IEEE P802.11  
Wireless LANs

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| LB 203 Clause 4 comment resolution | | | | |
| Date: 2014-09-17 | | | | |
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Abstract

This submission proposes comment resolutions of MAC comments from TGah Draft 2.0.

* CIDs: ~~4038, 4037, 4036~~, 3431, 3080, 3440, 3082, 3209, 3210, 3432, 3433, 3435, 3437, 4159, 3536, 3638, 4009, 3446, 3448, 3445, 4113, 3391

3918, 3438, 3533, 3620, 3873, 3915, 3208, 3917, 4008, 4126, 4114, 3916, 3998, 4127, 3443, 3689, 3867, 4001, 4000, 3999, 3919, 3975, 3690, 4160, 3920, 3381, 3868 (46 CIDs)

Note) CID 4038, 4037, 4036 will be addressed by Ron Murias.

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.***

| **CID** | **Commenter** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ~~4038~~ | ~~Ronald Murias~~ | ~~4.00~~ | ~~4.13~~ | ~~I object to the resolution of CID 1015. 14/337r3 has no resolution for CID 1013. It changes one paragraph in 4.13 but does not address the concerns raised (117 instances of can to be reviewed).~~ | ~~See comment.~~ | ~~Rejected-~~  ~~This is an invalid comment.~~  ~~For a comment to be valid:~~  ~~It needs to identify where the issue is in the draft~~  ~~It needs to identify what the issue is~~  ~~It needs to identify a proposed change in sufficient detail that the CRC can readily identify changes that they would reasonably expect to satisfy the commenter. The wording from the IEEE-SA Standards Board Operations Manual (2010 p24) is: “This vote must be accompanied by one or more specific objections with proposed resolution in sufficient detail so that the specific wording of the changes that will cause the Do Not Approve voter to change his or her vote to Approve can readily be determined.”~~ |
| ~~4037~~ | ~~Ronald Murias~~ | ~~4.00~~ | ~~4.13~~ | ~~I object to the resolution of CID 1014. 14/337r3 has no resolution for CID 1013. It changes one paragraph in 4.13 but does not address the concerns raised (117 instances of can to be reviewed).~~ | ~~See comment.~~ | ~~Rejected-~~  ~~This is an invalid comment.~~  ~~For a comment to be valid:~~  ~~It needs to identify where the issue is in the draft~~  ~~It needs to identify what the issue is~~  ~~It needs to identify a proposed change in sufficient detail that the CRC can readily identify changes that they would reasonably expect to satisfy the commenter. The wording from the IEEE-SA Standards Board Operations Manual (2010 p24) is: “This vote must be accompanied by one or more specific objections with proposed resolution in sufficient detail so that the specific wording of the changes that will cause the Do Not Approve voter to change his or her vote to Approve can readily be determined.”~~ |
| ~~4036~~ | ~~Ronald Murias~~ | ~~4.00~~ | ~~4.13~~ | ~~I object to the resolution of CID 1013. 14/337r3 has no resolution for CID 1013. It changes one paragraph in 4.13 but does not address the concerns raised (117 instances of can to be reviewed).~~ | ~~See comment.~~ | ~~Rejected-~~  ~~This is an invalid comment.~~  ~~For a comment to be valid:~~  ~~It needs to identify where the issue is in the draft~~  ~~It needs to identify what the issue is~~  ~~It needs to identify a proposed change in sufficient detail that the CRC can readily identify changes that they would reasonably expect to satisfy the commenter. The wording from the IEEE-SA Standards Board Operations Manual (2010 p24) is: “This vote must be accompanied by one or more specific objections with proposed resolution in sufficient detail so that the specific wording of the changes that will cause the Do Not Approve voter to change his or her vote to Approve can readily be determined.”~~ |
| 3431 | David Hunter | 7.00 | 4.3.12b.1 | The long list that begins: "The main MAC features supported for S1G STA are the following:" does not present concepts or terminology. Presenting a long list of undefined terms is the opposite of introducing concepts. Remove this material from clause 4. If this material is still thought to be valuable, move it to the beginning of the S1G section in clause 9. | Delete the lines from page 7 line 53 through page 8 line 12. If this material is still thought to be valuable, move it to the beginning of the S1G section in clause 9. | Rejected-  The list shows the main MAC features supported by S1G STA.  The list is meaningful for understanding the concept of the S1G STA.  Also, the wording of the same style is used in 4.3.12 Very high throughput (VHT) STA. |
| 3080 | Adrian Stephens | 7.00 | 4.3.12b.1 | You define an S1G-MCS term, but use the unqualified MCS term here. | Please use only S1G-MCS throughout the amendment when talking about clause 24 MCSs. | Revised-  Agree in principle.  TGah editor replaces MCS with S1G-MCS throughout the draft, when the MCS indicates the value of MCS subfield of SIG SIG field. |
| 3440 | David Hunter | 8.00 | 4.3.12b.2.1 | "The relay-AP forwards frames to non-AP STAs associated with it that are received from the AP to which the relay-STA of the same Relay entity is associated.": needs to be written in the order of the operation -- and the relay STA is associated \_with\_ the other AP. | Replace:"The relay-AP forwards frames to non-AP STAs associated with it that are received from the AP to which the relay-STA of the same Relay entity is associated."with:"When a relay AP and relay STA are in the same relay and the relay STA receives frames addressed to other STAs that are associated with the relay AP, the relay AP forwards those frames to the appropriate associated STAs.". | Revised-  This comment is addressed by the resolution of CID 3536. .  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3082 | Adrian Stephens | 8.00 | 4.3.12b.2.1 | "A relay-STA forwards frames from STAsassociated with the relay-AP of the same Relay entity to the AP to which it is associated. The relay-APforwards frames to non-AP STAs associated with it that are received from the AP to which the relay-STA of the same Relay entity is associated."This is not so. Relaying must surely operate at the level of the MSDU, as it does in mesh and 802.11ad. A single incoming data frame might result in multiple outgoing data frames (and vice versa) depending on fragmentation settings at each STA.Its position in the stack is important because that determines whether the receiving sta is responsible for duplicate detection, decryption, replay detection, block ack reordering etc... | Replace frame with MSDU in the cited text. Add to 5.1 a diagram showing where the relaying takes place (see REVmc D3.0 new diagrams for illustrating this). | Revised-  This comment is addressed by the resolution of CID 3536. .  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3209 | Alfred Asterjadhi | 8.00 | 4.3.12b.2 | This paragraph can be improved for clarity: "A relay-AP is an AP with additional functionalities for the relaying of frames (see 9.49 (Relay operation)) that resides inside a Relay entity. A relay-AP supports four-address MAC header format and includes the Relay element in its Beacon, (Re-)Association Response, and Probe Response frames." | Replace the 2nd paragraph of this subclause with the following: "A relay-AP is an AP that resides inside a Relay entity and has additional functionalities for relaying frames (see 9.49 (Relay operation)). A relay-AP supports four-address MAC header format and includes the Relay element in Beacon, (Re-)Association Response, and Probe Response frames that it transmits." | Revised-  This comment is addressed by the resolution of CID 3536. .  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3210 | Alfred Asterjadhi | 8.00 | 4.3.12b.2 | Also this paragraph can be improved for clarity: "A relay-STA is a non-AP STA with additional functionalities for the relaying of frames (see 9.49 (Relay operation)), which resides inside a Relay and that successfully completes association and authentication with an AP, transmits a Relay element in the (Re-)Association Request frame and receives a Relay element in the (Re-)Association Response frame." | Replace the 3rd paragraph of this subclause with the following: "A relay-STA is a non-AP STA that resides inside a Relay, which has additional functionalities for relaying frames (see 9.49 (Relay operation)), and successfully completes association and authentication with an AP that includes a Relay element in the (Re-)Association Request frame and that receives a Relay element in the (Re-)Association Response frame. | Revised-  This comment is addressed by the resolution of CID 3536. .  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor removes subclause 4.3.12b.2 to 4.3.12b.6.  from TGah Draft 2.1.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3432 | David Hunter | 8.00 | 4.3.12b.1 | "among other benefits": marketing phrase that does not help describe concepts. | Delete ", among other benefits,". | Accepted-  Agree in principle. |
| 3433 | David Hunter | 8.00 | 4.3.12b.1 | The sentences "There are mainly two service types: sensor type and offloading type. An S1G AP may provide either or both of the services." can be put much more simply, without the inappropriate term "may". There appear to be no formally defined types, so drop the word "type". Also: the statement that there are differences still needs to be backed by definitions of what these services are. Otherwise there is no reason to include them in this standard. | Either delete these sentences "There are mainly two service types: sensor type and offloading type. An S1G AP may provide either or both of the services."or replace them with: "The S1G AP can provide either or both sensor services and offloading services". and then add short introductory descriptions of what constitutes a sensor service and what an offloading service. (Without those descriptions these sentences are worthless, so, if there are no descriptions, then just delete the two sentences quoted above.) | Revised-  I agree that “may” should be deleted.  But, regarding a sensor type station, it is defined in clause 3 as the following:  “sensor type station (STA): A sensor type STA is a non-AP STA using data frames with small payload size. A sensor type STA is also expected to have limited available power and low traffic volume.”  TGah editor replace “There are mainly two service types: sensor type and offloading type. An S1G AP may provide either or both of the services.” with  “An S1G AP can support either or both of a sensor type STA and a non-sensor type STA.” |
| 3435 | David Hunter | 8.00 | 4.3.12b.2.1 | "logically" is unnecessary: both "AP" and "STA" are logical concepts, so their combination couldn't be anything else. | Delete "is an entity that logically". | Revised-  Agree in principle.  But, the entity of the Relay is meaningful. So, it is reasonable to delete “logically”.  TGah editor deletes “logically” from page 303 line 40. |
| 3437 | David Hunter | 8.00 | 4.3.12b.2.1 | The sentence "A relay-AP is an AP with additional functionalities for the relaying of frames" makes it sound like non-relay APs don't already relay frames, which of course is false. | Replace the paragraph on lines 32 through 35 with:"A relay AP is an AP that: -- Provides a frame relay function in addition to the usual AP relay -- Resides in a relay entity -- Supports the four-address MAC frame format -- Transmits the Relay element in its Beacon, (Re-)Association Response, and Probe Response frames"Likewise, replace the paragraph on lines 37 through 42 with:"A relay STA is a non-AP STA that: -- Provides a frame relay function -- Resides inside a relay entity -- Completes association and authentication with an AP -- Transmits a Relay element in the (Re-)Association Request frame -- Supports a Relay element in the (Re-)Association Response frames that it receives" | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 4159 | Yonggang Fang | 8.00 | 4.3.12b.2.1 | The root AP is a special Relay that inlcudes the relay-AP only. Suggest to clarify this in the text. | add: A non-relay-AP that has relay-STAs associated with it is known as a Root AP. "A Root AP is a special Relay that includes a relay-AP only" .... | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3536 | Graham Smith | 8.00 | 4.3.12b.2 | Clauses 4.3.12b.2-b.6 are too much for this section. They need to be removed. For example Relay description here is identical to what is in 9.49 including the figure. Just to be clear, Fig 9-43 is the same as 4-7a. Even VHT did not have this much information in the Clause 4. | Delete clauses 4.3.12b.2 to 4.3.12b.6 | Revised-  Agree in principle.  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3.  But, in TGah Draft 2.1, the duplicated paragraph and figure from clause 9.49 was removed. So, it is needed to roll back previous changes again.  TGah editor to make changes as the following:  Replace the third paragraph of subclause 9.49.1 with:  “An example of a relay function is illustrated in Figure 4-7a (Relay Architecture), where Relay 1 and Relay 2 are Relays, both of which consisting of a relay-STA and a relay-AP, whose relay-STAs are associated with an AP that is a Root AP. STA 1 and STA 2 are non-AP STAs associated with the relay-AP of Relay 1. STA3 and STA4 are non-AP STAs associated with the relay-AP of Relay 2. Frames from STA 1 and STA 2 are forwarded via the relay-AP of Relay 1 to the relay-STA of Relay 1 and then to the Root AP. Similarly, frames from the Root AP are forwarded to STA 1 and to STA 2 via the relay-STA and the relay-AP of Relay 1.” |
| 3638 | kaiying Lv | 8.00 | 4.3.12b.2.1 | change "control field" to "Hierarchy Indentifier subfield in the control fied" | as comment | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6. |
| 4009 | Richard Roy | 8.00 | 4.3.12b.2.1 | Text reads: "A relay-AP is an AP with additional functionalities for the relaying of frames (see 9.49 (Relay operation)) that resides inside a Relay entity. The Relay A relay-AP supports 4 four-address frame MAC header format and includes the Relay element in its Beacon, Association(Re-)Association Response, and Probe Response frames." There are misplaced modifiers among other editorial issues. | Suggested text: "A relay-AP is an AP that resides inside a Relay entity with additional functionalities for the relaying of frames (see 9.49 (Relay operation)). A relay-AP supports the 4 four-address frame MAC header format and includes the Relay element in its Beacon, Association(Re-)Association Response, and Probe Response frames." Make similar changes to the next paragraph on the relay-STA. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3446 | David Hunter | 10.00 | 4.3.12b.5 | Since "bidirectional" is one word, "BDT" isn't a clear acronym. 11mc already has a defined acronym "BT"; but that acronym is not used anywhere in 11mc and will be deleted, so there will be no conflict. However, the way "BDT" is used in this text is odd -- it is not used as the name as a type of TXOP but as a name of a procedure (its descriptions -- "provides the functionality", "is intended to" etc. -- do not apply to straightforward TXOPs.) So the CRC might want to replace this term with a term like "bidirectional TXOP protocol (BTP)". | Throughout this draft either replace "BDT" with "BT" or replace "bidirectional TXOP" with "bidirectional TXOP protocol" and "BDT" with "BTP" or "BT protocol". | Rejected-  BDT is an abbreviation of a bidirectional TXOP.  Also, similar abbreviation is also used in 802.11REVmc.  For example,  BF beamforming  If you still think that an abbreviation of the BDT is problem, please submit the same comment to REVmc.  Then, we will follow the style guide of the REVmc. |
| 3448 | David Hunter | 10.00 | 4.3.12b.5 | The following sentence needs rewrite for clarity and accuracy: "As compared to Reverse Direction (RD) protocol, BDT includes requirements for PHY-layer signaling that provides medium reservation information at the lowest PHY rate to minimize the possibility of interference with the exchange." "As" is extraneous. "Reverse Direction" is not the name of a frame, field, etc, so does not need intial caps, but does need an article. The subject of "that" is "requirements", so if "requiremments" is retained, the "provides" needs to be plural. However it is much more accurate to eliminate "requirements" because it is the signaling that provides information, not the requirements. "to minimize" begins a parenthentical remark, so needs to be separated from the main sentence by a comma. | Replace: "As compared to Reverse Direction (RD) protocol, BDT includes requirements for PHY-layer signaling that provides medium reservation information at the lowest PHY rate to minimize the possibility of interference with the exchange."with: "Compared to the reverse direction (RD) protocol, BTP includes PHY-layer signaling that provides medium reservation information at the lowest PHY rate, to minimize the possibility of interference with the frame exchange." | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3445 | David Hunter | 10.00 | 4.3.12b.4 | Clause 4 is dedicated to introducing concepts, not providing a lookup table of pointers to other clauses. But "This type of partitioning, termed as RAW grouping is discussed in 9.21.5 (Restricted Access Window (RAW) Operation)." does not introduce concepts. | Delete "This type of partitioning, termed as RAW grouping is discussed in 9.21.5 (Restricted Access Window (RAW) Operation).". Also on line 28 delete "is presented in 9.48.3 (Group sectorization operation)" and on line 30 delete "The TWT grouping concept is illustrated in 9.42.5 (TWT Grouping)." | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 4113 | Shusaku Shimada | 12.00 | 4.4.2 | For Relay function, one new SS function of MSDU relaying is required independently with IEEE802D MAC sublayer interconnection bridge relay. | After "The SS is as follows: a)....... j) DSE", append the following, "MSDU relaying", or "MSDU relaying to and from (coordinated) Front-haul". | Rejected-  11ah Relay functionality is not a new station service. |
| 3918 | Mitsuru Iwaoka | 8.00 | 4.3.12b.2.1 | A Relay element of a relay-AP has non-zero value of Hierarchy Identifier subfield. | Modify the last sentence of the 2nd paragraph of 4.3.12b.2.1 as follows;---A relay-AP supports four-address MAC header format and includes the Relay element with the Hierarchy Identifier subfield value not equal to 0 in its Beacon, (Re-)Association Response, and (Short) Probe Response frames. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3438 | David Hunter | 8.00 | 4.3.12b.2.1 | The term "resides inside" here and on line 38 implies much more than is entailed in the defintion of the relay entity (on line 30) -- as "consists of" a relay AP and a relay STA. . However, these are all logical entities, so what in the world can "reside inside" possibly mean? Either "reside inside" needs to be defined explicitly in terms of logical relationships, or it needs to be replaced by a term that entails specific logical relationships. For instance, perhaps it means "shares, through out-of-scope means, specific information x, y, z". | Either define "resides inside" exclusively in terms of logical relationships or replace this term with one that does entail specific (defined) logical relationships among the relay, relay AP and relay STA entities. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3533 | Ganesh Venkatesan | 8.00 | 4.3.12.b.2 | Relay function -- how is this different from 802.11s (Mesh function)? It appears that the Relay function has a lot of overlap with 802.11s -- extending 802.11s for 802.11ah use would have accomplished the Relay function without a lot of specification work. | Extend 802.11s to accomplish the needs of the 802.11ah Relay function. | Rejected-  I agree that our Relay function is overlapping with 802.11s.  But, 802.11s is not commercialized because of its complexity.  Our Relay is not a complicated protocol. We just simply connect the multiple BSSs into a tree.  If we extend 802.11s, it is hard to simplify the relay protocol and can not be commercialized as well. |
| 3620 | Jerome Henry | 8.00 | 4.3.12b.2.1 | The relay function still seems to be a form basic AP to AP backhaul communication, but enhanced to allow TXOP burst, which is smart. However, an AP seems to only be able to be relaying traffic from a set of associated STAs to one given root. The relay cannot seem to relay to an AP that is itself (maybe for its own stations) relay to the same or another root. In illustration 4.7a, relay 1 could not relay directly to relay 2, even if the relay 1 and relay 2 are in range of each other, and even if relay 1 stations try to reach relay 2 stations. This restrictive mechanisms limits the interest of the relay function, and also is not clear on several points:- can a relay be relay to more than one root AP (this may be needed in some cloud-like topologies)- why couldn't a root AP be itself a relay (not necessairly to retransmit the signals coming from another relay, but to relay traffic from its own STAs to another root AP in topologies where this makes sense)? | Enhance the relay function to allow:- a relay to relay to another Ap that is itself a relay (if we want to limit the number of hops for the relay, we can specify that this relay 2 shouldnot relay further traffic coming from a relay, that relay 2 can be relay for its own STA, but that relay 2 can also be a root AP to receive traffic relayed from relay 1, when this makes sense)- specify if a relay can be relay to only one root, or if a relay can be relay to different root APs- allow a root Ap to e arelay,maybe as long as that relay function is not relaying traffic from another relay, but just from the AP STAs to another root AP | Rejected-  The one of requirements of our Relay function design is simple protocol for a commercialization.  If we allow a communication between two relays, the protocol will be complicated, similar to 802.11s. |
| 3873 | Mark Hamilton | 8.00 | 4.3.12b.2 | The architecture of a Relay, and in particular the architectural components that are in the double-ended arrow in Figure 4-7a, need to be described more clearly. | A submission will be required. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3915 | Mitsuru Iwaoka | 8.00 | 4.3.12b.2.1 | Description of Relay in 4.3.12b.2.1 is too detailed for clause 4. | Swap the content of 4.3.12b.2.1 and the contents of 9.49.1. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3208 | Alfred Asterjadhi | 8.00 | 4.3.12b.2 | A Relay is not limited to an S1G STA. Hence, it does not need to be under the S1G subclause. | Move the Relay heading and its depending headings one level ahead i.e., as 4.3.12c (Relay) immediately following 4.3.12b (Sub 1 GHz (S1G) STA). | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3917 | Mitsuru Iwaoka | 8.00 | 4.3.12b.2.1 | A Control Field of a Relay element has sub fields and may be non zero for the Root AP. | Modify the 5th paragraph by replacing "Control field" by "Hierarchy Identifier subfield". | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 4008 | Richard Roy | 8.00 | 4.3.12b.2 | The description of the "Relay" function appears to be that of a (MAC) bridge, not a relay. The 802 Architecture document carefully describes what a relay is, and it's very different from this description. | Rewrite all the text throughout dealing with the Relay function using the approporiate 802 terminology: i.e. using the terms bridge and bridging rather than Relay. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 4126 | Stephen Mccann | 8.00 | 4.3.12b.2.1 | The base standard defines an AP as a STA. Hence the term "relay-STA" could be confused with a "relay-AP". It would be clearer if the term "relay non-AP STA" is used to indicate a client device. | Change text from "A relay-STA is a non-AP STA..." to "A relay-non-AP STA is a non-AP STA...". Make corresponding changes through the draft. | Rejected -  Relay-STA and relay-AP are clearly defined at the beginning of 4.3.12b.2.1, which makes them unambiguous (thus far they have not caused any confusion). |
| 4114 | Shusaku Shimada | 8.00 | 4.3.12b.2 | In order to distinguish 11ah relay from other existing MAC relaying function, rename simple "Relay" in 11ah. | Rename "Relay" in 11ah to "Coordinated fronthaul relaying", and "Relay-AP" to "Fronthaul-AP", "Relay-STA" to "Fronthaul-STA", respectively. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3916 | Mitsuru Iwaoka | 8.00 | 4.3.12b.2.1 | As specified in Table 8-240l (P163L4), the Relay element can be included in a Short Probe Response frame. | Insert "(Short) " before "Probe Response frames" (two occurrence; P8L34 and P8L49). | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3998 | Osama Aboulmagd | 8.00 | 4.3.12.b.2.1 | "where Relay 1 and Relay 2 are Relays" ..what does this mean? | reword | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 4127 | Stephen Mccann | 9.00 | 4.3.12b.2.1 | Which type of AP is this line discussing? It is not clear. I think it should be a "relay-AP". | Change text from "Frames are relayed from the AP to its..." to "Frames are relayed from the relay-AP to its..." | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3443 | David Hunter | 9.00 | 4.3.12b.2.2 | Active mode is defined in 11mc 3.2 to be a mesh power mode. If the use of "active mode" here isn't supposed to make these relay STAs mesh STAs, then 11ah needs to use a different term than "active mode". | Replace "active mode" with some other term (assuming that relay STAs are not mesh STAs). | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3689 | Liwen Chu | 9.00 | 4.3.12b.2.1 General | Short frame with buffered MAC address can also be used here | Change to "Frames are relayed from the AP to its associated relay-STA using either the four-address MAC header format, the A-MSDU format or short frame format." | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3867 | MARC EMMELMANN | 9.00 | 4.2.12b.2.1 | How does the concept of a basic service set relate to Figure 4-7a? | Depict the boundaries of a BSS in the picture | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 4001 | Osama Aboulmagd | 9.00 | 4.3.12b.2.3 | The term "TXOP Sharing" was used before in 11ac to indicate the sharing of the TXOP among different STAs in a MU transmission. It obviuosly means different thing in this context.Need to find a different name. | as in comments | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 4000 | Osama Aboulmagd | 9.00 | 4.3.12b.2.2 | "The relaying function is bi-directional.." maybe confused with full duplex transmissions | I suggest deleting the whole sentence. It doesn't add anything new. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3999 | Osama Aboulmagd | 9.00 | 4.3.12b.2.2 | "The relay function allows an AP...." | change to "The relay function allows a Root AP..." | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3919 | Mitsuru Iwaoka | 9.00 | 4.3.12b.2.4 | The subclause 4.3.12b.2.4 specifies the operation of flow control. It is more suitable for subclause 9.49.2. | Move the contents of subclause 4.3.12b.2.4 to the subclause 9.49.2 (Relay operation), with modification to normative text. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3975 | Osama Aboulmagd | 9.00 | 4.2.12b.2.4 | "add the word "Root" before the AP in the first line of the first paragraph of this clause | as in comment | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3690 | Liwen Chu | 10.00 | 4.3.12b.5 | "As compared to Reverse Direction (RD) protocol, BDT includes requirements for PHY-layer signaling that provides medium reservation information at the lowest PHY rate to minimize the possibility of interference with the exchange."This is not special requirement of BDT. RD has the same requirement. | Remove the cited sentence. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 4160 | Yonggang Fang | 10.00 | 4.3.12b.2.4 | A Relay is a bi-directional packet forwarding. The current text only discribes the relay flow control on the UL direction. It should also consider the DL direction flow control. | Suggest to add a text for the DL relay forwarding flow control. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6. |
| 3920 | Mitsuru Iwaoka | 10.00 | 4.3.12b.3 | The subclause 4.3.12b.4 (Grouping of non-AP STAs) describes the TWT is one of the partitioning methods. It is better to place the "Target wake time" subclause after "Grouping of non-AP STAs" subclause. | Swap the order of subclause 4.3.12b.3 and 4.3.12b.4, | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12b.1 as specified at the bottom of 11-14-1021r3. |
| 3381 | Bo Sun | 10.00 | 4.3.12b.6 | We have "Beacon" defined, not "beacon". | replace all "beacon" with "Beacon" or "Beacon frame" all over the spec draft. | Revised-  This comment is addressed by the resolution of CID 3536.  (Clauses from 4.3.12b.2 to 4.3.12b.6 are almost redundant with clause 9.)  TGah editor deletes from 4.3.12b.2 to 4.3.12b.6.  Instead, write 4.3.12a.1 as specified at the bottom of 11-14-1021r3. |
| 3868 | MARC EMMELMANN | 10.00 | 4.2.12b.2.2 | Introduction of a two-hop relay seems not necessary as this scenario could be realized using a wireless distribution media. | Delete the concept of relaying from the draft (includin g all related claused) or add text to clarify the difference to a set-up using a wireless distribution system. | Rejected-  I agree that our Relay function can be implemented by a wireless distribution media.  But, our Relay function has additional features such a flow control and a TXOP sharing. Because 802.11ah is focusing on the low power device, we need an optimized relay in the sense of the energy consumption of the STA. |

***TGah editor to replace 4.3.12a.2.1 with the following:***

**4.3.12a.2 Relay**

**4.3.12a.2.1 General**

Relay is a mechanism that allows to increase the coverage area of an AP. A Relay consists of a relay-AP and a relay-STA, as illustrated in Figure 4-7a. Frames are relayed between a relay-AP and an associated relay-STA using either the four-address MAC header format (PV0 or PV1) or the A-MSDU format.