802.11ba Draft Specification

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| Proposed Spec Text for Time of Departure accuracy and CCA sensitivity |
| Date: 2018-07-09 |
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Abstract

This submission proposes the spec text to be incorporated in IEEE802.11ba D1.0 related to the following clauses 32.2.10.5 Time of Departure accuracy and 32.2.11.5 CCA sensitivity. In addition, it resolves the TBD value for aCCAMidTime.

Revision History:

* Rev 0: Initial version of the document

**Straw Poll**

Do you support the Spec Text in this document IEEE 802.11-18/1163r1?

Yes

No

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

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

**TGba Editor: *Instruction: Add the following content under 32.2.10.5 Time of Departure accuracy***

32.2.10.5 Time of Departure accuracy

The Time of Departure accuracy test evaluates TIME\_OF\_DEPARTURE against aTxPHYTxStartRMS and aTxPHYTxStartRMS against TIME\_OF\_DEPARTURE\_ACCURACY\_TEST\_THRESH as defined

Annex P with the following test parameters:

— MULTICHANNEL\_SAMPLING\_RATE is:

$20× 10^{6}\left(1+ \left⌈\frac{f\_{H}-f\_{L}}{20 MHz}\right⌉\right)$sample/s, for a CH\_BANDWIDTH parameter equal to CBW20

$40× 10^{6}\left(1+ \left⌈\frac{f\_{H}-f\_{L}}{40 MHz}\right⌉\right)$sample/s, for a CH\_BANDWIDTH parameter equal to CBW40

$80× 10^{6}\left(1+ \left⌈\frac{f\_{H}-f\_{L}}{80 MHz}\right⌉\right)$sample/s, for a CH\_BANDWIDTH parameter equal to CBW80

where

$f\_{H} $is the nominal center frequency in Hz of the highest channel in the channel set

$f\_{L} $is the nominal center frequency in Hz of the lowest channel in the channel set, the channel

set is the set of channels upon which frames providing measurements are transmitted, the

channel set comprises channels uniformly spaced across $f\_{H}-f\_{L} \leq 50 MHz$

— FIRST\_TRANSITION\_FIELD is L-STF.

— SECOND\_TRANSITION\_FIELD is L-LTF.

— TRAINING\_FIELD is L-LTF windowed in a manner which should approximate the windowing described in 17.3.2.5 with TTR = 100 ns.

— TIME\_OF\_DEPARTURE\_ACCURACY\_TEST\_THRESH is 80 ns.

NOTE—The indicated windowing applies to the time of departure accuracy test equipment, and not the transmitter or receiver.

**TGba Editor: *Instruction: Add the following content under 32.2.11.5 CCA sensitivity***

**32.2.11.5 CCA sensitivity**

The CCA sensitivity shall follow the CCA sensitivity specification for the attached PCR PHY as defined in in 17.3.10.6 for OFDM, 19.3.19.5 for HT, 21.3.18.5 for VHT and 28.3.19.6 for HE depending on the Capabilities Element of PCR.

**TGba Editor: *Instruction: correct Table 32-11 as follows***

For FDMA case, aCCAMidTime definition is required and is defined as shown in the table below.

**Table 32-11—WUR PPDU Time and Length Characteristics**

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| --- | --- |
| **Characteristics** | **Value** |
| aCCAMidTime | 25 µs |
| aPPDUMaxTime | 5.484 ms |
| aPSDUMaxLength | 166 octets (see NOTE 1) |
| aRxPHYStartDelay | 88 µs (see NOTE 2) |
| NOTE 1—This is the maximum length in octets for a WUR PPDU with HDR, single stream, and limited by 1332 possible data symbols in aPPDUMaxTime. This is the maximum PSDU length a WUR PHY could support assuming no restrictions in MAC.NOTE 2—This value arises from the time to the end of the WUR-Sync field with HDR. |