

IP over Ethernet over 802.16

[draft-ietf-16ng-ip-over-ethernet-over-802.16-02.txt]

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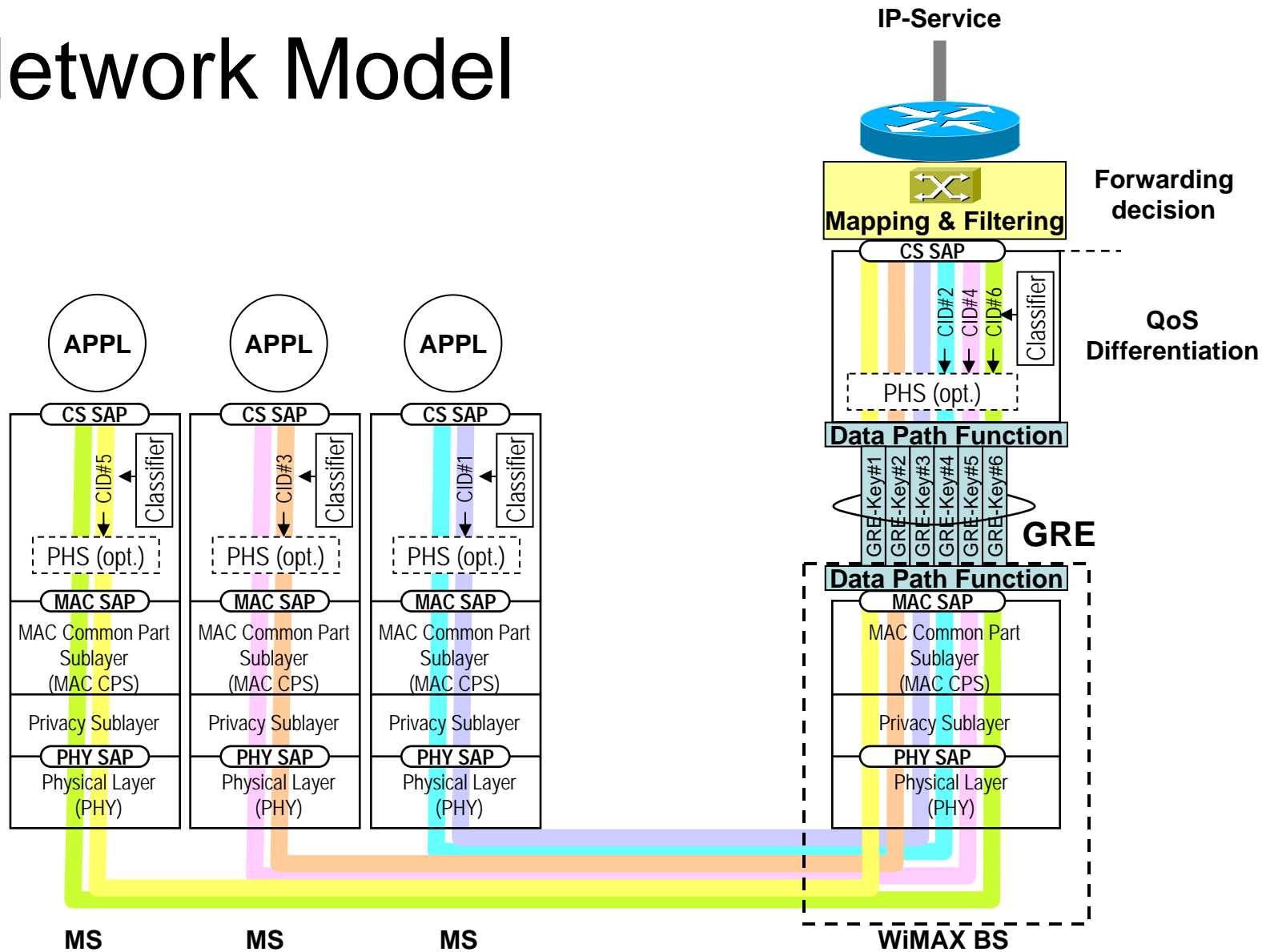
Outline

- Achievements since IETF-68
- 16ng mailing list
- New revision: draft-ietf-16ng-ip-over-ethernet-over-802.16-02.txt
- Adoption of RFC4605
- Deployment of link layer multicast (MBS)
- Conclusion and next steps

Achievements

- Feedback after IETF-68 showed good understanding and agreement on network model for IPoETH in IEEE802.16
- No severe issues detected in I-D
 - Separation of QoS differentiation and forwarding decision
 - Forwarding decision in bridge behind BS
 - see next slide

IEEE802.16 IPoETH Network Model



16ng mailing list

- Only a few postings related to IPoETH-CS
 - Ambiguities in description of multicast behavior of IEEE802.16

New Revision:

draft-ietf-16ng-ip-over-ethernet-over-802.16-02.txt

- Introduction of normative language
 - Main goal for -02 revision
- Editorial clarifications
- Adoption of RFC4605 for IGMP/MLD proxying
- Appendix on ‘Multicast CID Deployment Considerations’
 - to show why multicast CIDs are not deployed for IPoETH-CS

Adoption of RFC4605

- Issue:
 - RFC4541 on IGMP/MLD snooping switches is Informational RFC
 - not suited for normative references
 - RFC4605 on IGMP/MLD proxying is aimed for routers in simple tree topologies
- Ethernet Network Model for IEEE802.16 fits well into simple tree topology
 - RFC4605 mechanisms has been adopted to bridge behind base stations
 - still keeping RFC4541 as informational reference

Appendix:

Issues of Multicast CIDs/MBS

- Incompatibility with advanced radio layer algorithms based on feedback information from the receiver
 - HARQ
 - MIMO
- Incompatibility with advanced antenna systems

cont...

Issues of Multicast CIDs/MBS

- Increased interference level
 - Higher power needed due to missing HARQ
- Less efficient with mobile terminals
 - CID must be configured to provide sufficient signal to noise ratio to the most distant terminal.
 - With moving terminals the radio transmission characteristics may change and may require frequent re-adjustments of the radio link parameters.

cont...

Issues of Multicast CIDs/MBS

- Loss of Idle Mode for inactive terminals
 - Terminals have to process multicast CIDs even when 'meaningless' information is transferred
- Increased complexity for the whole system
 - Multicast CIDs require management of group keys

Conclusion and next steps

- Revision -02 provides essential enhancements (normative language)
- Concept of IPoETH-CS has been shown to be quite mature
- draft-ietf-16ng-ip-over-ethernet-over-802.16-02.txt is ready for WGLC