Mbus Update

draft-ietf-mmusic-mbus-transport-02.txt

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Quick Reminder

• Local coordination mechanism
• Specification split into three pieces
  – Requirements overview
  – Definition of the “transport protocol”
    • message syntax, addressing, local multicast, reliability, authentication, ...
  – Definition of the message semantics
    • call-control, media tools related commands
Overview of Changes in draft-ietf-mmusic-mbus-transport-02

- Bug-fixes
  - message syntax ABNF
  - minor corrections and clarifications
- new section „Awareness of other Entities“
  - explicit specification of requirements for implementations
  - new algorithm for mbus.hello timer calculation deploying timer reconsideration
Mbus Entity Awareness

• General idea:
  – Each Mbus entity sends periodic heartbeat messages (`mbus.hello`)
  – Received hello-messages are used
    • to learn of the existence of other entities on startup (bootstrapping)
    • to track the aliveness of entities
mbus.hello

- Fixed timer interval changed to dynamically adapted intervals
  - Scales according to number of entities
    - Number of mbus.hello received by an entity per time unit remains ~constant.
  - Deploys RTCP-like timer reconsideration mechanism to adapt to rapidly changing group size
    - Simpler than RTCP’s interval calculation because bandwidth fraction and sender vs. receiver is less important.
  - Uses randomization in order to avoid synchronization.
mbus.ping

- Problem:
  - Increased timer intervals in larger groups can prolong bootstrapping phase.

- Solution:
  - New command `mbus.ping`
  - Query for the existence of other entities
  - Learn their fully qualified Mbus addresses.

- Example:
  - “Where’s the audio engine (if any)?”:
    - Send a `mbus.ping` to `(media:audio)`.
    - Entities with matching addresses respond with `mbus.hello`.
    - Entity learns requested Mbus addresses.
Next steps

• Mbus-transport considered virtually stable
  – No further features/changes planned
  – Specification of behavior in the absence of Multicast could be useful.
    • Support for simple devices

• One more draft submission before WG-last-call?
Semantic specifications

• Specify the usage of Mbus transport services in specific application areas
  – Definition of address classes, commands and semantics
• Intended as Informational RFCs
• Currently:
  – draft-ott-mmusic-mbus-semantics-00.txt
  – Commands for media engines and call-control
  – Has not been re-submitted yet
Semantic specifications

- **Plan:**
  - Split-up specification into individual parts
  - Provide informational guidelines document for writing semantic specifications (work in progress)

- **Issue:**
  - Which other command classes to go for?
Other Issues

• Connecting physically separated Mbus domains
  – Independent of base spec.? 

• Simple devices
  – Mbus bootstrapping 
    • How to obtain Mbus configuration parameters? 
  – Allowing for Broadcast instead of Multicast?
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