IEEE P802.19
Wireless Coexistence

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| Frequency range notation |
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Abstract

This document contains proposed modifications to frequency range notation in section 6.5.

# Discussion

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 Some WSOs may use frequency only based on the channelization of original TV channel, others may not. For example, 802.11af and 802.15.4m support the usage of a partial TV channel and/or multiple channels. Using the information of detailed channel configuration which each WSO supports, a CM may allocate frequency resource more efficiently. This kind of WSO capabilities can be included by revising current definition of ListOfSupportedFrequencies.

In a summary, “ListOfSupportedFrequencies” needs to include following information,

* Each frequency range the WSO is supporting. Usually this is a list of all non-contiguous bands
* Each bandwidth the WSO is supporting in a given frequency range. There are two possibilities in bandwidth information: the true signal BW or the minimum space the signal requires to operate (channel bandwidth). At least the channel bandwidth has to be given.
* The combination of channels for aggregation the WSO is supporting.
* Minimum channel raster by which the devices in the WSO are able to fine tune the location in the spectrum. This raster can be e.g. the min resolution of the synthesizer in the device or min specified step size defined in the radio standard used by the WSO.

# Proposal

Revise the definition of “ListOfSupportedFrequencies” as follows,

ListOfSupportedFrequencies ::= SEQUENCE OF SEQUENCE {

 *-- The frequency borders of each possible sub band or channel*

 supportedFrequency FrequencyRange,

 *-- Extra channel configuration (subchannelization or channel aggregation) supported or not*

 extrachannelizationIsSupported BOOLEAN,

 *-- Extra channel configuration description*

 extrachannelizationDescription ExtraChannelizationDescription OPTIONAL

*}*

FrequencyRange ::= SEQUENCE {

 startFreq REAL,

 stopFreq REAL

 }

extraChannelizationDescription ::= SEQUENCE{

 *-- Maximum number of non-contiguous channels supported in channel aggregation*

 maxNuNonconCH INTEGER,

 *-- Maximum number of contiguous channels supported in channel bonding*

 maxNuConCH INTEGER,

*--Min channel raster for fine tuning of frequency*

minChRasterREAL *OPTIONAL,*

 *-- Maximum supported bandwidth per channel*

 maxCHBW REAL,

 *-- Minimum supported bandwidth per channel*

 minCHBW REAL,

 *-- Resolution for additional channel bandwidth between minCHBW and maxCHBW*

 resolutionSBW REAL,

 *-- Minimum bandwidth within either maxCHBW or minCHBW. Any number or location,*

 *-- which fits within either maxCHBW or minCHBW is allowed.*

 minUnderlayBW REAL,

 *-- Offset of the start frequency in the case of maxCHBW*

offsetFreqMaxCHBW REAL,

 *-- Offset of the start frequency in the case of minCHBW*

offsetFreqMinCHBW REAL,

 *-- Offset always based on the Primary Channelization or not*

 OffsetPerPrimaryChannelization BOOLEAN

}

# Appendix

Informative illustration for explaining the above parameters.



Fig. 1 support of channel aggregation and channel bonding