IEEE P802.11
Wireless LANs

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| LB 204 Comment resolutions related to Common ANQP Group  |
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Abstract

This contribution proposes resolutions to the CIDs: 6010, 6184, 6215, 6222, 6969, 6914, 6970,

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| **CID** | **Clause Number(C)** | **Page(C)** | **Line(C)** | **Comment** | **Proposed Change** | **Resolution** |
| 6010 | 8.4.2.172 | 43 | 64 | "The Common ANQP Group (CAG) is a group of ANQP elements, which do not change on a rapid basis".Please learn the difference between "that" and "which". While syntactically correct, "that" is the correct word here, because "do not change" is part of the definition of a CAG. | ", which" -> "that" | Accept |
| 6184 | 10.25.3.2.1 | 94 | 47 | SSID is not unique to an AP, but to an ESS. Please clarify whether the CAG Version should be associated with only an SSID? Since the sentence "stored CAG Version and the values of BSSID, HESSID, or SSID associated with the responding AP" seems to allow that possibility to allow a CAG Version to be associated with an SSID only. Similar comments for the rest of the paragraph. | If the CAG Version is associated with a BSS, instead of a ESS only, then change the text to read as "The STA stores the CAG Version and the BSSID or HESSID of the responding AP. In addition, it may store the SSID of the responding AP." make similar changes where appropriate in the same section. | Revised. “The STA stores the ANQP CAG Version and the BSSID, or HESSID and the corresponding SSID, of the responding AP. “ |
| 6215 | 8.4.2.172 | 43 | 64 | Need to compare this clause with 8.4.4.23 (Common Group ANQP-element). The words/phrasing needs to be more compatible and cross-referencing between them to clarify their relationship. | Harmonize these two clauses, both in terms of the names being used and how they relate to each other. | Revised. See the proposed text from the Doc: 11-14-1457-02-00ai  |
| 6222 | 8.4.4.23 | 66 | 64 | Lots of confusion between this and 8.4.1.172. For instance, what is the difference between a "CAG Version" used here and a "CAG Number element" used there? The descriptions seem to be the same. If there is a difference, it needs to be explicitly stated. | Review and revise as needed. | Revised. See the proposed text from the Doc: 11-14-1457-02-00ai |
| 6969 | 8.4.2.172 | 44 | 21 | I think the sentences at P44.21 and P44.25 require some more explanation as to what happens what the CAG version reaches 255. | Change the sentences to read:The CAG Version is incremented every time the value of, or presence of, an advertisement protocol element within the CAG of the associated advertisement protocol or InfoID are added, deleted, or changed. The CAG Version shall increment from 255 to 1, so that if a STA receives a value of zero in this subfield, this will be discarded. | Accept |
| 6914 | 8.4.4.20 | 64 | 45 | If an AP supports multiple BSSID, each BSS may have different ANQP information. The name of "AP List ANQP" is not adequate. | Replace "AP List ANQP" by "BSSID List ANQP" throughout the draft. | Revised. Replace “AP List ANQP” with “BSS List ANQP” |
| 6970 | 10.25.3.2.1 | 94 | 45 | This paragraph is rather hard to understand and requires re-writing. | Change the paragraph to read:A FILS STA stores the ANQP CAG Version Number available from an AP, together with the ANQP attributes and information from the Common Advertisement Group ANQP-element for later use. The STA stores the ANQP CAG Version Number and the values of BSSID , or HESSID and SSID associated with the responding AP .At a future time at an AP, a FILS STA should check its locally stored ANQP CAG Version Number with the ANQP CAG Version Number received from that AP. If the received ANQP CAG Version Number equals the stored value of an ANQP CAG Version Number (together with the same value of BSSID, or HESSID and SSID), the STA need not initiate an ANQP query request for any of the ANQP-elements contained within the CAG and shall use the stored Common Advertisement Group ANQP-element attributes and information within that STA instead. | Revised. “The STA stores the ANQP CAG Version and the BSSID, or HESSID and the corresponding SSID, of the responding AP. “ |

# Conventions

 Red color is used to show changes to the revision D3.0.

# Proposed Changes to 802.11ai/D2.1 Specification Text

**CID** 6010, 6215, 6222, 6969

*Instruct the editor to make the following changes:*

**8.4.2.172 CAG Number element**

The Common ANQP Group (CAG) is a group of ANQP elements **that** do not change on a rapid basis.

The CAG Number element provides the current version number of the CAG (CAG Version). The AP obtains the current value of the CAG Version from the ANQP server. How the AP obtains the value of the CAG Version is out of scope of this standard. The CAG Number element is used by the STA to determine if a change in the CAG occurred from the last visit of the STA to a particular AP. The CAG Number element is optionally present in the Beacon or Probe Response frame to reduce ANQP exchanges when dot11InterworkingServiceActivated is true and dot11FILSActivated is true.

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The Element ID and Length fields are defined in 8.4.2.1 (General).

The CAG Version is a 1-octet field whose value is an unsigned positive integer indicating the **current** version **number** of the CAG. ~~The CAG Version is incremented every time the value of, or presence of, an ANQP-element within the CAG or InfoID are added, deleted, or changed. CAG Version is always positive, therefore a value of zero in this field will be neglected by the receiving STA.~~

**The CAG Version is incremented every time the value of, or presence of, an advertisement protocol element within the CAG of the associated advertisement protocol or InfoID are added, deleted, or changed. The CAG Version shall increment from 255 to 1, so that if a STA receives a value of zero in this subfield, this will be discarded.**

***Insert new clause as follows:***

**8.4.4.23 Common Group ANQP-element**

The Common **G**roup ANQP-element provides the Info IDs for the ANQP-elements contained within a CAG

and the current value of the CAG Version **associated with ANQP** .



 **Figure 8-604e—Common Group ANQP-element**

**CID 6184, 6970**

Resolution: Revise.

*Instruct the editor to make the following changes:*

**10.25.3.2 ANQP procedures**

**10.25.3.2.1 General**

***Insert the new paragraph at the beginning of this clause as follows:***

A FILS STA ~~should~~ store**s**, ~~for later use,~~ the ANQP CAG Version available from an AP, ~~and also store the ANQP~~

~~attributes and information corresponding to that CAG Version~~ together with the ANQP attributes and information from the Common ANQP Group ANQP-element for later use.. The STA stores the ANQP CAG Version and the values of BSSID, **or** HESSID~~, or~~ and the corresponding SSID associated with the responding AP. ~~A STA uses this CAG Version to~~

~~determine if the CAG changed from the last STA's visit to that AP.~~ At a future time at an AP, a FILS STA should check its locally stored ANQP CAG Version Number with the ANQP CAG Version Number received from that AP. ~~In order to reduce the network selection delay, if CAG Version is provided from the AP, a FILS STA should check the locally stored CAG Version to decide whether it should initiate an ANQP query for new information.~~ If the received CAG Version equals the stored value of a CAG Version associated with the corresponding value of BSSID, or HESSID~~, or~~ and the corresponding SSID for the AP, the STA shall not initiate an ANQP query request for any of the ANQP-elements of the ANQP CAG and shall use the stored CAG ANQP attributes and information within that STA instead.

**CID 6914**

Resolution:Revised

*Instruct the editor to make the following changes:*

Replace "AP List ANQP" by "BSS List ANQP" throughout the draft.