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INTERNATIONAL STANDARD

Information technology – Fibre channel – Part 321: Audio video (FC-AV)

ISO/IEC 14165-321:2009(E)

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FIBRE CHANNEL –

Part 321: Audio video (FC-AV)

FOREWORD

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International Standard ISO/IEC 14165-321 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

The list of all currently available parts of the ISO/IEC 14165 series, under the general title *Information technology - Fibre channel,* can be found on the IEC web site.

This International Standard has been approved by vote of the member bodies and the voting results may be

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This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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This International Standard defines a protocol for transmitting AV streams using Fibre Channel Sequences and Exchanges. Fibre Channel is a high speed serial interface using either optical or electrical connections (i.e., the physical layer) at data rates currently up to 2 Gbit/s with a growth path to 10 Gbit/s. The topologies supported by Fibre Channel include point-to-point, switched fabric, and arbitrated loop. Fibre Channel connections used for transmitting AV streams utilize standard FC frame format and sequence/exchange hierarchy.

The *Fibre Channel Audio-Video* (FC-AV) standard is divided into 9 clauses and 7 annexes as follows:

Clause 1 - Scope

Clause 2 - Normative references

Clause 3 - Definitions, abbreviations, and conventions

Clause 4 - Overview of the protocol for transmitting FC-AV containers or AV frames over Fibre Channel

Clause 5 - FC-AV Container system

Clause 6 - Compressed FC-AV Stream transmission

Clause 7 - Frame Header Control Protocol

Clause 8 - Simple Streaming protocol for Simple Content Movement Architecture

Clause 9 - SCSI-3 FCP mapping of the Simple Streaming protocol

Annex A (normative) - Simple Parametric Digital Video (SPDV) profile that defines a mapping based on the FC-AV Container system.

Annex B (normative) - Object Type data.

Annex C (normative) - Television video primer.

Annex D (informative) - Audio and video information sender to receiver synchronization issues

Annex E (informative) - Three techniques that are in common use to make TCP/IP go fast on fast networks

Annex F (informative) - FC-AV container Header for allowed Video Frame Rates

Annex G (informative) - Data packing guidelines.

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FIBRE CHANNEL –
Part 321: Audio video (FC-AV)

1 Scope

This part of ISO/IEC 14165-321 specifies the transport of digital Audio and Video formats over Fibre Channel.

Specifications are included for:

– a coherent framework (i.e., an FC-AV Container and Objects) for mapping current and future digital Audio and Video formats to Fibre Channel;

– mapping the formats defined by the ITU-R BT-601 and SMPTE family of standards to Fibre Channel;

– mapping the formats defined by the ISO/IEC 3818 family of standards (which include MPEG and related compression systems) to Fibre Channel;

– a profile (i.e., Simple Parametric Digital Video) that parametrically defines the characteristics of Audio and Video information for specific applications; and,

– data packing guidelines recommended for AV data within the Fibre Channel transmission words.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Availability and contact information is provided as needed.

IEC 61179, *Helical-scan digital composite video cassette recording system using 19 mm magnetic tape, format D2 (NTSC, PAL, PAL-M)*

IEC 61834 (all parts), *Recording – Helical-scan digital video cassette recording system using 6.35 mm magnetic tape for consumer use (525-60, 625-50, 1125-60 and 1250-50 systems)*

IISO/IEC 14165-251, *Information technology – Fibre Channel – Part 251: Framing Signaling (FC-FS)*

ISO/IEC 14776-222, *Information technology – Small Computer System Interface (SCSI) – Part 222: Fibre Channel Protocol for SCSI, Version 2 (FCP-2)*

ISO/IEC 14165-331, *Information technology - Fibre Channel - Part 331: Virtual Interface (FC-VI)*

AES3-1992(r1997)(ANSI S4.401992), *AES Recommended Practice for Digital Audio Engineering - Serial transmission format for two-channel linearly represented digital audio data*

ANSI X3.230-1994, *Fibre Channel – Physical and Signaling Interface (FC-PH)*

ANSI/SMPTE 125M-1995, *Television – Component Video Signal 4:2:2 Bit-Parallel Interface*

ANSI/SMPTE 170M-1994, *Television – Composite Analog Video Signal – NTSC for Studio Applications*

ANSI/SMPTE 253M-1998, *Television – Three-Channel RGB Analog Video Interface*