

IEEE 1722a

Assumptions

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Green Text = Agreed to at a Face 2 Face (was Blue or Red)

Blue Text = Newly Agreed to (was Red at last Face 2 Face)

Black Text = Not Decided

Changes Marked with Red from last version

Subtype Assignment

- New subtypes
 - 0x02 AVTP Audio Format
 - 0x03 AVTP Video Format
 - 0x04 Time Sensitive Control Protocol
 - 0x05 CAN/Flexray
 - 0x7a AVDECC Discovery
 - 0x7b AVDECC Enumeration and Control
 - 0x7c AVDECC Connection Management
 - 0x7d Media Clock Negotiation
- Possibly redefine the C/D bit to be part of the subtype to make better use of the subtype field. (Needs to be looked at in document)

Changes to current standard

- Redefine gateway info to only be valid for 61883 formats
- Gateway info field to be replaced by a protocol specific field that can be used in new protocols

AVTP Audio Format

- Support PCM audio
- Event Markers
- DTCP Support
- HDCP Support

AAF LPCM Format

- Timestamp in every packet
- Define a base required default format, a talker must support one of the formats, a listener must support both of the following:
 - 48k, 6 samples/packet, 32-bit sample size, 8 channels
 - 44.1k, 6 samples/packet, 32-bit sample size, 8 channels
- We may want to split the defaults up by market

AVTP Video

- Support MJPEG
- Support new native AVTP formats
- Event Markers
- DTCP Support
- HDCP Support

AVF Formats

- MJPEG

Media Clock Negotiation

- Frequency multipliers to match 1722.1
 - 1.001, 1/1.001, 24/25, 25/24
- Clock Quality field(s) need to be added between priority1 and priority2
- Clock Quality should be determined by PPM drift or Allan deviation (TBD)
- Clock Quality field related to gPTP interval 8ns or 25ns
- Required Crystal GUID to be added for informational purposes to MCN Advertise packet

Real Time Format Change (the HDMI problem)

- Include markers to indicate change
 - Prechange indication??
 - Format identifier??
 - Formats are prenegotiated
 - One bit could set to indicate a change is coming and then reset to indicate the change is here
- Required in AVTP audio/video formats
- Add bits to 61883 base formats
- Could this be used by the 802.1 multitalker problem??

Standard Management Variables/Counters

- Counters being considered
 - Missing sequence numbers
 - Sequence number breaks
 - Bad presentation times
 - Stream packets received
 - Missed stream packets counter on a per stream basis
 - Unexpected stream packets counter
 - Late arriving packets
 - Others??
- See presentation from Chris Pane
- <http://grouper.ieee.org/groups/1722/contributions/1722-cpane-debug-counters-and-variables-proposal.pdf>
- Still looking for more idea.

1722 PICS

- 1722 only (no 61883 specific PICS)
- Need PICS for AVTP audio/video
- Need PICS for MCN

DTCP/HDCP

- Include bit fields to support DTCP/HDCP
- The DTCP spec uses the high order 2 bits of the sy field to support DTCP
- AVTP formats will provide 4 bits to be used by DTCP and HCDP
- Add 1 bit from a reserved field to support HDCP in the 61883 formats
- 1722 will not work with the DTLA to get approval
- 1722 will only provide what is needed such that someone else could get formats approved by the DTLA

Automotive Support

- CAN Gateway Protocol
- Flexray Gateway Protocol
 - FlexRay synchronization

- Presentation coming from Automotive specific companies

Low Latency Security/Encryption

- Informative Annex
- MacSec – per link encryption
- 802.1X – per LAN authentication
- DTCP – end to end AES 128 encryption
- How do I secure a live performance?
 - Class A Stream latency

Synchronization bits

- Currently M0 and M1
- Do we need more bits? Maybe 4 bits
- M0 used for format change
- M1 used to synchronize external events
- Can we add these same bits to the 61883 streaming formats?

Other items?