802.1AB Revision Update

Paul Congdon
Manfred Arndt
Current Status with 802.3at (PoE Plus)

• The following motion passed unanimously with one abstention at the interim meeting in Knoxville, TN:
  – 802.3at intends to use LLDP for L2 classification
  – 802.3at to use LLDP-MED extended power management as starting point

• Current 802.1AB revision PAR covers needs:
  – New and developing 802 standards, such as 802.3at
  – New information elements
  – More rapid exchange of LLDP frames

• No comments received on 802.1AB revision PAR
Scope of L2 power classification

• Propose an efficient Layer-2 power management protocol for enhanced power allocation, that includes the following:
  – Fine-grain power negotiation (initial boot-up and ongoing operation)
  – Dynamic re-negotiation without dropping link (e.g. video call in process)
  – Power priority (e.g. must keep “red phone” alive)
  – Backup power conservation (e.g. extend UPS battery life during disasters)

• Must be practical for both cost-restrained and feature rich endpoints
  – IP Phones, video phones and other communication devices
  – WLAN Access Points, video cameras, Pan-Tilt-Zoom video cameras
  – Card access readers (e.g. door entry)

• Must be backwards compatible with existing pre-PoE Plus devices
Next Steps for PoE Plus

• Write TLV extensions as part of 802.1AB revision
• 802.3at to appoint liaison to coordinate requirements for 802.1AB revision
  – New TLV elements, for example:
    – PD requested maximum power (over and above currently required)
    – PSE available maximum power (over and above currently supplied)
    – More rapid exchange of LLDP frames for timeliness of updates
• Define behavior rules within 802.3at, that describe the management entity interactions when PoE TLVs are sent and received
Overall 802.1AB Revision Work Plan

• Updates to support extended addressing model
  – Define new addresses and indicate which TLVs are sensitive to propagation
  – Modify transmit and receive portions of document
  – Update MIB to support multiple instances in an optimal way
• Editorial clarification of MIB, TLV usage, and other confusions discussed on email reflector
• More rapid exchange of LLDP frames for timeliness of updates
• New TLV elements for 802.3at
  – Requirements and content to be defined by 802.3at
• Any new TLV elements required for AVB and CM? Deadline?