IEEE P802.11  
Wireless LANs

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| Technicals | | | | |
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Resolutions of unresolved technical comments in 11-15/556r13 assigned to Donald Eastlake and Norman Finn.

# Resolutions

CID Comment

[Proposed Change]

**Resolution**

062 "Editor's Note: We plan to take four address use by 802.11ah into account at a later  
date because 802.11ah is not in the 802.11REVmc D4.0 base for this draft."  
  
This is not the way to handle this. 802.11ah \*is\* in your baseline, and you can propose changes to it to support GLK.

[Add support for 802.11ah features, or indicate that it cannot support GLK.  
  
Pay particular attention to the 802.11ah relaying function.]

**Revise. Tbd.**

133 I don't think the words "roughly replaced" are appropriate in this amendment. Either the DS is replaced or not.

[Modify the word "roughly" or re-write this clause, e.g. "Within a GLK ESS, the DS is replaced by an IEEE 802.1Q conformant network...". Also see clause 4.6 for some suitable text P12L23]

**Revise. Fixed in D1.3, see CID 7.**

181 EPD capability is specified twice for DMG STAs. Once here and once in the Capability Information field itself. Also in Fig 8-500 the field name includes a "Sta Capability" which is not consistent with the definition here.

[Either remove the capability field here or provide a motivation for its presence in two locations for DMG STAs. If the latter is performed then keep consistency between the field name in the figure and the EPD definition.]

**Reject. See CID 120.**

196 The 802.11ak is providing an important architectural extension to 802.11 that " ...extends the 802.11 standard so that communication links can be established between General Link (GLK) STAs that are usable as a transit links inside a network conformant to IEEE Std 802.1Q." IEEE 802.11 currently defines non-AP non-mesh STAs as leaf nodes of a network. The associated security model for such STAs is based on this assumption and is based on a asymmetric model (802.1x) that is not appropriate for GLK STAs. The considerations for key establishment and connectivity for a GLK TA are not the same as a leaf node. The proposed specification has no text describing the required changes for key establishment, authentication, authorization and access control for the proposed changes. THe security section is completely empty and no text anywhere mentions the implications on the security architecture of these fundamental architectural changes.

[The specification must address the changes in the security architecture associated with the changes in the topology model. A couple different options would be possible by the working group that might include: referencing the appropriate new mechanisms that might be used from 802.1 specifications, describing possible modifications to current .11 security (802.1 based) for a more symmetric GLK application or describe the requirements of link establishment requirements in context of GLK usage.]

**Reject. The 802.11ak extension merely makes 802.11 links as usable for transit as, for example, 802.3 links are. That you can make an extensive network from 802.11ak links using the 802.1Q bridges or equivalent devices that are connected to 802.11ak APs/STAs is no different from the ability to make such a network using 802.1Q bridges or the like connected to 802.3 links. Security of such networks as a whole is the business of the bridges or similar devices and is out of scope for 802.11. Thus, there is no particular need to extend the security of 802.11 for 802.11ak. (And 802.11 does provide symmetric security (SAE).)**

214 Should 11ak provide mechanisms for fast convergence after roaming w/o floods of source learning?

[802.11r supports fast roaming, but not sure what 802.1Q has, and wireless devices are by their very nature more mobile. Should we have a mechanism to migrate the ISS SAP vs removal/disablement? If 802.1Q has such mechanisms, it would be good to call out explicitly and require their usage.]

**Reject. This is a problem for 802.1Q.**

412 "A GLK mesh STA coordinates with the 802.1AC IEEE 802.11 General Link Convergence function": the text in this paragraph looks more like it belongs in cause 4 than in a normative clause. Either specify what frames the mesh STA uses or reference the subclause that specifies those communications.

[Reference the clause(s) that specify the frames, elements, etc. used in the coordination with the convergence function.]

**Revise. Tbd**

437 It is not clear GLK mesh STAs need not have access to a DS. Only Non-GLK mesh STAs must have access to a DS to be called a mesh gate.

[Replace: "Non-GLK mesh STAs that have access to a DS and GLK mesh STAs are called mesh gates."  
  
With: "A mesh gate is either a GLK mesh STA attached to a bridge or a Non-GLK mesh STA that has access to a DS."]

**Accept.**

# References:

11-15/556r13, “**LB212 Working Group Ballot Comments**”, Donald Eastlake 3rd (Huawei Technologies)