### **IEEE P802.11 Wireless LANs**

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| Spec Text on CSD recommendations | | | | |
| Date: 2018-07-12 | | | | |
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**Abstract**

This document contains text on “Recommended CSD” to be adopted into next TGba draft

**Discussion**

This document provides spec text for example CSD designs. This include the necessary text for the Annex as well as some text in Clause 32 referring to that Annex.

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***Instructions to 802.11ba Editor***

***Editor Instructions: In subclause 32.2.8.3.2 add the text shown in Red.***

**32.2.8.3.2 Cyclic Shift for WUR-Sync field**

Recommended cycle shift diversity (CSD) for the Sync Field, which is constructed from 2 µs MC-OOK symbols, are provided in Annex.

***Editor Instructions: In subclause 32.2.9 add the text shown in Red.***

**32.2.9.1 Cycle Shift for WUR-Data field**

Recommended cycle shift diversity (CSD) for the HDR Data Field and HDR Data Field are provided in Annex.

***Editor Instructions: Add the text shown in Red to the Annex.***

For the Sync field and the HDR Data field, which are both constructed from 2 µs MC-OOK symbols, Table xx provides a recommended CSD values for up to eight transmit antennas.

|  |  |
| --- | --- |
| **Number of Transmit Antennas** | **CSD Values (ns)** |
| 1 | [0] |
| 2 | [0, 1500] |
| 3 | [0, 750, 1500] |
| 4 | [0, 500, 1000, 1500] |
| 5 | [0, 400, 750, 1150, 1500] |
| 6 | [0, 300, 600, 900, 1200, 1500] |
| 7 | [0, 250, 500, 750, 1000, 1250, 1500] |
| 8 | [0, 200, 450, 650, 850, 1050, 1300, 1500] |

*Table xx: Recommended CSD values for the Sync field and HDR Data Fields*

For the LDR Data field, which is constructed from 4 µs MC-OOK symbols, Table yy provides a recommended CSD values for up to eight transmit antennas.

|  |  |
| --- | --- |
| **Number of Transmit Antennas** | **CSD Values (ns)** |
| 1 | [0] |
| 2 | [0, 3000] |
| 3 | [0, 1500, 3000] |
| 4 | [0, 1000, 2000, 3000] |
| 5 | [0, 750, 1500, 2250, 3000] |
| 6 | [0, 600, 1200, 1800, 2400, 3000] |
| 7 | [0, 500, 1000, 1500, 2000, 2500, 3000] |
| 8 | [0, 450, 850, 1300, 1700, 2150, 2550, 3000] |

*Table yy: Recommended CSD values for the LDR Data Field*