**IEEE 802.15**

**Wireless Speciality Networks**

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| Project | IEEE P802.15 Working Group for Wireless Speciality Networks (WSNs) | |
| Title | Proposal for revising clauses 7.2.2 and 7.3 in 802.15.3RevB | |
| Date Submitted | 20 December 2022 | |
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| Re: |  | |
| Abstract | Proposal for revising clauses 7.2.2 and 7.3 in 802.15.3RevB | |
| Purpose | Resolving comments of LB193 | |
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**Proposal for revising clauses 7.2.2 and 7.3 in 802.15.3RevB**

**7.2.2 Scanning through channels**

All DEVs shall use passive scanning to detect an active piconet . That is, DEVs shall be in receive mode for a period of time in a channel no less than *mMinChannelScan* to look for Beacon frames or, if supported, Sync frames from a PNC. If a particular BSID, PNID, or PNC address to scan for is not specified with an MLME-SCAN.request, the DEV searches for any Beacon frame or, if supported, a Sync frame. If a particular BSID, PNID, or PNC address to scan for is specified, the DEV shall ignore all received frames not matching the parameter or parameters contained in the request.

In addition, the searching DEV shall collect statistics on each channel scanned and save them in the

ChannelRatingList, as described in 5.3.3.

DEVs search for piconetsby traversing through all available PHY channels. A DEV may search the channels in any order as long as all valid channels are contained in the search pattern. The result of a piconet scan shall include information on any parent, child, as described in 7.2.8, or IEEE 802.15.3 neighbor, as described in 7.2.9, piconets that were detected. This provides a complete inventory of each channel.

While searching, if any frame type other than a Beacon frame is received, the searching DEV shall stay in the channel for a minimum of *mMinChannelScan* from the time of reception of first frame and look for a beacon from the PNC . The DEV shall scan all indicated channels to find piconets before returning the scan information via the MLME-SCAN.confirm primitive. The DEV shall report only piconets found due to the reception of a Beacon frame or, if supported, a Sync frame as a part of the MLME-SCAN.confirm primitive.

**7.3 Starting and stopping a pairnet**

**7.3.1 Scanning through channels**

All DEVs shall use passive scanning to detect an active pairnet. That is, DEVs shall be in receive mode for a period of time in a channel no less than *mMinChannelScan* to look for Beacon frames from a PRC. If a particular PNID or PRC address to scan for is not specified with an MLME-SCAN.request, the DEV searches for any Beacon frame. If a particular PNID or PRC address to scan for is specified, the DEV shall ignore all received frames not matching the parameter or parameters contained in the request.

In addition, the searching DEV shall collect statistics on each channel scanned and save them in the

ChannelRatingList, as described in 5.3.3.

DEVs search for pairnets by traversing through all available PHY channels. A DEV may search the channels in any order as long as all valid channels are contained in the search pattern. This provides a complete inventory of each channel.

While searching, if any frame type other than a Beacon frame is received, the searching DEV shall stay in the channel for a minimum of *mMinChannelScan* from the time of reception of first frame and look for a beacon from the PRC. The DEV shall scan all indicated channels to find pairnets before returning the scan information via the MLME-SCAN.confirm primitive. The DEV shall report only pairnets found due to the reception of a Beacon frame as a part of the MLME-SCAN.confirm primitive.

7.3.2 Starting a pairnet

<add text currently in 7.3, lines 19-26>

7.3.3 Stopping a pairnet

If the PRC is going to leave the pairnet the PRC will shut down the pairnet operations. The DME may initiate the shutdown pairnet operations using an MLME-STOP.request primitive with the RequestType set to SHUTDOWN.

7.3.4 Non-PRC-capable devices

Simple PRDEVs may be implemented without providing support for the PRC role in a pairnet. The implication of this is that these PRDEVs would be unable to form a pairnet by themselves. Therefore, these PRDEVs should be of a type that are normally used only in conjunction with a PRDEV that provides PRC capability.