IEEE P802.11
Wireless LANs

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| Neighboring Network Information MLME text with writing style modifications |
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Abstract

This document is based on IEEE 802.11af-D1.06.

This submission proposes some changes to the NNI MLME text with detailed descriptions of message formatting in order to align with the format used in other subclauses of MLME in 802.11af D1.06.

**Introduction**

## Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGaf Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGaf Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGaf Editor: Editing instructions preceded by “TGaf Editor” are instructions to the TGaf editor to modify existing material in the TGaf draft. As a result of adopting the changes, the TGaf editor will execute the instructions rather than copy them to the TGaf Draft.***

***Submission Note: Notes to the reader of this submission are not part of the motion to adopt. These notes are there to clarify or provide context.***

## Editing instructions:

**10 MLME**

**10.40 Operation under the control of a Geolocation Database**

**10.40.8 Neighboring Network Information (NNI) Query/Response Procedure**

***TGaf Editor: Change the 10.40.8.2 (NNI requesting STA) and 10.40.8.3 (NNI responding STA) subclauses as follows:***

10.40.8.2 NNI requesting STA

When dot11NNIActivated is true, a STA can use GAS protocol to send a NNI Query to an RLSS. Upon receipt of the MLME-GAS.request primitive with AdvertisementProtocolID set to RLQP and Query param­eters set to NNI Query element, the requesting STA performs the procedures described in 10.24.3.1.2 (STA procedures to transmit a GAS Query) to transmit a GAS Initial Request frame that contains RLQP element with RLQP ID for NNI Query in the Query Request field.

The specific information items in the Query Request field of the GAS Initial Request frame are generated based on the requirements of a station using the fields as described in 8.4.5.6 (Neighboring Network Information Query element)~~.~~,which are set as follows;

* RequesterSTAAddress field set to the MAC address of the NNI requesting STA.
* Request type = 0 to request the available NNI Information in the RLSS, as described in 8.4.5.6 (Neighboring Network Information Query element).
* The Device Identification Information field set to the device identification information of the NNI requesting STA, as spec­ified in 8.2.6.1.2 (Device Identification Information).
* The Estimated Maximum Transmit Power field set to the expected maximum transmit power level based on the device class of the NNI requesting STA for the operation in the TVWS band, as specified in 8.4.5.6 (Neighboring Network Information Query element).
* The Device Location Information field, if present, set to the location of the NNI requesting STA as spec­ified in 8.2.6.1.4 (Device Location Infor­mation). The Device Location Information field is present in the NNI Query element when the NNI requesting STA has not performed any prior CAQ or NNI Query procedure with the NNI Responding STA, or when it determines that its current location has changed from its prior reported location; otherwise Device Location Information is not present.

~~A STA requests the available NNI information in the RLSS by setting the Request Type subfield in the NNI Query element to 0.~~

~~A STA includes the Device Location Information in the NNI Query element when it has not performed any prior CAQ or NNI Query procedure with the NNI Responding STA, or when it determines that its current location has changed from its prior reported location; otherwise Device Location Information is not present.~~

~~A STA includes the Estimated Maximum Transmit Power information in the NNI Query element based on its device class for the operation in the TVWS band.~~

NOTE - When the MIB attribute dot11RLSSActivated is set to true, the STA has access to the RLSS and the NNI information retrieval does not require sending a GAS Query request to another STA. In this case, the STA can internally generate and transmit the Query Request to the RLSS that contains the message information contained in the NNI Query RLQP element.

**10.40.8.3 NNI responding STA**

When a GDC AP with dot11RLSSActivated set to true receives a GAS query frame containing RLQP element for NNI Query, it generates the NNI Response using the procedure in this subclause.

Upon receipt of the MLME-GAS.response primitive with ResponseInfo parameter set to NNI Response element, the responding STA transmits a RLQP element with RLQP ID for NNI Response in the Query Response field in a GAS Initial Response frame or one or more GAS Comeback Response frames using the procedures described in 10.24.3.1.3 (STA procedures to post a GAS Query to an Advertisement Server) and 10.24.3.1.4 (STA procedures for transmitting the GAS Query Response).

The specific information items in the Query Response field of the GAS Initial Response frame or GAS Comeback Response frame are generated using the fields as described in 8.4.5.7 (Neighboring Network Information Response element), which are set as follows;~~.~~

* RequesterSTAAddress field set to the MAC address of the STA from which the NNI Query was received
* Status code field set to one of the following values,
	+ 0 ("successful") to indicate the successful response with the the associated NNI Response information in the subsequent fields
	+ 1 ("unspecified failure") or 38 ("the request has not been successful as one or more parameters have invalid values") to indicate that the NNI information is not available due to the indicated reason.
* The BSSID field set to the BSSID of the BSS for which the network information in the five sub­sequent fields (Device Class, Operating Class, Channel Number, Operating Transmit Power and Relative Path Loss) applies. These six fields are repeated for each of the BSSs for which the network information is provided as indicated by the Length field.
* The Device Class field set to the Device Class of the STA operating the network with the preceding BSSID field value, in the format specified in 8.2.6.1.1 (Device class)
* The Operating Class field and Channel Number fields, with values defined in Annex E.1 (Country information and operating classes), together specify the operating class and channel number used in the BSS with the preceding BSSID value.
* The Operating Transmit Power field set to the maximum power allowed for transmissions in the BSS with the preceding BSSID value, in the format specified in 8.4.5.7 (Neighboring Network Information Response element.
* The Relative Path Loss field set to the estimated path loss for the transmissions from the neighboring network specified by the preceding BSSID field relative to the NNI requesting STA's position, in the format specified in 8.4.5.7 (Neighboring Network Information Response element. If the Relative Path Loss field value is unknown, the field is set to 0.

~~The responding STA sets the Status Code field in the NNI Query element to the following values, based on the result obtained from RLSS for the Query Response;~~

1. ~~0 ("Successful") to indicate the successful response with the the associated NNI Response information in the subsequent fields.~~
2. ~~1 ("Unspecified failure") or 38 ("The request has not been successful as one or more parameters have invalid values") to indicate that no information was available, as indicated by the respective reasons.~~