

# **IEEE 802 and QoS: RTP interactions?**

Michael Johas Teener  
mikejt@broadcom.com

# Background

- IEEE 802.1 (Ethernet switches, L2 bridges to other LANs/WANs, etc.) is working on QoS extensions to support streaming services
  - “IEEE 802.1 Audio Video Bridging Task Group”
- Details presented to TSVAREA yesterday
  - see <http://www.ieee802.org/1/files/public/docs2006/avb-mjt-802AVBforIETF-061106.pdf>
  - also <http://www.ieee802.org/1/pages/avbridges.html>

# AVB projects

- Precise time synchronization and clocking service (P802.1AS)
  - absolute synchronization below  $1\mu\text{s}$ , clock jitter below  $100\text{ns}$ , filterable down to  $100\text{ps}$  or less
- Registration and reservation for streams (P802.1Qat)
  - registers streams and reserves bandwidth resources for unicast and multicast streams using traffic-class-based latency rules
- Queuing and forwarding rules for streams (P802.1Qav)
  - traffic shaping rules for class 4/5/6/7
  - class remapping at “AV cloud” edge
- Establishment of interconnected network of cooperating devices (p802.1ABaw?)

# AVB and RTP

- Consumer electronics and professional A/V equipment designers plan to use AVB
- RTP seems like a natural fit for the IP-based streaming
- How do we hook RTP up to AVB?
  - Can RTP take advantage of precise synchronization?
  - Can RTP use bandwidth and latency guarantees
  - What RTP-related session establishment/QoS signaling is best: RSVP? NSIS?
  - Any other higher layers?

# Interaction

- Please consider participating in 802.1 AVB work
  - "subscribe stds-802-1-L <yourfirstname> <yourlastname> " to <mailto:ListServ@ieee.org>
  - plenary IEEE 802 meeting in Dallas, Nov 13-16
  - interim IEEE 802.1 meeting in Monterey, CA, Jan 22-25
- With which IETF groups should AVB try to maintain connection?

**Thanks!**