IEEE P802.11
Wireless LANs

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| LB203 MAC Resolution to Comments for D2.0 Subclauses 8.4.2.1, 8.4.2.28, 10.5, and 10.48  |
| Date: 2014-9-1 |
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Abstract

This submission proposes resolution to comments in D2.0 subclauses 8.4.2.1, 8.4.2.28, 10.5, and 10.48. There are 4 CIDs addressed: 3005, 3035, 3162, 3159

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 TGah Draft. This introduction is not part of the adopted material.

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

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

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| **CID** | **Page.Line** | **Clause** | **Comment** | **Propose Change** | **Resolution** |
| 3005 | 104.11 | 8.4.2.1 | The table of elements "Extensible" column shows "yes", "no" and "blank". There is no excuse not to explicitly state a value for all new elements. | Replace all blanks in "extensibility" column with something else. | Revise. Agree in principle. TGah editor to make the changes show in 11-14/xxx under all headings that include CID 3005. |
| 3035 | 113.47 | 8.4.2.28 | "Sensor type STA"Less is more. "type" adds nothing here without adding more words to indicate "what kind of type". | Replace all such with "Sensor STA" | Accept. Instruction to 11ah Editor to replace “Sensor type STA” with “Sensor STA” throughout the Draft.  |
| 3162 | 330.1 | 10.5 | The changes to this subclause should be inline with 9.23 (Block Acknowledgement) from a quick reading there are still some inconsistencies (e.g., BAT, BlockAck generation etc) between these two subclauses. | Make sure that the procedure described in this subclause is inline with that of 9.23 for S1G STAs. | Revised.Agreed to the commenter in general. TGah editor to make the changes show in 11-14/xxx under all headings that include CID 3162. |
| 3159 | 338.8 | 10.48 | This subclause should be dependent of 10.47 as it describea how the STA Type field is set by the AP that sets up the BSS. In addition it should also describe how the non-AP STA sets this subfield of the S1G Capabilities element and also clarify what type of STA is the AP that sets the STA Type values, not only what type of STAs it supports. | Move this subclause as a dependent clause of 10.47 (i.e., 10.47.7) and probably rename it to S1G BSS/STA Type. Add description of how a non-AP STA sets the STA Type of the S1G Capabilities. For better clarity also categorize the BSS Types as sensor-only BSS (already used somewhere), non-sensor BSS and mixed BSS and categorize the AP as a type of STA as well. | Revised.Agreed to the commenter in general. TGah editor to make the changes show in 11-14/xxx under all headings that include CID 3159. |
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### [CID 3005]

**Instruction to TGah editor: Please modify Table 8-85 (Element IDs) in subclause 8.4.2.1 (General) of TGah D2.1 as follows:**

|  |
| --- |
| * Element IDs
 |
| Element | Element ID | Extensible |
| S1G Open-Loop Link Margin Index | <ANA> | No |
| RPS | <ANA> | No |
| Page Slice | <ANA> | No |
| AID Request | <ANA> | No |
| AID Response | <ANA> | No |
| S1G Sector Operation  | <ANA> | Yes |
| S1G Beacon Compatibility | <ANA> | No |
| Short Beacon Interval | <ANA> | No |
| Change Sequence | <ANA> | No |
| TWT | <ANA> | Yes |
| S1G Capabilities  | <ANA> | Yes |
| Subchannel Selective Transmission | <ANA> | No |
| Authentication Control | <ANA> | Yes |
| TSF Timer Accuracy | <ANA> | No |
| Relay | <ANA> | Yes |
| Reachable Address | <ANA> | Yes |
| Relay Discovery | <ANA> | No |
| Probe Response Option | <ANA> | No |
| AID Announcement | <ANA> | Yes |
| Short Probe Response Option | <ANA> | No |
| Activity Specification | <ANA> | No |
| Sectorized Group ID List | <ANA> | Yes |
| S1G Operation | <ANA> | No |
| Header Compression | <ANA> | Yes |
| SST Operation | <ANA> | No |
| MAD | <ANA> | No |
| Relay Activation | <ANA> | Yes |

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### [CID 3159]

### Instruction to TGah editor: Please modify subclause 10.44d (Sensor-only BSS) of TGah D2.1 as follows: (Will overwirte the approved resolution to CID 3509)

### ~~10.44d Sensor-only BSS~~

### 10.44c7 S1G BSS type and STA type

S1G non-AP STAs are categorized into two types, sensor STAs and non-sensor STAs.

A non-AP sensor STA shall set the STA Type Support subfield value in the S1G Capabilities Info field (Table 8-258a5—Subfields of the S1G Capabilities Info field) to 1. A non-sensor STA shall set the STA Type Support subfield value in the S1G Capabilities Info field (Table 8-258a5—Subfields of the S1G Capabilities Info field) to 2.

There are three types of BSS that an S1G AP can set up: sensor BSS, non-sensor BSS, or mixed BSS. A sensor BSS only supports sensor STAs. A non-sensor BSS supports only non-sensor STAs. A mixed BSS supports both sensor and non-sensor STAs.

An AP may declare ~~indicate~~ ~~that the AP only supports a non-Sensor type STAs~~ a non-sensor BSS by transmitting the S1G Capabilities element in Beacon frames or (Short) Probe Response frames in which the STA Type Support subfield value indicates that only non-Sensor ~~type~~ STAs are allowed to associate and operate with that AP.

An AP may declare ~~indicate that the AP only supports a Sensor type STA~~ a sensor BSS by transmitting the S1G Capabilities element in Beacon frames or (Short) Probe Response frames in which the STA Type Support subfield value indicates that only Sensor ~~type~~ STAs are allowed to associate and operate with that AP.

An AP may declare ~~indicate that the AP supports both Sensor type and non-Sensor type~~ ~~STAs~~ a mixed BSS by transmitting the S1G Capabilities element in a Beacon or a (Short) Probe Response frame, in which the STA Type Support subfield value indicates that any type of STA is allowed to associate and operate with that AP.

### [CID 3162]

### Instruction to TGah editor: Please modify subclause 10.5.2 (Block ack operation) of TGah D2.1 as follows:

* Setup and modification of the block ack parameters
* Procedure at the originator

***Change the following item b) in the sub-clause 10.5.2.2 (REVmc D2.1) as the following:***

b) If the peer STA is a non-DMG STA, check whether the intended peer STA is capable of participating in the block ack mechanism by discovering and examining its Delayed Block Ack and Immediate Block Ack capability bits. If the peer STA is an S1G STA and the recipient is capable of participating in an Immediate Block Ack session, the S1G originator shall send an NDP ADDBA Request to indicate that it expects only NDP BlockAck frames during the block ack session with the following exceptions:

* If the S1G originator has the dot11BATImplemented equal to true and the BAT Support subfield in the most recently received S1G Capabilities element from the S1G recipient is 1 and a TWT has been setup with the S1G recipient as described in **9.42a (Target wake time (TWT)).**, then the S1G originator shall send a BAT ADDBA Request to indicate that it expects only BAT frames during the block ack session.
* When any of the conditions below is satisfied then the S1G originator may send an ADDBA Request to indicate that it expects only BlockAck frames during the block ack session:
1. The value of the Buffer Size field in the ADDBA Request, carried in an S1G\_LONG or S1G\_SHORT PPDU, is greater than 16
2. The value of the Buffer Size field of the ADDBA Request, carried in an S1G\_1M PPDU, is greater than 8
3. The dot11AsymmetricBlockAckSupport is true and Asymmetric Block Ack Supported field in the most recently received S1G Capabilities element from the S1G recipient is 1

If the recipient is capable of participating, the originator sends an ADDBA frame indicating the TID and the buffer size. If the recipient is capable of participating and the GCRGroupAddress parameter of the MLME-ADDBA.request primitive is present, the originator sends an ADDBA Request frame that includes a GCR Group Address element. All DMG STAs are capable of participating in the block ack mechanism.

* Procedure at the recipient

***Change the item b) in the sub-clause 10.5.2.3 (REVmc D2.1) as the following:***

***b)*** Upon receipt of the MLME-ADDBA.response primitive, the STA shall respond by an ADDBA Response frame with a result code as defined in 8.6.5.3 (ADDBA Response frame format). For S1G STA, the ADDBA Response frame refers to

* an NDP ADDBA Response if the value of the Buffer Size field of the NDP ADDBA Response is not greater than the value of the maximum number of MSDUs and A-MSDUs that can be acknowl-edged with the selected NDP BlockAck frame and no TWT has already been setup with the S1G originator as described in 9.42a (Target wake time (TWT)). This value is 8 for NDP 1M BlockAck frames and 16 for NDP\_2M BlockAck frames as de-scribed in 8.9.1.6 (NDP BlockAck). The NDP ADDBA Response frame shall be carried in an S1G\_1M PPDU to indicate the use of NDP\_1M BlockAck frames and shall be carried in an S1G\_SHORT or S1G\_LONG PPDU to indicate the use of NDP\_2M BlockAck frames.
* Otherwise, a BAT ADDBA Response as a response to a BAT ADDBA Request if a TWT has al-ready been setup with the S1G originator as described in 9.42a (Target wake time (TWT)). The value of the Buffer Size field in the BAT ADDBA Response shall not be greater than 32.
* Otherwise, an ADDBA Response indicating the use of BlockAck frames. The MCS subfield in the Originator Parameter field shall be set to 15 unless the dot11AsymmetricBlockAckSupport is true and the Asymmetric Block Ack Supported field in the most recently received S1G Capabilities from the S1G originator is 1 in which case the MCS subfield may indicate the value of the preferred MCS if asymmetric block ack opera-tion is used. The preferred MCS implicitly indicates the MCSDifference value, which is the difference between the preferred MCS and the MCS at which the ADDBA Response is sent.
* If the result code is SUCCESS, the Block Ack is considered to be established with the originator. Contained in the frame are the type of Block Ack agreement, the type of BlockAck frames and the number of buffers that have been allocated for the support of this block. If the recipient STA is an S1G non-AP STA and it has received from the AP a frame containing an S1G Capabilities element with the Asymmetric Block Ack Supported equal to 1, the Originator Parameter field may be contained in the ADDBA Response frame.