

The text contained ce:inter-refs-text appears in any rendering. The destinations contained in ce:inter-ref-title can be used to obtain a selection list.

See also

ce:cross-ref, ce:cross-refs, ce:inter-ref, ce:inter-refs, ce:intra-ref

ce:intra-refs-link

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:intra-refs-link    EMPTY>
<!ATTLIST  ce:intra-refs-link
           xlink:type            ( arc )           #FIXED "arc"
           xlink:from            ( intra-refs-start )
                                                   #FIXED "intra-refs-start"
           xlink:to              ( intra-ref-end ) #FIXED "intra-ref-end">
```

Description

The ce:intra-refs-link element is empty. Its presence in ce:intra-refs is required by the XLink standard.

Usage

See ce:intra-refs.

ce:intra-refs-text

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:intra-refs-text    ( %text.data; )*>
<!ATTLIST  ce:intra-refs-text
           id                    ID               #IMPLIED
           xlink:type            ( resource )     #FIXED "resource"
           xlink:label           ( intra-refs-start )
                                                  #FIXED "intra-refs-start">
```

Description

The ce:intra-refs-text element contains the text that is popularly seen as “text to click on” within a ce:intra-refs element. Clicking on this text may lead to more than one destination.

Usage

See ce:intra-refs.

ce:intro

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:intro              ( ce:para+ )>
```

Description

The element ce:intro contains a brief introduction.

Usage

The element ce:intro consists of one or more paragraphs, ce:para. It is used for short introductory paragraphs, e.g. in an index, glossary or textbox.

ce:isbn

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:isbn              ( %string.data; )*>
```

Description

The element ce:isbn is available to uniquely identify a book project.

Usage

The element ce:isbn is used in the identification portions of books DTDs to identify the book project. It contains the ISBN or ISBN-13 in its formatted form.

XML

```
<ce:isbn>0-13-065567-8</ce:isbn>
<ce:isbn>978-0-13-065567-7</ce:isbn>
```

Version history

This element was added in CEP 1.1.0.

ce:issn

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:issn              ( %string.data; )*>
```

Description

The element ce:issn is available to uniquely identify a serial publication, e.g. a journal.

Usage

The element ce:issn is used in the identification portions of serial publications, and contains an ISSN in its formatted form.

XML

```
<ce:issn>0369-8114</ce:issn>
```

Version history

This element was added in CEP 1.1.0.

ce:italic

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:italic            ( %richstring.data; )*>
```

Description

The element ce:italic is a font changing element (p. 134). It is used to obtain italic.

Usage

XML

```
<ce:italic>This text is in italic</ce:italic>
```

Presentation

This text is in italic

Formulae should be captured in MathML. This is not enforced for very simple formulae — these can be structured with text effect elements.

XML

```
<mml:math>
  <mml:mrow>
    <mml:mi>p</mml:mi>
    <mml:mo>+</mml:mo>
    <mml:mi>q</mml:mi>
    <mml:mo>=</mml:mo>
    <mml:mi>r</mml:mi>
  </mml:mrow>
</mml:math>
```

Presentation

$p + q = r$

Version history

Prior to DTD 5.0, this element was called it.

See also

For more information see the section on text effects (p. 134). See also ce:bold, ce:cross-out, ce:monospace, ce:sans-serif, ce:small-caps, ce:underline.

ce:keyword

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:keyword            ( ce:text, ce:keyword* )>
```

Description

The element ce:keyword is used to capture a keyword or classification code.

Usage

See ce:keywords.

Version history

Prior to DTD 5.0, this element was called kwd.

ce:keywords

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:keywords          ( ce:section-title?, ce:keyword+ )>
<!ATTLIST  ce:keywords
           class                CDATA             "keyword"
           xml:lang             %language;        #IMPLIED>
```

Description

Sets of keywords form a keyword group, ce:keywords, which may occur in various classes in an article.

Usage

A keyword group consists of a sequence of keywords or classification codes, ce:keyword. Keywords can be nested one level deep.

The element ce:keywords has two attributes. The language of the keywords (if applicable), if different from the language of the article, should be specified in the xml:lang attribute. It can have the values English (en), French (fr), German (de), Italian (it), Portuguese (pt), Russian (ru), and Spanish (es).

The type of keywords or classification scheme is given by the attribute class. This attribute is of type CDATA so that additional values can be added without a DTD update. The only values allowed for class are described below.

- keyword is the default. It is used for ordinary keywords. Second-order keywords can be captured using a nested keyword.

  XML

  ```
  <ce:keywords>
    <ce:section-title>Keywords</ce:section-title>
    <ce:keyword><ce:text>Electroplating</ce:text></ce:keyword>
    <ce:keyword><ce:text>Electrodeposited
      photoresist</ce:text></ce:keyword>
    <ce:keyword><ce:text>3D fabrication</ce:text></ce:keyword>
  </ce:keywords>
  ```

  Presentation

  Keywords: Electroplating; Electrodeposited photoresist; 3D fabrication

- abr is used for abbreviations in an abbreviation list. Similar to ce:nomenclature, these are the abbreviations used in a document. They are printed at the bottom of the first page of the article like a footnote.

  XML

  ```
  <ce:keywords class="abr">
    <ce:section-title>Abbreviations</ce:section-title>
    <ce:keyword>
      <ce:text>mtDNA</ce:text><ce:keyword><ce:text>mitochondrial
        DNA</ce:text></ce:keyword>
    </ce:keyword>
  ```

```
    <ce:keyword><ce:text>WT</ce:text><ce:keyword>
      <ce:text>wildtype</ce:text></ce:keyword>
    </ce:keyword>
    <ce:keyword><ce:text>GFP</ce:text><ce:keyword><ce:text>green
      fluorescent protein</ce:text></ce:keyword>
    </ce:keyword>
  </ce:keywords>
```

Presentation

Abbreviations: mtDNA, mitochondrial DNA; WT, wildtype; GFP, green fluorescent protein.

- `jel` is a subject classification used in Economics, based on the classification used by the *Journal of Economics Literature* (www.aeaweb.org). These keywords may not be nested.

  XML

  ```
  <ce:keywords class="jel">
    <ce:section-title>JEL classification</ce:section-title>
    <ce:keyword><ce:text>C1</ce:text></ce:keyword>
    <ce:keyword><ce:text>D11</ce:text></ce:keyword>
  </ce:keywords>
  ```

  Presentation

  JEL classification: C1; D11

- `msc` is used for the MSC classification, which evolved from the American Mathematical Society's subject classification (see www.ams.org/msc). A document can have "primary" classifications and additional "secondary" classifications.

  XML

  ```
  <ce:keywords class="msc">
    <ce:section-title>MSC</ce:section-title>
    <ce:keyword>
      <ce:text>primary</ce:text>
      <ce:keyword><ce:text>60K37</ce:text></ce:keyword>
    </ce:keyword>
    <ce:keyword>
      <ce:text>secondary</ce:text>
      <ce:keyword><ce:text>60F17</ce:text></ce:keyword>
      <ce:keyword><ce:text>82D30</ce:text></ce:keyword>
    </ce:keyword>
  </ce:keywords>
  ```

  Presentation

  MSC: primary 60K37; secondary 60F17; 82D30

  XML

  ```
  <ce:keywords class="msc">
    <ce:section-title>MSC</ce:section-title>
    <ce:keyword><ce:text>60G50</ce:text></ce:keyword>
    <ce:keyword><ce:text>60K35</ce:text></ce:keyword>
  </ce:keywords>
  ```

  Presentation

  MSC: 60G50; 60K35

  XML

  ```
  <ce:keywords class="msc">
    <ce:section-title>MSC</ce:section-title>
    <ce:keyword>
  ```

```
      <ce:text>primary</ce:text>
      <ce:keyword><ce:text>62G20</ce:text></ce:keyword>
      <ce:keyword><ce:text>62G30</ce:text></ce:keyword>
      <ce:keyword><ce:text>62M05</ce:text></ce:keyword>
    </ce:keyword>
  </ce:keywords>
```

Presentation

MSC: primary 62G20; 62G30; 62M05

- `pacs` is used for the PACS classification scheme (www.aip.org/pacs). Keywords in this class may not be nested.

  XML

```
<ce:keywords class="pacs">
  <ce:section-title>PACS</ce:section-title>
  <ce:keyword><ce:text>85.25.Cp</ce:text></ce:keyword>
  <ce:keyword><ce:text>74.50.+r/ce:text></ce:keyword>
  <ce:keyword><ce:text>75.80</ce:text></ce:keyword>
</ce:keywords>
```

  Presentation

  PACS: 85.25.Cp; 74.50.+r; 75.80

- `mat` is used for entries in a "Materials" index. These keywords may not be nested and are not necessarily presented in a rendering application.
- `src` is used for entries in a "Sources" index. These keywords may not be nested and are not necessarily presented in a rendering application.
- `idt` (index terms) is used for entries in a subject index. These keywords may not be nested and are not presented in a rendering of the item itself. By combining the `idt` keywords of various items, e.g., the items in a particular issue, a subject index is created.
- `psycinfo` is used for PsycINFO classifications (www.apa.org/psycinfo). These keywords may not be nested.

  XML

```
<ce:keywords class="psycinfo">
  <ce:section-title>PsycINFO classification</ce:section-title>
  <ce:keyword><ce:text>2360</ce:text></ce:keyword>
  <ce:keyword><ce:text>3313</ce:text></ce:keyword>
</ce:keywords>
```

  Presentation

  PsycINFO classification: 2360; 3313

- `neurosci` is used to assign "themes" and "topics" (evolved from the Society of Neuroscience, www.elsevier.nl/locate/bres). Topics (such as "Blood–brain barrier") are second-order keywords belonging to the theme ("Cellular and Molecular Biology").

  XML

```
<ce:keywords class="neurosci">
  <ce:keyword>
    <ce:text>Cellular and Molecular Biology</ce:text>
    <ce:keyword>
      <ce:text>Blood&ndash;brain barrier</ce:text>
    </ce:keyword>
  </ce:keyword>
</ce:keywords>
```

Presentation

Theme: Cellular and Molecular Biology
Topic: Blood–brain barrier

- `inspec-cc` is used for INSPEC classification codes (www.iee.org.uk). Keywords in this class may not be nested.

  XML

```
<ce:keywords class="inspec-cc">
  <ce:section-title>Classification codes</ce:section-title>
  <ce:keyword><ce:text>A0470</ce:text></ce:keyword>
  <ce:keyword><ce:text>A9760L</ce:text></ce:keyword>
</ce:keywords>
```

  Presentation

  Classification codes: A0470; A9760L

- `inspec-ct` is used for INSPEC classification terms (www.iee.org.uk). Keywords in this class may not be nested.

  XML

```
<ce:keywords class="inspec-ct">
  <ce:section-title>Thesaurus terms</ce:section-title>
  <ce:keyword><ce:text>accelerator-based
    transmutation</ce:text></ce:keyword>
  <ce:keyword><ce:text>haptic interfaces</ce:text></ce:keyword>
</ce:keywords>
```

  Presentation

  Thesaurus terms: accelerator-based transmutation; haptic interfaces

- `inspec-chi` is used for INSPEC chemical index terms. Keywords in this class may not be nested.

  XML

```
<ce:keywords class="inspec-chi">
  <ce:section-title>Chemical index</ce:section-title>
  <ce:keyword><ce:text>LaMnO3/ss<ce:text></ce:keyword>
  <ce:keyword><ce:text>La/ss<ce:text></ce:keyword>
  <ce:keyword><ce:text>Mn/ss<ce:text></ce:keyword>
  <ce:keyword><ce:text>O3/ss<ce:text></ce:keyword>
  <ce:keyword><ce:text>O/ss</ce:text></ce:keyword>
</ce:keywords>
```

  Presentation

  Chemical index: LaMnO3; La/ss; Mn/ss; O3/ss; O/ss

- `stma` is used for STMA (Statistical Theory & Methods Abstracts, www.cbs.nl/isi) classification codes. These keywords may not be nested.

  XML

```
<ce:keywords class="stma">
  <ce:section-title>Statistical Theory
    and Method Abstracts</ce:section-title>
  <ce:keyword><ce:text>00:050</ce:text></ce:keyword>
  <ce:keyword><ce:text>06:900</ce:text></ce:keyword>
</ce:keywords>
```

  Presentation

  Statistical Theory and Method Abstracts: 00:050; 06:900

- `astronomy` is used for controlled astronomical keywords, taken from the astronomical thesaurus, used, e.g., in *New Astronomy*. This class replaces the default class `keyword`, which therefore may not be used.

  XML

```
<ce:keywords class="astronomy">
  <ce:section-title>Keywords</ce:section-title>
  <ce:keyword>
    <ce:text>Cosmic microwave background</ce:text>
  </ce:keyword>
  <ce:keyword>
    <ce:text>Cosmology: theory</ce:text>
  </ce:keyword>
</ce:keywords>
```

  Presentation

  Keywords: Cosmic microwave background; Cosmology: theory

- `geo` is used for controlled keywords from the geo thesaurus as used in *EPSL Online*. This class replaces the default class `keyword`, which therefore may not be used.

  XML

```
<ce:keywords class="geo">
  <ce:section-title>Keywords</ce:section-title>
  <ce:keyword>
    <ce:text>fission-track dating</ce:text>
  </ce:keyword>
  <ce:keyword>
    <ce:text>uranium disequilibrium</ce:text>
  </ce:keyword>
</ce:keywords>
```

  Presentation

  Keywords: fission-track dating; uranium disequilibrium

- `cras` is used for the subject classification used in the journals of the *Comptes Rendues de l'Académie des Sciences* collection. Each consists of a keyword, or a keyword and a subkeyword.

  XML

```
<ce:keywords class="cras-terre">
   <ce:keyword>
      <ce:text>Géochimie</ce:text>
      <ce:keyword>
        <ce:text>Géosciences de surface</ce:text>
      </ce:keyword>
   </ce:keyword>
</ce:keywords>
<ce:keywords class="cras-terre" language="en">
   <ce:keyword>
      <ce:text>Geochemistry</ce:text>
      <ce:keyword>
        <ce:text>Surface Geosciences</ce:text>
      </ce:keyword>
   </ce:keyword>
</ce:keywords>
```

  Presentation

  Géochimie / Géosciences de surface

Geochemistry / Surface Geosciences

Version history

Prior to DTD 5.0, this element was called `kwdg`. In CEP 1.1.1 the value `it` was added to parameter entity `%language;`.

See also

`ce:keyword`

ce:label

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:label              ( %text.data; )*>
```

Description

The designation (number, name, label) of various elements is contained in the ce:label element.

Usage

The ce:label element is used to contain the designation of the parent element, e.g. “2.1.6”, “Fig. 2”, “Plate VII” or “Lemma 1.6”.

XML

```
<ce:affiliation id="aff2"><ce:label>b</ce:label> ...
<ce:footnote id="fn4"><ce:label>4</ce:label> ...
<ce:section id="sec2"><ce:label>2</ce:label> ...
<ce:section id="sec3.1"><ce:label>3.1</ce:label> ...
<ce:enunciation id="lem1.6"><ce:label>Lemma 1.6</ce:label> ...
```

Presentation

[b] Affiliation...
[4] Footnote...
2. Section...
3.1. Section...
Lemma 1.6. ...

Explanation

Note that ce:label generates some presentation: the closing full stops and the superscript position of the footnote number are generated by the ce:label, whereas they would have to be inserted explicitly in a ce:cross-ref. This allows the application to build cross-reference destination lists directly from the content of ce:label.

For explanation of the precise usage of ce:label, refer to the parents.

The element ce:label plays an important role in cross-referencing, especially for one-to-many links.

Version history

Prior to DTD 5.0, this element was called no.

See also

For more information, see the parent elements, the section Cross-references and the label element (p. 130), ce:cross-ref.

ce:last-page

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:last-page          ( %richstring.data; )*>
```

Description

The last page of an item called by a hub file is captured using ce:last-page.

Usage

See ce:pages.

Version history

This element was added in CEP 1.1.0.

See also

ce:include-item, ce:first-page

ce:legend

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:legend            ( ce:simple-para+ )>
```

Description

A ce:legend contains explanatory text belonging to a table.

Usage

A legend appears at the bottom of a table. It contains one or more simple paragraphs, ce:simple-para. It is an extension to the CALS table model.

For more information about tables, see ce:table.

See also

ce:table-footnote

ce:link

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:link              EMPTY>
<!ATTLIST  ce:link
           id                   ID              #IMPLIED
           locator              ENTITY          #REQUIRED>
```

Description

For the purpose of referring to external files, the general element `ce:link` is provided.

Usage

The element `ce:link` instructs the rendering application to pull in an external file, e.g. an artwork file or an audio file. What needs to be done with the external file depends on the parent element. Such external files belonging to the XML file are called *assets*.

`ce:link` has one mandatory attribute `locator` which is an entity declared in the document's declaration subset as an external file. From that entity declaration, the application retrieves the type of the external file: `APPLICATION`, `AUDIO`, `IMAGE`, `TEXT`, `VIDEO` or `XML`.

The *name* of the entity is irrelevant; the name of the file, however, is.

XML

```
<!ENTITY loc3 SYSTEM "fx22" NDATA IMAGE>
...
<ce:inline-figure><ce:link locator="loc3"/></ce:inline-figure>
...
```

In this example, `ce:link` tells the rendering application which external file must be used to render the inline figure. This is done through the entity `loc3` which is an image file with file name (without extension) `fx22`. A separate catalog file redirects the rendering application to the correct file, e.g. `fx22.tif`.

Version history

As from CEP 1.1.2 the attribute list no longer contains file-size information.

See also

Entities and the DOCTYPE declaration (p. 13).

ce:list

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:list              ( ce:label?, ce:section-title?,
                                  ce:list-item+ )>
<!ATTLIST  ce:list
           id                   ID              #IMPLIED>
```

Description

The element ce:list is used to capture free-format lists.

Usage

The element ce:list provides a way to capture lists, where the labels are left entirely to the user.

A ce:list has an optional number or label (ce:label) and an optional section title (ce:section-title). It has an optional id attribute so that it can become the target of a cross-reference.

A list consists of one or more list items, ce:list-item. Each list item can have a ce:label, containing the list item's label, and consists of one ore more paragraphs, ce:para. If the ce:label element is absent, then the item is indented, and the result is a "tab list".

A ce:list-item can have an id so that it can become the target of a cross-reference.

XML

```
<ce:list>
  <ce:list-item>
    <ce:label>(iii)</ce:label>
    <ce:para>Item 3...</ce:para>
  </ce:list-item>
  <ce:list-item>
    <ce:label>(iv)</ce:label>
    <ce:para>Item 4...</ce:para>
  </ce:list-item>
</ce:list>
```

XML

```
<ce:list>
   <ce:list-item>
     <ce:label>&rtrif;</ce:label>
     <ce:para>Item ...</ce:para>
   </ce:list-item>
   <ce:list-item>
     <ce:label>&rtrif;</ce:label>
     <ce:para>Item ...</ce:para>
   </ce:list-item>
</ce:list>
```

Version history

Prior to DTD 5.0, lists with auto-generated labels could be obtained with the 1 element.

See also

ce:def-list

ce:list-item

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:list-item          ( ce:label?, ce:para+ )>
<!ATTLIST  ce:list-item
           id                    ID               #IMPLIED>
```

Description

The element ce:list-item is used to capture list items within ce:list.

Usage

See ce:list.

ce:miscellaneous

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:miscellaneous      ( %text.data; )*>
```

Description

The ce:miscellaneous element is used to capture miscellaneous history information of the article. It is an optional element within the frontmatter.

Usage

Miscellaneous history information is contained in ce:miscellaneous. The most common information captured using this element is the communicating editor. In principle, each journal can have its own convention.

XML

```
<ce:miscellaneous>Communicated by M. Nivat</ce:miscellaneous>
```

Presentation

Communicated by M. Nivat

Rendering notes

ce:miscellaneous does not generate any text.

Version history

Prior to DTD 5.0, this element was called misc.

ce:monospace

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:monospace          ( %richstring.data; )*>
```

Description

The element ce:monospace is a font changing element (p. 134). It is used to obtain a monospaced typewriter font.

Usage

To obtain a monospaced “typewriter” font, the element ce:monospace is used.

XML

```
<ce:monospace>&lt;ce:monospace&gt;Monospace
    font&lt;/ce:monospace&gt;</ce:monospace>
```

Presentation

```
<ce:monospace>Monospace font</ce:monospace>
```

In combination with text tables or tab lists ce:monospace is popular for capturing computer code fragments; this is also known as verbatim text. To obtain multiple spaces use sequences of nonbreakable spaces .

Version history

Prior to DTD 5.0, this element was called ty.

See also

For more information see the section on text effects (p. 134). See also ce:bold, ce:cross-out, ce:italic, ce:sans-serif, ce:small-caps, ce:underline.

ce:nomenclature

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:nomenclature       ( ce:section-title?, ce:def-list+ )>
```

Description

Nomenclature, a listing of the terms used in a document, is captured with ce:nomenclature.

Usage

Nomenclature contains one or more listings of terms and definitions used in the document. Each such listing is a ce:def-list within ce:nomenclature.

The title of the nomenclature, mostly “Nomenclature”, is captured with the optional subelement ce:section-title.

XML

```
<ce:nomenclature>
  <ce:section-title>Nomenclature</ce:section-title>
  <ce:def-list>
    <ce:def-term>
      <ce:italic>A<ce:inf>n</ce:inf></ce:italic>
    </ce:def-term>
    <ce:def-description>
      <ce:para>area of nozzle, m<ce:sup>2</ce:sup></ce:para>
    </ce:def-description>
    <ce:def-term>
      <ce:italic>C<ce:inf>A</ce:inf></ce:italic>
    </ce:def-term>
    <ce:def-description>
      <ce:para>concentration of CO<ce:inf>2</ce:inf> in solution,
        mol/m<ce:sup>3</ce:sup></ce:para>
    </ce:def-description>
    <ce:def-term>
      <ce:italic>C<ce:inf>AG</ce:inf></ce:italic>
    </ce:def-term>
    <ce:def-description>
      <ce:para>concentration of CO<ce:inf>2</ce:inf> in gas
        phase, mol/m<ce:sup>3</ce:sup></ce:para>
    </ce:def-description>
    <ce:def-term>
      <ce:italic>v<ce:sup>*</ce:sup></ce:italic>
    </ce:def-term>
    <ce:def-description>
      <ce:para>friction velocity, m/s</ce:para>
    </ce:def-description>
  </ce:def-list>
  <ce:def-list>
```

```
      <ce:section-title>Greek letters</ce:section-title>
      <ce:def-term>Φ</ce:def-term>
      <ce:def-description>
        <ce:para>empirical constant</ce:para>
      </ce:def-description>
    </ce:def-list>
  </ce:nomenclature>
```

Presentation

Nomenclature

A_n	area of nozzle, m^2	v^*	friction velocity, m/s
C_A	concentration of CO_2 in solution, mol/m^3	*Greek letters*	
C_{AG}	concentration of CO_2 in gas phase, mol/m^3	Φ	empirical constant

See also

Similar constructs to capture this information are `ce:keywords` with `class` equal to `abr` and `ce:glossary`.

ce:note

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:note              ( ce:simple-para+ )>
```

Description

Within structured bibliographic references, ce:note contains descriptive paragraphs about the reference. It can also contain an endnote.

Usage

A ce:note contains one or more paragraphs, ce:simple-para. In a structured reference, it can occur on its own or after a bibliographic reference. On its own, it is effectively an "endnote", which may coexist beside footnotes and are listed between bibliographic references. After a bibliographic reference, it contains descriptive text about the reference, not to be confused with an sb:comment.

XML

```
<ce:bib-reference id="bib49">
  <ce:label>[49]</ce:label>
  <sb:reference>
    <sb:comment>See the references in</sb:comment>
    <sb:contribution>...</sb:contribution>
    <sb:comment>first published in</sb:comment>
    <sb:host>...</sb:host>
    <sb:comment>also available electronically as</sb:comment>
    <sb:host>...</sb:host>
    <sb:comment>(in Japanese)</sb:comment>
  </sb:reference>
  <ce:note>
    <ce:simple-para>This reference explains the usage of the comment
      and note elements. Comments and the other components of the
      sb:reference together form one text. The note may contain
      details about the reference.</ce:simple-para>
  </ce:note>
</ce:bib-reference>
<ce:bib-reference id="bib50">
  <ce:label>[50]</ce:label>
  <ce:note>
    <ce:simple-para>This is a note in between the references,
      an endnote.</ce:simple-para>
  </ce:note>
</ce:bib-reference>
```

Presentation

[49] See the references in … first published in … also available electronically as … (in Japanese).
This reference explains the usage of the comment and note elements. Comments and the other components of the sb:reference together form one text. The note may contain details about the reference.
[50] This is a note in between the references, an endnote.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

ce:note-para

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:note-para          ( %note.data; )*>
<!ATTLIST  ce:note-para
           id                    ID               #IMPLIED>
```

Description

Paragraphs of text within footnotes and notes, are captured using the element ce:note-para.

Usage

A note paragraph, ce:note-para, belongs to the lowest-level structuring elements. It contains text and objects structured with the elements in %note.data;, and differs from a full paragraph, ce:para, in that footnotes and floating objects are not allowed.

See also

ce:para, ce:simple-para.

ce:other-ref

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:other-ref          ( ce:label?, ce:textref )>
<!ATTLIST  ce:other-ref
           id                    ID               #IMPLIED>
```

Description

The element ce:other-ref is used to capture bibliographic references that cannot be structured.

Usage

If structuring a bibliographic reference in an sb:reference is not possible, then ce:other-ref can be used. Known examples are maps and patents, but also incomplete references can be tagged this way. However, the content of ce:other-ref must be a bibliographic reference; to create reference lists that also contain endnotes the element ce:note can be used.

A bibliographic reference, when tagged using ce:other-ref, needs to be marked up according to the journal style, e.g., if a title should be italics, it should explicitly be marked up.

The element ce:other-ref has an optional ce:label subelement and an id attribute. These are used when the ce:other-ref is part of a multiple reference.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

ce:pages

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:pages              ( ce:first-page, ce:last-page? )>
```

Description

The pages of an item called by a hub file are captured using ce:pages.

Usage

The element ce:pages contains a mandatory ce:first-page and an optional ce:last-page.

XML

```
<ce:pages>
  <ce:first-page>37</ce:first-page>
  <ce:last-page>51</ce:last-page>
</ce:pages>
```

XML

```
<ce:pages>
  <ce:first-page>L1</ce:first-page>
  <ce:last-page>L13</ce:last-page>
</ce:pages>
```

XML

```
<ce:pages>
  <ce:first-page>iv</ce:first-page>
</ce:pages>
```

The element ce:last-page is not used when the page range spans a single page.

If the document style is to render a page range as 127–9, then the element ce:last-page must contain 129.

Version history

This element was added in CEP 1.1.0.

See also

ce:include-item

ce:para

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:para              ( %par.data; )*>
<!ATTLIST  ce:para
           id                   ID                #IMPLIED
           role                 CDATA             #IMPLIED
           view                 %view;            'all'>
```

Description

Paragraphs of text are captured using the element ce:para.

Usage

A paragraph, ce:para, belongs to the lowest-level structuring elements. It contains text and objects structured with the elements in %par.data;.

The attribute id can be used to cross-reference to the paragraph.

The attribute role allows one to categorize paragraphs, and attach a special meaning to them. For instance, it makes it possible to mark a paragraph as a "motto", and handle it in a different way than an ordinary paragraph. Applications should treat roles unknown to them as ordinary paragraphs. The role must belong to a list validated by the XML validation tools. At the time of writing, the following roles exist.

- motto is used to turn a paragraph into a motto.

  XML

  ```
  <ce:para role="motto">Everything has a version number</ce:para>
  ```

- exam-questions is used to identify the paragraph which contains the actual exam questions. It should only be used for a paragraph in the element ce:exam-questions.
- introduction is used to mark the introductory paragraphs of an article. Introductory paragraphs are distinguished by some publications, which may print them, e.g., in boldface.
- acknowledgement is used to mark acknowledgement-like paragraphs, such as 'Contributors', 'Conflicts of Interest', etc.

Items can appear in compact, standard and extended *views*. The attribute view is used to indicate in which views the paragraph must appear. Its default is to appear in all views. See also the section Views (p. 142).

See also

ce:note-para, ce:simple-para

ce:pii

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:pii                ( %string.data; )*>
```

Description

The element ce:pii contains the PII of the item.

Usage

Each item must have a PII, a *publisher item identifier*. To identify the document, ce:pii is populated with the PII of the document. The full PII with parentheses and hyphens must be used.

For journal articles, an alternative means of identification is the combination of journal code, jid, and article number, aid.

See also

aid, ce:doi, jid

ce:preprint

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:preprint          ( ce:inter-ref )>
```

Description

The element ce:preprint is used to create a link between a document and an associated preprint version.

Usage

Many articles have an associated preprint version, which is stored in a preprint archive. In order to create a link between the article and its associated preprint version, the element ce:preprint is provided. It contains one subelement, ce:inter-ref, which is the actual link. The content of ce:inter-ref is empty in this context.

Only preprints in a pre-defined list of repositories may be referenced, so that correct links can be created. Therefore, only a limited number of values for the scheme in xlink:href are allowed. Presently only arxiv is used.

XML

```
<ce:preprint>
  <ce:inter-ref id="interref8"
    xlink:role="http://www.elsevier.com/xml/linking-roles/preprint"
    xlink:href="arxiv:/hep-th/9112009"></ce:inter-ref>
</ce:preprint>
```

Explanation

This generates a link between the article and the associated preprint within the Los Alamos archive, whose URL is http://www.arxiv.org/abs/hep-th/9112009.

Rendering notes

The element ce:preprint generates no output on paper, but in other media, a link with the preprint database may be created.

See also

ce:inter-ref

ce:presented

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:presented          ( %textfn.data; )*>
```

Description

In the head of an item, it is sometimes stated that the article was presented at a certain conference or by a certain person (mostly one of the authors). The `ce:presented` is provided for this purpose.

Usage

The element `ce:presented` is an optional subelement of the head. It contains the complete statement identifying the presenter of the article and/or the place where the article was presented.

XML

```
<ce:presented>Presented by P. Walmsey</ce:presented>
```

Version history

Prior to DTD 5.0, this element was called `prs`.

Rendering notes

The text “Presented by” is not generated.

ce:ranking

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:ranking            ( %richstring.data; )*>
```

Description

The element ce:ranking provides a way to mark “important” authors.

Usage

In some scientific disciplines, especially Chemistry, it is common to mark the more important authors. Often, the same symbol is used as the one for corresponding author. If not, or if the particular author is not a corresponding author, ce:ranking can be used to capture the symbol. Conversely, it is not required to mark an author using ce:ranking if the importance is already signalled in other means. Indeed, it is possible that two authors are “important” but one has ce:ranking and the other has a corresponding author footnote (ce:correspondence).

XML

```
<ce:author id="au1">
  <ce:given-name>Jitendra</ce:given-name>
  <ce:surname>Sharma</ce:surname>
  <ce:ranking>*</ce:ranking>
</ce:author>
<ce:author id="au2">
  <ce:given-name>A.</ce:given-name>
  <ce:surname>Angelucci</ce:surname>
  <ce:ranking>*</ce:ranking>
</ce:author>
```

Presentation

Jitendra Sharma*, A. Angelucci*

See also

ce:author, ce:correspondence

ce:reader-see

Declaration

Model (CEP 1.1.3)

```
<!ELEMENT  ce:reader-see          ( %text.data; )*>
```

Description

The element ce:reader-see is used to capture general references.

Usage

In indexes that are created by professional indexers, “see” or “see also” entries can appear that do not explicitly point to terms in the index, but instead require the reader’s expertise. In the first example below, taken from the *Encyclopedia of Food Sciences and Nutrition* (Academic Press, San Diego, 2003), the indexer has added an entry “absorption of nutrients” with reference “see *specific nutrients*”. A human reader can interpret this link, but it is not possible or viable to create a link in the XML file. With the element ce:reader-see such references without a link can be captured.

Unlike the elements ce:see and ce:see-also, no text is generated by ce:reader-see.

XML

```
<ce:index-entry>
  <ce:index-heading>absorption of nutrients</ce:index-heading>
  <ce:reader-see>see <ce:italic>specific
    nutrients</ce:italic></ce:reader-see>
</ce:index-entry>
```

XML

```
<ce:index-entry>
  <ce:index-heading>amines</ce:index-heading>
  ...
  <ce:index-entry>
    <ce:index-heading>biogenic</ce:index-heading>
    <ce:reader-see>see <ce:italic>individual
      amines</ce:italic></ce:reader-see>
  </ce:index-entry>
</ce:index-entry>
```

Version history

This element was added in CEP 1.1.3.

ce:refers-to-document

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:refers-to-document ( ce:doi | ( ce:pii, ce:doi? ) )>
```

Description

The element ce:refers-to-document is used to refer to another document.

Usage

The element ce:refers-to-document consists of a ce:pii and/or a ce:doi, alternative identifications of one and the same document, which must not be the document in which ce:refers-to-document itself occurs. If both PII and DOI are known, then both elements ce:pii and ce:doi should be used.

It is used to associate the two documents, e.g., to link an erratum with the article that it is an erratum to.

XML

```
<ce:refers-to-document>
  <ce:pii>S0031-9201(03)00274-7</ce:pii>
  <ce:doi>10.1016/j.pepi.2003.12.005</ce:doi>
</ce:refers-to-document>
```

Presentation

doi of original article: 10.1016/j.pepi.2003.12.005.

Version history

This element was introduced in CEP 1.1.0 and replaced ce:refers-to-article.

See also

ce:document-thread

ce:roles

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:roles              ( %richstring.data; )*>
```

Description

A sequence of named roles or job titles appearing after the author name is tagged with ce:roles.

Usage

Roles or job titles of the author may appear after an author name. These are captured using the ce:roles element. Roles or job titles are different from academic titles or degrees, which are part of ce:degrees.

XML

```
<ce:roles>Chairman</ce:roles>
<ce:roles>Past Treasurer of the ACGIH</ce:roles>
<ce:roles>Editor-in-Chief</ce:roles>
<ce:roles>CEO, Reed&ndash;Elsevier</ce:roles>
```

See also

ce:author, ce:degrees, ce:suffix

ce:salutation

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:salutation        ( %text.data; )*>
```

Description

If an article begins with a salutation, this can be captured using ce:salutation.

Usage

A salutation may appear at the beginning of the body of an article. It is tagged with ce:salutation.

XML

```
<body>
  <ce:salutation>Sir</ce:salutation>
  <ce:sections>
    <ce:section>
      <ce:para>David Brenner and Eric Hall make the assumption
        that our statement regarding ...</ce:para>
    ...
</body>
```

Presentation

Sir—David Brenner and Eric Hall make the assumption that our statement regarding . . .

Rendering notes

Punctuation is generated. Note that the above presentation is a possible one. Instead of an em-dash a comma could be used, or the “Sir” could be typeset in small capitals.

ce:sans-serif

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:sans-serif          ( %richstring.data; )*>
```

Description

The element ce:sans-serif is a font changing element (p. 134). It is used to obtain a sans-serif font.

Usage

XML

```
Here is some <ce:sans-serif>sans-serif text</ce:sans-serif>
```

Presentation

Here is some sans-serif text

Version history

Prior to DTD 5.0, this element was called ssf.

See also

For more information see the section on text effects (p. 134). See also ce:bold, ce:cross-out, ce:italic, ce:monospace, ce:small-caps, ce:underline.

ce:section

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:section          ( ( ( ce:section-title | ( ce:label,
                                 ce:section-title? ) ), %parsec; ) |
                                 ce:section+ )>
<!ATTLIST  ce:section
           id                  ID              #IMPLIED
           role                CDATA           #IMPLIED
           view                %view;          'all'>
```

Description

The element ce:section is used to create sections and subsections.

Usage

Sections and subsections are created using the element ce:section. Nested ce:section elements are used to create subsections. The nesting level determines the level of the section and hence the presentation of the section's number (ce:label) and title (ce:section-title).

A ce:section must have a ce:label and/or a ce:section-title, or it should be the parent of *only* ce:sections.

The optional section number is contained within ce:label without closing punctuation.

XML

```
<ce:section>
  <ce:label>2</ce:label>
  <ce:section-title>Asia</ce:section-title>
  <ce:section>
    <ce:label>2.1</ce:label>
    <ce:section-title>Japan</ce:section-title>
    <ce:para>...</ce:para>
  </ce:section>
  <ce:section>
    <ce:label>2.2</ce:label>
    <ce:section-title>Indonesia</ce:section-title>
    <ce:para>...</ce:para>
  </ce:section>
</ce:section>
```

Presentation

2. Asia
2.1. Japan
...
2.2. Indonesia
...

The attribute id is used to cross-reference to the section.

The attribute role allows one to categorize sections. For instance, it makes it possible to mark “Materials and Methods” sections, and handle these in different ways than ordinary sections. Applications should treat sections with roles unknown to them as ordinary sections, i.e., unknown roles must be ignored. The role must belong to a list validated by the XML validation tools. The following values for role have been defined:

- case-report. This role is used to identify a case report as is common in medical contexts.
- materials-methods. This role is used to identify a materials and methods section.
- note-added-in-proof. This role is used to identify a note added in proof section, which is added at proof stage and sometimes appears at the very end of the document.
- results. This role is used to identify a results section.
- acknowledgement. This role is used to mark acknowledgement-like sections, such as ‘Contributors’, ‘Conflicts of Interest’, etc.

XML

```
<ce:section id="sec3.5" role="materials-methods">
  <ce:label>3.5</ce:label>
  <ce:section-title>Materials and Methods</ce:section-title>
  ...
</ce:section>
```

Explanation

The section has become a “materials and methods” section. The presentation of such a section is style dependent; it is usually displayed in a somewhat smaller font size, but otherwise equal to an ordinary section.

Articles can appear in compact, standard and extended *views*. The attribute view is used to indicate in which views the section must appear. Its default is to appear in all views. See also the section Views (p. 142).

ce:sections

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:sections          ( %parsec; )>
```

Description

The element ce:sections is a container for sections and paragraphs (%parsec;).

ce:section-title

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:section-title      ( %nondisplay.data; )*>
<!ATTLIST  ce:section-title
           id                    ID                #IMPLIED>
```

Description

The element ce:section-title is used to capture section titles.

Usage

Element ce:section-title is used to capture the (section) title of the parent element.

The following elements can have ce:section-title as subelement: ce:abstract, ce:abstract-sec, ce:acknowledgment, ce:bibliography, ce:bibliography-sec, ce:def-list, ce:enunciation, ce:exam-answers, ce:exam-questions, ce:further-reading, ce:further-reading-sec, ce:glossary, ce:glossary-sec, ce:index, ce:index-sec, ce:keywords, ce:list, ce:nomenclature, ce:section, objectives in the EHS Books DTD, and issue-sec in the Serials Issue DTD.

Version history

Prior to DTD 5.0, this element was called st.

ce:see

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:see                ( %text.data; )*>
<!ATTLIST  ce:see
           refid                 IDREF             #REQUIRED>
```

Description

Within indexes, cross-references of the "see" type are captured with the ce:see element.

Usage

In indexes one is often referred to another, preferred, term. This is common in subject indexes. It is done with the ce:see element which is a specialized version of the ce:cross-ref element. Note that the content of ce:see need not be the same as the content of the heading in the referred ce:index-entry.

XML

```
<ce:index-entry id="idx197">
  <ce:index-heading>Peyrone's salt</ce:index-heading>
  <ce:index-entry>
    <ce:index-heading>configuration</ce:index-heading>
    <ce:inter-ref id="interref246"
      xlink:href="pii:B008043076701001">17</ce:inter-ref>
  </ce:index-entry>
  <ce:index-entry>
    <ce:index-heading>history</ce:index-heading>
    <ce:inter-ref id="interref247"
      xlink:href="pii:B008043076701001">3</ce:inter-ref>
  </ce:index-entry>
</ce:index-entry>
...
<ce:index-entry id="idx258">
  <ce:index-heading>Platosemidiammine chloride</ce:index-heading>
  <ce:see refid="idx197">Peyrone's salt</ce:see>
</ce:index-entry>
```

Presentation

Peyrone's salt
configuration, 17
history, 3
...
Platosemidiammine chloride — *see* Peyrone's salt

See also

ce:see-also

ce:see-also

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:see-also          ( %text.data; )*>
<!ATTLIST  ce:see-also
           refid                IDREF            #REQUIRED>
```

Description

Within indexes, cross-references of the "see also" type are captured with the ce:see-also element.

Usage

In indexes one is often referred to another, related, term. This is common in subject indexes. It is done with the ce:see-also element which is a specialized version of the ce:cross-ref element. Note that the content of ce:see-also need not be the same as the content of the heading in the referred ce:index-entry.

XML

```
<ce:index-entry id="idx14">
  <ce:index-heading>axiomatizability</ce:index-heading>
  <ce:inter-ref id="interref19"
    xlink:href="pii:B0444880747002016>1021</ce:inter-ref>
  <ce:see-also refid="idx68">deductive systems</ce:see-also>
  <ce:index-entry id="idx15">
    <ce:index-heading>equational</ce:index-heading>
    <ce:inter-ref id="interref20"
      xlink:href="pii:B0444880747002016>261</ce:inter-ref>
  </ce:index-entry>
</ce:index-entry>
...
<ce:index-entry>
  <ce:index-heading>deductive system</ce:index-heading>
  <ce:inter-ref id="interref174"
    xlink:href="pii:B0444880747002016">891</ce:inter-ref>
  <ce:index-entry>
    <ce:index-heading>for <ce:italic>DL</ce:italic></ce:index-heading>
    <ce:inter-ref id="interref175"
      xlink:href="pii:B0444880747002016">820</ce:inter-ref>
  </ce:index-entry>
  <ce:index-entry>
    <ce:index-heading>for Temporal Logic</ce:index-heading>
    <ce:inter-ref id="interref176"
      xlink:href="pii:B0444880747002016">1040</ce:inter-ref>
  </ce:index-entry>
</ce:index-entry>
```

Presentation

axiomatizability (*see also* deductive systems) 1021
  equational 261

...
deductive system 891
for *DL* 820
for Temporal Logic 1040

See also

ce:see

ce:simple-para

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:simple-para        ( %spar.data; )*>
<!ATTLIST  ce:simple-para
           id                    ID               #IMPLIED
           role                  CDATA            #IMPLIED
           view                  %view;           'all'>
```

Description

The element ce:simple-para is used to capture paragraphs without floats.

Usage

A simple paragraph, ce:simple-para, belongs to the lowest-level structuring elements. It contains text and objects structured with the elements in %spar.data;, and differs from the full paragraph ce:para in that it cannot contain any floating objects, i.e. no ce:float-anchor.

The attribute id can be used to cross-reference to the paragraph.

The attribute role allows one to categorize simple paragraphs, and attach a special meaning to them. For instance, it makes it possible to mark a simple paragraph as a "caption", and handle it in a different way than an ordinary paragraph. Applications should treat roles unknown to them as ordinary simple paragraphs. The role must belong to a list validated by the XML validation tools. At the time of writing, the following roles exist.

- caption is used to mark paragraphs of a caption that make up the caption proper and provide a description of the figure or table. It should only be used for simple paragraphs in the element ce:caption. Some publications distinguish the paragraphs with this role value from those with role=key, and may print them, e.g., in boldface.
- key is used to mark paragraphs of a caption that contain information about the keys and symbols used in the figure or table. It should only be used for simple paragraphs in the element ce:caption. Some publications distinguish the paragraphs with this role value from those with role=caption.

Items can appear in compact, standard and extended *views*. The attribute view is used to indicate in which views the paragraph must appear. Its default is to appear in all views. See also the section Views (p. 142).

The fact that simple paragraphs cannot contain floating objects, does not mean that they cannot contain cross-references to floating objects. For instance, if the only place where "Fig. 3" is referenced is in the caption of Fig. 2 — a simple paragraph context — then that caption contains the cross-references but the float anchor of Fig. 3 appears next to the float anchor of Fig. 2.

See also

ce:note-para, ce:para

ce:small-caps

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:small-caps        ( %richstring.data; )*>
```

Description

The element ce:small-caps is a font changing element (p. 134). It is used to obtain small caps.

Usage

To obtain small caps, use lowercase letters within ce:small-caps. Uppercase letters in this font may or may not be identical to uppercase letters of the surrounding font.

XML

```
<ce:small-caps>This text is in Small Caps</ce:small-caps>.
```

Presentation

THIS TEXT IS IN SMALL CAPS.

Version history

Prior to DTD 5.0, this element was called scp.

See also

For more information see the section on text effects (p. 134). See also ce:bold, ce:cross-out, ce:italic, ce:monospace, ce:sans-serif, ce:underline.

ce:source

Declaration

Model (CEP 1.1.3)

```
<!ELEMENT  ce:source            ( %note.data; )*>
```

Description

The element ce:source is available to capture the source of an item.

Usage

The element ce:source is used to describe the source of a ce:e-component, a ce:figure, a ce:table, or a ce:textbox.

XML

```
<ce:textbox>
  <ce:label>Box 4-6</ce:label>
  <ce:source>From Bethea L, Balazs A: Improving intergenerational
    health care communications, <ce:italic>J Health Commun</ce:italic>
    2(2):129, 1997.</ce:source>
  <ce:textbox-body>
    ...
  </ce:textbox-body>
</ce:textbox>
```

Version history

This element was added in CEP 1.1.3.

ce:stereochem

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:stereochem        ( ce:compound-struct, ( ce:compound-
                                  formula | ( ce:compound-name,
                                  ce:compound-formula? ) ), ce:compound-
                                  info )>
```

Description

A stereochemistry abstract contains the following details of a chemical compound: structure, name, formula, and all available stereochemical information. For each important chemical compound mentioned in a document, the element ce:stereochem provides a way to capture it.

Usage

The element ce:stereochem contains four subelements, corresponding to each of the parts of a stereochemistry abstract.

The first is ce:compound-struct, which contains a ce:link to a picture showing the chemical structure. The second is the optional ce:compound-name, which contains the name of the compound. The third is the optional ce:compound-formula, giving the formula. At least one of these latter two elements should be present. The fourth is ce:compound-info, containing one or more ce:list-item elements with additional stereochemical information.

XML

```
<ce:stereochem>
  <ce:compound-struct><ce:link locator="fx7"/></ce:compound-struct>
  <ce:compound-name>(<ce:italic>S</ce:italic>)-2-
    <ce:italic>t</ce:italic>-Butyldimethylsolylpent-4-enal
  </ce:compound-name>
  <ce:compound-formula>
    C<ce:inf>12</ce:inf>H<ce:inf>22</ce:inf>OSi
  </ce:compound-formula>
  <ce:compound-info>
    <ce:list-item id="li1">
      <ce:para>E.e. &ge; 95%</ce:para>
    </ce:list-item>
    <ce:list-item id="li2">
      <ce:para>[&alpha;]<ce:sup>25</ce:sup><ce:inf>
        <ce:small-caps>d</ce:small-caps></ce:inf>= ...</ce:para>
    </ce:list-item>
    <ce:list-item id="li3">
      <ce:para>Source of chirality: Sharpless AE</ce:para>
    </ce:list-item>
    <ce:list-item id="li4">
      <ce:para>Absolute configuration:
        <ce:italic>S</ce:italic></ce:para>
    </ce:list-item>
```

```
  </ce:compound-info>
</ce:stereochem>
<ce:stereochem>
  <ce:compound-struct><ce:link locator="fx8"/></ce:compound-struct>
  <ce:compound-name>(<ce:italic>S</ce:italic>)-2-‿
    <ce:italic>t</ce:italic>-Butyldimethylsilhex-5-enal‿
  </ce:compound-name>
  <ce:compound-formula>‿
    C<ce:inf>12</ce:inf>H<ce:inf>24</ce:inf>OSi‿
  </ce:compound-formula>
  <ce:compound-info>
    <ce:list-item>
      <ce:para>E.e. &ge; 95%</ce:para>
    <ce:list-item>
      <ce:para>[&alpha;]<ce:sup>25</ce:sup><ce:inf>
        <ce:small-caps>d</ce:small-caps></ce:inf>= ...</ce:para>
    </ce:list-item>
    ...
  </ce:compound-info>
</ce:stereochem>
<ce:stereochem>
  <ce:compound-struct><ce:link locator="fx9"/></ce:compound-struct>
  ...
</ce:stereochem>
```

Rendering notes

The stereochemistry abstracts, whose nature is much like keywords, are part of the front-matter, even though they may appear elsewhere in the paper publication. For online applications, the intended usage is to collect the stereochemistry abstracts (e.g., per publication) from the articles and to display them together.

ce:subtitle

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:subtitle          ( %textfn.data; )*>
```

Description

The element ce:subtitle contains the subtitle of an article, chapter, or other item.

Usage

The element ce:subtitle is used to capture the subtitle of an item, e.g. a journal article or book chapter. Parts of the title that form an integral part of the title, e.g. separated from the first part by a colon or an em-dash, are not subtitles. Tables of content tend not to contain subtitles.

XML

```
<ce:title>The monadic second-order logic of graphs, Part IX:
  Hierarchical decompositions of directed graphs</ce:title>
```

Explanation

Here it is not appropriate to make a division in title and subtitle, because the name of part IX is an integral part of the title.

XML

```
<ce:title>Hierarchical decompositions of directed graphs</ce:title>
<ce:subtitle>Part IX in a series of papers devoted to monadic
  second-order logic of graphs</ce:subtitle>
```

Version history

In DTDs prior to DTD 5.0, the element sbt fulfilled the function of both ce:subtitle and ce:alt-subtitle; the language was specified in the parent atl element.

See also

ce:alt-title, ce:alt-subtitle, ce:title

ce:suffix

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:suffix            ( %richstring.data; )*>
```

Description

A suffix of the author name, e.g. junior or senior, is captured using ce:suffix.

Usage

A name suffix, mostly denoting a generation, such as “Junior” or “Senior”, is tagged with ce:suffix.

XML

```
<ce:given-name>Sammy</ce:given-name>
<ce:surname>Davis</ce:surname>
<ce:suffix>Sr.</ce:suffix>
```

XML

```
<ce:given-name>Henry</ce:given-name>
<ce:surname>Ford</ce:surname>
<ce:suffix>III</ce:suffix>
```

Version history

In DTDs prior to DTD 5.0, this element was called `jr`.

See also

ce:author, ce:degrees, ce:given-name, ce:roles, ce:surname

ce:sup

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:sup                ( %richstring.data; )*>
<!ATTLIST  ce:sup
           loc                   %loc;              "post">
```

Description

Superscripts are captured using ce:sup.

Usage

Superscripts (superior text) are captured using ce:sup.

The optional attribute loc can have the values pre and post, the latter is equivalent to omitting the attribute altogether. If loc is equal to pre this is to signify that the element belongs to the subsequent object.

XML

```
<ce:sup loc="pre">238</ce:sup><ce:inf loc="pre">92</ce:inf>U
```

Presentation

$^{238}_{92}\mathrm{U}$

By default, a super- and subscript appearing at one object will be displayed stacked, i.e. above each other. Staggered super- and subscripts (for example, ${R^{i}}_{j}{}^{k}$) can only be used in math mode.

See also

ce:inf

ce:surname

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:surname            ( %text.data; )*>
```

Description

The surname of an author or editor is captured using ce:surname.

Usage

Together with the element ce:given-name, ce:surname forms the name of authors or editors.

XML

```
<ce:given-name>Franklin D.</ce:given-name>Roosevelt
```

Especially for non-Western persons, it is not always clear or known what the given name and the surname is. In some regions of the world, it is even not uncommon to have just one name. In such cases, ce:surname may contain the full name of the person.

XML

```
<ce:author>
  <ce:surname>Ho Chi Minh</ce:surname>
</ce:author>
```

If the author or editor (especially of a work in the bibliographic reference list) is not a person but an institution or corporation, the name is also tagged using ce:surname. (This should not be confused with a collaboration, ce:collaboration.)

XML

```
<ce:surname>National Board of Safety</ce:surname>
```

See also

ce:author

ce:table

Declaration

Model (CEPs 1.1.0, 1.1.1)

```
<!ELEMENT  ce:table              ( ce:label?, ce:caption?, ( tgroup |
                                   ce:link )+, ce:legend?, ce:table-
                                   footnote* )>
<!ATTLIST  ce:table
           frame                 ( top|bottom|topbot|all|sides|none )
                                                  #IMPLIED
           colsep                %yesorno;        #IMPLIED
           rowsep                %yesorno;        #IMPLIED
           id                    ID               #IMPLIED
           xmlns                 CDATA            #FIXED %CALS.xmlns;
           xmlns:tb              CDATA            #FIXED %ESTB.xmlns;>
```

Model (CEP 1.1.2)

```
<!ELEMENT  ce:table              ( ce:label?, ce:caption?, ( %copy-
                                   right; )?, ( tgroup | ce:link )+,
                                   ce:legend?, ce:table-footnote* )>
<!ATTLIST  ce:table
           frame                 ( top|bottom|topbot|all|sides|none )
                                                  #IMPLIED
           colsep                %yesorno;        #IMPLIED
           rowsep                %yesorno;        #IMPLIED
           id                    ID               #IMPLIED
           xmlns                 CDATA            #FIXED %CALS.xmlns;
           xmlns:tb              CDATA            #FIXED %ESTB.xmlns;>
```

Model (CEP 1.1.3)

```
<!ELEMENT  ce:table              ( ce:label?, ce:caption?, ce:source?,
                                   ( %copyright; )?, ( tgroup |
                                   ce:link )+, ce:legend?, ce:table-
                                   footnote* )>
<!ATTLIST  ce:table
           frame                 ( top|bottom|topbot|all|sides|none )
                                                  #IMPLIED
           colsep                %yesorno;        #IMPLIED
           rowsep                %yesorno;        #IMPLIED
           id                    ID               #IMPLIED
           xmlns                 CDATA            #FIXED %CALS.xmlns;
           xmlns:tb              CDATA            #FIXED %ESTB.xmlns;>
```

Description

A table is captured with `ce:table`.

Usage

Aligning text in rows and columns is done using tables. The element `ce:table` is used to capture a table. Two kinds of tables are distinguished: displayed tables and floating tables.

Displayed tables are contained within the container element ce:display. They appear, surrounded by some white space, where they are mentioned in the text.

Floating tables are grouped, together with the other floating objects such as figures, in a ce:floats container at the beginning of the document. Floating tables must be referred to from within the text using a ce:cross-ref or a ce:cross-refs and a ce:float-anchor is used to indicated the position near to which the floating table must appear. So, each floating table is referenced by at least one cross-reference and exactly one float anchor.

XML

```
see <ce:cross-refs refid="tbl1 tbl2 tbl3">Tables
1&ndash;3</ce:cross-ref><ce:float-anchor refid="tbl1"/>
<ce:float-anchor refid="tbl2"/><ce:float-anchor refid="tbl3"/>
```

A table begins with a ce:label (mandatory for floating tables) and an optional ce:caption with a description of the table. There can be multiple captions for different languages and/or roles; each caption must have a different role or language. The optional ce:copyright element is used if the copyright owner of the table differs from the copyright owner of the document. The optional ce:source element is used to describe the source of the table.

The actual table is contained in tgroup elements, and/or is delivered as images, ce:link. The tgroup contains an extended CALS table, described in more detail in Chapter 10.

Below the tabular content the legend, ce:legend, and table footnotes, ce:table-footnote, are found.

Version history

The subelement ce:copyright was introduced in CEP 1.1.2. At the same time, the caption was made repeatable. Subelement ce:source was introduced in CEP 1.1.3.

See also

For more information, see Chapter 10.

ce:table-footnote

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:table-footnote     ( ce:label, ce:note-para+ )>
<!ATTLIST  ce:table-footnote
           id                    ID                #REQUIRED>
```

Description

A table footnote is a footnote referenced and displayed within a table, and coded with ce:table-footnote.

Usage

The element ce:table-footnote occurs zero or more times at the end of ce:table, after the optional ce:legend and contains the table footnotes.

The first subelement of ce:table-footnote is a mandatory ce:label element. It contains the symbol of the table footnote with implied presentation style, i.e., if the style of the footnote symbol is a superior letter, the ce:label contains only the letter.

The text of the table footnote is contained in one or more note paragraphs, ce:note-para.

There must always be a cross-reference to a table footnote. Note that it is not allowed to cross-reference to a table footnote from outside the table in which the table footnote appears.

A table footnote should not be confused with a ce:legend.

ce:text

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:text              ( %text.data; )*>
<!ATTLIST  ce:text
           id                   ID              #IMPLIED>
```

Description

The element ce:text is a container element for text.

Usage

Various elements contain ce:text as a general container for text with content model %text.data;. The exact content of %text.data; is described in the section on Parameter entities (p. 137).

See also

ce:textfn, ce:textref

ce:textbox

Declaration

Model (CEPs 1.1.0, 1.1.1)

```
<!ELEMENT  ce:textbox          ( ce:label?, ce:caption?, ce:copyright?,
                                 ce:textbox-head?, ce:textbox-body,
                                 ce:textbox-tail? )>
<!ATTLIST  ce:textbox
           id                  ID              #IMPLIED
           role                CDATA           #IMPLIED>
```

Model (CEP 1.1.2)

```
<!ELEMENT  ce:textbox          ( ce:label?, ce:caption*, ( %copy-
                                 right; )?, ce:textbox-head?,
                                 ce:textbox-body, ce:textbox-tail? )>
<!ATTLIST  ce:textbox
           id                  ID              #IMPLIED
           role                CDATA           #IMPLIED>
```

Model (CEP 1.1.3)

```
<!ELEMENT  ce:textbox          ( ce:label?, ce:caption*, ce:source?,
                                 ( %copyright; )?, ce:textbox-head?,
                                 ce:textbox-body, ce:textbox-tail? )>
<!ATTLIST  ce:textbox
           id                  ID              #IMPLIED
           role                CDATA           #IMPLIED>
```

Description

A textbox (in this context written as one word) is an object similar to a figure, but rather than a graphic it contains typeset material, which could be regarded as a small document in its own right, sometimes displayed with a coloured background. The element ce:textbox is provided for this purpose.

Usage

The element ce:textbox can be used in a variety of ways. Similar to ce:figure it is embedded within ce:display or ce:floats. A displayed textbox appears in the text at the position where it is used, separated from the surrounding text with white space. A floating textbox, collected among the floats in ce:floats appears in the text near the point where a ce:float-anchor, pointing to the textbox, is placed.

The name of the textbox, e.g. “Box II”, is contained in the subelement ce:label. The ce:caption contains one or more paragraphs, ce:simple-para, of descriptive text. There can be multiple captions, for different languages and/or roles; each caption must have a different role or language.

The optional subelement ce:source is used to describe the source of the figure. The optional subelement ce:copyright can be used if the copyright of the textbox differs from the copyright of the document in which it is embedded.

A ce:textbox has an id attribute, so that it can be (but does not have to be) referred to using ce:cross-ref or ce:cross-refs (or from a foreign document). A floating textbox must have exactly one ce:float-anchor referring to it.

The structure of a textbox is an optional head (ce:textbox-head), a body (ce:textbox-body) and an optional tail (ce:textbox-tail). Simple textboxes will typically only have a body, but more elaborate textboxes with their own author names and bibliographic references exist also. Since the variety in textboxes is large, it contains many optional subelements.

The head, ce:textbox-head, begins with a titles sequence containing a title, ce:title and a subtitle, ce:subtitle, followed by possible combinations of titles and subtitles in an alternative language (ce:alt-title, ce:alt-subtitle). A sequence of author groups, ce:author-group, and an introductory section, ce:intro, complete the head.

The body of a textbox may contain paragraphs and sections within a ce:sections container and an acknowledgment (ce:acknowledgment), and ends with ce:appendices.

The tail of a textbox may contain a bibliography (ce:bibliography, a further-reading section (ce:further-reading), a glossary (ce:glossary), and biographies of the authors (ce:biography).

Note that an elaborate textbox itself resembles a small article. It may well contain its own figures and tables.

At the time of writing, the following value for ce:textbox's attribute role is defined: pull-quote. This is used to capture pull quotes, i.e., sentence or phrase excerpted from the main text, often set in large type, used to break up running text and draw the reader's attention.

Version history

Prior to DTD 5.0, elaborate textboxes were separate SGML instances, declared as SUBDOC in the main file. Such textboxes were called linked textboxes..

As from CEP 1.1.2, the caption is repeatable. Parameter entity %copyright; was introduced as well. Subelement ce:source was introduced in CEP 1.1.3.

Light reading

No floating textboxes may be used in CONTENTS-ENTRY-ONLY, HEAD-ONLY or HEAD-AND-TAIL files.

See also

ce:display, ce:float-anchor, ce:floats, ce:textbox-body, ce:textbox-head, ce:textbox-tail

ce:textbox-body

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:textbox-body       ( ce:sections, ce:acknowledgment?,
                                   ce:appendices? )>
```

Description

The element ce:textbox-body contains the body of a textbox, with a number of sections, an acknowledgment and appendices.

Usage

See ce:textbox.

ce:textbox-head

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:textbox-head       ( ce:title?, ce:subtitle?, ( ce:alt-
                                   title, ce:alt-subtitle? )*, ce:author-
                                   group*, ce:intro? )>
```

Description

The element ce:textbox-head contains the head of a textbox. It may contain titles and author names, and an introduction.

Usage

See ce:textbox.

ce:textbox-tail

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:textbox-tail       ( ce:bibliography?, ce:further-reading?,
                                   ce:glossary?, ce:biography* )>
```

Description

The element ce:textbox-tail contains the tail of a textbox, with a bibliography, a further-reading section, a glossary and biographies.

Usage

See ce:textbox.

Version history

Optional subelements ce:glossary and ce:biography were introduced in CEP 1.1.1.

ce:textfn

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:textfn            ( %textfn.data; )*>
<!ATTLIST  ce:textfn
           id                   ID                #IMPLIED>
```

Description

The element ce:textfn is a container element for text.

Usage

Various elements contain ce:textfn as a general container for text with content model %textfn.data;. The exact content of %textfn.data; is described in the section on Parameter entities (p. 137).

See also

ce:text, ce:textref

ce:textref

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:textref            ( %textref.data; )*>
<!ATTLIST  ce:textref
           id                    ID                #IMPLIED>
```

Description

The element ce:textref is a container element for text.

Usage

Various elements contain ce:textref as a general container for text with content model %textref.data;. The exact content of %textref.data; is described in the section on Parameter entities (p. 137).

See also

ce:text, ce:textfn

ce:title

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:title              ( %textfn.data; )*>
```

Description

The element ce:title contains the title of an article, chapter, or other item.

Usage

The element ce:title is used to capture the title of an item, e.g. a journal article or book chapter.

XML

```
<ce:title>Tag by Tag</ce:title>
```

Version history

In DTDs prior to DTD 5.0, the element atl fulfilled the function of both ce:title and ce:alt-title; moreover, it contained the subtitle within it.

See also

ce:alt-title, ce:alt-subtitle, ce:subtitle

ce:underline

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:underline          ( %richstring.data; )*>
```

Description

The element ce:underline is related to the font changing elements (p. 134). It is used to obtain underlined text.

Usage

To obtain underlined text, use ce:underline.

XML

```
<ce:underline>This text is underlined</ce:underline>.
```

Presentation

This text is underlined.

See also

For more information see the section on text effects (p. 134). See also ce:bold, ce:cross-out, ce:italic, ce:monospace, ce:sans-serif.

ce:vsp

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  ce:vsp              EMPTY>
<!ATTLIST  ce:vsp
           sp                  NMTOKEN          "1.0">
```

Description

The element ce:vsp is used to create explicit vertical space.

Usage

If the need arises to indicate explicit vertical spacing, ce:vsp can be used. It has one attribute, sp, which determines the amount of vertical space is to be inserted, measured as a multiple of the baseline-to-baseline distance, default 1.0. It is a non-negative floating number.

If <ce:vsp sp="1.5"> occurs in the running text, this should be displayed as follows: move down by 1.5 “baseline skip” and do not start a new line. However, if it is immediately followed by a <para>, <note-para> or <simple-para> tag, the next paragraph is not indented.

XML

```
Text1<ce:vsp/>Text2
```

Presentation

Text1
Text2

XML

```
Text1<ce:vsp sp="2.0"/><ce:para>Text2
```

Presentation

Text1

Text2

XML

```
Text1<ce:para><ce:vsp sp="2.0"/>Text2
```

Presentation

Text1

Text2

It is not allowed to use ce:vsp for creating built-up structures.

Chapter 8

Structured bibliographic references

This chapter contains an alphabetic listing of the DTD fragment for structured bibliographic references. This fragment also belongs to the common element pool (CEP 1.1), but its elements have been assigned to a separate namespace. This makes it possible, for instance, that the structure of an author name in a bibliographic reference differs from that in the head of an article: The elements `ce:author` and `sb:author` both exist.

The first section of this chapter contains extensive examples of various types of references and their XML coding. It is followed by detailed descriptions of each of the elements.

Bibliographic references — Examples

The fragment of the DTD related to bibliographic references is quite extensive. In this section, structured references are illustrated in the form of examples. The rendering given in the examples does not necessarily follow one of the standard presentations for bibliographic references.

The top-level element for a structured bibliographic reference is `sb:reference`. It uses concepts of "contributions" that appear in one or more "hosts". Four types of hosts exist: issue, book, edited book and electronic host.

Examples of structured references

The examples in this section are ordered by the type of host.

1. `sb:issue` as `sb:host`
2. `sb:book` as `sb:host`
3. `sb:edited-book` as `sb:host`
4. `sb:e-host` as `sb:host`, and other hosts on the web

Some examples demonstrate additional features.

- Non-English journal article, with an English `sb:translated-title` (Example 4)
- Book originally published in another language, with a translator (Example 7)
- Multiple hosts (Example 9, Example 14, Example 16)
- `sb:book-series` element (Example 12, Example 13)
- A book series published over a period of several years (Example 13)
- Publications on the web other than preprints (Example 15)
- `sb:comment` element (Example 3, Example 7, Example 16)
- `ce:note` element (Example 16)

1. *sb:issue* as *sb:host*

An `sb:issue` contains at least an `sb:series` and an `sb:date`. The `sb:series` contains an `sb:title` or an `sb:translated-title` and optionally an `sb:volume-nr`.

1. Simple journal article, two authors et al., paginated by issue.

Presentation

[1] A. Paivio, L.J. Becker, et al., Comparisons through the mind's eye, Cognition 37 (2) (1975) 635–647.

XML

```
<ce:bib-reference id="ref1">
<ce:label>[1]</ce:label>
<sb:reference>
  <sb:contribution>
    <sb:authors>
      <sb:author>
        <ce:given-name>A.</ce:given-name>
        <ce:surname>Paivio</ce:surname>
      </sb:author>
      <sb:author>
        <ce:given-name>L.J.</ce:given-name>
        <ce:surname>Becker</ce:surname>
```

```
      </sb:author>
      <sb:et-al/>
    </sb:authors>
    <sb:title>
      <sb:maintitle>Comparisons through
        the mind's eye</sb:maintitle>
    </sb:title>
  </sb:contribution>
  <sb:host>
    <sb:issue>
      <sb:series>
        <sb:title>
          <sb:maintitle>Cognition</sb:maintitle>
        </sb:title>
        <sb:volume-nr>37</sb:volume-nr>
      </sb:series>
      <sb:issue-nr>2</sb:issue-nr>
      <sb:date>1975</sb:date>
    </sb:issue>
    <sb:pages>
      <sb:first-page>635</sb:first-page>
      <sb:last-page>647</sb:last-page>
    </sb:pages>
   </sb:host>
</sb:reference>
</ce:bib-reference>
```

2. An article in a journal supplement, only first page given. The fact that it is a supplement can in this example be seen from the sb:issue-nr. Otherwise, there is no difference with an article in a normal issue.

Presentation

[2] S. Koczkas, G. Holmberg, L. Wedin, A pilot study of the effect of . . . , Acta Psychiatrica Scandinavica 63 (Suppl. 290) (1981) 328.

XML

```
<ce:bib-reference id="ref2">
<ce:label>[2]</ce:label>
<sb:reference>
  <sb:contribution>
    <sb:authors>
      <sb:author>
        <ce:given-name>S.</ce:given-name>
        <ce:surname>Koczkas</ce:surname>
      </sb:author>
      <sb:author>
        <ce:given-name>G.</ce:given-name>
        <ce:surname>Holmberg</ce:surname>
      </sb:author>
      <sb:author>
        <ce:given-name>L.</ce:given-name>
        <ce:surname>Wedin</ce:surname>
      </sb:author>
    </sb:authors>
    <sb:title>
```

```
      <sb:maintitle>A pilot study of the effect of ...</sb:maintitle>
    </sb:title>
  </sb:contribution>
  <sb:host>
    <sb:issue>
      <sb:series>
        <sb:title>
          <sb:maintitle>Acta Psychiatrica Scandinavica</sb:maintitle>
        </sb:title>
        <sb:volume-nr>63</sb:volume-nr>
      </sb:series>
      <sb:issue-nr>Suppl. 290</sb:issue-nr>
      <sb:date>1981</sb:date>
    </sb:issue>
    <sb:pages><sb:first-page>328</sb:first-page></sb:pages>
  </sb:host>
</sb:reference>
</ce:bib-reference>
```

3. Entire issue of a journal. In addition to the `sb:title` in the `sb:series` (the journal title), the issue of this example has a title and (guest) editors of its own. The additional text '(special issue)' is tagged as a comment.

This example is typical for special issues.

Presentation

[3] R. Glaser, L. Bond (Eds.), Testing: concepts and research, American Psychologist 36 (10–12) (1981) (special issue).

XML

```
<ce:bib-reference id="ref3">
<ce:label>[3]</ce:label>
<sb:reference>
  <sb:host>
    <sb:issue>
      <sb:editors>
        <sb:editor>
          <ce:given-name>R.</ce:given-name>
          <ce:surname>Glaser</ce:surname>
        </sb:editor>
        <sb:editor>
          <ce:given-name>L.</ce:given-name>
          <ce:surname>Bond</ce:surname>
        </sb:editor>
      </sb:editors>
      <sb:title>
        <sb:maintitle>Testing: concepts and research</sb:maintitle>
      </sb:title>
      <sb:series>
        <sb:title>
          <sb:maintitle>American Psychologist</sb:maintitle>
        </sb:title>
        <sb:volume-nr>36</sb:volume-nr>
      </sb:series>
      <sb:issue-nr>10&ndash;12</sb:issue-nr>
      <sb:date>1981</sb:date>
```

```
    </sb:issue>
  </sb:host>
  <sb:comment>(special issue)</sb:comment>
</sb:reference>
</ce:bib-reference>
```

4. Non-English journal article, with an English sb:translated-title. In this example, the language of the article is known and is specified in the xml:lang attribute of the sb:contribution.

Presentation

[4] E.M.H. Assink, N. Verloop, Het aanleren van deel–geheel relaties (Teaching part–whole relations), Pedagogische Studiën 54 (1977) 130–142.

XML

```
<ce:bib-reference id="ref4">
<ce:label>[4]</ce:label>
<sb:reference>
  <sb:contribution lang-type="iso" xml:lang="nl">
    <sb:authors>
      <sb:author>
        <ce:given-name>E.M.H.</ce:given-name>
        <ce:surname>Assink</ce:surname>
      </sb:author>
      <sb:author>
        <ce:given-name>N.</ce:given-name>
        <ce:surname>Verloop</ce:surname>
      </sb:author>
    </sb:authors>
    <sb:title>
      <sb:maintitle>Het aanleren
        van deel&ndash;geheel relaties</sb:maintitle>
    </sb:title>
    <sb:translated-title>
      <sb:maintitle>Teaching part&ndash;whole
        relations</sb:maintitle>
    </sb:translated-title>
  </sb:contribution>
  <sb:host>
    <sb:issue>
      <sb:series>
        <sb:title>
          <sb:maintitle>Pedagogische Studiën</sb:maintitle>
        </sb:title>
        <sb:volume-nr>54</sb:volume-nr>
      </sb:series>
      <sb:date>1977</sb:date>
    </sb:issue>
    <sb:pages>
      <sb:first-page>130</sb:first-page>
      <sb:last-page>142</sb:last-page>
    </sb:pages>
  </sb:host>
</sb:reference>
</ce:bib-reference>
```

2. *sb:book* as *sb:host*

An sb:book element contains at least an sb:date. The author names and the title can in virtually all cases be found in the sb:contribution. Only when no author is given, is the sb:title element in the sb:host used.

5. Monograph. In this example, the sb:book element contains, in addition to the sb:date, the sb:edition and the sb:publisher.

Presentation

[5] W. Strunk Jr., E.B. White, The elements of style, 3rd ed., Macmillan, New York, 1979.

XML

```
<ce:bib-reference id="ref5">
<ce:label>[5]</ce:label>
<sb:reference>
  <sb:contribution>
    <sb:authors>
      <sb:author>
        <ce:given-name>W.</ce:given-name>
        <ce:surname>Strunk</ce:surname>
        <ce:suffix>Jr.</ce:suffix>
      </sb:author>
      <sb:author>
        <ce:given-name>E.B.</ce:given-name>
        <ce:surname>White</ce:surname>
      </sb:author>
    </sb:authors>
    <sb:title>
      <sb:maintitle>The elements of style</sb:maintitle>
    </sb:title>
  </sb:contribution>
  <sb:host>
    <sb:book>
      <sb:edition>3rd ed.</sb:edition><sb:date>1979</sb:date>
      <sb:publisher>
        <sb:name>MacMillan</sb:name>
        <sb:location>New York</sb:location>
      </sb:publisher>
    </sb:book>
  </sb:host>
</sb:reference>
</ce:bib-reference>
```

6. Book without authors. The title is in the sb:host.

Presentation

[6] College bound seniors, College Board Publications, Princeton, NJ, 1979.

XML

```
<ce:bib-reference id="ref6">
<ce:label>[6]</ce:label>
<sb:reference>
  <sb:host>
    <sb:book>
      <sb:title>
        <sb:maintitle>College bound seniors</sb:maintitle>
```

```
      </sb:title>
      <sb:date>1979</sb:date>
      <sb:publisher>
        <sb:name>College Board Publications</sb:name>
        <sb:location>Princeton, NJ</sb:location>
      </sb:publisher>
    </sb:book>
  </sb:host>
</sb:reference>
</ce:bib-reference>
```

7. Book originally published in another language, with a translator.[3] In this example the original title and the original language are not given.

Presentation

[7] A.R. Luria, The mind of a mnemonist (L. Solotarof, Trans.) Avon books, New York, 1969 (Original work published 1965)

XML

```
<ce:bib-reference id="ref7">
<ce:label>[7]</ce:label>
<sb:reference>
  <sb:contribution>
    <sb:authors>
      <sb:author>
        <ce:given-name>A.R.</ce:given-name>
        <ce:surname>Luria</ce:surname>
      </sb:author>
    </sb:authors>
    <sb:title>
      <sb:maintitle>The mind of a mnemonist</sb:maintitle>
    </sb:title>
  </sb:contribution>
  <sb:comment>(L. Solotarof, Trans.)</sb:comment>
  <sb:host>
    <sb:book>
      <sb:date>1969</sb:date>
      <sb:publisher>
        <sb:name>Avon books</sb:name>
        <sb:location>New York</sb:location>
      </sb:publisher>
    </sb:book>
  </sb:host>
  <sb:comment>(Original work published 1965)</sb:comment>
</sb:reference>
</ce:bib-reference>
```

3. *sb:edited-book* as *sb:host*

An sb:edited-book contains at least an sb:date. When the sb:host is an sb:edited-book, the sb:contribution usually is an article or a chapter in that book. In that case there is an sb:title in both the sb:contribution and the sb:host, much like an article in an sb:issue.

8. Article or chapter in edited book.

3. There is no separate element for translator.

Presentation

[8] A.S. Gurman, D.P. Kniskern, Family therapy outcome research: knowns and unknowns, in: A.S. Gurman, D.P. Kniskern (Eds.), Handbook of family therapy, Brunner/Mazel, New York, 1981, pp. 742–775.

XML

```
<ce:bib-reference id="ref8">
<ce:label>[8]</ce:label>
<sb:reference>
  <sb:contribution>
    <sb:authors>
      <sb:author>
        <ce:given-name>A.S.</ce:given-name>
        <ce:surname>Gurman</ce:surname>
      </sb:author>
      <sb:author>
        <ce:given-name>D.P.</ce:given-name>
        <ce:surname>Kniskern</ce:surname>
      </sb:author>
    </sb:authors>
    <sb:title>
      <sb:maintitle>Family therapy outcome research:
        knowns and unknowns</sb:maintitle>
    </sb:title>
  </sb:contribution>
  <sb:host>
    <sb:edited-book>
      <sb:editors>
        <sb:editor>
          <ce:given-name>A.S.</ce:given-name>
          <ce:surname>Gurman</ce:surname>
        </sb:editor>
        <sb:editor>
          <ce:given-name>D.P.</ce:given-name>
          <ce:surname>Kniskern</ce:surname>
        </sb:editor>
      </sb:editors>
      <sb:title>
        <sb:maintitle>Handbook of family therapy</sb:maintitle>
      </sb:title>
      <sb:date>1981</sb:date>
      <sb:publisher>
        <sb:name>Brunner/Mazel</sb:name>
        <sb:location>New York</sb:location>
      </sb:publisher>
    </sb:edited-book>
    <sb:pages>
      <sb:first-page>742</sb:first-page>
      <sb:last-page>775</sb:last-page>
    </sb:pages>
  </sb:host>
</sb:reference>
</ce:bib-reference>
```

9. Article in edited book, reprinted from another source.

Presentation

[9] C.E. Sluzki, J. Beavin, Symmetry and complementarity, in: P. Watzlawick, J.H. Weakland (Eds.), The interactional view, Norton, New York, 1977, pp. 71–87. Reprinted from: Acta Psiquiatrica y Psicologica de America Latina 11 (1965) 321–330.

XML

```
<ce:bib-reference id="ref9">
<ce:label>[9]</ce:label>
<sb:reference>
  <sb:contribution>
    <sb:authors>
      <sb:author>
        <ce:given-name>C.E.</ce:given-name>
        <ce:surname>Sluzki</ce:surname>
      </sb:author>
      <sb:author>
        <ce:given-name>J.</ce:given-name>
        <ce:surname>Beavin</ce:surname>
      </sb:author>
    </sb:authors>
    <sb:title>
      <sb:maintitle>Symmetry and complementarity</sb:maintitle>
    </sb:title>
  </sb:contribution>
  <sb:host>
    <sb:edited-book>
      <sb:editors>
        <sb:editor>
          <ce:given-name>P.</ce:given-name>
          <ce:surname>Watzlawick</ce:surname>
        </sb:editor>
        <sb:editor>
          <ce:given-name>J.H.</ce:given-name>
          <ce:surname>Weakland</ce:surname>
        </sb:editor>
      </sb:editors>
      <sb:title>
        <sb:maintitle>The interactional view</sb:maintitle>
      </sb:title>
      <sb:date>1977</sb:date>
      <sb:publisher>
        <sb:name>Norton</sb:name>
        <sb:location>New York</sb:location>
      </sb:publisher>
    </sb:edited-book>
    <sb:pages>
      <sb:first-page>71</sb:first-page>
      <sb:last-page>87</sb:last-page>
    </sb:pages>
  </sb:host>
  <sb:comment>Reprinted from:</sb:comment>
  <sb:host>
    <sb:issue>
      <sb:series>
        <sb:title>
```

```
            <sb:maintitle>Acta Psiquiatrica y Psicologica
              de America Latina</sb:maintitle>
          </sb:title>
          <sb:volume-nr>11<sb:volume-nr>
        </sb:series>
        <sb:date>1965</sb:date>
      </sb:issue>
      <sb:pages>
        <sb:first-page>321</sb:first-page>
        <sb:last-page>330</sb:last-page>
      </sb:pages>
    </sb:host>
  </sb:reference>
  </ce:bib-reference>
```

10. Article in proceedings published as a book. A proceedings volume is an `sb:edited-book`. It may have conference info in the `sb:conference` element.

Presentation

[10] T.E. Chaddock, Gastric emptying of a nutritionally balanced diet, in: E.E. Daniel (Ed.), Proceedings of the Fourth International Symposium on Gastrointestinal Motility, ISGM4, 4–8 September 1973, Seattle, WA, Mitchell Press, Vancouver, British Columbia, Canada, 1974, pp. 83–92.

XML

```
<ce:bib-reference id="ref10">
<ce:label>[10]</ce:label>
<sb:reference>
  <sb:contribution>
    <sb:authors>
      <sb:author>
        <ce:given-name>T.E.</ce:given-name>
        <ce:surname>Chaddock</ce:surname>
      </sb:author>
    </sb:authors>
    <sb:title>
      <sb:maintitle>Gastric emptying of a nutritionally
        balanced diet</sb:maintitle>
    </sb:title>
  </sb:contribution>
  <sb:host>
    <sb:edited-book>
      <sb:editors>
        <sb:editor>
          <ce:given-name>E.E.</ce:given-name>
          <ce:surname>Daniel</ce:surname>
        </sb:editor>
      </sb:editors>
      <sb:title>
        <sb:maintitle>Proceedings of the Fourth International
          Symposium on Gastrointestinal Motility</sb:maintitle>
      </sb:title>
      <sb:conference>ISGM4, 4&ndash;8 September 1973,
        Seattle, WA</sb:conference>
      <sb:date>1974</sb:date>
      <sb:publisher>
```

```
            <sb:name>Mitchell Press</sb:name>
            <sb:location>Vancouver, British Columbia,
              Canada</sb:location>
          </sb:publisher>
        </sb:edited-book>
        <sb:pages>
          <sb:first-page>83</sb:first-page>
          <sb:last-page>92</sb:last-page>
        </sb:pages>
      </sb:host>
    </sb:reference>
    </ce:bib-reference>
```

11. Edited book. In this example the whole edited book is cited and therefore the element `sb:contribution` is absent.

Presentation

[11] S. Letheridge, C.R. Cannon (Eds.), Bilingual education, Praeger, New York, 1980.

XML

```
    <ce:bib-reference id="ref11">
    <ce:label>[11]</ce:label>
    <sb:reference>
      <sb:host>
        <sb:edited-book>
          <sb:editors>
            <sb:editor>
              <ce:given-name>S.</ce:given-name>
              <ce:surname>Letheridge</ce:surname>
            </sb:editor>
            <sb:editor>
              <ce:given-name>C.R.</ce:given-name>
              <ce:surname>Cannon</ce:surname>
            </sb:editor>
          </sb:editors>
          <sb:title>
            <sb:maintitle>Bilingual education</sb:maintitle>
          </sb:title>
          <sb:date>1980</sb:date>
          <sb:publisher>
            <sb:name>Praeger</sb:name>
            <sb:location>New York</sb:location>
          </sb:publisher>
        </sb:edited-book>
      </sb:host>
    </sb:reference>
    </ce:bib-reference>
```

12. A volume in a multi-volume edited work. The difference with a single-volume edited work, is the presence of an `sb:book-series` element. The `sb:book-series` contains an `sb:series` element and optionally the editors of the series. The `sb:series` element contains the series title and optionally the `sb:volume-nr`. The volume may have its own editors and title, as shown in this example.

Presentation

[12] J.G. Wilson (Ed.), Basic teratology, in: J.G. Wilson, F.C. Fraser (Eds.), Handbook of

teratology, vol. 1, Plenum Press, New York, 1977–1978.

XML

```
<ce:bib-reference id="ref12">
<ce:label>[12]</ce:label>
<sb:reference>
  <sb:host>
    <sb:edited-book>
      <sb:editors>
        <sb:editor>
          <ce:given-name>J.G.</ce:given-name>
          <ce:surname>Wilson</ce:surname>
        </sb:editor>
      </sb:editors>
      <sb:title>
        <sb:maintitle>Basic teratology</sb:maintitle>
      </sb:title>
      <sb:book-series>
        <sb:editors>
          <sb:editor>
            <ce:given-name>J.G.</ce:given-name>
            <ce:surname>Wilson</ce:surname>
          </sb:editor>
          <sb:editor>
            <ce:given-name>F.C.</ce:given-name>
            <ce:surname>Fraser</ce:surname>
          </sb:editor>
        </sb:editors>
        <sb:series>
          <sb:title>
            <sb:maintitle>Handbook of teratology</sb:maintitle>
          </sb:title>
          <sb:volume-nr>Vol. 1</sb:volume-nr>
        </sb:series>
      </sb:book-series>
      <sb:date>1977</sb:date>
      <sb:publisher>
        <sb:name>Plenum Press</sb:name>
        <sb:location>New York</sb:location>
      </sb:publisher>
    </sb:edited-book>
  </sb:host>
</sb:reference>
</ce:bib-reference>
```

13. A multi-volume edited work, publication over more than one year. In this example the whole series is cited; therefore the `sb:contribution` element is absent, and the `sb:edited-book` contains only elements that belong to the series: `sb:book-series`, `sb:date`s and an `sb:publisher`. The fact that the series was published over a period of several years, is expressed by the presence of multiple `sb:date`s.

Presentation

[13] J.G. Wilson, F.C. Fraser (Eds.), Handbook of teratology, Vols. 1–4, Plenum Press, New York, 1977–1978.

XML

```
<ce:bib-reference id="ref13">
<ce:label>[13]</ce:label>
<sb:reference>
  <sb:host>
    <sb:edited-book>
      <sb:book-series>
        <sb:editors>
          <sb:editor>
            <ce:given-name>J.G.</ce:given-name>
            <ce:surname>Wilson</ce:surname>
          </sb:editor>
          <sb:editor>
            <ce:given-name>F.C.</ce:given-name>
            <ce:surname>Fraser</ce:surname>
          </sb:editor>
        </sb:editors>
        <sb:series>
          <sb:title>
            <sb:maintitle>Handbook of teratology</sb:maintitle>
          </sb:title>
          <sb:volume-nr>Vols. 1&ndash;4</sb:volume-nr>
        </sb:series>
      </sb:book-series>
      <sb:date>1977</sb:date>
      <sb:date>1978</sb:date>
      <sb:publisher>
        <sb:name>Plenum Press</sb:name>
        <sb:location>New York</sb:location>
      </sb:publisher>
    <sb:edited-book>
  </sb:host>
</sb:reference>
</ce:bib-reference>
```

4. *sb:e-host* as *sb:host*, and other hosts on the web

An sb:e-host cannot at the same time be an sb:issue, sb:book or sb:edited-book. Therefore it is mainly used for articles on the web that do not belong to any of the other types of host, mostly for preprints. However, one of the examples below shows how a book can have an sb:e-host as one of its hosts.

14. An electronic host, sb:e-host, consists of a ce:inter-ref element and an optional sb:date. Formally, the ce:inter-ref is optional too, but in practice it is not.

In this example the sb:e-host contains the preprint, and the sb:issue contains the printed article. It also often occurs that the sb:e-host is the only host.

Presentation

[14] F. Yu, X.-S. Wu, Phys. Rev. Lett. 68 (1992) 2996. hep-th/9112009.

XML

```
<ce:bib-reference id="ref14">
<ce:label>[14]</ce:label>
<sb:reference>
  <sb:contribution>
    <sb:authors>
```

```
      <sb:author>
        <ce:given-name>F.</ce:given-name>
        <ce:surname>Yu</ce:surname>
      </sb:author>
      <sb:author>
        <ce:given-name>X.-S.</ce:given-name>
        <ce:surname>Wu</ce:surname>
      </sb:author>
    </sb:authors>
  </sb:contribution>
  <sb:host>
    <sb:issue>
      <sb:series>
        <sb:title>
          <sb:maintitle>Phys. Rev. Lett.</sb:maintitle>
        </sb:title>
        <sb:volume-nr>68</sb:volume-nr>
      </sb:series>
      <sb:date>1992</sb:date>
    </sb:issue>
    <sb:pages><sb:first-page>2996</sb:first-page></sb:pages>
  </sb:host>
  <sb:host>
    <sb:e-host>
      <ce:inter-ref id="interref37"
        xlink:role="http://www.elsevier.com/xml/linking-roles/preprint"
        xlink:href="arxiv:/hep-th/9112009">hep-th/9112009</ce:inter-ref>
    </sb:e-host>
  </sb:host>
</sb:reference>
</ce:bib-reference>
```

15. Article in proceedings, published on the web. In this example the host is a proceedings, hence an `sb:edited-book`, even though it is published solely on the web (or that is the only publication given). The `sb:title` of the `sb:contribution` contains a `ce:inter-ref` element with a leading to a file for this specific article. In addition, the URL of the proceedings is tagged as an `ce:inter-ref` element in the `sb:title` of the `sb:host`.

Presentation

[15] F. Douglis and Th. Ball, Tracking and viewing changes on the web, in: Proc. 1996 USENIX Technical Conference, January 1996.

XML

```
<ce:bib-reference id="ref15">
<ce:label>[15]</ce:label>
<sb:reference>
  <sb:contribution>
    <sb:authors>
      <sb:author>
        <ce:given-name>F.</ce:given-name>
        <ce:surname>Douglis</ce:surname>
      </sb:author>
      <sb:author>
        <ce:given-name>Th.</ce:given-name>
        <ce:surname>Ball</ce:surname>
```

```
      </sb:author>
    </sb:authors>
    <sb:title>
      <sb:maintitle>
        <ce:inter-ref id="interref38"
          xlink:href="http://www.research.att.com/papers/aide.ps.gz">

          Tracking and viewing changes on the web
        </ce:inter-ref>
      </sb:maintitle>
    </sb:title>
  </sb:contribution>
  <sb:host>
    <sb:edited-book>
      <sb:title>
        <ce:inter-ref id="interref39"
          xlink:role="http://www.elsevier.com/xml/linking-roles/text/html"
          xlink:href="http://usenix.org/sd96.html">Proc. 1996 USENIX
            Technical Conference</ce:inter-ref>
      </sb:title>
      <sb:date>January 1996</sb:date>
    </sb:edited-book>
  </sb:host>
</sb:reference>
</ce:bib-reference>
```

16. Article with maximum usage of comments: an `sb:comment` before the `sb:contribution`, an `sb:comment` before each of the `sb:host`s, and an `sb:comment` after the last `sb:host`. It also has a `ce:note`.

Presentation

[16] See the references in H.A. Buchdahl, The Concepts of Classical Thermodynamics, first published by Cambridge University Press, Cambridge, 1966, also available electronically as: The Concepts of Classical Thermodynamics (last updated 1999).
This reference discusses the basic concepts in a very thorough manner.
Its literature list is a main entry point into the discipline.

XML

```
<ce:bib-reference id="ref16"><ce:label>[16]</ce:label>
<sb:reference>
  <sb:comment>See the references in</sb:comment>
  <sb:contribution>
    <sb:authors>
      <sb:author>
        <ce:given-name>H.A.</ce:given-name>
        <ce:surname>Buchdahl</ce:surname>
      </sb:author>
    </sb:authors>
    <sb:title>
      <sb:maintitle>The Concepts of
        Classical Thermodynamics</sb:maintitle>
    </sb:title>
  </sb:contribution>
  <sb:comment>first published by</sb:comment>
  <sb:host>
```

```
      <sb:book>
        <sb:date>1966</sb:date>
        <sb:publisher>
          <sb:name>Cambridge University Press</sb:name>
          <sb:location>Cambridge</sb:location>
        </sb:publisher>
      </sb:book>
    </sb:host>
    <sb:comment>also available electronically as:</sb:comment>
    <sb:host>
      <sb:e-host>
        <ce:inter-ref id="interref40"
            xlink:role="http://www.elsevier.com/xml/linking-roles/text/html"
            xlink:href="http://www.sciencedirect.com/books/5027.html">
          The Concepts of Classical Thermodynamics
        </ce:inter-ref>
      </sb:e-host>
    </sb:host>
    <sb:comment>(last updated 1999)</sb:comment>
    </sb:reference>
    <ce:note>
      <ce:simple-para>This reference discusses the basic concepts in
        a very thorough manner.</ce:simple-para>
      <ce:simple-para>Its literature list is a main entry point
        into the discipline.</ce:simple-para>
    </ce:note>
  </ce:bib-reference>
```

sb:author

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:author            ( %name; )>
```

Description

Within structured bibliographic references, author names are tagged using sb:author.

Usage

The element sb:author has %name; as its content model. That means that it contains a ce:surname and optionally a ce:given-name in any order, possibly followed by a ce:suffix. For more details, see those elements.

XML

```
<sb:author>
  <sb:given-name>D.E.</sb:given-name>
  <sb:surname>Knuth</sb:surname>
</sb:author>
```

XML

```
<sb:author>
  <sb:surname>Liszt</sb:surname>
  <sb:given-name>Ferenc</sb:given-name>
</sb:author>
```

XML

```
<sb:author>
  <sb:surname>National Institute of Health</sb:surname>
</sb:author>
```

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:authors

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:authors            ( ( sb:collaboration | ( sb:author,
                                   sb:et-al? ) )+ )>
```

Description

Within structured bibliographic references, sb:authors is a container element for the authors of the reference.

Usage

The element sb:authors consists of a non-empty sequence of collaborations (sb:collaboration) and authors (sb:author) possibly followed by an sb:et-al element. For more information, see these elements.

XML

```
<sb:authors>
  <sb:author>
    <ce:given-name>D.C.</ce:given-name>
    <ce:surname>Coleman</ce:surname>
  </sb:author>
  <sb:et-al/>
</sb:authors>
```

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:book

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:book                ( ( %sb.titles; )?, sb:edition?,
                                    sb:book-series?, sb:date+,
                                    sb:publisher?, sb:isbn? )>
```

Description

Within bibliographic references, the structure of a book is captured using sb:book.

Usage

One of the four type of "hosts" is sb:book, used when structuring references to (non-edited) books.

Such simple books, or monographs, are considered as a single "contribution" occurring in the host. Consequently, the author names and the title of the work can in virtually all cases be found in the sb:contribution. The optional titles within the sb:book are used when no author is given. An average book, therefore, only contains the following subelements.

The optional subelement sb:edition contains information about the edition of the book. The date of publication of the book — or, more accurately, the host, for a book may well appear in different hosts — is captured using sb:date. A book can have more than one date. The name and place of the publisher are contained within sb:publisher. Finally, the element sb:isbn can be used to capture the ISBN number of the referenced book, if required.

XML

```
<sb:contribution>
  <sb:authors>
    <sb:author>
      <ce:given-name>B.M.</ce:given-name>
      <ce:surname>Travis</ce:surname>
    </sb:author>
    <sb:author>
      <ce:given-name>D.</ce:given-name>
      <ce:surname>Waldt</ce:surname>
    </sb:author>
  </sb:authors>
  <sb:title>
    <sb:maintitle>The SGML Implementation Guide</sb:maintitle>
    <sb:subtitle>A Blueprint for SGML Migration</sb:subtitle>
  </sb:title>
</sb:contribution>
<sb:host>
  <sb:book>
    <sb:date>1996</sb:date>
    <sb:publisher>
      <sb:name>Springer</sb:name>
      <sb:location>Berlin</sb:location>
```

```
      </sb:publisher>
    </sb:book>
  </sb:host>
```

Presentation

B. Travis and D. Waldt, The SGML Implementation Guide. A Blueprint for SGML Migration (Springer, Berlin, 1996).

XML

```
  <sb:host>
    <sb:book>
      <sb:title>
        <sb:maintitle>Quick Course in Microsoft<ce:sup>&reg;</ce:sup>
          Powerpoint<ce:sup>&reg;</ce:sup> 97
        </sb:maintitle>
      </sb:title>
    <sb:date>1997</sb:date>
    <sb:publisher>
      <sb:name>Online Press Inc.</sb:name>
      <sb:location>Bellevue, WA</sb:location>
    </sb:publisher>
  </sb:host>
```

Presentation

Quick Course in Microsoft® Powerpoint® 97 (Online Press Inc., Bellevue, WA, 1997).

Explanation

This book has no mention of authors or editors. The title within the `sb:book` is used.

Version history

The parameter entity `%sb.titles;` was introduced in CEP 1.1.0.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:book-series

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:book-series        ( sb:editors?, sb:series )>
```

Description

Within bibliographic references, the name of a book series and the volume number of the work within that series are captured using sb:book-series

Usage

The element sb:book-series occurs as an optional element within sb:book and sb:edited-book. Apart from a mandatory sb:series subelement, it may contain an editor group. In practice, unlike the names of the editors of an edited book, the names of the editors of a book series are seldom mentioned in bibliographic references.

XML

```
<sb:book-series>
  <sb:series>
    <sb:title>
      <sb:maintitle>Lecture Notes in Mathematics</sb:maintitle>
    </sb:title>
    <sb:volume-nr>Vol. 1201</sb:volume-nr>
```

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:collaboration

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:collaboration      ( %text.data; )*>
```

Description

Within structured bibliographic references, the name of a collaboration is tagged using sb:collaboration.

Usage

A collaboration denotes a group of authors who present themselves under a common name: the collaboration name. In a structured bibliographic reference, it can appear at the same place as where an sb:author can appear.

If the author is not a person but a government body or another organization, then this is not a collaboration.

See also

sb:author, ce:collaboration. Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:comment

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:comment            ( %nondisplay.data; )*>
```

Description

Comments within structured bibliographic references are captured using sb:comment.

Usage

The element sb:comment is used to insert text between the highly structured bibliographic references.

The element sb:comment can occur before the contribution, between the contribution and the host, and after each host. It holds text which, when rendered, can appear between the highly structured contribution and hosts. Whether the sb:comment belongs to the host or contribution before or after it cannot be signified.

sb:comment should not be confused with ce:note.

XML

```
<bib-reference id="bib49">
  <ce:label>[49]</ce:label>
  <sb:reference>
    <sb:comment>See the references in</sb:comment>
    <sb:contribution>...</sb:contribution>
    <sb:comment>first published in</sb:comment>
    <sb:host>...</sb:host>
    <sb:comment>also available electronically as</sb:comment>
    <sb:host>...</sb:host>
    <sb:comment>(in Japanese)</sb:comment>
  </sb:reference>
</bib-reference>
```

Version history

In CEP 1.1.1 the content model was changed to allow for more content (elements ce:footnote and ce:anchor).

See also

ce:note. Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:conference

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:conference          ( %text.data; )*>
```

Description

Within bibliographic references, it may happen that conference information (such as the location or the date) is present for the proceedings of a conference, appearing as an `sb:issue` or an `sb:edited-book`. This information, seldom present in actual bibliographic references, can be captured using `sb:conference`.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:contribution

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:contribution       ( sb:authors?, ( %sb.titles; )? )>
<!ATTLIST  sb:contribution
           langtype              %language-type;   "en"
           xml:lang              %iso639;          #IMPLIED>
```

Description

Each structured bibliographic reference is divided into an "sb:contribution" and one or more "sb:host"s.

Usage

Bibliographic references are structurally split into a "contribution" and one or more "hosts". Contribution is the abstract term used for the referenced object separated from its physical appearance. An sb:contribution can be a scientific article or book, but also a map, audiotape, Internet page, etc. — any object referred to in a reference list. Some examples: In a reference to an article in a journal issue or in an edited volume, the sb:contribution contains the author names and title of the article. A monograph (simple book) is seen as one contribution within a host.

It is possible to specify the language of the contribution using the attributes langtype and xml:lang, which takes its values in %iso639;, i.e., the ISO 639 list of language codes (p. 141). The language type (%language-type;) gives an indication about the language in which the contribution is written. It can take the following values: en (English); non-en (an unspecified non-English language); iso (a language specified in the xml:lang attribute). The value unknown is used when the reference gives no indication whatsoever about the language.

The attribute xml:lang is mandatory when langtype has the value iso and may not be present for other values of langtype.

A contribution consists of an optional author group (sb:authors), and optional title and/or translated title.

Version history

The parameter entity %sb.titles; was introduced in CEP 1.1.0.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:date

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:date              ( %richstring.data; )*>
```

Description

Within structured bibliographic references, dates of publication are tagged using sb:date.

Usage

The element sb:date contains the date of publication of a structured bibliographic reference. This may contain merely a year or a full date, depending on the author's manuscript. For books or edited books multiple dates can be given — these must be captured in different sb:date elements.

XML

```
<sb:date>1999</sb:date>
```

XML

```
<sb:date>12 December 1999</sb:date>
```

XML

```
<sb:date>1975</sb:date><sb:date>1997</sb:date>
```

In name/date references, references that share the same author names and year are listed as "(Böhm, 1999a)". The "a" is *not* part of the sb:date; it is found in the ce:label subelement of ce:bib-reference, *q.v.*

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:edited-book

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:edited-book        ( sb:editors?, ( %sb.titles; )?,
                                   sb:conference?, sb:edition?, sb:book-
                                   series?, sb:date+, sb:publisher?,
                                   sb:isbn? )>
```

Description

Within bibliographic references, element sb:edited-book is used to capture the structure of book which contains contributions from several authors, edited by an editor.

Usage

One of the four type of "hosts" is sb:edited-book, used when structuring references to edited books, i.e., books that contain contributions from several authors.

The first subelement, the optional editor group (sb:editors) contains the names of the editors of the work. This is followed by the sb:title and/or the sb:translated-title.

The edited book can be the proceedings of a conference, and if conference details, such as place and date of the conference, are present these can be captured with sb:conference. In practice, bibliographic references rarely contain such detailed information.

Information about the edition can be captured with sb:edition. If the edited book is itself a member of a book series, this can be recorded using sb:book-series. The publication date(s) are tagged with sb:date.

The name and place of the publisher are contained in sb:publisher.

Finally, the element sb:isbn can be used to capture the ISBN number of the referenced book, if required.

Version history

The parameter entity %sb.titles; was introduced in CEP 1.1.0.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:edition

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:edition           ( %richstring.data; )*>
```

Description

Within structured bibliographic references, information about the edition of a book is captured using sb:edition.

Usage

The element sb:edition is an optional element for a book or an edited book, and contains information about the edition.

XML

```
<sb:edition>second edition</sb:edition>
<sb:edition>3rd ed.</sb:edition>
<sb:edition>revised edition</sb:edition>
```

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:editor

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:editor            ( %name; )>
```

Description

Within structured bibliographic references, editor names are tagged using sb:editor.

Usage

The element sb:editor has %name; as its content model, which means that it contains a ce:surname and an optional ce:given-name in any order, and an optional ce:suffix. For more details, see those elements.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:editors

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:editors            ( sb:editor+, sb:et-al? )>
```

Description

Within bibliographic references, the element sb:editors contains one or more editor names and possibly an “et al.” indicator. The element is referred to as editor group.

Usage

An sb:book-series, an sb:edited-book and an sb:issue can have (guest) editors. The element sb:editors is a container element for one or more sb:editors and optionally an sb:et-al.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:e-host

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:e-host              ( ce:inter-ref?, sb:date? )>
```

Description

The element sb:e-host is used to capture references to electronic media.

Usage

If one of the hosts of a bibliographic reference is a preprint in an electronic preprint archive or another document on an electronic platform, the element sb:e-host is used. It may contain a ce:inter-ref and/or an sb:date, although it is only useful when it contains ce:inter-ref.

The hyperlink to the electronic platform is established using ce:inter-ref. For detailed information, see that element.

The date of publication can be captured with the sb:date subelement.

XML

```
<sb:e-host>
  <ce:inter-ref id="interref37"
    xlink:role="http://www.elsevier.com/xml/linking-roles/preprint"
    xlink:href="arxiv:/hep-th/9112009">hep-th/9112009</ce:inter-ref>
</sb:e-host>
```

See also

Bibliographic references are explained in more detail in the section Bibliographic references (p. 354).

sb:et-al

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:et-al              EMPTY>
```

Description

Within structured bibliographic references, occurrences of the phrase “et al.” are structured with `sb:et-al`.

Usage

The element `sb:et-al` is used when the bibliographic reference only lists part of the authors or editors.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:first-page

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:first-page        ( %richstring.data; )*>
```

Description

Within structured bibliographic references, the number of the first page of a publication is tagged using sb:first-page.

Usage

The element sb:first-page contains the first page of a bibliographic reference. If the reference has a page *range*, the number of the last page is to be captured using sb:last-page. The element may not contain an en-dash.

XML

```
<sb:first-page>121</sb:first-page>
```

XML

```
<sb:first-page>A-12</sb:first-page>
```

XML

```
<sb:first-page>37v</sb:first-page>
```

See also

sb:last-page. Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:host

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:host                ( ( ( sb:issue, sb:pages? ) | sb:book
                                    | ( sb:edited-book, sb:pages? ) |
                                    sb:e-host ), ce:doi? )>
```

Description

Within bibliographic references, the structure of a host is captured using `sb:host`.

Usage

A bibliographic reference is structurally split into a “contribution” and one or more “hosts”. The host is the physical appearance that “contains” the reference. There can be more than one host: a version of an article on the author’s homepage, a version in a journal issue, a version in a spin-off book, a version on ScienceDirect®.

A host can be one of four varieties: `sb:issue`, `sb:book`, `sb:edited-book` or `sb:e-host`. For more information, see these elements.

In order to locate the contribution within an issue or an edited book, an optional `sb:pages` is added to the `sb:host`.

Each host can have a DOI, captured using the `ce:doi` element.

Version history

Prior to DTD 5.0, the `pages` element was contained within elements `issue` and `edited-book`.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:isbn

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:isbn              ( %string.data; )*>
```

Description

Within structured bibliographic references, the ISBN of a book is tagged using sb:isbn.

Usage

If in structured references the ISBN of a book needs to be captured, this can be done by the element sb:isbn.

In practice, bibliographic references rarely contain ISBNs. The element is very useful, however, in the frontmatter of a book review.

XML

```
<sb:isbn>0-13-065567-8</sb:isbn>
```

See also

book-review. Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:issn

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:issn              ( %string.data; )*>
```

Description

Within structured bibliographic references, the ISSN of a serial publication is captured using sb:issn.

Usage

Although this happens rarely in practice, an ISSN of a serial publication can be tagged with sb:issn. This element is an optional element within sb:series.

XML

```
<sb:issn>0167-8396</sb:issn>
```

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:issue

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:issue              ( sb:editors?, ( %sb.titles; )?,
                                   sb:conference?, sb:series, sb:issue-
                                   nr?, sb:date )>
```

Description

Within bibliographic references, the structure of a journal issue is captured using sb:issue.

Usage

One of the four type of "hosts" is sb:issue, used when structuring references to articles in journal issues or to whole journal issues. The article is the "contribution"; the journal issue is the "host".

The first three subelements of sb:issue are an editor group (sb:editors), sb:title and/or sb:translated-title, and conference information (sb:conference). These are used when the bibliographic reference contains special issue information.

The titles mentioned above should not be confused with the titles appearing within the subelement sb:series, which contains the journal name and optionally the volume number. Each reference to an issue must have a title within sb:series (the journal name) but much fewer references will have a title on the sb:issue level.

If available, the issue identification can be captured with sb:issue-nr.

The last subelement, the mandatory sb:date, contains the publication date of the issue. (Most references only have the year.)

The page range on which the article appears is captured within the sb:pages element on the sb:host level.

XML

```
<sb:host>
  <sb:issue>
    <sb:series>
      <sb:title>
        <sb:maintitle>Theoret. Comput. Sci.</sb:maintitle>
      </sb:title>
      <sb:volume-nr>193</sb:volume-nr>
    </sb:series>
    <sb:issue-nr>1-2</sb:issue-nr>
    <sb:date>1998</sb:date>
  </sb:issue>
  <sb:pages>
    <sb:first-page>97</sb:firstpage>
    <sb:last-page>112</sb:lastpage>
  </sb:pages>
</sb:host>
```

XML

```
<sb:host>
  <sb:issue>
    <sb:editors>Christer Carlsson and Robert Full&#x00233;r</sb:editors>
    <sb:title>
      <sb:maintitle>Soft Decision Analysis</sb:maintitle>
    </sb:title>
    <sb:series>
      <sb:title>
        <sb:maintitle>Fuzzy Sets and Systems</sb:maintitle>
      </sb:title>
      <sb:volume-nr>115</sb:volume-nr>
    </sb:series>
    <sb:date>2000</sb:date>
  </sb:issue>
</sb:host>
```

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:issue-nr

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:issue-nr          ( %richstring.data; )*>
```

Description

Within structured bibliographic references, issue numbers are tagged using sb:issue-nr.

Usage

The element sb:issue-nr may contain an issue number or a range of issue numbers.

XML

```
<sb:issue-nr>2&#x02013;4</sb:issue-nr>
```

XML

```
<sb:issue-nr>Suppl. 1</sb:issue-nr>
```

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:last-page

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:last-page          ( %richstring.data; )*>
```

Description

Within structured bibliographic references, the last page of a page range can be captured using sb:last-page.

Usage

The number of the last page of a bibliographic reference is contained in sb:last-page. It should always be greater than sb:first-page.

Copy edit considerations

The number of the last page should always be given in full. That is, if a page range 147–9 is given, sb:last-page should contain 149. Similarly, in case of page range S155–161, sb:last-page should contain S161.

See also

sb:first-page. Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:location

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:location          ( %richstring.data; )*>
```

Description

Within structured bibliographic references, the location of a publisher can be captured using the element sb:location.

Usage

See sb:publisher.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:maintitle

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:maintitle          ( %text.data; )*>
```

Description

The main title of a structured bibliographic reference is captured using sb:maintitle.

Usage

See sb:title.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:name

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:name              ( %richstring.data; )*>
```

Description

Within structured bibliographic references, the name of the publisher is captured using sb:name.

Usage

See sb:publisher.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:pages

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:pages              ( sb:first-page, sb:last-page? )>
```

Description

Within structured bibliographic references, pages or page ranges of a publication are contained in sb:pages.

Usage

The element sb:pages contains a mandatory sb:first-page and an optional sb:last-page.

XML

```
<sb:pages>
  <sb:first-page>37</sb:first-page>
  <sb:last-page>51</sb:last-page>
</sb:pages>
```

Presentation

37–51

Some layout styles abbreviate 121–127 to 121–7. This should be solved by the style sheet: the last page is always captured as “127”.

Version history

The element has been moved to the sb:host level and out of the sb:issue and sb:edited-book level.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:publisher

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:publisher          ( sb:name, sb:location? )>
```

Description

Within structured bibliographic references, the name and place of the publisher of the publication are captured using sb:publisher.

Usage

The element sb:publisher contains a mandatory sb:name, the name of the publisher or the imprint, and an optional sb:location, the place or places where the publisher is located.

XML

```
<sb:publisher>
  <sb:name>North-Holland</sb:name>
  <sb:location>Amsterdam</sb:location>
</sb:publisher>
```

XML

```
<sb:publisher>
  <sb:name>American Mathematical Society</sb:name>
  <sb:location>Providence, RI</sb:location>
</sb:publisher>
```

XML

```
<sb:publisher>
  <sb:name>Springer-Verlag</sb:name>
  <sb:location>Heidelberg, Berlin</sb:location>
</sb:publisher>
```

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:reference

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:reference          ( ce:label?, sb:comment?, ( sb:contribution,
                                   sb:comment? )?, ( sb:host,
                                   sb:comment? )+ )>
<!ATTLIST  sb:reference
           id                    ID                #IMPLIED
           xmlns:sb              CDATA             #FIXED %ESSB.xmlns;>
```

Description

The element sb:reference is used to capture a fully structured reference.

Usage

A structured reference is contained in an sb:reference element. Each sb:reference consists of an optional sb:contribution and one or more sb:hosts. Comments can be inserted between these elements using sb:comment.

An sb:reference may have a ce:label subelement and an id attribute. These are used if the sb:reference is part of a multiple reference.

Version history

Prior to DTD 5.0, this element was called bb.

See also

sb:comment, sb:contribution and sb:host. Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:series

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:series              ( ( %sb.titles; ), sb:issn?, sb:volume-
                                    nr? )>
```

Description

Within structured bibliographic references, the element sb:series is used to identify serial publications.

Usage

The element sb:series is used to capture the journal title and the volume number of an issue appearing in that journal, or the title of a book series and the volume number of a book that appears in a book series. It can also contain the ISSN of the serial publication.

Version history

The parameter entity %sb.titles; was introduced in CEP 1.1.0.

See also

sb:book-series and sb:issue. Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:subtitle

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:subtitle          ( %text.data; )*>
```

Description

The subtitle of a structured bibliographic reference is captured using `sb:subtitle`.

Usage

See `sb:title`.

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:title

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:title              ( sb:maintitle, sb:subtitle? )>
```

Description

Within bibliographic references, titles are tagged using sb:title. Depending on the context, this can be the title of an article or a book, the name of a journal or a book series, etc.

Usage

An sb:book, an sb:contribution, an sb:edited-book, an sb:issue and an sb:series can have an sb:title.

An sb:title consists of sb:maintitle and optionally sb:subtitle. Please refer to ce:subtitle for a description of what constitutes a subtitle.

XML

```
<sb:title>
  <sb:maintitle>The SGML Implementation Guide</sb:maintitle>
  <sb:subtitle>A Blueprint for SGML Migration</sb:subtitle>
</sb:title>
```

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:translated-title

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:translated-title   ( sb:maintitle, sb:subtitle? )>
```

Description

Within bibliographic references, translated titles are tagged using sb:translated-title.

Usage

Often, when a contribution is written in a different language, the author has translated the title for the benefit of the reader. A comment "(in Dutch)" or similar is then added to the reference. To this end, sb:book, sb:contribution, sb:edited-book, sb:issue and sb:series can have an sb:translated-title.

The element sb:translated-title consists of a sb:maintitle as well as an optional sb:subtitle. See sb:title for more information.

XML

```
<sb:contribution>
  <sb:authors>
    <sb:author>
      <sb:given-name>E.M.H.</sb:given-name>
      <sb:surname>Assink</sb:surname>
    </sb:author>
    <sb:author>
      <sb:given-name>N.</sb:given-name>
      <sb:surname>Verloop</sb:surname>
    </sb:author>
  </sb:authors>
  <sb:title>Het aanleren van deel&#x02013;geheel relaties</sb:title>
  <sb:translated-title>Teaching part&#x02013;whole
    relations</sb:translated-title>
</sb:contribution>
```

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

sb:volume-nr

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  sb:volume-nr          ( %richstring.data; )*>
```

Description

Within structured bibliographic references, volume numbers are tagged using sb:volume-nr.

Usage

The element sb:volume-nr may contain a volume number or a range of volume numbers.

XML

```
<sb:volume-nr>121</sb:volume-nr>
```

XML

```
<sb:volume-nr>XL&#x02013;XLII</sb:volume-nr>
```

See also

Structured references are explained in more detail in the section Bibliographic references (p. 354).

Chapter 9
MathML

The Elsevier DTD 5.0 family uses MathML for its mathematical formulae. The element `mml:math` can be used inline and as subelement of `ce:formula`.

We refer to specialized MathML documentation for more information about MathML tagging.

MathML exists in two forms known as Presentational MathML and Content MathML. Content MathML captures the meaning of the formula; the presentation of the formula is a derivative thereof. Presentational MathML merely captures the presentation of the formula; math notation is such that the meaning can be derived from the presentation to some extent, but never fully so.

It is expected that Content MathML cannot be written or keyed in by humans; it will always be generated by mathematical software. Certainly in the beginning, we do not expect to receive much material in Content MathML from authors. Conversions from mathematical typesetting formats such as TEX will produce Presentation MathML. Therefore our articles will almost always contain Presentational MathML when they follow the regular workflow.

We do not exclude Content MathML. Applications downstream should in principle be prepared to receive and process both types of MathML.

The CEP 1.1 includes a version of MathML modified by Elsevier. Standard, the `mml:mtext` element can only contain `#PCDATA`, which is insufficient. Therefore we made sure that the content allows `%nondisplay.data;` to be used. For instance, this allows us to make cross-references within a displayed formula.

MathML Plane One characters may not be used, `mathvariant` should be used instead.

Usage of MathML elements and attributes

For backwards compatibility, version 2 of the MathML standard [24] contains a number of deprecated attributes, which were present in MathML version 1. These attributes must not be used in Elsevier articles and books. They are listed in the following pages. There is one exception: The `font*` attributes may be used in exceptional cases, see the subsection on 'Style, fonts and mathvariants'.

The MathML standard covers many publication contexts, from articles in scientific journals to distant learning courses on the web. Consequently, some elements and attributes are more applicable to one publication context than to another. In the following pages we list the elements and attributes which are currently considered not to be applicable in the context of Elsevier articles and books. Such elements and attributes may not be used. It should be noted that understanding of this issue may evolve with time. For example, we do not see a role for the `mml:maction` element in current publications. With increasing understanding of the possibilities of MathML by both authors and web publishing platforms, suitable forms of usage of the `mml:maction` element may be identified in the years to come.

The following listing indicates which attributes are deprecated in MathML 2, and which elements and attributes may not be used in the context of Elsevier articles and books.

Style, fonts and mathvariants

The MathML spec. [24] allows the CSS attribute `style` on all elements. In addition it allows the attributes `fontfamily`, `fontweight`, `fontstyle` and `mathvariant` on all token elements. Each of these attributes can be used to specify a different style for a variable. But these attributes convey different information about the variable, and therefore they cannot be used interchangeably.

The CSS (Cascading Style Sheet) attribute `style` indicates a style that is imposed by features that are external to the formula, and which has no influence on the interpretation of the formula. An example is the boldening of an inline formula in a bold header. Because such presentational markup may not be used in our articles, the attribute `style` must not be used.

It is a characteristic of mathematical notation that a style change for a single variable indicates a different meaning of the variable: a boldface $\boldsymbol{A}$ is a different variable than A. Such a style change may be achieved by the attribute `mathvariant`. The list of values of `mathvariant` is constrained, and the symbol in the desired style must exist as a mathematical styled character in Unicode, usually in Plane One.

If a symbol is desired in a style that is not an allowed value of the `mathvariant` attribute, or if a symbol in a desired style does not exist as a mathematical styled character in Unicode, it can currently not be used in that style. For example, it is not possible to have italic double-struck (open-face) characters, because italic double-struck is not an allowed value of the `mathvariant` attribute, and also because italic double-struck characters do not exist mathematical styled characters in Unicode.

In the future we may allow the possibility to mark a symbol up using the attributes `fontfamily`, `fontweight` and `fontstyle`. The value of the attribute `fontfamily` should be one of a list of recognized font families. Currently there are no recognized font families,

and therefore this feature is not available. We will add fonts to the list when they are required in publications. The main candidates seem to be open-face (double-struck) fonts, for which DTD 4.x allowed more styles than MathML. It should be noted, however, that such symbols may not easily be rendered on each reader's computer; therefore this feature should be used only in exceptional cases.

The MathML spec. [24, section 3.2.2.1] excludes the combined usage of the `font*` attributes and the `mathvariant` attribute.

It is not allowed to use the font changing elements from the CEP to mark up a variable in MathML, not even in the `mml:mtext` element. Of course, font changing elements from the CEP are allowed to mark up an in-line formula that is tagged without MathML.

All elements

The attribute `other` is deprecated, and must not be used. The attributes `xlink:href`, `xlink:type`, `style` must not be used.

Token elements

The attributes `color` and `fontsize` are deprecated, and must not be used. The attributes `mathsize`, `mathcolor`, and `mathbackground` must not be used.

The attributes `fontfamily`, `fontweight` and `fontstyle` should only be used in exceptional cases, see the subsection on 'Style, fonts and mathvariants'.

Individual elements

mml:math

The attribute `mode` is deprecated and must not be used. The attributes `macros`, `overflow`, `alttext` and `xsi:schemaLocation` must not be used.

The attributes `type`, `name`, `height`, `width` and `baseline` must not be used.

mml:mo

The `true` values of the attributes `fence`, `separator`, `accent` and `largeop` are mutually exclusive.

When the attribute `fence` has the value `true`, the `form` attribute may only have the values `prefix` or `postfix`.

When the attribute `accent` has the value `true`, the `form` attribute may only have the value `postfix`.

When the attribute `largeop` has the value `true`, the `form` attribute may only have the value `prefix`.

The attributes `symmetric`, `maxsize` and `minsize` only make sense when the attribute `stretchy` has the value `true`.

mml:mglyph

The element `mml:mglyph` should only be used in exceptional cases. The value of the attribute `fontfamily` must be taken from a list of allowed values; currently that list is empty.

mml:mstyle

The `mml:mstyle` element is used to make style changes that affect the rendering of its contents. `mml:mstyle` can be given any attribute accepted by any MathML presentation

element provided that the attribute value is inherited, computed or has a default value (MathML spec. [24, section 3.3.4.1]). For such attributes the rules apply that are mentioned with the individual elements.

In addition, there are a number of attributes which may only be specified on the mml:mstyle element: background, scriptsizemultiplier, scriptminsize, veryverythinmathspace, verythinmathspace, thinmathspace, mediummathspace, thickmathspace, verythickmathspace, veryverythickmathspace. None of these attributes is allowed to be used.

mml:mtext

The attributes mathvariant, fontweight, fontstyle, fontfamily must not be used. Instead, the element mml:mtext has been modified to allow CEP inline markup.

mml:merror

The mml:merror element must not be used.

mml:maction

The mml:maction element must not be used.

mml:math

Declaration

Model

```
<!ELEMENT  math                 ( mi | mn | mo | mtext | ms | mspace
                                  | mrow | mfrac | msqrt | mroot
                                  | menclose | mstyle | merror
                                  | mpadded | mphantom | mfenced
                                  | msub | msup | msubsup | munder
                                  | mover | munderover | mmultiscripts
                                  | mtable | mtr | mlabeledtr | mtd
                                  | malignmark | maction
                                  | %ContInPres; )>
<!ATTLIST  math
           xmlns:mml            CDATA              #FIXED
                                http://www.w3.org/1998/Math/MathML
           xlink:href           CDATA              #IMPLIED
           xlink:type           CDATA              #IMPLIED
           class                CDATA              #IMPLIED
           style                CDATA              #IMPLIED
           id                   ID                 #IMPLIED
           xref                 IDREF              #IMPLIED
           other                CDATA              #IMPLIED
           macros               CDATA              #IMPLIED
           mode                 CDATA              #IMPLIED
           display              CDATA              #IMPLIED
           type                 CDATA              #IMPLIED
           name                 CDATA              #IMPLIED
           height               CDATA              #IMPLIED
           width                CDATA              #IMPLIED
           baseline             CDATA              #IMPLIED
           overflow             (scroll|elide|truncate|scale)   'scroll'
           altimg               CDATA              #IMPLIED
           alttext              CDATA              #IMPLIED>
```

Description

The element mml:math contains a MathML formula.

Usage

The mml:math element, which can be used inline and within ce:formula, is used to capture mathematical formulae. It is an element belonging to MathML, and we refer to MathML documentation for details. It is well-known that parsing MathML is not sufficient for a file to conform to the MathML specifications.

mml:math must never be nested within mml:math.

Each mml:math is delivered together with a graphical representation for rendering applications that cannot handle MathML. Such an image is called a *strip-in*. The attribute altimg contains the name of the strip-in image, it is a file name inclusive extension, see the section on strip-in images (p. 29).

The attribute mode is deprecated, and should not be used. The attributes style, macros, overflow, and alttext should not be used.

See also

ce:enunciation, ce:formula, ce:italic

Chapter 10
(Extended) CALS tables

Over the course of the years contractors of the US Department of Defense converged to a single table model, the so-called CALS Table Model (Computer-Aided Logistics Support). It became a *de facto* standard, which was used by many and supported by many software packages. OASIS published documentation of the full CALS table elements and attributes [13], in order to promote a shared interpretation. It has also critically reviewed the CALS table model and the software support for it. The result is the OASIS Exchange Model [15].

In the DTD 5.0 family, Elsevier has adopted CALS tables according to this OASIS Exchange Model. The parametrization was exploited to make `%cell.data;` the content of a table cell and to furnish the tables with a label, a caption, a legend and table footnotes. However, as became apparent, even with the extensive parametrization options, the CALS table model was not sufficient for our needs. This is why we extended the CALS tables with the border elements from earlier Elsevier DTDs and with a modified element for column specifications. These additional elements are placed in their own namespace, `http://www.elsevier.com/xml/common/table/dtd`, which can be recognized by the `tb:` prefix.

A CALS table is not necessarily valid if it satisfies the DTD. The description of `entry` in the CALS specification [15] summarizes conditions which make a CALS table invalid. These error conditions translate into the following requirements:

- A column name used in a `colname`, `namest` or `nameend` attribute must be a `colname` declared in a `colspec` or a `tb:colspec` in the containing `tgroup`.
- The names declared in different `colspec`s and `tb:colspec`s of a `tgroup` must be different.
- It is an error if portions of different `entry`s overlap each other.
- It is an error if an `entry`'s `morerows` attribute specifies more additional rows than the number of remaining rows defined for the containing `thead` or `tbody`.
- It is an error if the number of columns filled by the `entry`s in a row, taking column spanning by `entry`s in that row, and row spanning by `entry`s in previous rows into account, exceeds the value of the `cols` attribute of the containing `tgroup`.
- The column specified by the `nameend` attribute of an `entry` must be to the right of (i.e. have a higher column number than) the column specified by the `namest` attribute of the `entry`.

Note. The `morerows` attribute denotes the number of *additional* rows spanned. In this respect it differs from the attribute `rspan` of DTD 4 and the attribute `rowspan` of HTML: `morerows` $=$ `rspan` $-\,1$.

Note. `entry` elements which span more rows require special attention. They fill columns in their own row and in one or more following rows. The following rows have no `entry`

elements for those columns. It is not necessary nor allowed to place empty `entry` elements in those rows as placeholders.

The CALS table specification allows some fairly complicated constructions using column names. Elsevier wants to avoid such complications. Elsevier wants to ensure that its CALS tables have a regular and straightforward structure, and are easily transformed into display formats. This can be summarized in the following requirements. These requirements are additional to the standard CALS requirements listed above.

- An `entry` may not have both a `namest` attribute and a `colname` attribute.
- If an `entry` has a `nameend` attribute, it must also have a `namest` attribute.
- The `colspec`s and `tb:colspec`s must be listed in column order.
- There must be a `colspec` or `tb:colspec` for every column, up to the number of columns declared in the `cols` attribute of the containing `tgroup`.
- It is an error if there is a `colspec` or `tb:colspec` for a column whose number is higher than the number of columns declared in the `cols` attribute of the containing `tgroup`.
- The column names declared in the `colspec` or `tb:colspec` elements must adhere to the pattern: "col" followed by the column number, i.e. "col*N*".
- The `entry`s in a row must be listed in column order, taking into account that `entry`s which are straddled by row spanning `entry`s in previous rows, should be skipped.
- All `entry`s in a row must be listed, taking into account that `entry`s which are straddled by row spanning `entry`s in previous rows, should be skipped.

The latter two rules are almost identical to the requirements for cells in DTD 4. The difference is that no `entry`s are listed which are spanned by other `entry`s.

This chapter contains a listing of the elements of the extended CALS table model. We first give a number of examples of CALS tables. After a brief overview of the native CALS elements (for more information, we refer to [1] and [15]) we list the CALS table extensions.

A table containing at least one element from the `tb` namespace is called an *extended* CALS *table*. Tables without these extensions are called *native* CALS *tables*.

It is only allowed to create an extended CALS table if a native CALS table cannot be used to represent the table. The examples in the next section show and explain the cases when this is appropriate. In the following cases an extended CALS table is inevitable:

- when the alignment in cells requires vertical alignmarks, `tb:alignmark`;
- when the border style is an "ornament" (see the ornament tables, p. 429), other than a single vertical or horizontal line;
- when the cell borders at the outer extremities of the table require a different border style than the table frame (the frame cannot be overruled);
- when cells need a top border but the cell above spans different columns;
- when cells need a left border but the cell to the left spans different rows.

Inheritance of attribute values

The CALS table model does not use default attribute values in the strict sense, that is, default values that are specified in the DTD, and that are reported by a parser. Instead, it uses the absence of an attribute value to signal that the value should be inherited from a specified other element, usually the parent element, or that it has a default value. The CALS specification mentions the possibility to specify default values in style sheets. That possibility is not used in Elsevier's XML files; the default values are those listed in the CALS specification.

The inheritance paths and default values are as follows:

attribute	inheritance path	default
valign	entry ⟶ row ⟶ { thead / tbody }	bottom / top
align	entry ⟶ colspec ⟶ tgroup	left
char	entry ⟶ colspec ⟶ tgroup	–
charoff	entry ⟶ colspec ⟶ tgroup	50%
rowsep	entry ⟶ row ⟶ colspec ⟶ tgroup ⟶ ce:table	1
colsep	entry ⟶ colspec ⟶ tgroup ⟶ ce:table	1

In this scheme, each ⟶ means: if the attribute value is not specified for the element on the left, use the value from the element on the right. Each occurrence of colspec should be read as colspec or tb:colspec.

CALS tables — Examples

Example 1

The following table is a standard CALS table except for column 6. Column 6 uses an `alignmark`, which is not available in standard CALS. The fact that this column uses an extension to the standard CALS table model is signalled by the presence of the `tb` prefix on the `tb:colspec` and `tb:alignmark` elements.

XML

```
<ce:table id="tbl001" frame="topbot" colsep="0" rowsep="0">
  <ce:label>Table 1</ce:label>
  <ce:caption>
    <ce:simple-para>Sm-Nd data.</ce:simple-para>
  </ce:caption>
  <tgroup cols="6">
    <colspec colname="col1"/>
    <colspec colname="col2"/>
    <colspec colname="col3"/>
    <colspec colname="col4"/>
    <colspec colname="col5"/>
    <tb:colspec colname="col6"/>
    <thead>
      <row valign="top" rowsep="1">
        <entry namest="col1" nameend="col2">Eclogites</entry>
        <entry>Sm</entry>
        <entry>Nd</entry>
        <entry><ce:sup loc="pre">147</ce:sup>Sm
               / <ce:sup loc="pre">144</ce:sup>Nd</entry>
        <entry>Yield (%)</entry>
      </row>
    </thead>
    <tbody>
      <row valign="top">
        <entry>162a</entry>
        <entry>Grenat</entry>
        <entry align="char" char=".">0.92</entry>
        <entry align="char" char=".">2.31</entry>
        <entry align="char" char="+">0.240 + 0.005</entry>
        <entry>10.512 <tb:alignmark/>+ 10.000 <tb:alignmark/>- 0.500</entry>
      </row>
      <row valign="top">
        <entry/>
        <entry>Omphacite</entry>
        <entry align="char" char=".">6.41</entry>
        <entry align="char" char=".">23.60</entry>
        <entry align="char" char="+">0.164 + 0.04</entry>
        <entry>10.51 <tb:alignmark/>+ 10.05 <tb:alignmark/>- 0.05</entry>
      </row>
    </tbody>
  </tgroup>
</ce:table>
```

Presentation

Table 1
Sm-Nd data

Eclogites		Sm	Nd	$^{147}Nd/^{144}Nd$	$^{143}Nd/^{144}Nd$
162a	Grenat	0.92	2.31	0.240 + 0.005	10.512 + 10.000 - 0.500
	Omphacite	6.41	23.60	0.164 + 0.04	10.51 + 10.05 - 0.05

Explanation

The horizontal rules at the top and bottom of the table are specified by the value `topbot` of the `frame` attribute of the `ce:table` element.

The default value of the `colsep` and `rowsep` attributes of the `ce:table` element is implied, which according to the CALS documentation means that there are row and column separators for each row and column unless specified otherwise for a certain row, column or entry. Here we specify the value 0 for these attributes, which means that in this table we have no row and column specifiers unless specified otherwise for a certain row, column or entry.

The table has a single `tgroup` element, with a `thead` containing one row and a `tbody` containing 2 rows.

The `tgroup` starts with five `colspec` elements. They have no `colnum` attribute, and thus are automatically assigned to columns 1 to 5. They *do* specify a name for the column, in the `colname` attribute. This name is used below to specify column spanning.

The sixth element is a `tb:colspec` element. This indicates automatically that the column uses alignment markers `tb:alignmark`, due to the default value `mark` of its `align` attribute.

In principle the `colspec` elements for columns 3 to 5 could have been omitted, because we do not make use of them, and the `tb:colspec` element for column sixth could have specified that it applies to column 6, by the value of its `colnum` attribute. However, skipping `colspec` elements is less desirable because it is not supported by all CALS table applications.

The first `entry` of the first `row` spans two columns. This is indicated by the values of the `namest` and `nameend` attributes, which are the names of the starting and ending columns.

The other entries in this row override the alignment specified for the column by having their own `align` attributes.

The rule between the table head and the table body must be specified explicitly. This is done by the value `1` of the `rowsep` attribute of the `row`.

The fifth entries in the two rows in the `tbody` demonstrate that alignment may be specified on any character: these entries align on the '+' character.

The last entries use two alignment markers `tb:alignmark` to align on the + and − signs in the entry. Note that an alignment marker may introduce space to its left (see the example in the discussion of the `tb:alignmark` element). An earlier version of this example ignored that fact and was therefore in error.

This column alignment mechanism has a superficial similarity with the alignment mechanism using alignment markers and alignment groups in MathML; see Section 3.5.5 of the

MathML specification. The latter, however, is more complicated and more powerful, due to its usage of alignment groups.

Finally note that `entry` has mixed content. Therefore, if one would insert a linebreak after the start tag, one would insert a space at the start of the entry's content. Similarly for a line break before the end tag. This would be undesirable.

Example 2

The following table demonstrates our requirements for regular tables.

- For each column a `colspec` element is present, and the `colspec` elements are listed in column order.
- All `entry` elements of a row are listed, in column order. Only a series of empty `entry` elements at the end of the row has been omitted.

Rows 4 and 5 demonstrate entries which span more than one row. Entries 1–3 of row 4 extend into row 5 and fill columns 1–3 in that row as well. In row 5 there are no entries for columns 1–3; the first listed (empty) entry automatically falls in column 4.

XML

```
<ce:table id="tbl1">
  <tgroup cols="5">
    <colspec colnum="1" colname="col1"/>
    <colspec colnum="2" colname="col2"/>
    <colspec colnum="3" colname="col3"/>
    <colspec colnum="4" colname="col4"/>
    <colspec colnum="5" colname="col5"/>
    <tbody>
      <row>
        <entry>A</entry>
        <entry>B</entry>
        <entry>C</entry>
        <entry>D</entry>
        <entry>E</entry>
      </row>
      <row>
        <entry/>
        <entry/>
        <entry>C</entry>
      </row>
      <row>
        <entry/>
        <entry namest="col2" nameend="col4">BCD</entry>
        <entry>E</entry>
      </row>
      <row>
        <entry namest="col1" nameend="col3" morerows="1">ABCABC</entry>
        <entry>D</entry>
      </row>
      <row>
        <!--NO ENTRY-->
        <!--NO ENTRY-->
        <!--NO ENTRY-->
        <entry/>
        <entry>E</entry>
```

```
      </row>
    </tbody>
  </tgroup>
</ce:table>
```

Presentation

A	B	C	D	E
		C		
		BCD		E
ABCABC			D	
				E

Example 3

The following table is a standard CALS table except for one row. The cells in this row specify a left border, a top border and a right border, which are not available in standard CALS. The fact that this row uses an extension to the standard CALS table model is signalled by the presence of the `tb` prefix on the `tb:left-border`, `tb:top-border` and `tb:right-border` elements.

XML

```
<ce:table id="tbl1" frame="topbot" colsep="0" rowsep="0">
  <ce:label>Table 1</ce:label>
  <ce:caption>
    <ce:simple-para id="sp1">Colours</ce:simple-para>
  </ce:caption>
  <ce:link locator="tbl1"/>
  <tgroup cols="3">
    <colspec colnum="1" colname="col1" colwidth="3*"/>
    <colspec colnum="2" colname="col2" colwidth="2*"/>
    <colspec colnum="3" colname="col3" colwidth="4*"/>
    <thead>
      <row rowsep="1">
        <entry>Colour 1</entry>
        <entry>Colour 2</entry>
        <entry>Colour 3</entry>
      </row>
    </thead>
    <tbody>
      <row>
        <entry>Red</entry>
        <entry>Green</entry>
        <entry>Blue</entry>
      </row>
      <row>
        <entry namest="col1" nameend="col3">White<ce:cross-ref
        refid="tblfn1"><ce:sup>a</ce:sup></ce:cross-ref></entry>
      </row>
      <row>
        <entry colsep="1"><tb:left-border/>Blue</entry>
        <entry morerows="1" colsep="1"><tb:top-border/>High
          Green</entry>
        <entry><tb:right-border/>Red</entry>
      </row>
```

```
      <row>
        <entry colsep="1" colname="col1">Red</entry>
        <!--NO ENTRY-->
        <entry>Blue</entry>
      </row>
    </tbody>
  </tgroup>
  <ce:legend>
    <ce:simple-para>The colours in this table are shown in various cell
entry layouts. These layouts demonstrate the various possibilities of
CALS tables and of the extensions to CALS tables.</ce:simple-para>
  </ce:legend>
  <ce:table-footnote id="tblfn1">
    <ce:label>a</ce:label>
    <ce:note-para>White is obtained by applying an equal mixture of
Red, Green and Blue.</ce:note-para>
  </ce:table-footnote>
</ce:table>
```

Presentation

The table below is a not-to-scale rendition of the table tagged above. The thick lines denote "real" lines, the thin lines indicate cell borders without border lines. The dotted oblong represents an included image.

Table 1
Colours

Image tbl1

Colour 1	Colour 2	Colour 3
Red	Green	Blue
White[a]		
Blue	High Green	Red
Red		Blue

The colour names in this table are shown in various cell entry layouts. These layouts demonstrate the various possibilities of CALS tables and of the extensions to CALS tables.

[a] White is obtained by applying an equal mixture of Red, Green and Blue.

Explanation

A table may contain a mixture of `tgroup` elements and `ce:link` elements. The `ce:link` elements stand for table groups which have been captured as an image. In this example the

table opens with a ce:link element. Note that the image should contain the bottom border of that part of the table if there is any.

The colspec elements of the tgroup specify the relative widths of the columns. A '*' denotes the unit width. The column widths are expressed as multiples of this unit width. Since decimal values are not supported by any software, the proportional width values should be *integer*. The actual value of the unit width is determined at rendering time. The colspec elements also specify names for the columns, to be used to specify column spanning.

The entry in the second row spans three columns, which is indicated by the values of the namest and nameend attributes, which are the names of the starting and ending columns.

The next row starts with an entry with a left border. Use of the extension element tb:left-border is the only way to achieve that.

The same row contains an entry ("High Green") that spans two rows and is framed. The row spanning is indicated by the value of the morerows attribute of the entry element. Its left border is specified by the value of the colsep attribute of the two entries to the left. Its bottom border coincides with the bottom frame of the table, and need not be specified. Its top border would have been specified by the value of the rowsep attribute of the entry above were it not the case that the entry above spans different columns. The border of the cell above would span the same three columns, more than the top of the "High Green" cell. Therefore the only option is to use an extended CALS element, the top-border element.

The same row ends with an entry with a right border. Here using the rowsep attribute would not be correct, because the colsep and rowsep attributes on the outer borders of the table are overruled by the frame attribute of the ce:table. Use of the extension element tb:right-border is the only valid way to specify this right border.

In the last row the second entry is omitted, because its space is occupied by the entry from the row above. The table processing software should know this and move the entry count forward by 1.

CALS table elements

This section lists the table elements from the OASIS Exchange Table Model DTD [15]. For precise descriptions about these elements and their extensive attribute lists, we refer to the literature about the CALS tables, e.g. [1].

These elements have no namespace prefix. They belong to the CALS namespace, `http://www.elsevier.com/xml/common/cals/dtd`, due to the `xmlns` attribute of the element `ce:table`. The element `entry` is an exception: it belongs to the common element pool's namespace.

colspec

Model

```
<!ELEMENT  colspec              EMPTY>
<!ATTLIST  colspec
           colnum               NMTOKEN          #IMPLIED
           colname              NMTOKEN          #IMPLIED
           colwidth             CDATA            #IMPLIED
           colsep               %yesorno;        #IMPLIED
           rowsep               %yesorno;        #IMPLIED
           align                (left|right|center|justify|char)
                                                 #IMPLIED
           char                 CDATA            #IMPLIED
           charoff              NMTOKEN          #IMPLIED>
```

The element `colspec` defines a column specification, in which each column can be given a name, width, alignment, and a right-hand separator. The element `tb:colspec` is provided as an alternative, which then results in an extended CALS table.

entry

Model

```
<!ELEMENT  entry                ( %cell.data; )>
<!ATTLIST  entry
           colname              NMTOKEN          #IMPLIED
           namest               NMTOKEN          #IMPLIED
           nameend              NMTOKEN          #IMPLIED
           morerows             NMTOKEN          #IMPLIED
           colsep               %yesorno;        #IMPLIED
           rowsep               %yesorno;        #IMPLIED
           align                (left|right|center|justify|char)
                                                 #IMPLIED
           char                 CDATA            #IMPLIED
           charoff              NMTOKEN          #IMPLIED
           valign               (top|middle|bottom)
                                                 #IMPLIED
           xmlns                CDATA            #FIXED %ESCE.xmlns; >
```

The element `entry` defines a cell in the table, which may or may not span more than one row or column. The default alignment and separator below and to the right, defined in the column specification, on the row or on the table, can be overridden. The content of

this element is %cell.data;, i.e. contains elements from the common element pool, as well as the border elements tb:bottom-border, tb:left-border, tb:right-border, tb:top-border, and the vertical mark tb:alignmark. When these elements from the extended table namespace are present in the cell, the table becomes an extended CALS table.

entry is the only element in the namespace of the common element pool that has no prefix.

row

Model

```
<!ELEMENT  row                ( entry+ )>
<!ATTLIST  row
           rowsep             %yesorno;          #IMPLIED
           valign             (top|middle|bottom)
                                                 #IMPLIED>
```

The element row defines a row in the table, consisting of table entries. It has attributes to define the alignment and separator below the row.

tbody

Model

```
<!ELEMENT  tbody              ( row+ )>
<!ATTLIST  tbody
           valign             (top|middle|bottom)
                                                 #IMPLIED>
```

The element tbody contains the body of the table, i.e. the rectangular structure of rows and columns.

tgroup

Model

```
<!ELEMENT  tgroup             ( ( colspec | tb:colspec )* , thead?,
                                tbody )>
<!ATTLIST  tgroup
           cols               NMTOKEN            #REQUIRED
           colsep             %yesorno;          #IMPLIED
           rowsep             %yesorno;          #IMPLIED
           align              (left|right|center|justify|char)
                                                 #IMPLIED
           altimg             CDATA              #REQUIRED>
```

The element tgroup contains the structure of the table: a column specification, an optional head and a body. Note that a table foot, while present in some CALS table models, is not available in the OASIS Exchange Table Model DTD.

The tgroup has an additional altimg attribute. This attribute contains a reference to a graphic file containing an image of the tgroup. It is present for extended CALS tables. Such a graphic representation of the table is called a *strip-in*. See the section on strip-in images (p. 29).

thead

Model

```
<!ELEMENT  thead                ( row+ )>
<!ATTLIST  thead
           valign               (top|middle|bottom)
                                           #IMPLIED>
```

The element thead contains the header rows of the table. These rows are repeated when the table is split over several pages. Prior to DTD 5.0, header rows were defined as “stubs”.

tb:alignmark

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  tb:alignmark          EMPTY>
```

Description

The element tb:alignmark is a vertical mark. It can be used to obtain complicated alignments within table cells. However, using this element takes the table outside of the scope of CALS tables.

Usage

A vertical alignment mark, tb:alignmark, is an empty element which can occur within a table cell, entry. If any border elements are present within the cell, they must precede the tb:alignmark.

If the alignment of a column is not specified by a tb:colspec element, then the vertical alignment mark is forbidden in the cells of that column. Otherwise, the ith tb:alignmark of the nth cell in a row, must be left-aligned with the ith tb:alignmark in all nth cells of the rows in the same tbody. This rule is independent of the span of a cell, i.e., in a spanned cell it is only possible to align with alignment points in the leftmost spanned column.

In a column the numbers of tb:alignmarks per cell need not be equal. The rules still apply when this is the case.

XML

```
<tgroup cols="1">
  <tb:colspec/>
    <tbody>
      <row>
        <entry>a<tb:alignmark/>bcd<tb:alignmark/>e</entry>
      </row>
      <row>
        <entry>pq<tb:alignmark/>r<tb:alignmark/>stu</entry>
      </row>
    </tbody>
</tgroup>
```

Presentation

a bcde
pqr stu

See also

tb:colspec. More details are given in the examples section (p. 414).

tb:bottom-border

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  tb:bottom-border      EMPTY>
<!ATTLIST  tb:bottom-border
           type                  %hline;          'bar'
           style                 %style;          's'>
```

Description

The element tb:bottom-border, when present in a cell, provides the cell with a bottom border.

Usage

tb:bottom-border is an empty element, which may appear within a cell entry of a table. When it is present in a cell, it provides the cell with a bottom border.

Two attributes, type (default bar) and style (default: single, s), determine what the border will look like. See Tables 7, 9 and 10 (pp. 429–430) for the allowed combinations of values of these attributes.

Border elements must come before any other content of the entry.

See also

More details can be found in the examples section (p. 414).

tb:colspec

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  tb:colspec          EMPTY>
<!ATTLIST  tb:colspec
           colnum              NMTOKEN          #IMPLIED
           colname             NMTOKEN          #IMPLIED
           colwidth            CDATA            #IMPLIED
           colsep              %yesorno;        #IMPLIED
           rowsep              %yesorno;        #IMPLIED
           align               ( mark )         #FIXED 'mark'>
```

Description

A tb:colspec element must be used instead of a colspec element to specify a column that uses alignment on tb:alignmark elements.

Usage

A tb:colspec element is used in the same way as a colspec element, except that its align attribute has the fixed value mark.

Version history

Prior to DTD 5.0, vertical alignment along marks was specified with the value vmk of the ca attribute of the c element.

See also

For an example see tb:alignmark. More details can be found in the examples section (p. 414).

tb:left-border

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  tb:left-border       EMPTY>
<!ATTLIST  tb:left-border
           type                 %vline;          'vb'
           style                %style;          's'>
```

Description

The element `tb:left-border`, when present in a cell, provides the cell with a left border.

Usage

`tb:left-border` is an empty element, which may appear within a cell `entry` of a table. When it is present in a cell, it provides the cell with a left border.

Two attributes, `type` (default `vb`) and `style` (default: single, `s`), determine what the border will look like. See Tables 8, 9 and 10 (pp. 429–430) for the allowed combinations of values of these attributes.

Border elements must come before any other content of the `entry`.

See also

More details can be found in the examples section (p. 414).

tb:right-border

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  tb:right-border       EMPTY>
<!ATTLIST  tb:right-border
           type                  %vline;          'vb'
           style                 %style;          's'>
```

Description

The element tb:right-border, when present in a cell, provides the cell with a right border.

Usage

tb:right-border is an empty element, which may appear within a cell entry of a table or an array. When it is present in a cell, it provides the cell with a right border.

Two attributes, type (default vb) and style (default: single, s), determine what the border will look like. See Tables 8, 9 and 10 (pp. 429–430) for the allowed combinations of values of these attributes.

Border elements must come before any other content of the entry.

See also

More details can be found in the examples section (p. 414).

tb:top-border

Declaration

Model (CEPs 1.1.0–1.1.3)

```
<!ELEMENT  tb:top-border         EMPTY>
<!ATTLIST  tb:top-border
           type                  %hline;          'bar'
           style                 %style;          's'>
```

Description

The element `tb:top-border`, when present in a cell, provides the cell with a top border.

Usage

`tb:top-border` is an empty element, which may appear within a cell `entry` of a table or an array. When it is present in a cell, it provides the cell with a top border.

Two attributes, `type` (default `bar`) and `style` (default: single, `s`), determine what the border will look like. See Tables 7, 9 and 10 (pp. 429–430) for the allowed combinations of values of these attributes.

Border elements must come before any other content of the `entry`.

See also

More details can be found in the examples section (p. 414).

Ornament types and styles

Several elements have `type` and `style` attributes, defining an *ornament*. The attribute values and the allowed combinations are described in this section.

Table 7: Valid values (`%hline;`) of the `type` attribute of elements that specify a horizontal line or other ornament. These occur in `tb:bottom-border` and `tb:top-border`.

Attribute value	Symbol	Attribute value	Symbol
`bar`	—	`circ`	⏜
`tcub`	⏞	`tilde`	⏝
`bcub`	⏟	`rarr`	⟶
`tsqb`	⎴	`larr`	⟵
`bsqb`	⎵	`harr`	⟷
`tpar`	⏜	`lharu`	↼
`bpar`	⏝	`rharu`	⇀

Table 8: Legal values (`%vline;`) of the `type` attribute of elements that specify a vertical line or other ornament. These may occur in `tb:left-border` and `tb:right-border`.

Attribute value	Symbol	Attribute value	Symbol
`lpar`	(	`bsol`	\
`rpar`	)	`lceil`	⌈
`lsqb`	[	`rceil`	⌉
`rsqb`	]	`lfloor`	⌊
`lcub`	{	`rfloor`	⌋
`rcub`	}	`dharr`	⇃
`vb`	|	`uharr`	↾
`lang`	⟨	`darr`	↓
`rang`	⟩	`uarr`	↑
`sol`	/	`varr`	↕

Table 9: Values (`%style;`) of the `style` attribute. It may occur in `tb:bottom-border`, `tb:left-border`, `tb:right-border` and `tb:top-border`.

Value	Meaning	Example
`s`	single	|
`d`	double	||
`t`	triple	|||
`da`	dashed	⋮
`dot`	dotted	⋮
`b`	bold	▌
`bl`	blank	space between
`n`	none	no space between

Table 10: Valid combinations of `type` (`%hline;`, `%vline;`) and `style` (`%style;`) attributes.

type		style							
		s	d	t	da	dot	b	bl	n
lpar	(	×	×				×	×	
rpar	)	×	×				×	×	
lsqb	[	×	×				×	×	
rsqb	]	×	×				×	×	
vb	|	×	×	×	×	×	×	×	×
lang	⟨	×	×				×	×	
rang	⟩	×	×				×	×	
bar	—	×	×	×	×	×	×	×	×

All other horizontal and vertical `type`s may only occur in combination with `s`, `b` or `bl`.

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