**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | **Proposed comment resolution for SSPAN related comments from LB110** | |
| Date Submitted | 8 October 2015 | |
| Source | \*[Verotiana Rabarijaona, Fumihide Kojima], †[Hiroshi Harada]  \*[NICT], †[Kyoto University]  \*[3-4, Hikarino-oka, Yokosuka, 239-0847 Japan], †[36-1 Yoshida-Honmachi, Sakyo-ku, Kyoto 606-8501 Japan] | Voice: [+81-46-847-5075]  Fax: [+81-46-847-5089]  E-mail: [rverotiana@nict.go.jp] |
| Re: | 802.15.10 Consolidated Comment Entry Form, SSPAN related comments | |
| Abstract | Provides a proposed resolution to SSPAN related comments | |
| Purpose | To be used by the technical editor to apply the necessary changes to the draft to resolve SSPAN related comments | |
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**Comments**

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| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Page** | **Clause** | **Line** | **Comment** | **Proposed change** |
| 1393 | Tero Kivinen | 61 | 6.2.5.3 | 29 | How does the receiver know which mesh this message relates to? I mean there might be multiple L2R meshes around, some of them might be SSPAN, some not. There might even be two separate SSPANs L2R meshes around, or is that forbidden. | Specify how the receiver will know the address length, i.e. how can it find out whether this SRA IE actually belongs to the SSPAN he thinks it belongs to. |
| 1413 | Tero Kivinen | 66 | 6.2.9.1 | 51 | How does the receiver know to which mesh this message belongs to. I mean there might be two L2R meshes around, one using short addresses one using long addresses, and the neighbor who sent this message might also belong to both of them. | Explain how the receiver can know which mesh this message belongs to. |
| 1416 | Tero Kivinen | 67 | 6.2.9.2 | 3 | How does the receiver know to which mesh this message belongs to. I mean there might be two L2R meshes around, one using short addresses one using long addresses, and the neighbor who sent this message might also belong to both of them. | Explain how the receiver can know which mesh this message belongs to. |

**Resolution: Revise**

Only one L2R mesh should be deployed over an SSPAN and the mesh root is co-located with the PAN coordinator. Therefore, all frames sent within this L2R mesh should have the same PAN ID in the MAC header. Whenever a device receives a SRA IE or a SLR IE, it knows it is from the SSPAN it belongs to, if the frame passes the MAC filtering of the PAN ID. The PAN ID Compression field should be set so that at least one PAN ID field (Source or Destination) is present in the MAC header. If an L2R router in an SSPAN L2R mesh detects an L2R-D IE where the mesh root address does not match the mesh root address recorded in the MT, the L2R sublayer alerts the higher layers. The resolution of a mesh root address conflict in an SSPAN is out of the scope of the document.

* ***Insert the following new definition in clause 3.1***

**SL2R mesh:** L2R mesh deployed over an SSPAN

* ***Insert the following new acronym in clause 3.2***

SL2R Small scale personal area network layer 2 routing

* ***Insert the following text after the second paragraph on p.14***

If an L2R router belongs to an SL2R mesh and receives an empty L2R-D IE, it replies with an L2R-D IE where the Number of Services field is set to zero and the Service List field is omitted.

* ***Replace the second sentence of clause 5.1.2.2***

A device may join several L2R meshes. However, it may join only one SL2R mesh.

* ***Insert the following text at the end of the description of the Service list in Table 1***

Omitted in an SL2R mesh.

* ***Insert the following row before the Service list in Table 1***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid Range** | **Description** |
| *SSPAN* | Boolean | TRUE, FALSE | Indicates whether the L2R mesh is an SL2R mesh. |

* ***On p.11, l.29, replace the last sentence with:***

The device may decide to become a mesh root if there is no existing L2R mesh to join and if it is able to provide access to one or more services. In an SSPAN, the PAN coordinator is the only device allowed to start an SL2R mesh.

* ***Insert the new parameter “Sl2rRootConflict” in the L2RLME-SCAN.indication semantics and in Table 19 as follows:***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Valid Range** | **Description** |
| Sl2rRootConflict | Enumeration | TRUE, UNKNOWN,  NOT\_APPLICABLE | Indicates whether there is a mesh root conflict in an SSPAN |

The Sl2rRootConflict is set to TRUE if an L2R router part of an SL2R detects an L2R-D IE where the mesh root address does not match the mesh root address recorded in its MT.

The Sl2rRootConflict is set to UNKNOWN if a joining device receives an L2R-D IE from an SL2R router and does not know the address of the PAN coordinator.

The Sl2rRootConflict is set to NOT\_APPLICABLE if the Small Scale PAN field in the received L2R-D IE is set to zero.

* ***Insert the following text after before the last paragraph of 5.1.2.1***

During the discovery phase of a joining device in an SL2R, if an L2R router already part of the SL2R receives an L2R-D IE where the mesh root address does not match the mesh root address recorded in its MT, it informs the higher layers with an L2RLME-SCAN.indication primitive where Sl2rRootConflict is set to TRUE. If the mesh root address matches that of the MT, the L2R router discards the L2R-D IE.