### IEEE P802.11Wireless LANs

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| 11be D1.0 CR for 3.2 |
| Date: 2021-12-14 |
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Abstract

This submission proposes resolutions for the following CIDs:

5777, 5293, 6624, 6636, 7488, 5571, 6105, 6166, 4093, 4315, 6581

Revisions:

* Rev 0: Initial version of the document.

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 TGbe D1.0 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe D1.0 Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

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

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| **CID** | **Commenter** | **Clause** | **P.L** | **Comment** | **Proposed Change** | **Resolution** |
| 5777 | Laurent Cariou | 3.2 | 41.16 | MLD definition should allow to have a single STA, for many reasons, including the fact that an AP can be removed to the associated MLD or that the association response only accepts one link out of two links. | as in comment | Revised – We change “more than one” to “one or more”TGbe editor to make the changes shown in 11-21/2009r0 under all headings that include CID 5777. |
| 5293 | Jarkko Kneckt | 3.2 | 41.16 | An MLD device should be possible to have one STA. Requiring more than one STA complicates operation and implementation. There may be cases, where MLD desires to setup only a single link and it should be supported by 802.11be. All 802.11be STAs should use the same link setup signaling, to enable flexilibility to add/delete ilnks without need to perform new ML authentication and association. | Please change:" more than one " to "one or more". | Revised – We change “more than one” to “one or more”TGbe editor to make the changes shown in 11-21/2009r0 under all headings that include CID 5777. |
| 6624 | Po-Kai Huang | 3.2 | 41.16 | MLD definition limits the framework to have at least two STAs. There is really no reason to have this specific limitation. An non-AP MLD may try to setup 2 links and the AP MLD may only accept one. Due to the framework limitation, now we can not even proceed in this case, and the AP MLD will have to reject assocaiton of this case with the reason code like "framework not support". Technically, all the proposal for MLD will still work when one link is setup. The operation basically fall back to legacy, and there is no reason to limit the design by limiting the framework this way. Note that this is TBD under motion 23. "NOTE 2 - It is TBD for a MLD to have only one STA." | Change the definition to allow MLD defintion be "A device that is a logical entity and has one or more one affiliated station (STA) and has a single medium access control (MAC) service access point (SAP) to logical link control (LLC), which includes one MAC data service." | Revised – We change “more than one” to “one or more”TGbe editor to make the changes shown in 11-21/2009r0 under all headings that include CID 5777. |
| 6636 | Pooya Monajemi | 3.2 | 41.16 | In some scenarios an MLD may operate using only one STA. This includes cases where a link is removed after an AP of an AP MLD shuts down. Definition should support this case. | Either change to "capability to have more than one affiliated station", or change to "one or more affiliated station" | Revised – We change “more than one” to “one or more”TGbe editor to make the changes shown in 11-21/2009r0 under all headings that include CID 5777. |
| 7488 | Tomoko Adachi | 3.2 | 41.18 | It is not clear what the relative pronoun "which" is intended to be. It should be not the LLC, nor the MAC SAP. It should be the MAC portion having the MAC SAP, I believe... The definition sentence should be revisited to be more clear. | As in comment. | Revised – We simply say have “one MAC data service”.TGbe editor to make the changes shown in 11-21/2009r0 under all headings that include CID 7488. |
| 5571 | John Wullert | 3.2 | 41.16 | The phrase "ML transition" is used in multiple places in the document but is not included in the definitions section. There is a description of various types of ML transition in in section 4.5.3.2, but a specific definition would still enhance clarity. | Add defintion of ML Transition | Revised – ML transition has been combined with BSS transition.TGbe editor no further changes are needed. |
| 6581 | Payam Torab Jahromi |   | 0.00 | Unify "affiliated with" / "affiliated to" usage; I prefer the more common variant "affiliated with", which also shows up about 10 times the "affiliated to" usage in Draft 1.0 (343 vs. 36). | Change all instances of "affiliated to" to "affiliated with". (and use "affiliated with" moving forward) | Revised – There are 611 instances of “affiliated with” in D1.3. There are only 29 instances of “affiliated to” in D1.3. Agree to use “affiliated with” across the spec.TGbe editor to make the changes shown in 11-21/2009r0 under all headings that include CID 6581. |
| 6105 | Mark Hamilton | 3.2 | 41.11 | There is no definition of "affiliated" STA. Given that other definitions depend on this term, and many normative requirements apply when those definitions are met, the term needs to be well defined. | 1) Create a definition of "affiliated station", that is unique to the MLD situation, compared to other multi-station structures already defined in 802.11, or even that are outside the scope of 802.11 and are just co-located implementations. 2) Define the MLD structure based on this affiliated station, as a device that co-locates an MLD STA with other stations that cooperate to provide both legacy and MLO behaviors. 3) Wording such as the changes across 4.5.3 can be simplified or changes removed, throughout. 4) Numerous technical changes with no real value can be removed, such as (just for example) the change to BSSMaxIdlePeriod in 6.3.7.3.2 and 11.21.13, and the creation of subclauses 4.3.19.23a and 35.3.10.3. | Revised – We simply use “STAs affiliated with”. Definition of “affiliated” from Merrian Webster is shown below.*Definition of affiliated****:****closely associated with another typically in a dependent or subordinate position*TGbe editor to make the changes shown in 11-21/2009r0 under all headings that include CID 6105 |
| 6166 | Michael Montemurro | 1 | 0.00 | If terminology like ML STA and ML AP was used, this cumbersome paragraph would not be required. Clean-up multi-link terminology to use ML STA and ML AP. | Throughout the draft, change AP MLD and non-AP MLD to ML STA and ML AP, respectively. | Rejected – It is clarified that in the reference mode of 11-21/577r5 that different STAs have different lower MAC sublayer and there is a common higher MAC sublayer among STAs for MLD. Hence, ML STA or ML AP is not a appropriate term. |
| 4093 | Abhishek Patil | 3.1 | 41.01 | identify is a more appropriate term than 'describe' - same goes for the definition of Reported STA | As in comment | Revised – The commenter suggests change for texts that is quoted from baseline. This can be resolved in revme, but there is no harm to do change in 11be since terms like reported STA are indeed used later, which follows baseline and may need adjustment. We do corresponding revision for reported AP and reported STA.TGbe editor to make the changes shown in 11-21/2009r0 under all headings that include CID 4093. |
| 4315 | Arik Klein | 3.2 | 41.01 | The usage of "described" in the context of the following definition seems inproper: "Reported access point (AP): An AP that is \*described\* in an element such as a Neighbor Report element or a Reduced Neighbor Report element or Basic variant Multi-Link element".What is the meaning of "AP description"? you can describe parameters, fields, diagrams, guidelines & rules, feature/attribute, etc. but a definition has to be precise and not use "description of AP in an element" (as a whole entity) without denoting what are the specific parts of the AP are described in the element... | Consider the following definition: Reported access point (AP): An AP whose one or more parameters are included in an element such as a Neighbor Report element or a Reduced Neighbor Report element or Basic variant Multi-Link element that is transmitted in a frame by a different AP ". | Revised – The commenter suggests change for texts that is quoted from baseline. This can be resolved in revme, but there is no harm to do change in 11be since terms like reported STA are indeed used later, which follows baseline and may need adjustment. We do corresponding revision for reported AP and reported STA and use “identify”.TGbe editor to make the changes shown in 11-21/2009r0 under all headings that include CID 4093. |

**Propose:**

***TGbe editor: Modify 3.2 Definitions specific to IEEE 802.11 as follows (track change on):***

**3.2 Definitions specific to IEEE 802.11**

***Change the following definitions:***

(…existing texts…)

(#1415)(#2744)**reported access point (AP):** An AP that is identified(#4093) in an element such as a Neighbor
Report element or a Reduced Neighbor Report element or Basic Multi-Link element(#6700).

(…existing texts…)

***Insert the following definitions (maintaining alphabetical order):***

(…existing texts…)

**multi-link device (MLD):** A device that is a logical entity and has one or more(#5777) station affiliated with the device (#6105) and has one MAC data service and(#7488) a single medium access control (MAC) service access point (SAP) to logical link control (LLC)(#7488).

(…existing texts…)

(#1415)(#2744)(#7368)**reported station (STA):** An access point (AP) or a non-AP STA that is identified(#4093) in
an element such as a Basic Multi-Link element(#6700).

(…existing texts…)

***TGbe editor: Change all instances of “affiliated to” to “affiliated with” in D1.3(#6581)***