**IEEE P802.15**

**Wireless Personal Area Networks**

|  |  |
| --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | Suggested text for common mode |
| Date Submitted | September 2015 |
| Source | Huan-Bang Li (NICT)Marco Hernandez (NICT)Igor Dotlić (NICT)Ryu Miura (NICT) |  |
| Re: | Suggested text for the draft of 802.15.8 |
| Abstract | This is the work in progress text of the MAC component for IEEE 802.15.8 group for PAC. |
| Purpose | This document provides the details of draft text to IEEE 802.15.8 |
| Notice | This document does not represent the agreed views of the IEEE 802.15 Working Group or IEEE 802.15.8 Task Group. It represents only the views of the participants listed in the “Source(s)” field above. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein. |
| Release | The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by P802.15. |
| Patent Policy | The contributor is familiar with the IEEE-SA Patent Policy and Procedures:<http://standards.ieee.org/guides/bylaws/sect6-7.html#6> and<http://standards.ieee.org/guides/opman/sect6.html#6.3>.Further information is located at <http://standards.ieee.org/board/pat/pat-material.html> and<http://standards.ieee.org/board/pat>. |

# [This is draft text for subclause of common mode and channel access order for TG8]

# #.% Common mode and channel access order

1.

 #.%.1 Common mode

To facilitate distributed synchronization among neighbor PDs, 802.15.8 defines a common mode at each frequency band. A common mode shall be assigned with a fixed RF channel, and fixed PHY parameters to guarantee immediate distributed synchronization. There shall be one and only one common mode defined at each channel page of a frequency band.

The suggested common mode at 900 MHz band is as follows

Channel page: as defined in TBD

Channel number: channel ? as in TBD

Data rate: mandatory data rate as defined in TBD

The suggested common mode at 2.4 GHz band is as follows

Channel page: as defined in TBD

Channel number: channel ? as in TBD

Data rate: mandatory data rate as defined in TBD

The suggested common mode at 5 GHz band is as follows

Channel page: as defined in TBD

Channel number: channel ? as in TBD

Data rate: mandatory data rate as defined in TBD

The suggested common mode at UWB band is as follows

Channel number: channel ? as in TBD

Modulation: TBD

Any PD enters the common mode shall perform the distributed synchronization as described in 5.3. A PD attempts to start a PAC group shall be already in synchronization in common mode. A PD attempts to join a PAC group should be already in synchronization in common mode.

A PD has not got synchronized in the common mode and attempt to operate in a RF channel different from that of the common mode shall perform the distributed synchronization as described in 5.3 but it shall not transmit synchronization signal. In other words, in other RF channels rather than that of the common mode, only PDs that have got synchronized in common mode are allowed to transmit synchronization signal.

A PD got synchronized in common mode and starts to transmit synchronization signal in any other RF channels rather than the common mode shall perform re-synchronization as described in 5.3.3 in common mode for a minimum interval of time or it shall stop transmit synchronization signal.

The minimum intervals that a PD shall get re-synchronized in common mode are as follows.

 TBD; for 900 MHz band

 TBD; for 2.4 GHz band

TBD; for 5 GHz band

 TBD; for UWB band