**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | Resolution to i-0411: Ranging in the Primitives of MAC Data Service |
| Date Submitted | [July 2019] |
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| Re: |  |  |
| Abstract | Text for possible inclusion in IEEE 802.15.4z MAC |
| Purpose | Provision of the text to facilitate its incorporation into the draft text of the IEEE 802.15.4z standard currently under development in the 802.15 TG4z. |
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| Patent Policy | The contributor is familiar with the IEEE-SA Patent Policy and Procedures:<http://standards.ieee.org/guides/bylaws/sect6-7.html#6> and<http://standards.ieee.org/guides/opman/sect6.html#6.3>.Further information is located at <http://standards.ieee.org/board/pat/pat-material.html> and<http://standards.ieee.org/board/pat>. |

***Goal of this submission:***

*The objective of this submission is to provide text, for inclusion into the 15.4z draft, to revise the Ranging parameter in the MCPS-DATA.request. The changes of this parameter are to reflect the development of 4z with new PPDU packet formats, which will not impact the features of base standard.*

*The changes are based on 802.15.4.*

*This document is a resolution to the following comment:*

*i-0411*

***Add RangingPhr to the MCPS-DATA.request as shown:***

MCPS-DATA.request (

 Ranging,

 RangingPhr,

 )

***Change the following rows of Table 8-75 as shown:***

**Table 8-75-MCPS-DATA.request parameters**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid ranging** | **Description** |
| Ranging | Boolean~~Enumeration~~ | TRUE, FALSE~~NON\_RANGING,~~~~ALL\_RANGING,~~~~PHY\_HEADER\_ONLY~~ | For an RDEV, the ranging counter is enabled to do ranging operations if this parameter is TRUE, and disabled if it is FALSE. This parameter is only valid for RDEV.~~A value of NON\_RANGING indicates that ranging is not to be used. A value of ALL\_RANGING indicates that ranging operations using both the ranging bit in the PHR and the counter operation are enabled. A value of PHY\_HEADER\_ONLY indicates that only the ranging bit in the PHR will be used. A value of NON\_RANGING is PHYs that do not support ranging.~~ |
| RangingPhr | Boolean | TRUE, FALSE | TRUE if the Ranging field of PHR is set to be one, FALSE otherwise. This parameter is only valid when the PHR is present and has a Ranging field.  |

*Insert the following paragraph at the end of 8.3.1:*

For an RDEV when the Ranging parameter enables the ranging counter to do ranging operations it stays enabled until it is disabled by either a subsequent MCPS-DATA.request or an MLME-RX-ENABLE.request. While ranging is enabled RMARKER transmission and reception times are reported via the TxRangingCounter and RxRangingCounter parameters of the MCPS-DATA.confirm and MCPS-DATA.indication primitives.