1722.1 Assumptions

Oct 2009 – F2F

Green Text = Agreed to at a Plenary (was Blue)
Blue Text = Newly Agreed to (was Red at last Face 2 Face)
Black Text = Not Decided
Changes Marked with Red from last version

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Revision History

- Avb-pannell-assumptions-0307-v1: Oct 2009 F2F
Definitions

- **Talker**: An AVB end node that sources streams
- **Listener**: An AVB end node that sinks streams
- **Stream Source**: Source of a single 1722 stream
- **Stream Sink**: Destination of a single 1722 stream
- **Channel**: One component of stream (i.e., the left channel of a stereo stream)
- **Potential Stream**: A stream that is advertised but has no Listeners associated with it
- **Reserved Stream**: A successful Qat reservation associated with a given Talker but data is not flowing
- **Active Stream**: A successful Qat reservation associated with a given Talker and data is flowing
Task #1 Device Discovery

• Definition: Device exists and can talk the 1722.1 language

• Our current base line is to use Zeroconf – see zeroconf.org
  – We need to define Zeroconf DNS-SD
    • These are a: txt record, srv record and a ptr record (Matt to propose)

• Devices (Talkers and Listeners) need to support Auto IP (to acquire IP addresses) and DNS-SD (to resolve unique names) and 1722 MAAP (to acquire MC stream addresses)
Discovery Items

• Sample Rate
• Direction (Input vs. Output)
• Stream (Channel?) count
• Word format
• Plane-to-plane delay (1722 to human interface and visa versa)
• Version Control – i.e., 1722.1 STD Rev of the Spec
• ID Record
  – Mfg fixed and User settable (when set – I’m configured)…
• Pass-through for generic communications
  – For example: to get Latency numbers for non-integrated devices
• Locate device
  – Light up an LED on a specific device – or a Label display
  – Press a button on a device
  – Enumerated
• I’m OK or I’m not OK bit (i.e., low battery)
Task #2 Enumeration

• Definition: Finding the capabilities of the device

• Use the types defined in 1722 (i.e., 61883…) (Rob to propose)
Enumeration Goals

- Need to be able to send out a single 7.1 (8 channel) stream where each speaker attached to it receives this stream and attaches its single speaker to one of the stream’s channels
  - This requires a device like this has some form of an enumerator (a switch to select left-rear, etc.)
- Need a set of minimum capabilities that all devices in a given category must support (i.e., all speakers must support xyz)
Min. Parameters

- E.g., VGA mode for displays – probably different per profile
- Need to discover a device
- Need to know what it can do
- What layer do we use? – should control packets be routable from the internet? It would be nice for this to work over a VPN. To just talk to Controllers or to talk directly to end nodes? We want low cost end nodes (i.e., UDP?).
Task #3 Connection Management

• Definition:
Task #4 Control

• Definition:
Profiles

• Consumer
  – True Plug-n-Play
  – Control: Standardize Mute, Volume up/down
  – Support for WiFi and/or other wireless technologies
  – User settable and readable settings (i.e., left read speaker)

• Professional
  – True Plug-n-Play
  – Redundancy
  – Control: Don’t’ want in 1st standard
  – No support for WiFi (as it is today) – but support future low latency wireless
  – Wireless for intercom
  – Recover in the absence of a Controller back to the last known state
  – New Controller need to sync to existing network state
  – Be able to swap devices in and out
  – Fast boot up time in the order of ?? secs

• Standardize a way to control devices (volume)
  – Report what a device is capable of doing (aka, USB 2.0)
  – Although desirable, this may be too much for a 1st standard

• Home model is a subset of the pro model
Diagnostics

- Cloud Issues
  - New issues that are introduced by AVB
- Legal Issues (e-911 – IEC 60849 & ISO 7240, 7241)
  - Life safety issues
Problems

• Support a roaming endpoints
  – Need 802.11 to support full bridging protocols
• Security
• Authentication
• Device Naming
  – One from manufacture & one for user
• Redundancy
• Fault Diagnosis
  – Reporting failures and why – where is the error