IEEE P802.11
Wireless LANs

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| Comment resolutions for element ID CID 1014 |
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Abstract

Resolutions to LB232 comments on element ID and element identification: CID 1014

## Comment

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| **CID** | **Commenter** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 1014 | Andrew Myles | 4191.34 | R3.3 | A mapping is required to map end-to-end QoS intent based on DSCP to a UP suitable for use over 802.11. 802.11REVmd D1.0 defines an example DSCP to 802.11 UP mapping in 802.11-2016 Annex R. The mapping in 802.11Revmd D1.0 Annex R is inconsistent with current specification & practice.See more details of the problem in 11-18-0354-00. | 802.11Revmd should be updated with a revised DSCP to 802.11 UP/AC mapping in Table R-2.See more details of the proposed change in 11-18-0354-00. |

## Discussion

Annex R3.1 presents two example DSCP to UP (and vice versa) mappings, one for GSMA networks, another one for example enterprise networks. The group noted that the reference documents (GSMA IR34, RFC 8325) were subject to change as their recommendation follow evolving practices. It might not be the taskl of IEEE 802.11 to simply duplicate these recommendations, especially as guidance over L3 mapping is not core to 802.11. Accordingly, it is better to remove the example mapping, and point instead to the source of the examples (GSMA and IETF documents), noting that updates to these documents will be documented directly on the relevant document source.

## Editing instructions

R.3.1 General

*Change the third paragraph as follows:*

The EDCA and HCCA mechanism defined in 10.23 (HCF) provide QoS control at the MAC layer. However, the QoS control parameters used by the EDCA and HCCA cannot match directly with other QoS control parameters of the interworked external networks, e.g., SSPN. For example, the SSPN could have different metrics for defining the QoS levels. Destination Network 1 (DN1) and DN2 can use DSCP values differently, in which case, STA1 and STA2 would require different QoS mapping information. Therefore, mapping from these external QoS control parameters to the QoS parameters of this standard is necessary.

The QoS parameters mapping can be used for both uplink and downlink data transmission:

* For uplink: at the non-AP STA, external QoS parameters are mapped to IEEE 802.11 QoS parameters, e.g., DSCP to IEEE 802.11 User Priority and in turn to EDCA ACs. This mapping helps the non-AP STA to construct correct QoS requests to the AP, e.g., the ADDTS Request frame and to transmit frames at the correct priority.
* For downlink: at the AP, DSCP values are mapped to EDCA UPs. Optionally, the non-AP STA can use TSPEC and TCLAS elements in an ADDTS Request frame to set up a traffic stream in the BSS. In this method, the User Priority is specified in the TCLAS element. The policy used by the AP to choose a specific method to map frames to user priorities is outside the scope of this standard.

Different external networks can use different DSCP sets for the same services as described in R.3.3. For example, a 3GPP network can use different code points from that of an enterprise network. The QoS Map distribution mechanism defined in 11.23.9 (Interworking procedures: support for QoS mapping from external networks) provides means to communicate to the STA’s mapping information from the network. The mapping of the DSCP to 3GPP Traffic Class is available in GSMA, IR.34 v4.6 [B16] (similar to that of GSMA IREG34). See TR 21.905 [B2] for definition of general packet radio service (GPRS) roaming exchange. Enterprise networks use mapping based on application classes defined in IETF RFC 4594 and their mapping to 802.11 UPs defined in RFC 8325. Mapping between DSCP and UP can be done using Exception fields or by range. The use of DSCP Exception fields will map a DSCP to a UP. Mapping by range will require the setting of DSCP ranges as per the format defined in 9.4.2.94.

R.3.3 Example of QoS mapping from different networks

*Delete clause R3.3.*

R.3.4 QoS mapping and GLK

*Renumber to R.3.3.*