Content and Data Architecture
Elsevier
Radarweg 29
1043 NX Amsterdam
Netherlands

Phone: +31 20 485 3433
Fax: +31 20 485 3266
Email: t.bos@elsevier.com

Release note for Book DTD 5.4.0

TBo14007 — version 1.1, 18 December 2014, by Ton Bos and Jos Migchielsen

version 0.1	14 July 2014	First draft based on Book DTD v5.4.0r1, CEP v1.4.0r1, T-b-T 1.9.5
version 1.0	3 October 2014	Final
version 1.1	18 December 2014	Final; removed reference to unchanged SI DTD

Contents

1. Introduction to the Journal Article DTD 5.4.0, Book DTD 5.4.0 and Serial Issue DTD 5.4.0

To support the Reed Elsevier Accessibility initiative [1] it has become necessary to update both the journal and book DTDs. At the same time a few missing features were added to the

DTDS and their usability was extended.

Moreover, the journal and book DTDs were aligned in that from now on they will be using the same version of the common element pool (CEP). To emphasize this, both DTDs were assigned the same version number, 5.4.0; and the new CEP has version number 1.4.0. Note that version numbers 5.3.0 for the journal DTD and 1.3.0 for the CEP were skipped.

Note that book production will have to implement both the changes in CEP in going from version 1.1.6 to 1.2.0 and in going from 1.2.0 to 1.4.0!

The Serial Issue DTD underwent a minor change to allow for journal articles without page numbers.

Implementation of the new DTDs is scheduled for the first quarter of 2015. The release comprises the following:

- the Journal Article DTD 5.4.0 (art540.dtd),
- the Serial Issue DTD 5.4.0 (si540.dtd),
- the Elsevier Book DTD 5.4.0 (book540.dtd),
- the Common Element Pool 1.4.0 (common140.ent),
- a complete set containing all relevant DTD files (dtd-2014.zip),
- two separate release notes, one for the Book DTD (this document), one for the Journal Article DTD,
- an updated Tag by Tag, version 1.9.5.

Additionally, separate implementation notes and updates of other documentation can be expected. Sample files will be made available and distributed separately.

A new feature of this release note is that an attempt was made to define the impact of the change on systems in general and on various steps of the end-to-end workflow, manuscript→XML→rendering to HTML/print PDF/web PDF.

2. Changes in Book DTD 5.4.0 with respect to Book DTD 5.3.1

2.1. New PITs

In Book DTD 5.4.0 five new PITs were added, `edb`, `lit`, `lst`, `rem` and `dup`. Four of these PITs are already allowed in articles that follow the JA DTD (`lit`, `edb`, `rem` and `dup`). (PIT=`lst` is intended specifically for use in book publishing, but was also added to the JA DTD to keep that align with the book PIT list to some extent.)

PIT `lit` is to be used to identify reviews of literature in a given subject area over a period of time. It is particularly useful in Major Reference Works, since the information that an item with PIT=`lit` contains will gradually become of historical interest, and should therefore be distinguishable from regular MRW content that is updated periodically. (Note that in the journal DTD PIT=`lit` is used for a very different purpose, namely to identify literature alerts. Literature alerts comprise for example lists of recently published articles rather than

reviews thereof.

PIT `edb` is used to identify an editorial board: A list of names, usually with affiliations, of scientists supporting the book Editor(s) in maintaining the scientific quality of articles published in that journal. Items with titles like Advisory Board, Advisory Editors, etc. are also to be tagged with PIT=`edb`.

PIT `lst` is intended to capture lists of any kind. It has to be used in conjunction with the `fb-non-chapter` top level element, with a `role` attribute that indicates the type of list (e.g., list of figures, list of plates.)

Two of the journal "tombstone" PITs, `rem` and `dup`, were added to all book top-level elements in order to allow retraction of book chapters and other book content. The third tombstone PIT, `ret`, was already part of the book DTD and is now also allowed for all book top-level elements. PIT=`ret` was used in the past in the production of Major Reference Works to indicate so-called "relicts" – MRW texts that were rendered obsolete by the appearance of an update text. The use of `ret` to tag relicts is no longer allowed. In journal publishing, `ret` is used to identify a retracted article. Handling of book chapter retractions will follow the lines of the established procedures for journal retraction.

DTD change request CR85.
Impact: systems, manuscript→xml, xml rendering.

2.2. Article history: change to ce:miscellaneous in top-level elements

The occurrence indicator of element `ce:miscellaneous` was changed from ? (zero or one occurrences) to * (zero, one or more occurrences) in top-level elements `chapter` and `simple-chapter`. Element `ce:miscellaneous` is used to capture additional history information in the head of a chapter, next to the regular dates of receipt, review and acceptance. An example is the name of a communicating editor but also other data or dates in the history of the chapter can go into `ce:miscellaneous`. Allowing multiple occurrences of `ce:miscellaneous` offers flexibility to publishing and editorial in capturing information in the chapter in a book-specific way.

DTD change request CR28.
Impact: manuscript→xml, xml rendering.

2.3. Alternate titles

Similar to the JA DTD, support was added for titles and subtitles in other languages than the main language of a chapter. This was done by replacing the two title elements `ce:title` and `ce:subtitle` by the parameter entity `%titles;` in models of `chapter` and `simple-chapter`.

Parameter entity `%titles;` has the following model: `(ce:title, ce:subtitle?, (ce:alt-title, ce:alt-subtitle?)*)`, and the two `ce:alt-title` and `ce:alt-subtitle` elements can be used together with the appropriate language attribute for alternative titles in a foreign language.

XML example:

```
<chapter id="c02" xml:lang="de">
  ...
  <ce:title id="ttl010">Kopf und Halsregion</ce:title>
  <ce:alt-title xml:lang="en">Head and neck region</ce:alt-title>
  ...
</chapter>
```

Rendered example:

Kopf und Halsregion
Head and neck region

DTD change request CR67.
Impact: manuscript→xml, xml rendering.

2.4. Chapter outline and nomenclature

The elements `chapter` and `simple-chapter` may contain an optional `outline` element, used for tagging a short description of the chapter content. They also contain an optional `ce:nomenclature` element with the terms and definitions used in the chapter. The DTD prescribes that both of these elements comprise a list. To allow for more flexibility in capturing outline and nomenclature, both elements were made and repeatable in Book DTD 5.4.

Moreover, element `outline` has `id`, `view` and `role` attributes as of Book DTD 5.5, in common with many other elements.

DTD change requests CR95 (cardinality of outline and `ce:miscellaneous`) and CR96 (`view` and `role` attributes of outline).
Impact: manuscript→xml, xml rendering.

3. Changes in Common Element Pool

Book DTD 5.3.1 uses v1.1.6 of the common element pool. CEP 1.1.6 was updated to v1.2.0 for use with the then-current journal and serials issue DTDs (v5.2.0). The new Elsevier Book DTD 5.4.0 uses the latest version of the common element pool, CEP 1.4.0, an update of CEP 1.2.0. This implies that the book DTD benefits from a number of modifications that are already commonplace in the journal and serial issue DTDs. The changes from CEP 1.1.6 to 1.2.0 are described in Section 3.1; the changes in CEP 1.4.0 are described in Section 3.2.

3.1. Changes in Common Element Pool 1.2.0 with respect to version 1.1.6

Numerous changes were introduced in CEP 1.2.0 to improve the way we are modelling the author groups. This give publishing and operations added flexibility in the way authors names can be rendered in print or in HTML. The structured bibliographic references namespace was improved to allow a higher proportion of references to be tagged. Various smaller additions and changes complete the CEP package (new abstract classes, keywords to figures and the like). A comprehensive overview follows below.

3.1.1. Authors' names in non-Roman script: introduction of ce:alt-name

In contributions prepared by Chinese authors, it is becoming increasingly common that the authors' names in native script are added in parentheses after the names transliterated in English. The element `ce:alt-name` was added to the `ce:author-group` model to allow capturing this.

XML example:

```
<ce:author-group>
  <ce:author>
    <ce:surname>Jin</ce:surname>
    <ce:given-name>Chao</ce:given-name>
    <ce:alt-name>&#x9773; &#x8D85;</ce:alt-name>
  </ce:author>
</ce:author-group>
```

Rendered example:

Jin Chao (靳 超)

Impact: systems, manuscript→xml, xml rendering.

3.1.2. orcid attribute

ORCID is a standard and persistent digital identifier that uniquely distinguishes a scientist from every other researcher. It is used for example in manuscript preparation and grant submission. An `orcid` attribute was added to the model of `ce:author` to support this.

Impact: systems, manuscript→xml, xml rendering.

3.1.3. Structuring of affiliations by the introduction of ce:affiliation and sa:affiliation

Historically, affiliations were not structured to a high extent in Elsevier's XML. This has resulted in a lot of post-production efforts in systems as Opsbank and Scopus that have an urgent need for well-structured address information. The element `sa:affiliation` and its children was introduced for this purpose. The element and its children should be populated to the highest extent possible, but they are not rendered in PDF or HTML; the existing element `ce:affiliation` is still being used to tag address information that should be displayed in PDF and HTML.

XML example:

```
<ce:affiliation id="aff1">
  <ce:label>a</ce:label>
  <ce:textfn>Elsevier, Radarweg 29,
     1043 NX Amsterdam, The Netherlands</ce:textfn>
  <sa:affiliation>
    <sa:organization>Elsevier</sa:organization>
    <sa:address-line>Radarweg 29</sa:address-line>
    <sa:city>Amsterdam</sa:city>
```

```
    <sa:postal-code>1043 NX<sa:postal-code>
    <sa:country>The Netherlands</sa:country>
  </sa:affiliation>
</ce:affiliation>
```

(Note that in CEP 1.4.0 use of element `sa:affiliation` was extended to element `ce:correspondence`; see section 3.2.8.)

Impact: manuscript→xml.

3.1.4. Three new abstract classes: author-highlights, editor-highlights, structured digital abstracts

Element `ce:abstract` is used to capture a short summary of an article or book chapter. They come in a large variety of types, the most common one being the abstract supplied by the author itself. Element `ce:abstract` has a `class` attribute that is used to make the distinction between these many variants. Three new values of this class attribute were introduced, for `author-highlights`, `editor-highlights` and `sda`.

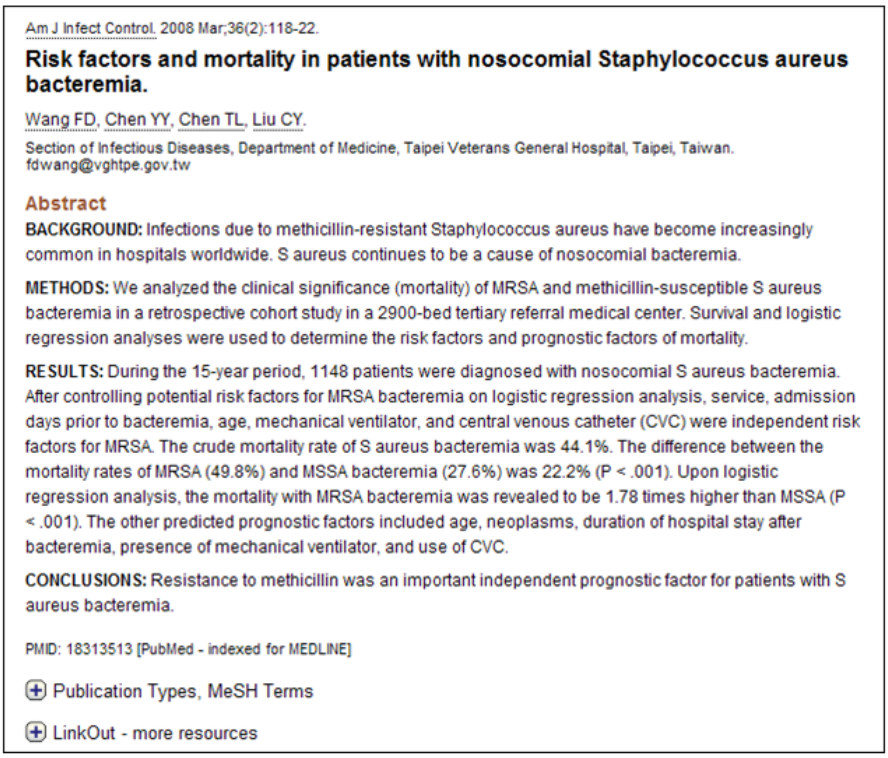
Of these, `sda` (structured digital abstract) is the most interesting: it is intended to tag protein−protein interactions in machine-readable format and not for any other type of structured abstract such as is described in Section 3.1.5.

The `author-highlights` and `editor-highlights` attributes are intended to properly support the so-called “research highlights”, short-and-snappy descriptions of the high points of the research described in a chapter or article. These are usually not rendered in PDF.

Impact: manuscript→xml, HTML rendering.

3.1.5. Tagging structured abstracts (role attribute for ce:abstract-sec)

A role attribute was added to the model of `ce:abstract-sec`, to facilitate in tagging the highly structured abstracts that are common in the medical scientific literature. This role attribute is ignored in rendering to PDF or HTML, and any section headings (BACKGOUND, METHODS etc. in the example below) that need to be displayed in these types of abstracts should be present verbatim, tagged using `ce:section-title`.



Am J Infect Control. 2008 Mar;36(2):118-22.

Risk factors and mortality in patients with nosocomial Staphylococcus aureus bacteremia.

Wang FD, Chen YY, Chen TL, Liu CY.

Section of Infectious Diseases, Department of Medicine, Taipei Veterans General Hospital, Taipei, Taiwan. fdwang@vghtpe.gov.tw

Abstract

BACKGROUND: Infections due to methicillin-resistant Staphylococcus aureus have become increasingly common in hospitals worldwide. S aureus continues to be a cause of nosocomial bacteremia.

METHODS: We analyzed the clinical significance (mortality) of MRSA and methicillin-susceptible S aureus bacteremia in a retrospective cohort study in a 2900-bed tertiary referral medical center. Survival and logistic regression analyses were used to determine the risk factors and prognostic factors of mortality.

RESULTS: During the 15-year period, 1148 patients were diagnosed with nosocomial S aureus bacteremia. After controlling potential risk factors for MRSA bacteremia on logistic regression analysis, service, admission days prior to bacteremia, age, mechanical ventilator, and central venous catheter (CVC) were independent risk factors for MRSA. The crude mortality rate of S aureus bacteremia was 44.1%. The difference between the mortality rates of MRSA (49.8%) and MSSA bacteremia (27.6%) was 22.2% (P < .001). Upon logistic regression analysis, the mortality with MRSA bacteremia was revealed to be 1.78 times higher than MSSA (P < .001). The other predicted prognostic factors included age, neoplasms, duration of hospital stay after bacteremia, presence of mechanical ventilator, and use of CVC.

CONCLUSIONS: Resistance to methicillin was an important independent prognostic factor for patients with S aureus bacteremia.

PMID: 18313513 [PubMed - indexed for MEDLINE]

⊕ Publication Types, MeSH Terms

⊕ LinkOut - more resources

Impact: manuscript→xml.

3.1.6. New copyright type, "free-of-copyright"

The `ce:copyright` element contains a mandatory `type` attribute that is used together with the `year` attribute to construct the copyright line in a chapter or article. A new value, `free-of-copyright`, was added to the list of allowed values for this element.

Impact: systems, manuscript→xml, xml rendering.

3.1.7. id attribute added to 24 elements

An id attribute was added to a large number of existing elements: `ce:refers-to-document`, `ce:doctopic`, `ce:dochead`, `ce:title`, `ce:alt-title`, `ce:subtitle`, `ce:alt-subtitle`, `ce:presented`, `ce:dedication`, `ce:author-group`, `ce:e-address`, `ce:miscellaneous`, `ce:abstract-sec`, `ce:keywords`, `ce:keyword`, `ce:glossary-def`, `ce:cross-ref`, `ce:cross-refs`, `ce:intra-refs`, `ce:inter-refs`, `ce:def-description`, `ce:alt-e-component`, `ce:grant-number`. These id attributes are intended to allow crossreferences to these elements to be made; similar `id` attributes were already in place for many of the more common text elements such as `ce:section` or `ce:para`. The `id` attributes are suppressed when rendering the element in PDF or HTML.

Impact: manuscript→xml.

3.1.8. Tagging of collaborations (new elements ce:e-address and ce:author-group in ce:collaboration)

Especially in the field of high-energy physics but also in medical publishing, it is common that a (large) group of authors collaborate and present themselves under a common name: the collaboration name. The element `ce:collaboration` is used to capture such a collaboration. Subelements `ce:e-address` and `ce:author-group` were added to the CEP to allow for more flexibility in displaying the collaboration and its members; it is now possible to display just the collaboration name in HTML when the article is first accessed by a reader, and then expanding the collaboration name to show all members.

It is a Pubmed/Medline requirement that a collaborations can be expanded to its constituent members.

XML example:

```
<ce:collaboration id="coll5">
  <ce:text>NEMO-3 Collaboration</ce:text>
  <ce:author-group id="aug2">
    <ce:author id="au2">
      <ce:given-name>J.</ce:given-name>
      <ce:surname>Argyiades</ce:surname>
      <ce:cross-ref refid="aff1">...</ce:cross-ref>
    </ce:author>
    <ce:author id="au3">
      <ce:given-name>R.</ce:given-name>
      <ce:surname>Arnold</ce:surname>
      ...
    </ce:author>
    ...
    <ce:affiliation id="aff1">
      <ce:label>a</ce:label>
      <ce:textfn>LAL, ...</textfn>
    </ce:affiliation>
  ...
  </ce:author-group>
</ce:collaboration>
```

Rendered example:

NEMO-3 Collaboration (not expanded)

NEMO-3 Collaboration (J. Argyiades, R. Arnold, C. Augier, . . . , V. Vorobel and Ts. Vylov) (expanded)

Impact: systems, manuscript→xml, xml rendering.

3.1.9. Bibliographic references: tagging reports and PhD theses (class attribute in sb:book)

Several improvements were made to the structured bibliographic references namespace, in order to limit the number of references that cannot be structured and that have to be captured using `ce:other-ref` instead. These unstructured references create problems in reference

linking on web platforms.

Element sb:book is the sb:host element used to capture structured bibliographic references to book monographs. A new class attribute was introduced to this element in CEP 1.2.0. There are several kinds of book-like content such as Reports and Ph.D. Theses that can now be captured using sb:book; using the class attribute with a value equal to "report" makes it possible to structure these references, while the distinction can be maintained between a monograph on the one hand and a Ph.D. Thesis on the other. Currently "report" is the only allowed value for this class attribute

Impact: manuscript→xml, xml rendering.

3.1.10. Bibliographic references: tagging pages in books

A second improvement to the structured bibliographic references namespace was a change to element sb:host. As of CEP 1.2.0 element sb:book can have an optional child sb:pages, allowing the tagging of page numbers in a monograph book; capturing of pages in edited books and issues was already possible.

Impact: manuscript→xml, xml rendering.

3.1.11. Keywords in figures, tables, textboxes and MMCs

Element ce:keywords was added the models of ce:figure, ce:e-component, ce:table and ce:textbox, to allow keywords to be tagged when they are part of a figure or video caption, a table or a textbox rather than referring to the chapter as a whole. In principle, these are intended to improve searchability, and they are by default not rendered in the PDF or HTML renditions of the chapter.

Impact: manuscript→xml, HTML rendering.

3.1.12. The source of displayed quotes (introduction of element ce:source)

The element ce:displayed-quote has been available since the earliest version of the CEP to tag free standing quotations. A new subelement, ce:source, was added to ce:displayed-quote to enable tagging of the source of the quotation, i.e., the author and the book from which the quote was taken.

Impact: manuscript→xml, xml rendering.

3.2. Changes in Common Element Pool 1.4.0 with respect to version 1.2.0

The new Book DTD 5.4.0 uses the latest version of the common element pool, CEP 1.4.0. Four new elements were introduced in CEP 1.4.0, ce:alt-text, ce:article-number, sb:article-number and sb:ellipsis. Moreover, the models of various elements that are already in existence were updated. Changes in CEP 1.4.0 with respect to its predecessor CEP 1.2.0 are described in the following sections.

3.2.1. Accessibility initiative: introduction of ce:alt-text

In order to comply with the Reed Elsevier Accessibility initiative [1] a new element `ce:alt-text` was introduced. This element makes it possible to include descriptive text alternatives for non-text content such as figures or videos, for example a description of a figure which can be used with screen reading software to make the content accessible for the visually impaired. The most appropriate way of rendering alt-text is left to the various web platforms, taking into account the standards described in [1].

`ce:alt-text` was added as an optional element to the models of `ce:figure`, `ce:table`, `ce:textbox`, `ce:inline-figure` and `ce:e-component`. Element `ce:alt-text` has a role attribute with three allowed values:

- `short` for a description of less than 30 words,
- `long`, for a more verbose text alternatives,
- `summary`, which is to be used for table summaries only.

There must be one `ce:alt-text` with `role` value `short` and only one `ce:alt-text` for every `role` value. The attribute role `must` be populated.

In case text alternatives for any of these five elements are available in source content, it is expected that these alternatives are tagged as `ce:alt-text`; how these text alternatives are actually obtained is outside the scope of this document.

XML and rendering sample for ce:figure:

```
<ce:figure id="f055">
…
<ce:alt-text id="at070" role="short">Painting by John William Waterhouse, 'The lady of Shalott', 1888.</ce:alt-text>
…
</ce:figure>
```

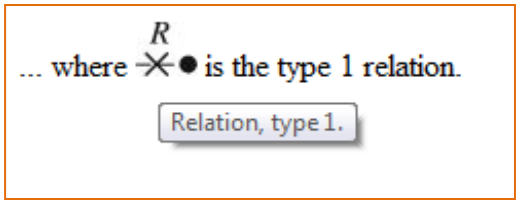
`ce:alt-text role="short"` translated to HTML image `alt` attribute.

`ce:alt-text` translated to link.

XML and rendering sample for ce:inline- figure:

```
<ce:inline-figure baseline="0.0">
  <ce:link locator="fx1"/>
  <ce:alt-text id="at346"
    role="short">Relation,
      type 1.</ce:alt-text>
</ce:inline-figure>
```

Rendering in HTML:



DTD change request CR87.
Impact: systems, manuscript→XML, XML rendering.

3.2.2. Accessibility initiative: enhanced table header functionality (rowheads)

One of the Web Accessibility Guidelines Working Group [1] recommendations to improve accessibility of scientific articles is to clearly indicate the row and column headings of tables in HTML. Tables are a very visually oriented way of organizing data; simply looking at a table in print or on screen generally suffices to understand the table's structure, and it is easy to get the meaning of the content of any particular table cell. But as anyone who is familiar with the way tabular content is represented in the text-based context of native HTML or XML will know, making sense of a table without visual clues is far more difficult.

For a visually impaired person to make use of tabular material, it is essential that the contents of each table cell can be related to the content of the column head, the row head, or usually both. This can then be used in conjunction with screen reading software to get a full description of the content of any table cell. In the basic Elsevier CALS tables specification, column head cells are already identified as such since their `entry` elements are children of element `thead`. CEP 1.4.0 adds a way of identifying row head cells as well by specifying the use of a `role` attribute `rowhead` in the `entry` elements capturing the contents of the first cell in each row.

Rendering notes:

The XML transform to HTML needs to ensure that the XML fragment

```
<entry role="rowhead">Content of row head cell 1</entry>
```

translates to the following HTML:

```
<td scope="row">Content of row head cell 1</td>
```

And similarly that

```
<thead>
  <row>
    <entry>Content of column head cell 1</entry>
...
  </row>
</thead>
```

translates to:

```
<th scope="col">Content of column head cell 1</th>
```

DTD change request CR35.
Impact: manuscript→XML, XML rendering to HTML.

3.2.3. Handling of content objects that reside outside the Electronic Warehouse (change in ce:link)

In its Virtual Total Warehouse, Elsevier is moving toward a content handling model in which figures, video files and other components of an article can be addressed individually as so-called content objects rather than as assets that are an inseparable part of the article. In this line of thinking these component files can be stored separate from the article rather than combined with it in a dataset in the Electronic Warehouse (EW); in case of video files for example in the DAM (the Digital Asset Management system) or even on a non-Elsevier system such as Akamai**.** The `ce:link` element is used for pulling in assets from the EW; the exact location of these files is not prescribed in the XML.

To allow content objects that reside outside EW datasets to be pulled in from external locations, `ce:link` was updated by the introduction of three optional attributes: `xlink:type`, `xlink:role` and `xlink:href`. These attributes work the same way as they do in the existing element `ce:inter-ref`: the `xlink:href` attribute contains the link to the external location where the content object resides, `xlink:type` and `xlink:role` describe properties of the link. Detailed specifications of the `href` linking scheme used in `ce:link` can be found in the VTW documentation.

XML examples:

```
<ce:link id="lk00360" locator="gr23"
    xlink:type="simple" xlink:href="pii:M2013402009010228X">

<ce:link id="lk00361" locator="gr1"
    xlink:type="simple" xlink:href="pii:S9999999414207732/gr1"/>
```

[Note that the model for element `ce:link` now is identical to that of `ce:inter-ref` with the addition of the locator attribute that specifies the name of the file that is to be retrieved.]

DTD change request CR22.
Impact: manuscript→XML, XML rendering.

3.2.4. Direct linking of keywords to external databases (change in ce:text)

As of the introduction of CEP 1.4.0, it is possible to link keywords to an external database; previously, they could only be captured as plain text. This was done by changing element `ce:text` to allow it to contain `ce:inter-ref` as well. Detailed specifications of the `href` linking scheme used in `ce:inter-ref` can be found in a separate document [2].

XML example:

```
<ce:keywords id="kwds0010">
  <ce:keyword id="kwd0010">
```

```
    Alpha Centauri
  </ce:keyword>
  <ce:keyword id="kwd0020">
    <ce:inter-ref id="ir0010" xlink:type="simple"
    xlink:href="ascl:1201.001">1201.001</ce:inter-ref>
  </ce:keyword>
  ...
</ce:keywords>
```

Rendered example:

Keywords:
Alpha Centauri
1201.001

DTD change request CR84.
Impact: manuscript→XML.

3.2.5. Article numbers: introduction of ce:article-number, sb:article-number

The traditional, print-based way of citing journal article references makes use of the volume number, issue number and page number of an article (VIP citation). To some extent, the scientific community is moving away from VIP citation to a system in which articles are cited using an article number, sometimes in addition to (part of) the VIP information. This article number could be the DOI of the article, or a "generic" article number introduced by a journal or an STM publisher for citation purposes.

Two new elements were introduced to support the use of article numbers, `ce:article-number` and `sb:article-number`. Element `ce:article-number` allows articles to be tagged with an article number, and was added to the model of `item-info` as described in Section 2.2 of the JA DTD release note; it is not to be used in book production and mentioned here for completeness' sake. Element `sb:article-number` allows articles to be cited using article numbers and was added to the model of element `sb:host`.

XML example:

```
<ce:bib-reference id="br0120">
  <ce:label>[12]</ce:label>
  <sb:reference id="sbr13">
  <sb:contribution>...</sb:contribution>
  <sb:host>
    <sb:issue>
      <sb:series><sb:title><sb:maintitle>Phys. Rev. Lett.</sb:maintitle></sb:title>
        <sb:volume-nr>90</sb:volume-nr>
      </sb:series>
      <sb:date>2003</sb:date>
    </sb:issue>
    <sb:article-number>194101</sb:article-number>
  </sb:host>
  </sb:reference>
</ce:bib-reference>
```

DTD change request CR89.

Impact: manuscript→XML, XML rendering.

3.2.6. Unicode version 6: changes in use of ce:glyph

Nearly all conceivable symbols used in publishing are covered by the Unicode grid that has been part of the Elsevier DTDs since DTD version 5.0; however, a small number of essential symbols are not yet represented in Unicode, and have to be tagged using `ce:glyph` instead. Unicode version 6 has introduced ten Unicode code points for symbols that were previously only available through the Elsevier grid of glyphs. For reasons of backward compatibility these glyphs are not removed from the grid, but in DTD 5.4 files Unicode code points rather than `ce:glyph` elements have to be used to represent these symbols.

Symbol	Symbol name	Unicode code point	Obsolete glyph name	Elsevier grid position
ɖ	curly-tail d (phonetic symbol)	00221	dcurt	Pid
ɟ	j, undotted (phonetic symbol)	00237	jnodot	Pfj
◆	lozenge, filled	029EB	lozf	Bgi
ɳ	curly-tail n (phonetic symbol)	00235	ncurt	Phn
⬠	pentagon	02B20	pent	Bo1
⬓	square, bottom filled	02B13	sqfb	Bfw
◥	square with filled N-E-corner	02B14	sqfne	Bfp
◣	square with filled S-W-corner	02B15	sqfsw	Bfr
⬒	square, top filled	02B12	sqft	Bfv
ʇ	curly-tail t (phonetic symbol)	00236	tcurt	Pht

DTD change request CR75.
Impact: manuscript→XML.

3.2.7. Better support of APA reference style: introduction of sb:ellipsis

In the sixth version of the so-called APA reference style, in case of eight or more authors only the first six and the last one are shown, as follows: "au1, au2, au3, au4, au5, au6, ... au37". To support this feature, a new, empty element `sb:ellipsis` was introduced to the model of `sb:authors`. This element captures the ellipsis typographical symbol (…) used in APA-style references to represent the omitted author names.

XML example:

```
<sb:authors>
  <sb:author>
    <ce:given-name>C.P.</ce:given-name>
    <ce:surname>Black</ce:surname>
  </sb:author>
  <sb:author>
    <ce:given-name>S.T.</ce:given-name>
    <ce:surname>Arlo</ce:surname>
  </sb:author>
  <sb:author>
    <ce:given-name>R.</ce:given-name>
    <ce:surname>Rechit</ce:surname>
  </sb:author>
```

```
  <sb:author>
    <ce:given-name>J.P.</ce:given-name>
    <ce:surname>Machlen</ce:surname>
  </sb:author>
  <sb:author>
    <ce:given-name>K.</ce:given-name>
    <ce:surname>Sempson</ce:surname>
  </sb:author>
  <sb:author>
    <ce:given-name>A.L.</ce:given-name>
    <ce:surname>Bee</ce:surname>
  </sb:author>
  <sb:ellipsis/>
  <sb:author>
    <ce:given-name>S.P.</ce:given-name>
    <ce:surname>Clark</ce:surname>
  </sb:author>
</sb:authors>
```

Rendered example:
Black, C. P., Arlo, S. T., Rechit, R., Machlen, J. P., Sempson, K., Bee, A. L., … Clark, S. P.

[Note that in Elsevier XML files there are no spaces between initials in `ce:given-name`; these have to be added when the XML file is rendered in print PDF, web PDF or HTML for full compliance with the APA standard. The same holds true for the space that follows the ellipsis in the rendered example.]

DTD change request CR91.
Impact: manuscript→XML, XML rendering.

3.2.8. Structured correspondence addresses: extended use of ce:correspondence

In the previous release of the CEP (v. 1.1.6) structuring of author affiliations was made possible by the introduction of element `sa:affiliation` (see Section 3.1.3). In the current release, this element was added to the data model of `ce:correspondence`, allowing any correspondence address present in the source content to be structured as well. All correspondence addresses should be tagged using `sa:affiliation` in a similar way as affiliations:

```
<ce:correspondence id="cor1">
  <ce:label>&#x0240E;</ce:label>
  <ce:text>Correspondence to: R. Schrauwen, Chief Content Architect,
     Elsevier, Radarweg 29, 1043 NX Amsterdam, The Netherlands
  </ce:text>
  <sa:affiliation>
    <sa:organization>Elsevier</sa:organization>
    <sa:address-line>Radarweg 29</sa:address-line>
    <sa:city>Amsterdam</sa:city>
    <sa:postal-code>1043 NX<sa:postal-code>
    <sa:country>The Netherlands</sa:country>
  </sa:affiliation>
</ce:correspondence>
```

DTD change request CR-99/COS-21.
Impact: manuscript→xml.

3.2.9. Nesting of ce:bibliography-sec and ce:further-reading-sec

As of CEP 1.4.0, sections within the bibliographic references or further reading lists may be nested. This allows better formatting of extended reference lists. To enable this nesting, an optional element `ce:bibliography-sec` was added to the data model of `ce:bibliography-sec` and similarly an optional element `ce:further-reading-sec` to that of `ce:further-reading-sec`. Nesting is allowed up to one level deep.

XML example (most id and view attributes removed for improved legibility):

```
<ce:bibliography>
  <ce:section-title>References</ce:section-title>
  <ce:bibliography-sec">
    <ce:section-title>Human Papilloma Viruses</ce:section-title>
    <ce:bibliography-sec>
      <ce:section-title>Prevalence and Pathogenesis</ce:section-title>
      <ce:bib-reference id="bib0005">  ... </ce:bib-reference>
      ...
      <ce:bib-reference id="bib00x0">  ... </ce:bib-reference>
    </ce:bibliography-sec>
    <ce:bibliography-sec>
      <ce:section-title>Genotyping of Human Papilloma Viruses</ce:section-title>
      <ce:bib-reference id="bib00x5">  ... </ce:bib-reference>
      ...
      <ce:bib-reference id="bib00xx">  ... </ce:bib-reference>
    </ce:bibliography-sec>
  </ce:bibliography-sec>
</ce:bibliography>
```

Rendered example:

References

Human Papilloma Viruses
Prevalence and Pathogenesis
…
Genotyping of Human Papilloma Viruses
…

DTD change request CR-97.
Impact: manuscript→XML, XML rendering.

4. References

[1] Section 508 of the US Rehabilitation Act, http://www.section508.gov/, and Web Accessibility Guidelines Working Group (WCAG 2.0), http://www.w3.org/TR/WCAG20/.

[2] External Object Linking - Supplier specification.

5. Support

The Elsevier DTDs and schemas are developed by the DTD Maintenance & Development Team, who will be happy to answer queries about the new DTDs. For this release, please contact David Kuilman, Jos Migchielsen or Rob Schrauwen.