IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CR For Misc CIDs – Part 2 | | | | |
| Date: 2021-07-19 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Erik Lindskog | Samsung |  |  | e.lindskog@samsung.com |
| Dibakar Das | Intel |  |  | [Dibakar.das@intel.com](mailto:Dibakar.das@intel.com) |
| Ali Raissinia | Qualcomm |  |  |  |

Abstract

This document proposes CR for following CIDs: 5271 and 5231.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Line** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 5271 | 74 |  | 9.4.2.298 | "LMR to phase shift" and "LMR to be phase shift type of ToA" are they the same or different? If they are the same why are they described using different words? If not, how are they different?  The R2I TOA Type subfield is set to 1 in the IFTMR frame to set the TOA feedback type in the R2I LMR to phase shift which corresponds to the average linear phase across the subcarriers. Otherwise, the R2I TOA Type subfield is set to 0 and the R2I LMR TOA feedback type will be first path reporting. The R2I TOA Type subfield is set to 1 in the initial Fine Timing Measurement frame to indicate that the RSTA estimates TOA using phase shift; and set to 0 to indicate that the RSTA estimates TOA using first path reporting. (#1648)  The I2R TOA Type subfield in the IFTMR frame is set to 1 to indicate that the ISTA supports phase shift type TOA feedback and is set to 0 to indicate support of only first path reporting in the I2R LMR. The I2R TOA type subfield in the initial Fine Timing Measurement frame is set to 1 to indicate that the TOA feedback type in the I2R LMR to be phase shift type of TOA, corresponding to the average linear phase across the subcarriers and is set to 0 to indicate that the feedback type in the I2R will be of the first path reporting." | Use consistent terminology to avoid confusion. If Phase Shift type estimation is common to R2I ToA and I2R ToA, defining it once would help avoid scenarios where one definition is modified while other is not rendering it inconsistent can be avoided. | **Revised.**  Agreed in principle. Since the detailed description of the term is provided elsewhere, we revised the sentences in the comment to match the terminology used elsewhere.  **TGaz editor:** make the changes identified below in https://mentor.ieee.org/802.11/dcn/21/11-21-1160-02-00az-cr-for-misc-cids-part-2.docx. |
| 5231 | 130 | 13 | 11.21.6.3.3 | It is not specified how phase shift feedback reporting works if the ISTA is reporting phase shift TOAs in non-TB and TB ranging. How will the ISTA get the required information from the RSTA in order to compute the RTT? | Add specification and description for the case when the ISTA is reporting phase shift TOAs in non-TB and TB ranging and how the ISTA will get the required information from the RSTA in order to compute the RTT. | Rejected.  The ISTA can measure its TOA even if it is not reporting it and use that to compute its RTT to the RSTA. |

***TGaz Editor: Thoughout the draft text, including in text below, replace all instances of ‘phase shift feedback’ with ‘phase shift TOA feedback’ with the appropriate capitalizations. (#5271)***

***TGaz editor: Revise the text in P74L21 of 11az draft 3.1 as follows:***

The R2I TOA Type subfield is set to 1 in the IFTMR frame by the ISTA to indicate that it requests phase shift TOA feedback in the R2I LMR and is set to 0 otherwise. The R2I TOA Type subfield is set to 1 in the initial Fine Timing Measurement frame by the RSTA to indicate that it reports phase shift TOA feedback in the R2I LMR and is set to 0 otherwise (see 11.21.6.3.3 Negotiation for TB and Non-TB Ranging measurement exchange). (#**1648, 5271**)

The I2R TOA Type subfield is set to 1 in the IFTMR frame by the ISTA to request phase shift feedback in the I2R LMR and is set to 0 otherwise. The I2R TOA type subfield is set to 1 in the initial Fine Timing Measurement frame by the RSTA to assign phase shift TOA feedback in the I2R LMR and is set to 0 otherwise (see 11.21.6.3.3 Negotiation for TB and Non-TB Ranging measurement exchange) . (#5271)

***TGaz editor: Revise the text in P132L36 of 11az draft 3.1 as follows:***

An RSTA in which dot11PhaseShiftFeedbackImplemented is true shall set the Phase Shift TOA Feedback Support field in the Extended Capabilities element to 1 to indicate RSTA’s capability to support phase shift TOA feedback in the R2I LMR. If an RSTA has set the Phase Shift TOA Feedback Support field to 1 in the Extended Capabilities element, then to request phase shift TOA feedback in the R2I LMR, an ISTA shall set the R2I TOA Type subfield in the Ranging Parameter field in an IFTMR frame to 1. To assign phase shift TOA feedback in the R2I LMR the RSTA shall set the R2I TOA subfield in the Ranging Parameter field in an initial Fine Timing Measurement frame to 1 (#**3607**), otherwise it shall set it to 0. If the RSTA sets the R2I TOA Type subfield in the Ranging Parameter field in an initial Fine Timing Measurement frame to 1, the RSTA shall report the phase shift TOA feedback (tp2 of the I2R NDP) in the R2I LMR. (#**1581**, #**3606**)

An ISTA that has set the I2R LMR feedback subfield in the Ranging Parameters field in an initial Fine Timing Measurement Request frame to 1, shall set the I2R TOA Type subfield to 1 to request phase shift TOA feedback in the I2R LMR. To assign phase shift TOA feedback in the I2R LMR, the RSTA shall set the I2R TOA Type subfield in the Ranging parameters field of an initial Fine Timing Measurement frame to 1, otherwise it shall set it to 0. If the RSTA sets the I2R TOA Type subfield in the Ranging parameters field of an initial Fine Timing Measurement frame to 1, the ISTA shall report phase shift TOA feedback (tp4 of the R2I NDP) in the I2R LMR. (#**1581**, **3616**)