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PEOPLE'S REPUBLIC OF CHINA**

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**Audio applications of networks-open control architecture - Part
1: Framework
(English Translation)**

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Foreword

GY/T 322 "Open Control Architecture for Network Audio Applications" is divided into the following three parts.

-Part 1. Framework;

-Part 2. Class structure;

-Part 3. Protocols for TCP/IP networks.

This part is the first part of GY/T 322.

This section is drafted in accordance with the rules given in GB/T 1.1-2009.

This section is prepared with reference to AES70-1-2015 "Open Control Architecture for

Network Audio Applications Part 1. Framework".

Please note that some elements of this document may involve patents. The issuer of this document is not responsible for identifying these patents.

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0.1 Overview

The Open Control Architecture (OCA) specifies an extensible control protocol architecture for professional media network monitoring. Open control architecture only Regarding device monitoring, there are no defined standards for transmitting streaming media or describing media content. As long as the underlying communication network can carry open control Monitoring architecture, it can be integrated with any streaming media transmission protocol.

The open control architecture does not provide a complete device implementation model. The open control architecture establishes the monitoring function model of the device and does not include its all signal paths. If certain elements of the equipment do not have remote controllable features, it is not necessary to it is expressed in the protocol interface.

The first part of the open control architecture is based on AES70-1-2015 "Open control architecture for network audio applications Part 1. Framework" the second part of the open control architecture defines the class structure of the open control architecture for media network monitoring. Part 2 is a reference Prepared by AES70-2-2015 "Open Control Architecture for Network Audio Applications Part 2. Class Structure" the third part of the open control architecture is based on AES70-3-2015 "Open control architecture for network audio applications Part 3. For "TCP/IP Network Protocol", the original English text can be obtained from

0.2 Architecture goals and constraints

The open control architecture is based on the following functional requirements and requirements.

a) Functional

The open control architecture supports the following functions.

- 1) Discover devices connected to the network that conform to the open control architecture;
- 2) Define or undefine the media stream path between devices;
- 3) Perform control operations and parameter configuration for devices that conform to the open control architecture;
- 4) Perform monitoring operations and parameter configuration for devices that conform to the open control architecture;
- 5) For devices with reconfigurable signal processing and/or control capabilities, define and manage configuration parameters;
- 6) Upgrade the software and firmware of the controlled device. Includes fail-safe upgrade capabilities.

b) Security

The open control architecture supports the following security measures for data control and monitoring.

- 1) entity authentication;
- 2) Anti-eavesdropping;
- 3) integrity protection;
- 4) Freshness-"Freshness" here refers to the authenticity of the replay message detected in the replay attack.

c) scalability

The open control architecture supports networks with at least 10,000 application devices. Open control architecture applies physical distribution of equipment Line minimum limit.

d) availability

The open control architecture supports high availability by providing the following features.

- 1) Device management of devices that conform to the open control architecture;
- 2) Manage the network connected to the equipment that complies with the open control architecture;
- 3) Efficient network re-initialization after errors and configuration changes.

e) Robustness

The open control architecture supports robustness by providing.