IEEE 802.19.1 Ballot Resolution Committee

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| Comment Resolution for CID4 |
| Date: 2018-05-29 |
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Abstract

This document provides the resolution for CID4.

**=======(Text proposal as follows)**

# Annex G (informative) JavaScript Object Notation (JSON) Encoding

This document uses the ASN.1 notation to define modules of Data Types, Primitives and Messages. On the other hand, some standards to access database (e.g. RFC 7545 Protocol to Access White-Space database (PAWS)) uses JavaScript Object Notation (JSON) for application layer protocol. Therefore, this informative annex shows example JSON encoding.

## G.1 Subscription Request

ASN.1 notation of Subscription Request is as follows:

--WSO/GCO subscription request

SubscriptionRequest ::= SEQUENCE {

--WSO subscription ID

clientID IA5String OPTIONAL,

--WSO subscription password

clientPassword IA5String OPTIONAL,

--Coexistence service to which WSO is subscribed

coexistenceService CoexistenceService OPTIONAL,

--Coexistence service to which WSO is subscribed

subscribedService SubscribedService OPTIONAL,

--GCO ID (Only in Profile 3)

gcoID OCTET STRING OPTIONAL

}

JSON encoded message of Subscription Request with example values can be described as follows:

{

“clientID”: “abcd%@”,

“clientPassword”: “efgh###”,

“coexistenceService”: “information”,

“subscribedService”: null,

“gcoID”: “ieee802\_19\_1\_compliant\_device\_group\_1”

}

The fields with null value and the optional fields can be omitted from the JSON object as follow;

{

“coexistenceService”: “information”,

“gcoID”: “ieee802\_19\_1\_compliant\_device\_group\_1”

}

## G.2 CE Registration Request

ASN.1 notation of CE Registration Request is as follows:

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

--WSO/GCO registration

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CERegistrationRequest ::= SEQUENCE OF SEQUENCE {

--New registration, registration update or deregistration

operationCode OperationCode OPTIONAL,

--WSO ID

wsoID OCTET STRING OPTIONAL,

--Network ID

networkID OCTET STRING OPTIONAL,

--Network technology

networkTechnology NetworkTechnology OPTIONAL,

--Network type

networkType NetworkType OPTIONAL,

--Location

geolocation Geolocation OPTIONAL,

--Discovery information

discoveryInformation DiscoveryInformation OPTIONAL,

--Coverage area

coverageArea CoverageArea OPTIONAL,

-- Mobility information

mobilityInformation MobilityInformation OPTIONAL,

--Installation parameters

installationParameters InstallationParameters OPTIONAL,

--List of available frequencies

listOfAvailableFrequencies ListOfAvailableFrequencies OPTIONAL,

--Transmission schedule is supported or not

txScheduleSupported BOOLEAN OPTIONAL,

--List of operating frequencies

listOfOperatingFrequencies ListOfOperatingFrequencies OPTIONAL,

--List of available channel number

listOfAvailableChNumbers ListOfAvailableChNumbers OPTIONAL,

--List of supported channel number

listOfSupportedChNumbers SEQUENCE OF INTEGER OPTIONAL,

-- List of supported frequencies

listOfSuppFrequencies ListOfSupportedFrequencies OPTIONAL,

--List of operating channel number

listOfOperatingChNumbers ListOfOperatingChNumbers OPTIONAL,

--Required resource

requiredResource RequiredResource OPTIONAL,

--Measurement capability

measurementCapability MeasurementCapability OPTIONAL,

addNetworkTechnolgoy NetworkTechnology OPTIONAL,

--GCO ID (Only in Profile 3)

gcoID OCTET STRING OPTIONAL,

--List of desired performance (Only in Profile 3)

listOfDesiredPerformances ListOfDesiredPerformances OPTIONAL,

--Spectrum transition capability (Only in Profile 3)

spectrumTransitionCapability BOOLEAN OPTIONAL,

--Operation region (Only in Profile 3)

operationRegion Range OPTIONAL

}

JSON encoded message of CE Registration Request with example values can be described as follows:

{

“gcoDescriptor”: {

 “emissionClass”: “A”,

 “networkTechnology”: “E\_UTRA”,

 “gcoRegulatoryID”: “fcc\_id\_example”,

 “serialNumber”: “abscdefg”,

 “sensingCapability”: false,

 “userContactInformation”: {

 “userName”: “John Dae”,

 “contact”: {

 “phoneNumber”: “1619xxxyyyy”,

 “email”: “john.dae@example.com”

 }

 }

},

“installationParameters”: {

 “geolocation”: {

 “longitude”: -122.387,

 “latitude”: 37.615

 },

 “antennaCharacteristics”: {

 “antennaHeight”: 5,

 “antennaHeightType”: “agl”,

 “antennaGain”: 0,

 “beamwidth”: 360

 },

 “eirpCapability”: 30,

 “indoorDeployment”: true

}

}

## G.3 Implementation example

Implementers can merge JSON-encoded Subscription Request in G.1 into JSON-encoded CE Registration Request in G.2 as follows.

{

“gcoDescriptor”: {

 “emissionClass”: “A”,

 “networkTechnology”: “E\_UTRA”,

 “gcoRegulatoryID”: “fcc\_id\_example”,

 “serialNumber”: “abscdefg”,

 “sensingCapability”: false,

 “userContactInformation”: {

 “userName”: “John Dae”,

 “contact”: {

 “phoneNumber”: “1619xxxyyyy”,

 “email”: “john.dae@example.com”

 }

 }

},

“installationParameters”: {

 “geolocation”: {

 “longitude”: -122.387,

 “latitude”: 37.615

 },

 “antennaCharacteristics”: {

 “antennaHeight”: 5,

 “antennaHeightType”: “agl”,

 “antennaGain”: 0,

 “beamwidth”: 360

 },

 “eirpCapability”: 30,

 “indoorDeployment”: true

},

“subscriptionRequest”: {

 “coexistenceService”: “information”,

 “gcoID”: “ieee802\_19\_1\_compliant\_device\_group\_1”

}

}

**=======(End of Text proposal)**