IEEE P802.11
Wireless LANs

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| LB254 Comment Resolution Clause 32.3.15 |
| Date: 2021-08-23 |
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Abstract

This submission discusses resolutions to the following 3 CIDs from WG LB 254 of TGbd D2.0 Clause 32.3.15.

The CID list is: 2119, 2120, 2121

Proposed changes in this document are with reference to TGbd D2.0.

Revisions:

* Rev 0: Initial version of the document
* Rev 1:
	+ CID 2119: Equation number corrected to (32-29)
	+ CID 2120, 2121: Figures 32-18 and 32-19 corrected *N*NGV-LTF·(LTF\_REP+1)

Proposed comment resolution

Modificaiton to previous revision

Presented and discussed, no open discussion points

Under discussion

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Comment** | **Proposed Change** | **Resolution** |
| 2119 | 117.02 | The use of "the number of LTF repetitions" in this subclause appears confusing. It needs to be revised to be consistent with the parameter LTF\_REP defined in TXVECTOR. The word "repetition" denotes the duplicates beyond the first one. It seems the number of NGV LTF set transmission is meant to specify. An NGV LTF set consists of NUM\_SS NGV-LTF symbols. | Please clarify and revise accordingly with LTF\_REP defined/revised in TXVECTOR. | RevisedAgree with the comment that the use of LTF repetitions, LTF\_REP and the LTF Repetition field needs to be clarified and harmonized.According to Table 32-11 P93 one NGV-LTF symbol is used for one spatial stream and two NGV-LTF symobls are used for two spatial streams. Note that the second NGV-LTF symbol is not necessarily a repetition of the first NGV-LTF symbol for two spatial streams as they might differ according to (32-29).Hence, we propose the following changes:P69L10: Indicate the number of repetitions of the NGV-LTF symbols. Set to the number of repetitions.P116L60: The TXVECTOR parameter LTF\_REP denotes the number of repetitions of the NGV-LTF symbols.P117L2-3: The number of LTF repetitions equals LTF\_REP. **TGbd Editor:** Please incorporate the changes in<https://mentor.ieee.org/802.11/dcn/21/11-21-1389-01-00bd-lb254-comment-resolution-clause-32-3-15.docx> |
| 2120 | 117.16 | A1, A2, B1, B2 are not defined. Need to define for clarity or provide the pointer to where they are defined. | As in comment. | RevisedAgree in principle with the comment.The numbering has been introduced in 11az D3.0 Figure 27-46b P225L12 without further explanation. For simplicity, the numbering A1, A2, B1, B2 has been removed from the figure. **TGbd Editor:** Please incorporate the changes in<https://mentor.ieee.org/802.11/dcn/21/11-21-1389-01-00bd-lb254-comment-resolution-clause-32-3-15.docx>and<https://mentor.ieee.org/802.11/dcn/21/11-21-1390-01-00bd-visio-for-32-3-15-ngv-ranging-ndp-format.vsdx> |
| 2121 | 117.20 | The word "repetition" is not used properly in the figure particularly the first one. Consider removing it or changing it to "transmission." | As in comment. | RevisedAgree with the commentChanged the two figures 32-18 and 32-19**TGbd Editor:** Please incorporate the changes in<https://mentor.ieee.org/802.11/dcn/21/11-21-1389-01-00bd-lb254-comment-resolution-clause-32-3-15.docx>,<https://mentor.ieee.org/802.11/dcn/21/11-21-1390-01-00bd-visio-for-32-3-15-ngv-ranging-ndp-format.vsdx>and<https://mentor.ieee.org/802.11/dcn/21/11-21-1391-01-00bd-visio-for-32-3-15-example-of-ngv-ltf.vsdx> |

## CID 2119 Discussion

According to Table 32-11 P93 one NGV-LTF symbol is used for one spatial stream and two NGV-LTF symobls are used for two spatial streams. Note that the second NGV-LTF symbol is not necessarily a repetition of the first NGV-LTF symbol for two spatial streams as they might differ according to (32-29) in the $[A\_{NGT-LTF}^{k}]\_{m,\left(n+1\right)}$ value.

LTF Repetition Field in NGV-SIG Field:

* P90L61: Set to 0 for NGV PPDU with Data field and NGV ranging without NGV-LTF repetition. Set to 1 for NGV Ranging NDP with NGV-LTF repetition.

TXVECTOR parameter LTF\_REP:

* P69L10-11: Indicate the number of repetitions of the NGV-LTF symbols. Set to the number of repetitions minus 1.
* P116L60: The TXVECTOR parameter LTF\_REP indicates the number of repetitions of the NGV-LTF minus 1.
* P117L2-3: The number of LTF repetitions equals to LTF\_REP plus 1. When LTF repetition is used, LTF\_REP is 1. Otherwise, LTF\_REP is 0.

## Proposed changes for CID 2119:

***TGbd editor: please apply the following modifications***

* P69L10-11: Indicate the number of repetitions of the NGV-LTF symbols. Set to the number of repetitions ~~minus 1~~.(#2119)
* P116L60-61: The TXVECTOR parameter LTF\_REP denotes~~indicates~~ the number of repetitions of the NGV-LTF symbols ~~minus 1~~. (#2119)
* P117L2: The number of LTF repetitions equals ~~to~~ LTF\_REP ~~plus 1~~. (#2119)

## Proposed changes for CID 2120 & 2121:

***TGbd editor: please apply the following modifications***





**Figure 32-18—NGV Ranging NDP format**(#2121)





**Figure 32-19—Example of NGV-LTF with N\_SS=2 and LTF\_REP=1**(#2120) (#2121)