

hi Matt,

I'm not sure if you have other agenda topics for the P1722.1 phone call Monday, but I'm glad to talk over the attached proposal for DNS-SD records if that would help.

I've incorporated Girault's suggestion for a bit-map of Talker/Listener capabilities. While that's admirably compact, it would be good to understand how the browser knows the secret decoder chart for the bit-map.

Let me know if there are comments,

/guy

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The SRV Record simply identifies the host name of a device that can serve 1722. We'd change tcp to udp should the enumeration protocol use udp, and insert the appropriate port number:

```
_p1722._tcp.example.com 86400 IN SRV 0 5 xxxx example.com
```

The TXT record would give information that would either enable access to the enumeration service (which is not DNS-SD itself, of course) or information that would be helpful in a DNS-SD browser, assisting a person in understanding what's on the network.

Since we're not managing streams through DNS-SD, there is not any useful stream-specific information that can go into the TXT record.

Here's a guess of what we might put in a TXT Record.

We should note that the TXT record is more-or-less static, that is, it doesn't represent current status of the device, it indicates device capability. So the TXT record may indicate a device that is capable of Talking at three different bit rates, but that doesn't mean it's *currently* talking at all.

I'm including three version-numbers...

- the Text Record version number (as Stuart Cheshire suggests),
- the version of the enumeration protocol that would be used to learn about streams (I have that down as 1722.1 version)
- and the version of 1722 streaming. This could be learned through the enumeration protocol, but it might save steps to know in advance.

- I've added a "UserName" field, which displays the user-provided name for the device (discussion on what happens with this name is not unique would be helpful)

Then I'm including records to identify the capabilities of the device/service.

- Talker and Listener Capabilities. Each key may have an associated bit field that

gives summary capabilities (see note later).

- then some kind of functional designation, ie, speaker, amp, mixer, effects-box, video camera, etc. I'd assume this key would be helpful in organizing the list of AVB-capable devices in a browser, but probably does not have an impact on the way a call is set up.

- and we probably want a Make and Model designation, again for browsing what's on the network. We could also use some kind of formal organizational identifier number in addition to the human-readable Maker's name so that manufacturers could reliably find their own devices.

In the example below, only one of the names listed in braces would actually be present.

```
TxTVers=1.1
1722Vers=1.0
1722.1Vers=1.0
UserName=Front-Left-14

ListenerCap=0x31
TalkerCap=0x31
Maker={Adamson, Avid, Apple, Harman, ...} [and a thousand others]
MakerOUI={a number unique to each manufacturer}
Device={Mixer, Speaker, FX, Preamp, Amplifier, MediaPlayer, Camera,
Display} [and a thousand other choices]
Model={Crown-MA-9000i, ... }
```

Listener and Talker capabilities are coded as bit-maps to save space. If the field is zero, or not present, the device cannot function as talker or listener, while a non-zero value indicates that the device has *some* capability as either talker or listener.

0x01            in TalkerCap indicates the device can be a talker, in ListenerCap, indicates the device can listen

0x02            supports audio AM824 with coding rate of 44.1

0x04            supports audio AM824 with coding rate of 48 khz

0x08            supports audio AM824 with coding rate of 96 khz

0x10            supports audio AM824 with coding rate of 192 khz

0x20            supports xx video

... etc ..

