IEEE P802.11  
Wireless LANs

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| LB235 CR Subclause 3.2 | | | | |
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Abstract

This submission proposes resolutions of comments received from TGba LB235.

(The proposed change is based on TGba Draft 1.0.)

* CIDs: 54, 771, 279, 475, 578, 875, 477, 478, 505, 479, 506, 480, 507, 579, 683 (15 CIDs)

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGba Draft. This introduction is not part of the adopted material.

***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 existing 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.***

| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- |
| 54 | 19.00 | 3.2 | The concepts of primary and secondary are not clear of their purpose. Especially the secondary ones. I would expect these to be baseline primaries and secondaries. | As in comment. | Revised-  The WUR primary channel is basically same with the primary channel of the baseline.  But, because the WUR frame can be sent in the different band/channel with the PCR BSS, the WUR primary channel is additionaly defined.  And, the WUR secondary channels are used only for the WUR FDMA PPDU.  More clarification texts are updated.  TGba editor makes changes as shown in the as specified in 11-19/0011r1. |
| 771 | 19.13 | 3.2 | Too many channels!! Can the WUR Channel be different from WUR Primary Channel? Shouldn't all WURx tune to the primary channel to receive the WUR Beacon? | Define (maybe in a different Clause) the relationship between these three channels. Additionally some discussion on WUR Primary Channels is needed. How it is selected? Relationship to PCR Primary Channel? Etc. | Revised-  In the WUR FDMA operation, the WUR channel can be different from WUR primary channel.  The WUR primary channel can be different from the the primary channel of the PCR.  Such informative texts are added in a note.  TGba editor makes changes as shown in the as specified in 11-19/0011r1. |
| 279 | 19.17 | 3.2 | "wake-up radio (WUR) channel: A channel in which a WUR non-AP STA in WURx awake state listens.". A radio can listen only when it is awake. 'awake state' in this statement is redundant. Delete it. | Replace with "wake-up radio (WUR) channel: A channel in which a WURx in a non-AP STA listens." | Revised-  Agree in principle.  Change to “A channel in which a WUR AP transmits WUR frames and a WUR non-AP STA listens.”  TGba editor makes changes as shown in the as specified in 11-19/0011r1. |
| 475 | 19.17 | 3.2 | The wake-up radio (WUR) channel has nothing to do with non-AP STA, it is simply the channel that the WURx will listen on when it is in WURx Awake state, the definitions should simply say so. | Replace the current definition for WUR channel with: wake-up radio (WUR) channel: The channel that a WURx listens to when it is in the WURx Awake state. | Revised-  Agree in principle.  Change to “A channel in which a WUR AP transmits WUR frames and a WUR non-AP STA listens.”  TGba editor makes changes as shown in the as specified in 11-19/0011r1. |
| 578 | 19.17 | 3.2 | With the WUR FDMA feature, it is not clear which channel is the one the non-AP STA is using to listen while in WURx awake state. There should be a definition of the WUR Beacon channel and the WUR Wake-up channel. | Add definitions of the WUR Beacon channel and the WUR Wake-up channel. The definition of "WUR channel" then, might be the combination of these (or only one of them?) | Rejected-  The WUR Beacon channel is equivalent with the WUR primary channel.  And, thw WUR channel is more generalized channel for the WUR non-AP STA operation. |
| 875 | 19.17 | 3.2 | A WUR non-AP STA in WURx awake state may not always listen to the WUR channel, for example during times it switches to the WUR primary channel to listen to WUR Beacon frames if the WUR channel is not the same as the WUR primary channel. | Change the definition of WUR channel in a similar way to other WUR channels: A channel in which WUR Wake-up frames are transmitted. | Revised-  For a WUR AP operation, the WUR channel should be be defined in the transmission side.  But, for a WUR non-AP STA, current definition is also necessary.  TGba editor makes changes as shown in the as specified in 11-19/0011r1. |
| 477 | 19.26 | 3.2 | WUR primary 40 MHz channel is identical to a standard 802.11 primary 40 MHz channel, except that after channel acquisition a WUR PPDU can be transmitted on the channel. Since standard 802.11 channel access procedures are followed, there is no reason to define the channel as a WUR channel. The definition and the concept is unnecessary and should be removed from the draft and replaced by a statement that standard 802.11 20 MHz, 40 MHz and 80 MHz access rules are followed by the AP to gain channel access and that once access is obtained the WUR AP may transmit WUR PPDUs in the appropriate sub channels. | delete the WUR primary 40 MHz channel definition. | Rejected-  The WUR primary 40 MHz channel is basically same with the primary 40 MHz channel of the baseline.  But, because the WUR FDMA frame can be sent in the different band/channel with the PCR BSS, the WUR primary 40 MHz channel is additionaly defined. |
| 478 | 19.29 | 3.2 | WUR primary 80 MHz channel is identical to a standard 802.11 primary 80 MHz channel, except that after channel acquisition a WUR PPDU can be transmitted on the channel. Since standard 802.11 channel access procedures are followed, there is no reason to define the channel as a WUR channel. The definition and the concept is unnecessary and should be removed from the draft and replaced by a statement that standard 802.11 20 MHz, 40 MHz and 80 MHz access rules are followed by the AP to gain channel access and that once access is obtained the WUR AP may transmit WUR PPDUs in the appropriate sub channels. | delete the WUR primary80 MHz channel definition. | Rejected-  The WUR primary 80 MHz channel is basically same with the primary 80 MHz channel of the baseline.  But, because the WUR FDMA frame can be sent in the different band/channel with the PCR BSS, the WUR primary 80 MHz channel is additionaly defined. |
| 505 | 19.30 | 3.2 | There is no WUR secondary 80 MHz channel. It is unnecessary to define the WUR primary 80 MHz channel. | remove "primary" from "WUR primary 80MHz channel" | Revised-  Agree in principle.  TGba editor makes changes as shown in the as specified in 11-19/0011r1. |
| 479 | 19.33 | 3.2 | WUR secondary channel is identical to a standard 802.11 secondary channel, except that after channel acquisition a WUR PPDU can be transmitted on the channel. Since standard 802.11 channel access procedures are followed, there is no reason to define the channel as a WUR channel. The definition and the concept is unnecessary and should be removed from the draft and replaced by a statement that standard 802.11 access rules are followed by the AP to gain channel access and that once access is obtained the WUR AP may transmit WUR PPDUs in the appropriate sub channels. | delete the WUR secondary channel definition. | Rejected-  The WUR secondary channel is basically same with the secondary channel of the baseline.  But, because the WUR FDMA frame can be sent in the different band/channel with the PCR BSS, the WUR secondary channel is additionaly defined. |
| 506 | 19.33 | 3.2 | "the 40 MHz channel" should be changed to "the WUR primary 40 MHz channel" | as per comment | Revised-  Agree in principle.  TGba editor makes changes as shown in the as specified in 11-19/0011r1. |
| 480 | 19.37 | 3.2 | WUR secondary 40 MHz channel is identical to a standard 802.11 secondary 40 MHz channel, except that after channel acquisition a WUR PPDU can be transmitted on the channel. Since standard 802.11 channel access procedures are followed, there is no reason to define this channel as a WUR channel. The definition and the concept is unnecessary and should be removed from the draft and replaced by a statement that standard 802.11 20 MHz, 40 MHz and 80 MHz access rules are followed by the AP to gain channel access and that once access is obtained the WUR AP may transmit WUR PPDUs in the appropriate sub channels. | delete the WUR secondary 40 MHz channel definition. | Rejected-  The WUR secondary 40 MHz channel is basically same with the secondary 40 MHz channel of the baseline.  But, because the WUR FDMA frame can be sent in the different band/channel with the PCR BSS, the WUR secondary 40 MHz channel is additionaly defined. |
| 507 | 19.38 | 3.2 | "the 80 MHz channel" should be changed to "the WUR 80 MHz channel" | as per comment | Revised-  Agree in principle.  TGba editor makes changes as shown in the as specified in 11-19/0011r1. |
| 579 | 19.49 | 3.4 | FDMA needs to be in the acronym list | Add FDMA to acronym list (as Frequency Division Multiple Access) | Revised-  Agree in principle.  TGba editor makes changes as shown in the as specified in 11-19/0011r1. |
| 683 | 49.22 | 3.2 | WUR primary channle is a vague terminology, and is easily confused with primary channel in 802.11-2016. | Change WUR primary channel to WUR beacon channel or other | Rejected-  WUR primary channel is not only for the WUR beacon transmission.  It is used for accessing the channel of the WUR frame tranmissions.  Please remind that the WUR frame can be sent in the different band/channel with the PCR BSS. |

***TGba Editor: Change subclause 3.2 as the following:***

* Definitions specific to IEEE 802.11

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**wake-up radio (WUR) channel:** A channel in which a WUR AP transmits WUR frames (#875) and a WUR non-AP STA ~~in WURx awake state~~ (#279, 475)listens.

**wake-up radio (WUR) discovery channel:** A channel in which the WUR discovery frames are transmitted

**wake-up radio (WUR) primary channel:** The common channel of operation for all WUR stations (STAs) in which the WUR beacons are transmitted.

NOTE—WUR primary channel can be different from the the primary channel of the BSS. (#771)

**wake-up radio (WUR) primary 40 MHz channel:** The 40 MHz channel that is used to transmit 40 MHz WUR Frequency Division Multiple Access (FDMA) physical layer (PHY) protocol data units (PPDUs).

**wake-up radio (WUR) ~~primary~~ (#505) 80 MHz channel:** The 80 MHz channel that is used to transmit 80 MHz WUR Frequency Division Multiple Access (FDMA) physical layer (PHY) protocol data units (PPDUs).

**wake-up radio (WUR) secondary channel:** The 20 MHz channel adjacent to the WUR primary channel that together form the WUR primary (#506) 40 MHz channel.

**wake-up radio (WUR) secondary 40 MHz channel:** The 40 MHz channel adjacent to the WUR primary 40 MHz channel that together form the WUR (#507) 80 MHz channel.

**3.4 Abbreviations and acronyms**

***TGba Editor: Insert the following acronym definition (maintaining alphabetical order). (#579)***

FDMA Frequency Division Multiple Access

***TGba Editor: Replace “WUR primary 80 MHz channel” with “WUR 80 MHz channel” throughout TGba Draft 1.1. (#505)***