

provides a representation of the Metafile syntax that can be optimized for speed of generation and interpretation, while still providing a standard means of interchange among computer systems. The encoding uses binary data formats that are much more similar to the data representations used within computer systems than the data formats of the other encodings. Some of the data formats may exactly match those of some computer systems. In such cases processing is reduced very much relative to the other standardized encodings. On most computer systems processing requirements for the Binary Encoding will be substantially lower than another encoding. In cases where a computer system's architecture does not match the standard formats used in the Binary Encoding, and where absolute minimization of processing requirements is critical, and where interchange among dissimilar systems does not matter, it may be more appropriate to use a private encoding, conforming to the rules specified in clause 7 of ISO/IEC 8632-1. See the DISR citation for ISO/IEC 8632-1:1999 which addresses the functionality enabled by CGM.

Profiling Questions

- GEOINT: Still Imagery**
- Does your system exchange graphically annotated still imagery, raster or gridded data with external systems?

Products Incorporating This Standard

Companies with commercially available implementations/products include: BAE Systems, Harris Corporation, ITT Industries, Leica Geosystems, PAR Government Systems, Paragon Imaging, PhotoTelesis, Raytheon, Recon Optical, Research Systems, Inc. (RSI), Sensor Systems, Inc., and Technology Services Corporation.

Relevant Information

For many years, Mil-Std-2301A, Computer Graphics Metafile (CGM) Implementation Standard for National Imagery Transmission Format Standard, served as an implementation profile of ISO/IEC 8632. The citation in the DISR for Mil-Std-2301A has since been replaced by BPCGM01.00, a functionally equivalent profile of CGM. This citation authored by the GWG's NTB Focus Group

Implementation Guidance

ISO/IEC 8632 is among the suite of standards used by the NITFS. See STDI-0005, Implementation Practices of the NITFS, available at: <http://www.gwg.nga.mil/ntb/baseline/docs/ipon/index.html> The STDI-0005 document is a compilation of common practices, conventions, and guidelines for implementing the National Imagery Transmission Format Standard (NITFS). The objective is to help promote common specification and application of the NITFS suite of standards by all fielded and developmental digital imagery-related systems. It describes common conventions for implementing the suite of NITFS standards that promote and sustain NITFS compliance and interoperability for the production, storage, cataloging, discovery, selection, exploitation, and dissemination of digital imagery, raster map, and other related raster products.

Standard Selection Criteria

Net-Centric Interoperability

ISO/IEC 8632, CGM, is a graphics data interchange standard which defines a neutral computer interpretable representation of 2D graphical (pictorial) information which is independent of any particular application or system. The ISO/IEC 8632 series of standards, as used within the NITFS, provides the means for textual, graphical, and symbolic annotation of digital imagery and raster maps. Imagery analysts use it to graphically mark up digital imagery and maps with the visualization of their analytic results, for example target folders. It often is used to provide visualization of the NITFS-

embedded security markings and handling instructions. For example, every Digital Point Positioning Data Base (DPPDB) uses this standard to present security information, national stock numbers, visual boundaries for associating image data with positioning and quality support data, and similar uses.

Technical Maturity

The standard is technically mature and stable, to include established conformance test criteria, tools, services and technical consultation for the implementation profile used by the NITFS. Existing commercial products conforming to the NITFS profile of this standard include, but not limited to: Paragon Imaging, Inc. Electronic Light Table Products (PocketELT ELT/4000 ELT/1500 Global Image Viewer ELT/5500 ELT/View Image Light Table (ILT) Plus and ELT/5500 Pro) BAE VITecELT ERDAS Imagine Sensor Systems, Inc. RemoteView Professional PhotoTelesis Image and Research Systems, Inc. The Environment for Visualizing Imagery (ENVI). The NITFS profile of this standard has been part of the NITFS suite of standards since 1994 and part of STANAG 4545, NATO Secondary Imagery Format (NSIF) since 1998. A follow on standard for use within NITFS/NSIF is not currently in consideration. A sunset status should not yet be added for this currently mandated (for use with NITFS/NSIF) standard.

Public Availability

The electronic version of this International Standard can be downloaded at no charge from the ISO/IEC Information Technology Task Force (ITTF) web site:
http://isotc.iso.org/livelink/livelink/fetch/2000/2489/Ittf_Home/PubliclyAvailableStandards.htm

Implementability

Typically, implementation profiles of ISO/IEC 8632 are established for specific functional applications of CGM. The BIIF profile of ISO/IEC 8632 is widely implemented by a variety of systems (data production, dissemination, library/archive, exploitation work stations, etc.) supporting the NITFS suite of standards. Sample data, sample software, technical consultation, and conformance testing services are available to government and commercial implementers of the standard by contacting the NITFS Test Facility operated by the Joint Interoperability Test Command (JITC) on behalf of the National-Geospatial-Intelligence Agency (NGA). Contact information available at <http://jitic.fhu.disa.mil/nitf/nitf.htm>, 1-800-538-5482, x8-5458, and jitcn@disa.mil. A list of government and commercially developed conforming implementations of the NITFS suite of standards is available at <http://jitic.fhu.disa.mil/nitf/register.htm>.

Authority

The ISO/IEC 8632 series of standards was developed by ISO/IEC Joint Technical Committee 1/SubCommittee 24, Computer Graphics and Image Processing. The process for maintaining and developing the standard is an internationally open process by members of national bodies and liaison organizations participating with ISO/IEC. The US NITFS Technical Board (NTB) and the NATO STANAG 4545 Custodial Support Team maintain liaison relationships with the ISO SubCommittee.

Standard Type Non-Military

Keywords for Search None