IEEE P802.11
Wireless LANs

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| Proposed Text Changes for SR Fields in HE Trigger-Based PPDU |
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Abstract

This document provide proposed text changes to resolve SR field interpretation ambiguity. Please refer to document “11-16/0901r2 Clarification of SR Fields in HE Trigger Based PPDU” for details of the discussion.

rev0: initial draft

rev1: added proposed text changes to the common field of the trigger frame.

rev2: clause 9 does not use shall statements, therefore, remove shall statements in the changes to clause 9.

This document shows the proposed text changes for resolving SR field ambiguity, which is discussed in document 11-16/0901r0.

**To TGax Editor:** Replace the “Spatial reuse field” in Table 26-17 of the secton 26.3.9.7.2 (Content) with four new field entries as shown below. Add a note shown below to the end of the Table 26-17 of section 26.3.9.7.2 (Content).

Details of the proposed changes are shown below.

***----- Start of proposed text changes ------***

|  |
| --- |
| * Fields in the HE-SIG-A for an HE trigger-based PPDU
 |
| Two Parts of HE-SIG-A | Bit | Field | Number of bits | Description |
|  | B7:B10 | Spatial Reuse 1 | 4 | If Bandwidth is set to 20 MHz* Spatial Reuse field for the 20MHz bandwidth

If Bandwidth is set to 40 MHz* Spatial Reuse field for the first 20 MHz of the 40 MHz operating band. (See Note 1)

If Bandwidth is set to 80 MHz* Spatial Reuse field for the first 20 MHz of the 80 MHz operating band. (See Note 1)

If Bandwidth is set to 160/80+80 MHz* Spatial Reuse field for first 40 MHz of the 160 MHz operating band. (See Note 1)

“SR\_allowed” signaling indicates whether SR operation is allowed or not.* Set to 0 to indicate SR is disallowed
* The conditions to disallow SR are TBD

Other details are TBD.Notes: this part needs further development.(#2169) |
|   | B11:B14 | Spatial Reuse 2 | 4 | If Bandwidth is set to 20 MHz* Spatial Reuse field for the 20MHz bandwidth.
* This field is set to same value as Spatial Reuse 1 field.

If Bandwidth is set to 40 MHz* Spatial Reuse field for the second 20 MHz of the 40 MHz operating band. (See Note 1).
* This field is set to same value as Spatial Reuse 1 field when operating in 2.4 GHz band.

If Bandwidth is set to 80 MHz* Spatial Reuse field for the second 20 MHz of the 80 MHz operating band. (See Note 1)

If Bandwidth is set to 160/80+80 MHz* Spatial Reuse field for second 40 MHz of the 160 MHz operating band. (See Note 1)
 |
|  | B15:B18 | Spatial Reuse 3 | 4 | If Bandwidth is set to 20 MHz* Spatial Reuse field for the 20MHz bandwidth.
* This field is set to same value as Spatial Reuse 1 field.

If Bandwidth is set to 40 MHz* Spatial Reuse field for the first 20 MHz of the 40 MHz operating band. (See Note 1).
* This field is set to same value as Spatial Reuse 1 field.

If Bandwidth is set to 80 MHz* Spatial Reuse field for the third 20 MHz of the 80 MHz operating band. (See Note 1)

If Bandwidth is set to 160/80+80 MHz* Spatial Reuse field for third 40 MHz of the 160 MHz operating band. (See Note 1).
* This field is set to same value as Spatial Reuse 1 field when bandwidth of the HE PPDU is 80+80 MHz.
 |
|  | B19:B22 | Spatial Reuse 4 | 4 | If Bandwidth is set to 20 MHz* Spatial Reuse field for the 20MHz bandwidth.
* This field is set to same value as Spatial Reuse 1 field.

If Bandwidth is set to 40 MHz* Spatial Reuse field for the second 20 MHz of the 40 MHz operating band. (See Note 1).
* This field is set to same value as Spatial Reuse 2 field.

If Bandwidth is set to 80 MHz* Spatial Reuse field for the fourth 20 MHz of the 80 MHz operating band. (See Note 1)

If Bandwidth is set to 160/80+80 MHz* Spatial Reuse field for fourth 40 MHz of the 160 MHz operating band. (See Note 1).
* This field is set to same value as Spatial Reuse 2 field when bandwidth of the HE PPDU is 80+80 MHz.
 |
| Note 1: First, second, third, and fourth 20 or 40MHz band is enumerated from the lowest frequency to highest frequency. |

***----- End of proposed text changes ------***

Following resolution is proposed changes on top of proposed changes in document 11-16/0780r1, “CIDs for: Section 9.3.1.23 Trigger Frame Format”.

**To TGax Editor:** Apply the following proposed text changes on top of the proposed changes in document 11-16/0780r1.

***----- Start of proposed text changes ------***

The Spatial Reuse bits indicates the value of the Spatial Reuse in the HE-SIGA of the HE\_TRIG PPDU transmitted as a response to the Trigger frame. For HE trigger-based PPDU, 4 SR fields are signaled:

* For 20MHz one SR field corresponding to entire 20MHz (other 3 fields indicate identical values)
* For 40MHz two SR fields for each 20MHz (other 2 fields indicate identical values)
* For 80MHz four SR fields for each 20MHz
* For 160MHz and 80+80MHz four SR fields for each 40MHz

When operating 40MHz in 2.4GHz band, two SR fields, SR field 1 and SR field 2, are set to same values. When operating 80+80MHz, SR field 3 is set to same value as SR field 1, and SR field 4 is set to to same value as SR field 2.

***----- End of proposed text changes ------***