

About This Standard

Mandated

Standard Identifier ITU-T T.81

Title of Standard

Digital Compression and Coding of Continuous-tone Still Images - Requirements and Guidelines, September 1992

Standards History

Introduced to Registry	Date Emerging	Date Mandated	Last Status Update	Last Status Review	Inactive/Retired
2002-07-17	n/a	2002-07-17	2002-07-17	2007-06-27	n/a

Standards Body [ITU](#)

[Broken Link?](#)

URL to Access or Acquire <http://www.itu.int>

Working Group

Primary Owner Collaboration TWG
Secondary Interests Information Transfer TWG
Application / Messaging TWG
Geospatial Intelligence TWG (GWG)

Service Areas GEOINT: Still Imagery
Video Teleconferencing

KIPs No KIP Found

Standard Applicability

2007-06-27

For VTU/MCU multimedia, applications implementing the features of audiographic conferencing, facsimile, still image transfer, annotation, pointing, whiteboard, file transfer, audio visual control, and application sharing, operating at data rates of 9.6 to 1,920 kbit/s, or operating over local area networks (LANs), this standard is mandated. For systems implementing the National Imagery Transmission Format Standard (NITFS) [or its NATO instantiation, the NATO Secondary Imagery Transmission Format (NSIF)], Mil-Std-188-198A establishes (profiles) the features and functional behavior that must be supported when using the JPEG image compression algorithms. This implementation profile addresses lossy and lossless compression for both eight- and 12-bit gray-scale imagery, 24-bit color imagery, eight- and 12-bit spectral imagery, radar-derived imagery, and similar applications.

2003-10-03

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Standard Abstract

2007-06-27

CCITT Rec. T.81 | ISO/IEC 10918-1 or ITU-T Rec. T.84 | ISO/IEC 10918-3, commonly known as JPEG. This CCITT Recommendation | International Standard is applicable to continuous-tone, grayscale or colour digital still image data. It is applicable to a wide range of applications which require use of compressed images. It is not applicable to bi-level image data. This Specification specifies processes for converting source image data to compressed image data; specifies processes for converting compressed image data to reconstructed image data; gives guidance on how to implement these processes in practice; specifies coded representations for compressed image data. NOTE: This Specification does not specify a complete coded image representation. Such representations may include certain parameters, such as aspect ratio, component sample registration, and colour space designation, which are application-dependent.

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Profiling Questions

- GEOINT: Still Imagery** • Does your system exchange Still Imagery data with external systems?
- Video Teleconferencing** • Do your Video Teleconferencing Units and Multipoint Control Units operate over packet-based tcp/ip networks?

Products Incorporating This Standard

None

Relevant Information

ITU-T T.81 is also published as ISO/IEC 10918-1. JFIF. An implementation profile widely used in the commercial market place and on the world-wide-web is the JPEG File Interchange Format (JFIF), MIME Type image/jpeg. JFIF is a minimal file format which enables JPEG bitstreams to be exchanged between a wide variety of platforms and applications. This minimal format does not include any of the advanced features found in the NITFS or TIFF JPEG profiles or any application specific file format. The only purpose of this simplified format is to allow the simple exchange of monochrome and color JPEG compressed images (pixels only) using the lossy JPEG algorithm. See DISR citation for JPEG.

Implementation Guidance

The following documents provide detailed implementation guidance for implementing ITU-T T.81 for use with the National Imagery Transmission Standard (NITFS) and/or

STANAG 4545, NATO Secondary Imagery Transmission Format (NSIF). MIL-STD-188-198A, Joint Photographic Experts Group (JPEG) Image Compression For The National Imagery Transmission Format Standard. NGA Document, N-0106, Bandwidth Compression Standards and Guidelines NGA Document, STDI-0005, Implementation Practices of the NITFS (IPON)

Standard Selection Criteria

Net-Centric Interoperability

This standard can be used on the internet as a component of web services. It can operate over IP-based networks as well as other networks. The standard further promotes interoperability because it is platform-independent.

Technical Maturity

The standard is mature and stable, and commercial products exist. Major VTC manufacturers support this standard. The world-wide deployment of the baseline capabilities of this standard (commonly known as JPEG image compression), makes it one of the most widely implemented IT standards in history.

Public Availability

The ITU specification is publicly available for a fee at:
<http://www.itu.int/publications/default.aspx>.

Implementability

This standard is widely implemented in the marketplace and is widely used by DoD. Major VTC manufacturers implement this standard. It is also widely implemented by imagery sensor-related systems (government and commercial) supporting the National Imagery Transmission Format Standard (NITFS) and the NATO Secondary Imagery Format (NSIF).

Authority

This international standard was developed and is maintained by the ITU through an open process.

Standard Type Non-Military

Keywords for Search None