IEEE P802.19  
Wireless Coexistence

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| Proposed update to data types | | | | |
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Abstract

This document is a submission to IEEE 802.19 TG1 proposing update to data types.

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# Proposed update

*It is proposed to add Normative Annex Data Types Definition using the text below.*

**Normative Annex Data Types Definition**

IEEE802191DataType DEFINITIONS AUTOMATIC TAGS ::= BEGIN

**-----------------------------------------------------------**

**--Exported data types**

**-----------------------------------------------------------**

--Exported data types

EXPORTS

--Coexistence protocol entity ID

CxID,

--Status

Status,

--Coexistence service

CoexistenceService,

--Network technology

NetworkTechnology,

--Geolocation

Geolocation,

--Coverage area

CoverageArea,

--Installation parameters

InstallationParameters,

--Frequency range

FrequencyRange,

--List of available frequencies

ListOfAvailableFrequencies,

--List of operating frequencies

ListOfOperatingFrequencies,

--Required resource

RequiredResource,

--Operation code for registration

OperationCode,

--List of available frequencies of the subject WSO

ListOfSubjectWSOAvailableFrequencies,

--Transmission schedule

TxSchedule,

--CM registration

CMRegistration,

--CE registration

CERegistration,

--List of subject CEs

ListOfSubjectCEs,

--List of neighbor CMs transport information

ListOfNeighborCMsTransport,

--List of neighbor CM WSOs

ListOfNeighborCMWSOs,

--List of CEs for reconfiguration

ReconfigListOfCEs

;

**-----------------------------------------------------------**

**--Coexistence protocol entity ID**

**-----------------------------------------------------------**

--Coexistence protocol entity type

CxType ::= ENUMERATED {

--Coexistence enabler

ce,

--Coexistence manager

cm,

--Coexistence discovery and information server

cdis}

--Coexistence protocol entity ID

CxID ::= SEQUENCE {

--Entity type

type CxType,

--Entity ID

id OCTET STRING}

**-----------------------------------------------------------**

**--Status**

**-----------------------------------------------------------**

--Status

Status ::= ENUMERATED {

--Primitive/message is successfully processed

noError,

--Primitive/message is rejected due to security reasons

rejected,

--Primitive/message cannot be successfully processed because according to the current entity status different primitive/message is expected

invalidEntityStatus,

--Primitive/message cannot be successfully processed because of invalid values of parameters

invalidArgument,

--Primitive/message cannot be successfully processed because of the process error in the receiving entity

processFailure,

--Primitive/message cannot be successfully processed because of the connection error

networkFailure}

**-----------------------------------------------------------**

**--Coexistence service**

**-----------------------------------------------------------**

--Coexistence service

CoexistenceService ::= ENUMERATED {

--Information service

information,

--Management service

management,

--No service

noService}

**-----------------------------------------------------------**

**--Network technology**

**-----------------------------------------------------------**

NetworkTechnology ::= ENUMERATED {

--IEEE 802.11af

ieee802dot11af,

--IEEE 802.22

ieee802dot22,

--Radio microphone

radioMic,

--Area broadcast

areaBroadcast}

**-----------------------------------------------------------**

**--Location**

**-----------------------------------------------------------**

--Location

Geolocation ::= CHOICE {

--Place name or ID

placeID OCTET STRING,

--Coordinates of the master station

coordinates SEQUENCE {

--Latitude

latitude REAL,

--Longitude

longitude REAL,

--Altitude

altitude REAL OPTIONAL}}

**-----------------------------------------------------------**

**--Coverage area**

**-----------------------------------------------------------**

--Coverage area

CoverageArea ::= SEQUENCE {

--Coverage radius

radius REAL,

--Reference central frequency

refFrequency REAL,

--Reference height of master station

refMasterHeight REAL,

--Reference height of slave station

refSlaveHeight REAL,

--Reference transmission power

refTxPower REAL}

**-----------------------------------------------------------**

**--Installation parameters**

**-----------------------------------------------------------**

--Installation parameters

InstallationParameters ::= SEQUENCE {

--Operating height of master station

opMasterHeight REAL OPTIONAL,

--Operating height of slave station

opSlaveHeight REAL OPTIONAL,

--Operating transmission power

opTxPower REAL OPTIONAL}

**-----------------------------------------------------------**

**--Frequency range related data types**

**-----------------------------------------------------------**

--Frequency range

FrequencyRange ::= SEQUENCE {

--Start frequency

startFreq REAL,

--Stop frequency

stopFreq REAL}

--List of available frequencies

ListOfAvailableFrequencies ::= SEQUENCE OF SEQUENCE {

--Frequency range

frequencyRange FrequencyRange,

--Transmission power limit

txPowerLimit REAL OPTIONAL,

--Start time when this frequency range is available

availableStartTime GeneralizedTime OPTIONAL,

--Duration during which this frequency range is available

availableDuration REAL OPTIONAL}

--List of supported frequencies

ListOfSupportedFrequencies ::= SEQUENCE OF FrequencyRange

--List of operating frequencies

ListOfOperatingFrequencies ::= SEQUENCE OF SEQUENCE {

--Frequency range

frequencyRange FrequencyRange,

--Occupancy if known

occupancy REAL OPTIONAL}

**-----------------------------------------------------------**

**--Required resource**

**-----------------------------------------------------------**

--Required resource

RequiredResource ::= SEQUENCE OF SEQUENCE {

--Required bandwidth

requiredBandwidth REAL,

--Expected occupancy if known

occupancy REAL OPTIONAL}

**-----------------------------------------------------------**

**--Operation code for registration**

**-----------------------------------------------------------**

--Operation code for registration

OperationCode ::= ENUMERATED {

--New registration

new,

--Update of registration information

update,

--Deregistration

delete}

**-----------------------------------------------------------**

**--Reconfiguration related data types**

**-----------------------------------------------------------**

--Transmission schedule

TxSchedule ::= SEQUENCE {

--Schedule start time

scheduleStartTime GeneralizedTime,

--Schedule frame duration

scheduleFrameDuration REAL,

--Number of schedule frames

numberOfFrames INTEGER,

--Transmission start time within a schedule frame

transmissionStartTime REAL,

--Transmission duration within a schedule frame

transmissionDuration REAL}

**-----------------------------------------------------------**

**--CM registration**

**-----------------------------------------------------------**

--CM registration

CMRegistration ::= SEQUENCE {

--CM IP address

ipAddress OCTET STRING,

--CM port number

portNumber INTEGER}

--List of WSO for registration

ListOfWSORegistrations ::= SEQUENCE OF SEQUENCE {

--New registration, registration update or deregistration

operationCode OperationCode,

--WSO ID

wsoID OCTET STRING,

--Network technology

networkTechnology NetworkTechnology OPTIONAL,

--Location

geolocation Geolocation OPTIONAL,

--Coverage area

coverageArea CoverageArea OPTIONAL,

--Installation parameters

installationParameters InstallationParameters OPTIONAL,

--List of available frequencies

listOfAvailableFrequencies ListOfAvailableFrequencies OPTIONAL}

--CE registration

CERegistration ::= SEQUENCE OF SEQUENCE{

--CE ID

ceID CxID,

-- List of WSO registration

listOfWSORegistration ListOfWSORegistrations}

**-----------------------------------------------------------**

**--Coexistence set information related data types**

**-----------------------------------------------------------**

--Interference direction

InterferenceDirection ::= ENUMERATED {

--Subject WSO creates interference to neighbor WSO

source,

--Neighbor WSO creates interference to subject WSO

victim,

--Both subject WSO and neighbor WSO create interference to each other

mutual}

--List of neighbor WSOs

ListOfNeighborWSOs ::= SEQUENCE OF SEQUENCE {

--Neighbor WSO ID

wsoID OCTET STRING,

--Neighbor WSO network technology

networkTechnology NetworkTechnology,

--Interference direction

interferenceDirection InterferenceDirection,

--Distance to subject WSO

distance REAL

--List of operating frequencies

--Not used in CoexistenceSetInformationAnnouncement

--Used in CoexistenceReportAnnouncement and CxMediaCoexistenceReportIndication

listOfOperatingFrequencies ListOfOperatingFrequencies OPTIONAL}

--List of neighbor CEs

ListOfNeighborCEs ::= SEQUENCE OF SEQUENCE {

--Neihgbor CE ID

ceID CxID,

--List of neighbor WSOs

listOfNeighborWSOs ListOfNeighborWSOs}

--List of neighbor CMs

ListOfNeighborCMs ::= SEQUENCE OF SEQUENCE {

--Neighbor CM ID

cmID CxID,

--List of neighbor CEs

listOfNeighborCEs ListOfNeighborCEs}

--List of available frequencies of the subject WSO

ListOfSubjectWSOAvailableFrequencies ::= SEQUENCE OF SEQUENCE {

--Frequency range

frequencyRange FrequencyRange,

--List of neighbor CMs

listOfNeighborCMs ListOfNeighborCMs}

--List of subject WSOs

ListOfSubjectWSOs ::= SEQUENCE OF SEQUENCE {

--Subject WSO ID

wsoID OCTET STRING,

--List of available frequencies of the subject WSO

listOfSubjectWSOAvailableFrequencies ListOfSubjectWSOAvailableFrequencies}

--List of subject CEs

ListOfSubjectCEs ::= SEQUENCE OF SEQUENCE {

--Subject CE ID

ceID CxID,

--List of subject WSOs

listOfSubjectWSOs ListOfSubjectWSOs}

--List of neighbor CMs transport information

ListOfNeighborCMsTransport ::= SEQUENCE OF SEQUENCE {

--Neighbor CM ID

cmID CxID,

-- Neighbor CM IP address

ipAddress OCTET STRING,

-- Neighbor CM port number

portNumber INTEGER}

**-----------------------------------------------------------**

**--Coexistence set element information related data types**

**-----------------------------------------------------------**

--List of neighbor CM WSOs

ListOfNeighborCMWSOs ::= SEQUENCE OF SEQUENCE {

--WSO ID

wsoID OCTET STRING,

--List of available frequencies

listOfAvailableFrequencies ListOfAvailableFrequencies OPTIONAL,

--List of operating frequencies

listOfOperatingFrequencies ListOfOperatingFrequencies OPTIONAL

}

**-----------------------------------------------------------**

**--Coexistence set element reconfiguration related data types**

**-----------------------------------------------------------**

--List of WSOs

ReconfigListOfWSOs ::= SEQUENCE OF SEQUENCE {

--WSO ID

wsoID OCTET STRING,

--Potential new operating frequency

newOperatingFrequency FrequencyRange

}

--List of CEs

ReconfigListOfCEs ::= SEQUENCE OF SEQUENCE {

--CE ID

ceID CxID,

--List of WSOs

reconfigListOfWSOs ReconfigListOfWSOs

}

END