

About This Standard

Current Status *Mandated*

Standard Identifier MISB RP 0604

Title of Standard

MISB Recommended Practice 0604: Time Stamping Compressed Motion Imagery, 13 June 2007

Standards History

Introduced to Registry	Date Emerging	Date Mandated	Last Status Update	Last Status Review	Inactive/Retired
2008-11-20	n/a	2008-11-20	2008-11-20	2008-11-20	n/a

Standards Body

[MISB](#)

[Broken Link?](#)

URL to Access or Acquire

<http://www.gwg.nga.mil/misb>

Working Group

Primary Owner Geospatial Intelligence (GWG)
Secondary Interest No Secondary Interest

Service Area

GEOINT: Motion Imagery

KIPs

No KIP Found

Standard Applicability

2008-11-04

MISB RP 0604 would be used to transport time-stamped, compressed (MPEG-2 or H.264) video and metadata so the video and metadata could be accurately correlated on the receiving end. This is necessary for targeting and should be used for all applications so as to know where the camera is looking. The MPEG-2 transport layer (ISO/IEC 13818-1:2000) provides an infrastructure for the carriage of video, audio and metadata in a single motion imagery stream and has been standardized by the MISB for over 10 years. MISB RP 0603, Common Time Reference for Digital Motion Imagery using Coordinated Universal Time (UTC), outlines the advantages of using Universal Coordinated Time (UTC) as the master clock reference for video and metadata, and discusses several time formats and the relationships between them. RP 0604 defines how UTC time can be used to stamp MPEG-2 and H.264 video streams, and how the video and metadata can be synchronously transported in motion imagery streams.

Standard Abstract

2008-11-04

This Recommended Practice defines methods to time stamp compressed video streams and to synchronously transport video and metadata in compressed motion imagery streams. Implementation methods are defined that leverage the transport layer of MPEG-2 for carriage of motion imagery streams of varying types and bit rates as defined in the Motion Imagery Standards Profile (MISP). Specific formats covered include MPEG-2 and H.264. The MPEG2 Transport Stream (or equivalent) also contains compressed motion imagery from sensors such as an Electro-Optical / Infrared (EO/IR) video capture device. Synchronization between the metadata and

the appropriate video packet is also required for ensuring the validity of the metadata. This RP provides guidance on methods to synchronously transport video frames and associated metadata elements with varying levels of precision as determined by the user's requirements.

Profiling Questions

GEOINT: Motion Imagery

- Will your system need to time stamp metadata and full motion video (FMV) so they can be correlated, or is the timing accuracy of the metadata in relation to FMV important, or must the position of a certain object in the video frame be accurately identified?

Products Incorporating This Standard

General Atomics, Delta Information Systems, and others

Relevant Information

This citation was authored by the GWG Motion Imagery Standards Board (MISB).

Implementation Guidance

Guidance for using/implementing this standard is available from the Motion Imagery Standards Board (MISB) [<http://www.gwg.nga.mil/misb/>].

Standard Selection Criteria

Interoperability/Supportability

The DoD/IC Motion Imagery Standards Board adopted Recommended Practice (RP) 0604 in June 2007 for time stamping compressed video streams and synchronously transporting video and metadata in compressed motion imagery streams. It is expected that RP 0604 will be utilized in streaming and file applications using web services. This RP defines how Universal Coordinated Time (UTC) can be used to stamp MPEG-2 and H.264 video streams, and how the video and metadata can be synchronously transported in motion imagery streams.

Technical Maturity

RP 0604 is relatively mature given that it was standardized in June 2007 by the MISB. It was demonstrated in 2006 and is expected to be adopted by NATO organizations.

Public Availability

<http://www.gwg.nga.mil/misb/rppubs.html>

Implementability

General Atomics and Delta Information Systems built prototypes and demonstrated systems utilizing RP 0604 in early 2006. It has since been adopted in the DoD Unmanned System Interoperability Profile. It will be in Edition 3 of STANAG 4609 on digital motion imagery.

Authority

The Motion Imagery Standards Board, a DoD and Intelligence Community standards organization, maintains RP 0604. Edition 3 of NATO STANAG 4609 on Digital

Motion Imagery will utilize RP 0604. The Motion Imagery Standards board has an open process for maintaining and developing this standard.

<u>Standard Type</u>	Military
<u>Standard Classification</u>	Unclassified
<u>Keywords for Search</u>	FMV, H.264, KLV, MISB, MISP, MPEG2, Metadata, STANAG 4609, Time stamping, UAS, UAV, Video, correlation, exploitation support data, full motion video, transport stream