IEEE P802.11
Wireless LANs

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| LB 203 Comment Resolution for 9.43.2 |
| Date: 2014-08-26 |
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Abstract

This document provides resolutions for CID 3368, 3813, 3814, 3815, 3816, 3817.

The changes are in the following clause: 9.43.2.

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# 0 Revision Notes

R0: First draft

| **CID** | **Commenter** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- | --- |
| 3368 | Alfred Asterjadhi | 282.30 | 9.43.2 | Paragraphs 2-5 basically list different options of the Poll Type setting for a STA that transmits a PS-Poll frame so you can list these options removing redundancy. See suggested change. The same thing can be done for paragraphs 7-10. | Replace these paragraphs with:" An S1G STA that transmits a PS-Poll frame may set the Poll Type field in the Frame Control field to:- 0 if it requests to the AP delivery of DL BUs without requesting rescheduling of the doze/awake cycle- 1 if it solicits information regarding the change sequence of the Beacon and the partial timestamp- 2 if it is not a TWT STA that requests to the AP delivery of the DL BUs and re-synchronizing to the next TBTT- 2 if it is a TWT STA that transmits the frame to the TWT AP within the negotiated TWT SP to request delivery of DL BUs and information for the next TWT- 3 if it requests to the AP to reschedule its doze/wake cycle to another service period" | Revised- Agree in principle for paragraphs 2-6. However, the same way may not be appropriate for paragraphs 7-10 as the text for the different options are difficult to align with the same structure. TGah editor to make changes shown in 11-14/ 1070r0 under the heading for CID 3368. |
| 3813 | Liwen Chu | 282.30  | 9.43.2 | This paragraph should be in normal power save subclause | Move it to normal power save subclause. | Revised- Agree in principle. Subclause 9.43.2 is about non-TIM STAs. Please refer to the description of TIM STA (P323L33,D2.0) for Poll Type subfield setting in Subclause 10.2.2.2.TGah editor to make changes shown in 11-14/ 1070r0 under the heading for CID 3813. |
| 3814 | Liwen Chu | 282.62  | 9.43.2 | "Upon reception of a PS-Poll with the PS-Poll Type subfield equal to 2 sent by a TWT STA within the negotiated TWT SP, the AP sends a TACK frame in response to a PS-Poll frame as described in 9.42 (Target wake time (TWT))."This sentence doesn't use may/should/shall. | Change the text by using may/should.shall. | Rejected.The text is declarative as the normative behaviour is already specified in the respective clauses (i.e. Subclause10.2.2.6, 9.43.2, and 9.42).   |
| 3815 | Liwen Chu | 282.56  | 9.43.2 | The behavior of AP doesn't match the STA's behavior of PS-Poll when Poll Type subfield equal to 1, 2, 3. | Make them consistent. | Revised- Agree in principle. TGah editor to make changes shown in 11-14/ 1070r0 under the heading for CID 3815. |
| 3816 | Liwen Chu | 283.18  | 9.43.2 | A control frame can't include a timer. | Change to something like "...that include a delay time duration" | Revised- Agree in principle. TGah editor to make changes shown in 11-14/ 1070r0 under the heading for CID 3816. |
| 3817 | Liwen Chu | 283.31  | 9.43.2 | This is dangerous feature since non-TIM STA may not be able to decode TIM element. | Remove this or indicate in the specification that this may not be able for a non-TIM STA to detect whether there are buffered frames in the AP for the non-TIM STA. | RejectedThe non-TIM STA that supports this feature is not required to listen to the beacon that includes TIM element but it can obtain the buffered frame status from the More field of the response frame (either NDP Ack or NDP PS-Poll-Ack) upon wakeup and sending the (NDP) PS-Poll frame. |

***Proposed changes:***

**CID 3368, 3813, 3816**

 **Instruction to Editor: *Please make the following changes for L30P282:***

~~An S1G STA may set the Poll Type subfield in the Frame Control field to 0 in a transmitted PS-Poll frame if it requests the BU from the AP but without a request for rescheduling its doze/awake cycle.~~

~~An S1G STA may send a PS-Poll with the Poll Type subfield in the Frame Control field equal to 1 to solicit the information of the beacon change sequence and the partial timestamp.~~

~~An S1G STA that is not a TWT STA may set the Poll Type subfield in the Frame Control field to 2 in a transmitted PS-Poll frame if it requests the BU from the AP with a request for rescheduling its doze/awake cycle by re-synchronizing to a TBTT.~~

~~A TWT STA may set the Poll Type subfield in the Frame Control field to 2 in a transmitted PS-Poll frame within the negotiated TWT SP if it requests the BU and the next TWT information from the AP.~~

~~An S1G STA may set the Poll Type subfield in the Frame Control field to 3 in a transmitted PS-Poll frame if it requests a deferred service period to reschedule its doze/awake cycle from the AP.~~

An S1G Non-TIM STA that transmits a PS-Poll frame may set the Poll Type subfield of the Frame Control field to:

- 0 if it requests to the AP delivery of DL BUs but without a request for rescheduling of the doze/awake cycle

- 1 if it solicits information regarding the change sequence of the Beacon and the partial timestamp

- 2 if it is not a TWT STA and requests to the AP delivery of the DL BUs and re-synchronizing to the next TBTT

- 2 if it is a TWT STA that transmits the frame to the TWT AP within the negotiated TWT SP to request delivery of DL BUs and information for the next TWT

- 3 if it requests to the AP to reschedule its doze/wake cycle to another service period.

Upon receiving an NDP PS-Poll frame, trigger frame or PS-Poll frame with the Poll Type subfield equal to 0, the S1G AP responds as described in 10.2.2.6 (AP operation during the CP). Upon receiving a PS-Poll frame with the Poll Type subfield not equal to 0, the AP responds with different frames depending on the value of the Poll Type subfield in the Frame Control field of the PS-Poll frame that elicited the response as described in this sub-clause.

Upon reception of a PS-Poll with the Poll Type subfield equal to 1, the AP with dot11PollTACKResponseSupport equal to true shall send a TACK frame without the Next TWT field. The S1G STA shall not send a PS-Poll with the Poll Type subfield equal to 1 to an AP unless the TACK Support as PS-Poll Response field of the most recent S1G Capabilities element received from that AP is equal to 1.

Upon reception of a PS-Poll with the PS-Poll Type subfield equal to 2 sent by a TWT STA within the negotiated TWT SP, the AP sends a TACK frame in response to a PS-Poll frame as described in 9.42 (Target wake time (TWT)). A TWT STA shall not send a PS-Poll with the Poll Type subfield equal to 2 to an AP unless the TWT Support field of the most recent S1G Capabilities element received from that AP is equal to 1.

The procedure of an S1G STA transmitting a PS-Poll with the Poll Type subfield equal to 3 is described in 10.2.2.6 (AP operation during the CP). In addition, an S1G STA that has requested time slot protection for a TXOP duration after the expiration of a wakeup timer, as described in 9.44.1 (Sync frame transmission procedure for uplink traffic), may transmit to the UL-Sync capable AP a PS-Poll with the Poll Type subfield equal to 3. The UL-Sync capable AP shall protect the TXOP duration following the expiration of the wakeup timer as described in 9.44.1 (Sync frame transmission procedure for uplink traffic).

The AP shall send either a buffered frame or an NDP Ack frame as the response to a PS-Poll frame with the Poll Type subfield equal to 2 transmitted by a STA that is not a TWT STA or a TWT STA that is not within the negotiated TWT SP. Upon receiving an NDP PS-Poll, trigger frame or PS-Poll frame with Poll Type subfield equal to 2 sent by an S1G STA that is not TWT STA or a TWT STA that is not within the negotiated TWT SP, an S1G AP may respond with a control frame that includes a ~~timer~~Duration field. The control frame is either the NDP Ack frame in 8.9.1.4 (NDP Ack) or the NDP PS-Poll-Ack frame in 8.9.1.5 (NDP PS-Poll-Ack), both of which use the Duration field to indicate a wakeup timer value when the Idle Indication field is equal to 1. The S1G STA can re-synchronize to the beacon with the help of the wakeup timer.

***CID 3815***

**Instruction to Editor: *Please make the following changes for Table 8-3a (L8P72, D2.0) or Table 8-4c (D2.1):***

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| **Poll Type value****B15 B14** | **Description** |
| 00 | Request for a buffered frame without a request to reschedule the awake/doze cycle |
| 01 | ~~Request for Change Sequence/Timestamp~~Request for a duration to a TBTT or Next TWT to reschedule awake/doze cycle |
| 10 | Request for Change Sequence/Timestamp~~Request for a duration to a TBTT or Next TWT to reschedule awake/doze cycle~~ |
| 11 | Request for a duration to a service period |

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