IEEE P802.19
Wireless Coexistence

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| Proposal to modify message (section 6.4) and data type (section 6.5) definitions for radio environment type information |
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Abstract

This document contains a proposal what information to exchange between CMs about the coexistence set elements. CoexistenceSetElementInformationAnnouncement is as an example.

Basicly the old information in CoexistenceSetElementInformationAnnouncement is included in data type OwnNetwork.

Other data types are CoexSetNetworks, OtherNetworks, UnusedFrequencies and UnknownFrequencyUsage. These include information about the environment seen by the CE which OwnNetwork information is presented in CoexistenceSetElementInformationAnnouncement.

The proposal relates to comments with CID138 and CID139.

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**SECTION 6.4**

OLD

CoexistenceSetElementInformationAnnouncement ::= SEQUENCE {

 -- CE ID of the WSO served by source CM

 sourceWSOId OCTET STRING,

 -- Network technology, e.g., 802.11af, 802.22

 sourceNetwTech NetworkTechnology,

 -- WSO type, e.g., fixed, mode 2

 networkType NetworkType,

 -- List of supported resources: channel numbers or frequencies

 listOfSupportedResources CHOICE {

 -- List of supported channel numbers

 listOfSuppChNumber ListOfSupportedChNumber,

 -- List of supported frequencies

 listOfSuppFreq ListOfSupportedFrequencies

 },

 -- List of operating resources: channel numbers or frequencies

 listOfOperatingResources CHOICE {

 -- List of operating channel numbers

 listOfOperChNum ListOfOperatingChNumber,

 -- List of operating frequencies including occupancy information

 listOfOperFreq ListOfOperatingFrequencies

 },

 -- WSO capabilities that have an effect on coexistence decisions

 sourceNetworkCapabilities NetworkCapabilities,

 -- Coexistence service subscription

 sourceSubscribedService SubscribedService,

 -- Indicates whether this WSO shall be managed by source CM or

 -- destination CM

 managingCM BOOLEAN,

 -- Channel classification information

 chClassInfo ChClassInfo OPTIONAL,

 -- Indicates whether this WSO finished scheduled time when channel

 -- is shared

 scheduledTimeEnd BOOLEAN OPTIONAL,

 -- Indicates whether the coexistence set element releases resources

 -- temporarily or reclaims them

 temporaryResource ENUMERATED {release, reclaim} OPTIONAL

}

NEW

-- From CM to CM

CoexistenceSetElementInformationAnnouncement ::= SEQUENCE {

 --Identifier of the CE for which information is given

 ceID CX\_ID,

 --information of the own network

 ownNet OwnNetwork,

 --802.19.1 type networks

 coexNets CoexSetNetworks,

 --Other networks outside 802.19.1

 otherNets OtherNetworks,

 --unused frequency locations

 unusedFreqs UnusedFrequencies,

 --Unknown frequency usage

 unknownUsage UnknownFrequencyUsage

}

**SECTION 6.5**

FrequencyRange ::= SEQUENCE {

 startFreq INTEGER,

 stopFreq INTEGER

}

OwnNetwork ::= SEQUENCE {

 -- CM identifier for a source CE

 cMID CxID,

 -- CM IP address

 cMIPAddress OCTET STRING,

 -- CM port number

 cMPortNum OCTET STRING,

 -- Network identifier, e.g., BSS ID

 networkID OCTET STRING,

 -- Network technology, e.g., 802.11af, 802.22

 networkTechnology NetworkTechnology,

 -- Coexistence service subscription

 subscribedServ SubscribedService,

 -- List of supported resources: channel numbers or frequencies

 -- List of allowed channels for the source CE

 listOfAllowedTVWSChNum ListOfAllowedTVWSChNumber,

 --Frequencies supported by the source CE

 listOfSupportedResources CHOICE {

 -- List of supported channel numbers

 listOfSuppChNumber ListOfSupportedChNumber,

 -- List of supported frequencies

 listOfSuppFreq ListOfSupportedFrequencies

 },

 -- WSO capabilities that have an effect on coexistence decisions

 sourceNetworkCapabilities NetworkCapabilities,

 -- Indicates whether this WSO shall be managed by source CM or

 -- destination CM

 managingCM BOOLEAN OPTIONAL,

 -- Channel classification information

 chClassInfo ChClassInfo OPTIONAL,

 -- Indicates whether this WSO finished scheduled time when

 -- channel is shared

 scheduledTimeEnd BOOLEAN OPTIONAL,

 -- Indicates whether the coexistence set element releases resources

 -- temporarily or reclaims them

 temporaryResource ENUMERATED {release, reclaim} OPTIONAL

 --Coexistence value of the network

 coexistenceValue REAL,

 listOfOperatingResourceValues SEQUENCE OF SEQUENCE {

 CHOICE {

 -- Operating channel number

 operChNumber INTEGER,

 -- Operating frequency location

 operFreq FrequencyRange },

 occupancy REAL OPTIONAL,

 txSch TxSchedule OPTIONAL,

 totalOccupancy REAL OPTIONAL,

 channelIsShared BOOLEAN OPTIONAL,

 txPowerLimit REAL OPTIONAL

 }

}

CoexSetNetworks ::= SEQUENCE OF SEQUENCE {

 -- CE identifier of the related WSO

 ceID CxID,

 -- CM identifier for CE

 cMID CxID,

 -- CM IP address

 cMIPAddress OCTET STRING,

 -- CM port number

 cMPortNum OCTET STRING,

 -- Network identifier, e.g., BSS ID

 networkID OCTET STRING,

 -- Network technology, e.g., 802.11af, 802.22

 networkTechnology NetworkTechnology,

 listOfOperatingResourceValues SEQUENCE OF SEQUENCE {

 CHOICE {

 -- Operating channel number

 operChNumber INTEGER,

 -- Operating frequency location

 operFreq FrequencyRange },

 occupancy REAL OPTIONAL,

 txSch TxSchedule OPTIONAL,

 totalOccupancy REAL OPTIONAL,

 channelIsShared BOOLEAN OPTIONAL,

 txPowerLimit REAL OPTIONAL

 }

}

OtherNetworks ::= SEQUENCE OF SEQUENCE {

 -- Network identifier, e.g., BSS ID

 networkID OCTET STRING OPTIONAL,

 -- Network technology, e.g., 802.11af, 802.22

 networkTechnology NetworkTechnology OPTIONAL,

 CHOICE {

 -- Operating channel number

 operChNumber INTEGER,

 -- Operating frequency location

 operFreq FrequencyRange },

 occupancy REAL OPTIONAL

}

UnusedFrequencies ::= SEQUENCE OF SEQUENCE {

 CHOICE {

 -- Operating channel number

 operChNumber INTEGER,

 -- Operating frequency location

 operFreq FrequencyRange }

}

UnknownFrequencyUsage ::= SEQUENCE OF SEQUENCE {

 CHOICE {

 -- Operating channel number

 operChNumber INTEGER,

 -- Operating frequency location

 operFreq FrequencyRange }

}