IEEE 802.19.1a
Wireless Coexistence

|  |
| --- |
| Text proposal on Annex for supporting interference alignment  |
| Date: 2016-01-19 |
| Author(s): |
| Name | Company | Address | Phone | Email |
| Chen Sun | Sony China |  |  | Chen.Sun@sony.com.cn |
| Sho Furuichi | Sony |  |  | Sho.Furuichi@jp.sony.com |
| Naotaka Sato | Sony |  |  | naotaka.sato@ieee.org |

Abstract

This document provides text proposal Annex.

==== (Proposed text as follows)

**Annex A** (normative) **Data types**

-----------------------------------------------------------

--Discovery information

-----------------------------------------------------------

DiscoveryInformation ::= SEQUENCE {

--Latitude [degree]

coordinateX REAL OPTIONAL,

--Longitude [degree]

coordinateY REAL OPTIONAL,

--Altitude [m]

coordinateZ REAL OPTIONAL,

--Maximum transmit power [dBm]

maxTxPower REAL OPTIONAL,

--Receiver sensitivity [dBm]

rxSensitivity REAL OPTIONAL,

--Antenna gain [dBi]

antennaGain REAL OPTIONAL,

--Minimum required SNR [dB]

minReqSNR REAL OPTIONAL,

--Antenna height above ground [m]

antennaHeight REAL OPTIONAL,

--The number of antennas at the requesting WSO indicating the ability of mitigating the effect of interference spatially

 numberOfAntennas INTEGER,

--The type of antenna array. Present if the number of antenna is two or more.

 antennaType AntennaType OPTIONAL,

 -- MIMO type. Present if the number of antenna is two or more.

 mimoType ENUMERATED {

 twoDimentional,

 threeDimentional} OPTIONAL,

--Antenna processing capability includes directional beam forming and multiantenna precoding. Present if the number of antenna is two or more.

 multiAntProCap MultiAntProCap OPTIONAL,

 --Antenna boresight azimuth angle direction measured in degree against longitude facing north in clockwise direction. (i.e. an azimuth angle of zero degrees) is a horizontal line in the direction to the north pole, starting from the antenna. Present if the number of antenna is two or more.

 azimuthAngle REAL OPTIONAL

…

}

MultiAntProCap ::= ENUMERATED{

  --Directional beam forming capability

 beamforming,

 --Multiple antenna precoding capability

 precoding

}

AntennaType ::= ENUMERATED{

 --Linear array

 linear,

 --Planar array

 planar,

 --Circular

 circular,

 ...

}

- ListOfSpecUsageInfo

ListOfSpecUsageInfo ::= SEQUENCE OF SpecUsageInfo

- SpecUsageInfo

SpecUsageInfo ::= SEQUENCE{

 -- Start frequency

 startFreq REAL,

 -- Stop frequency

 stopFreq REAL,

 -- Geolocation information of WSO

 geolocation SEQUENCE OF Geolocation

}

**Annex C** (normative) **Messages8**

-----------------------------------------------------------

--WSO reconfiguration

-----------------------------------------------------------

--Reconfiguration request

ReconfigurationRequest ::= SEQUENCE OF SEQUENCE {

--WSO ID

wsoID OCTET STRING OPTIONAL,

--Operating frequency

operatingFrequency FrequencyRange OPTIONAL,

--List of operating channel number

listOfOperatingChNumber SEQUENCE OF INTEGER OPTIONAL,

--Transmission power limit [dBm]

txPowerLimit REAL OPTIONAL,

--Indication whether the channel is shared

channelIsShared BOOLEAN OPTIONAL,

--Transmission schedule

txSchedule TxSchedule OPTIONAL,

-- Channel classification information

chClassInfo ChClassInfo OPTIONAL,

-- Mobility information

mobilityInformation MobilityInformation OPTIONAL,

--Additionally operable network technology

addNetworkTechnology NetworkTechnology OPTIONAL,

--Interference leakage weighting factor describes the weight on the interference of a WSO to co-channel WSOs, where the value is limited from 0 to 1.

intLeakageFactor REAL OPTIONAL,

--List of reference point locations of the high priority general authorized system for each available channels that can be used to generate null pattern towards high priority general authorized system, e.g., reduced directivity gain.

listOfSpecUsageInfoOfRefPoints ListOfSpecUsageInfo OPTIONAL,

--List of cochannel neighbor WSOs location information for available channels that can be used to generate null pattern toward cochannel WSO for better coexistence.

listOfSpecUsageInfoOfNeightborWSOs ListOfSpecUsageInfo OPTIONAL

}