P1722.1

Submitter Email: mxmora@ieee.org
Type of Project: New IEEE Standard
PAR Request Date: 28-Jul-2009
PAR Approval Date: 11-Sep-2009
PAR Expiration Date: 31-Dec-2013
Status: PAR for a New IEEE Standard
Project Record: 1722.1

1.1 Project Number: P1722.1
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for Standard Device Discovery, Connection Management and Control Protocol for IEEE 1722 Based Devices

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3.1 Working Group: IEEE Standard Device Discovery, Connection Management and Control Protocol for P1722 based devices (C/MSC/P1722.1)
Contact Information for Working Group Chair
Name: Matthew Mora
Email Address: mxmora@ieee.org
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Contact Information for Working Group Vice-Chair
None

3.2 Sponsoring Society and Committee: IEEE Computer Society/Microprocessor Standards Committee (C/MSC)
Contact Information for Sponsor Chair
Name: James Davis
Email Address: bob@scsi.com
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Contact Information for Standards Representative
None

4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 12/2010
4.3 Projected Completion Date for Submittal to RevCom: 10/2012

5.1 Approximate number of people expected to be actively involved in the development of this project: 30
5.2 Scope: This standard specifies the protocol, device discovery, connection management and device control procedures used to ensure interoperability between audio and video based end stations that use IEEE 1722 based stream on IEEE 802 based networks.
5.3 Is the completion of this standard dependent upon the completion of another standard: Yes
If yes please explain: IEEE Standard for Layer 2 Transport Protocol for Time Sensitive Applications in Bridged Local Area Networks (P1722)
IEEE standard for Local and Metropolitan Area Networks: Virtual Bridged Local Area Networks - Amendment 9: Stream Reservation Protocol (SRP) (P802.1Qat)

5.4 Purpose: To facilitate interoperability between stations that stream time-sensitive audio and/or video across LANs providing time synchronization and latency/bandwidth services, this standard defines the device discovery, connection management, stream setup, control, and teardown protocols.
5.5 Need for the Project: Increasingly, entertainment media is digitally transported. Streaming audio/video and interactive applications over bridged LANs need to have comparable real-time performance with legacy analog distribution. There is significant end-user and vendor interest in defining a simple yet common method for handling real-time audio/video suitable for consumer electronics, professional A/V applications, etc.æ
Technologies such as IEEE 1394, Bluetooth and USB exist today but each has their own encapsulation, protocols, timing control, etc. such that building interworking functions is difficult. The use of a common audio/video transport over multiple IEEE 802 network types will realize operational and equipment cost benefits.æ
By ensuring that all IEEE 802 wired and wireless devices share a common set of discovery and control mechanisms for P1722 devices, we lessen the effort of producing interworking units between IEEE 802 and other digital networks.

5.6 Stakeholders for the Standard: Developers and users of bridged LAN and end-point systems supporting audio/video applications.

Intellectual Property
6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No
6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

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7.1 Are there other standards or projects with a similar scope?: Do Not Know
If Yes please explain:
and answer the following
Sponsor Organization:
Project/Standard Number:
Project/Standard Date:
Project/Standard Title:
7.2 International Activities
a. Adoption
Is there potential for this standard (in part or in whole) to be adopted by another national, regional or international organization?: Do Not Know
Organization:
Technical Committee Name:
Technical Committee Number:
Contact Name:
Phone:
Email:
b. Joint Development
Is it the intent to develop this document jointly with another organization?: No
c. Harmonization
Are you aware of another organization that may be interested in portions of this document in their standardization development efforts?: Do Not Know
Organization:
Technical Committee Name:
Technical Committee Number:
Contact Name:
Phone:
Email:

8.1 Additional Explanatory Notes (Item Number and Explanation): 5.4 Par Reason

A great deal of work and effort of late has been applied to the development and specification of IEEE 802 based networks that provide networking services for real time applications. To further the work and to provide maximum interoperability of real-time audio and video streaming applications, we must define common device discovery, connection management and control protocols to successfully integrate the devices in to a usable system. Additionally, there must be standardized approaches for the use of synchronization/presentation time stamps and use of 802.1Qat connection management procedures.
Unfortunately, some of the protocol mechanisms and formats utilized by applications providing streaming audio and video are entangled with low level network layers. This makes them unsuitable for adoption in a layered networking application.
For IEEE 1394 bus based networks, a working implementation exists today that meets most of the needs for real-time audio and video streams device discovery, connection and control. We will start with the AVC based solution and adapt it for use on IEEE802.x networks.
Unfortunately for IEEE 802, the IEC 61883 series of standards uses mechanisms, formats, specific low level services and functions provided by IEEE 1394 that are not provided by IEEE 802.
For the reasons stated above, a new standard is needed to provide a common set of protocol encapsulations and mechanisms by starting with AVC protocol encapsulations and mechanisms, and modifying them to accommodate alternate IEEE LLC and MAC layer protocols.
The title for 1722 will be: IEEE Standard for Layer 2 Transport Protocol for Time Sensitive Applications in Bridged Local Area Networks