AES standard for Audio applications of networks - Open Control Architecture - Part 3: Protocol for TCP/IP Networks

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Abstract

AES70 defines a scalable control-protocol architecture for professional media networks. It addresses device control and monitoring only; it does not define standards for streaming media transport. However, the Open Control Architecture (OCA) is intended to cooperate with various media transport architectures.

AES70 is divided into a number of separate parts. This Part 3 defines a communications protocol of AES70. This protocol supports AES70-compliant remote control and monitoring of media devices over TCP/IP networks. This document should be read together with Part 1, Framework, and Part 2, Class structure.

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Foreword

This foreword is not part of this document, AES70-3-2015, *AES standard for audio applications of networks - Open Control Architecture - Part 3: Protocol for TCP/IP Networks*.

This document is a member of the set that defines AES70, the Open Control Architecture. AES70C defines the TCP/IP communications protocol for AES70. Other parts define the architectural framework and the specific control repertoire.

AES70 is based on a proposed standard provided to the AES by the OCA Alliance, a trade association dedicated to the development, standardization, promotion, and support of the Open Control Architecture.

The development project for this standard was originally proposed by the Open Control Architecture Alliance (OCA Alliance) and initiated in October 2012 as project AES70 to be developed in task group SC-02-12-L. The OCA Alliance also contributed the task-group working draft and, as a direct result, there are a number of references to "OCA" in the protocol in order to maintain compatibility with implementations already in the field. The protocol for TCP/IP networks in early drafts is also known as "OCP.1".

The members of the writing group that developed this document in draft are: J. Berryman, H. Hamamatsu, T. Head, S. Jones, M. Lave, N. O'Neill, M. Renz, M. Smaak, G. van Beuningen, S. van Tienen, E. Wetzell.

J. Berryman led the task group.

Richard Foss
Chair, working group SC-02-12
2015-11-12

Note on normative language

In AES standards documents, sentences containing the word “shall” are requirements for compliance with the document. Sentences containing the verb “should” are strong suggestions (recommendations). Sentences giving permission use the verb “may”. Sentences expressing a possibility use the verb “can”.

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0 Introduction

0.1 General

This document contains the technical specification of the AES70-3 protocol of AES70, the Open Control Architecture. AES70-3 supports AES70-compliant remote control and monitoring of media devices over TCP/IP networks.

0.2 Documentation conventions

This document refers both to general data types that are used in all AES70 protocols and to specific data types that are only used in AES70-3, In order to distinguish the difference, the names of the general data types start with '**`Oca`**', while the names of the specific data types start with '**`Ocp1`**'.

Numerical values are decimal unless otherwise stated.

A Courier typeface is used to identify programmatic names to distinguish them from regular text.

Where new terminology is first introduced in body text, the term will be set in an italic typeface.

1 Scope

AES70 defines a scalable control-protocol architecture for professional media networks. AES70 addresses device control and monitoring only; it does not define standards for streaming media transport.

AES70 is divided into a number of separate parts. This Part 3 specifies a protocol implementation for TCP/IP networks. It should be read in conjunction with Part 1, Framework, and Part 2, Class Tree.

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.

AES70-1 *AES standard for Audio applications of networks - Open Control Architecture - Framework*. Audio Engineering Society, New York, NY., US.

AES70-2 *AES standard for Audio applications of networks - Open Control Architecture - Class Structure*. Audio Engineering Society, New York, NY., US.

RFC 3279 *Dynamic Configuration of IPv4 Link-Local Addresses*. Internet Engineering Task Force (IETF), 2005.

RFC 4279 *Pre-Shared Key Ciphersuites for Transport Layer Security (TLS)*. Internet Engineering Task Force (IETF), 2005.

RFC 4862 *IPv6 Stateless Address Autoconfiguration*. Internet Engineering Task Force (IETF), 2007.

RFC 5246 *The Transport Layer Security (TLS) Protocol, Version 1.2*. Internet Engineering Task Force (IETF), 2008.