
Audio Video Bridging (AVB) Assumptions

IEEE 802.1 AVB Conference Call

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Green Text = Agreed to on Various AVB Calls
Changes Marked with Red

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Revision History

- **Avb-pannell-assumptions-0407-v3:** After 4/04/07 call
- Avb-pannell-assumptions-0307-v2: After 3/28/07 call
- Avb-pannell-assumptions-0307-v1: Before 3/28/07 call

AVB Assumptions

- Link Speed
 - 802.3: 100 Mbit/sec or faster (i.e., no 10 Mbit support)
 - 802.11: Leaf node: ?? Bridged (Core): ??
- Link Duplex
 - 802.3: Full Duplex only (i.e., no half duplex support)
 - 802.11: ??
- Maximum Frame Size
 - 802.3: 1522 bytes? Or 2000 bytes? (i.e., no Jumbo frame support)
 - 802.11: ??
- Flow Control
 - 802.3x is not supported and cannot be used on AVB links
- 802.1 Q Tagging
 - All AVB Streams will be Q Tagged
 - All PTP frames (for 802.1AS) will NOT be Q Tagged
 - All SRP frames (for 802.1Qat) will be Q Tagged

AVB Assumptions

- Priorities
 - AVB Class 5 Streams will use a Q Tag priority of 5
 - AVB Class 4 Streams will use a Q Tag priority of 4
 - Legacy frames in the AVB cloud CANNOT use Q Tag priorities of 4 or 5
 - What about Vista? Need a Provider Network Model or
- Class Observation Interval
 - AVB Class 5 is 125 uSec
 - AVB Class 4 is 1-5 mSec?
- Latency
 - 802.3: AVB Class 5: Less than 2 mSec over 7 bridge hops
 - 802.3: AVB Class 4: Less than 10 mSec over 7 bridge hops
 - 802.11: ??
- Latency Variation (Jitter)
 - 802.3: Need to discuss objectives – effects shaper

AVB Assumptions

- PTP Clock Quality
 - Bridges: +/- 100ppm or better from a free running >25 MHz clock
 - End point time synchronization accuracy (up to 7 hops) <= 1 uSec
- Stream Identification
 - Q Tag priority 4 or 5 entering an AVB port?
 - MAC DA address?
- DA MAC Address
 - Multicast Range?
 - Unicast?
- PONs?
- VLANs
 - The VID is a VLAN and not a Stream Identifier
 - Stream Identifiers must be unique per VID
- AE Environments
 - Any AVB Streams and PTP & SRP frames can be AE Tagged
- Provider Networks?

AVB Assumptions

- SRP will allocate a Static bandwidth for a flow (i.e., no support for Dynamic bandwidth changes)
- Other Assumptions ...
 - (this is a growing work in process)