

Update on P802.1CQ and MAAP: Personal Views

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P802.1CQ Status

- Most recent update provided to 1722 WG: 2020-10-20
 - <https://grouper.ieee.org/groups/1722/contributions/2020/1722-Marks-P8021CQ-MAAP.pdf>
 - after Task Group ballot comment resolution
- That contribution said:
 - *PROBEv2 is heard by legacy MAAP devices - can defend with DEFENDv1*
 - *also heard by server; responds with offer*
- It's taken since then to figure out an architecture.
 - Block Address Registration and Claiming (BARC)
 - <https://www.ieee802.org/1/files/public/docs2021/cq-marks-BARC-0321-v00.pdf>
- Next step: preparing a new draft.
 - will be time-consuming

MAAP relationship with BARC

- Slides 11-12 (cq-marks-BARC-0321) explain that Address Registration and Claiming (ARC) supports both:
 - address blocks (ABs), identified by Address Block Identifiers (ABIs)
 - Include local multicast and unicast addresses
 - address ranges (ARs), assigned by MAAP, excluding addresses in blocks specified by BARC ABIs
- Slide 12 shows an AR State Machine interacting with the MAAP State Machine. When it's time to add an AR, the AR State Machine tells MAAP to add that AR. Whenever the MAAP State Machine changes state, the AR State Machine follows. This lets MAAP do whatever MAAP wants to do.

New Claimant and Registrant

- The new Claimant talks to MAAP using the existing MAAP protocol, with one exception: the Probe (message_type=1) uses maap_version=2 instead of 1. This is backward compatible. A legacy device does not care if maap_version>1, because:
 - *All MAAP AVTPDUs received that contain a higher version number and a message type that is defined in the implemented version of MAAP shall be interpreted using the implemented version of MAAP, ignoring all unknown fields. This requires that future versions of MAAP maintain compatibility with the message types implemented in all previous versions of MAAP. (IEEE Std 1722)*
- The new Registrant will respond to such a Probe/v2 by sending an Offer of an Address Block. (This offer won't go to legacy devices since they used Probe/v1; see Slide 18.) The Claimant receiving the Offer has the option to accept the Address Block, independent of whether it claims the MAAP Address Range; see Slide 19, which provides the full detail. A Claimant that ignores the Offer is just doing legacy MAAP.

BARCPDU Format

- MAAP AVTPDU format is unchanged.
- The slides do not detail the BARCPDU format. The BARCPDU format can be completely different from the AVTPDU format, or it can be almost identical.
- Slide 13 says that the BARCPDU Ethertype could be the 1722 Ethertype; if so, the subtype would be "per 1722 WG".
 - would be dependent on sub-assignment, as previously discussed

Next steps

- Next draft of P802.1CQ under development
- Will be sent to IEEE 1722 Working Group for review, by liaison (already approved by 802.1 WG in November 2020)