



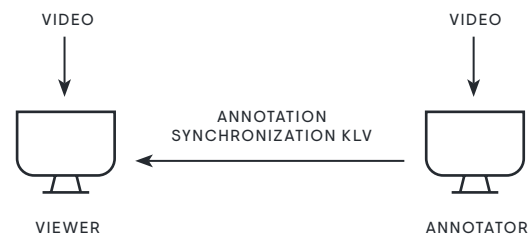
HIGH PRECISION VIDEO TELESTRATION

MissionMarker

Seamless, accurate communication when it matters most.

MissionMarker, part of the General Dynamics Mediaware Products suite, is a high precision video telestration product that enhances an operator's ability to accurately communicate with other users via a video and image whiteboard. It allows operators to graphically highlight objects or scenes in the live video such that those graphics are accurately displayed on another user's display, regardless of location. Timing and accuracy are critical – the graphical annotations are precisely synchronized between the two systems to ensure they are displayed on the exact video frame and pixel location as they were made.

MissionMarker is a proven capability with more than 15 years of operational use. In typical deployments the producer (Annotator) of the graphics and the consumer (Viewer) are viewing the same live video stream via different communication channels. Synchronization and graphics information is sent directly from the producer to the consumer via a separate low-bandwidth uni-directional channel as showcased in the diagram above.



Annotation Modes

MissionMarker supports two video annotation modes: live video annotation mode and still frame (from live video) annotation. Live video annotation sends a separate stream of annotation data from the annotator to the viewer in real-time, synchronously displaying the annotations on both displays.

When still frame annotation is triggered, a video frame is extracted from the video and displayed in a separate still frame annotation window. Simultaneously the same exact

still frame is extracted on the remote Viewer systems. Annotations drawn on the still frame are automatically (and dynamically) drawn on the remote Viewer systems as they are made.

FOR ALL INQUIRIES INCLUDING MAAS/
MEDIWARE PRODUCTS (MWP):

MotionGEOINTSolutions@gdit.com

Technical Specifications

STANAG 4609/ Motion Imagery Standard Profile (MISP) compliant, including:

- Standards 0104, 0102, 0601, 0602, 0603, 0604, 0605, 0801, 0806, 0807, 0902, 0903, 1002, 1010, 1107, 1202, 1206, 1601, 1602 and SMPTE RP210v13, 20120214

Packetization

- MPEG-2 Transport Stream
- MPEG-2 Program Stream
- Elementary Stream

Video Formats

- AVC (H.264) SD/HD Base, Main & High Profile
- HEVC (H.265) SD/HD 4K Main profile
- MPEG-2 Main and 4:2:2 Profile

Audio Formats

- MPEG-1 Layer-I and II
- MPEG-2 layer-1 and II
- AAC-LC
- HE-AAC

Metadata

- SMPTE 336M and 335M Key Length Value (KLV) metadata and metadata dictionary standards
- SMPTE RP 217 and ISO/IEC 13818-1:2007 standards for carrying KLV in MPEG-2 transport streams
- ESD Carried in the Closed Caption fields of either MPEG-2 or H.264/AVC (Line-21) Formats

System Requirements

- Windows® XP, Windows 7
- Graphics cards must support OpenGL® version 1.5. (NVIDIA® cards recommended)
- RAM Needed: 1GB minimum