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ANSI/CEA Standard

Control Network Protocol Specification

ANSI/CEA-709.1-C

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Foreword

This standard was developed under the auspices of the CEA R7.1 Home Controls System Subcommittee.

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CONTROL NETWORK PROTOCOL SPECIFICATION

1 Scope

This specification applies to a communication protocol for networked control systems. The protocol provides peer-to-peer communication for networked control and is suitable for implementing both peer-to-peer and master-slave control strategies. This specification describes services in layers 2-7. In the layer 2 (data link layer) specification, it also describes the MAC sub-layer interface to the physical layer. The physical layer provides a choice of transmission media. The interface described in this specification supports multiple transmission media at the physical layer. In the layer 7 specification, it includes a description of the types of messages used by applications to exchange application and network management data.

2 Normative References

The following standards contain provisions that, through reference in this text, constitute normative provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed in 2.1.

2.1 Normative Reference List

[1] CEA-852 Tunneling Component Network Protocols Over Internet Protocol Channels

2.2 Normative Reference Acquisition

CEA Standards:

- Global Engineering Documents, World Headquarters, 15 Inverness Way East, Englewood, CO USA 80112-5776; Phone 800-854-7179; Fax 303-397-2740; Internet <http://global.ihs.com>; Email global@ihs.com

3 Related Documents

For complementary specifications, see references listed in the bibliography at the end of this document.

4 Definitions and Symbols

4.1 Use of Terms

The following section introduces the basic terminology employed throughout this document. Moreover the terms *must*, *must not*, *should*, *should not*, and *may* when they appear in this document are used to convey requirements of conformance in accordance with the definitions in [4] (RFC 2119). Most of it is commonly used and the terms have the same meaning in both the general and the CEA-709 context. However, for some terms, there are subtle differences. For ex-