# 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