IEEE 802.19.1a
Wireless Coexistence

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| Text proposal on Annex C |
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Abstract

This document provides text proposal on Annex C.

Text in this submission is made by 19-16/0016r1, 19-16/0020r1, 19-16/0022r1, 19-16/0051r1, 19-16/0053r1, 19-16/0055r1, 19-16/0058r0, 19-16/0060r2, 19-16/0083r0, 19-16/0084r0, 19-16/0086r0 and 19-16/0088r0 with some changes.

Each message format is based on the other text proposal for section 6 (19-16/0090r0).

# **Annex C (normative)**Messages for IEEE 802.19.1a

IEEE802191aMessage DEFINITIONS AUTOMATIC TAGS ::= BEGIN

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

**--Imported data types**

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

--Imported data types

IMPORTS

 --Coexistence protocol entity ID

 CxID,

 --Status

 Status,

 --CxMedia status

 CxMediaStatus,

 --Coexistence service

 CoexistenceService,

 --Network technology

 NetworkTechnology,

 --Network type

 NetworkType,

 --Location

 Geolocation,

 --Region

 Region,

 --Coverage area

 CoverageArea,

 --Installation parameters

 InstallationParameters,

 --List of available frequencies

 ListOfAvailableFrequencies,

 --List of operating frequencies

 ListOfOperatingFrequencies,

 --List of supported frequencies

ListOfSupportedFrequencies,

 --Required resource

 RequiredResource,

 --Operation code for registration

 OperationCode,

 --Frequency range

 FrequencyRange,

 --CM registration

 CMRegistration,

 --CE registration

 CERegistration,

 --Coexistence report

 CoexistenceReport,

 --List of coexistence reports

 ListOfCoexistenceReports,

 --Measurement capability

 MeasurementCapability,

 --List of neighbor CMs

 ListOfNeighborCMs,

 --Mobility Information

 MobilityInformation,

 --Entity profile

 EntityProfile,

 --List of master CM candidate

 ListOfMasterCMCandidates,

--List of desired performance

 ListOfDesiredPerformances,

 SpecRequestModification

FROM IEEE802191aDataType;

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

**--Message structure, header structure, and payload types**

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

--Message structure

CxMessage ::= SEQUENCE {

 -- Message header

 header CxHeader,

 -- Message payload

 payload CxPayload

}

--Header

CxHeader ::= CHOICE {

 --For announcement

 none NULL,

 --For request or single response

 requestID INTEGER (0..2147483647),

 --For multiple responses

 multipleResponse SEQUENCE {

 --Original request ID

 requestID INTEGER (0..2147483647),

 --Response number

 sequenceNumber INTEGER (0..2147483647),

 --True is the response is last

 isLastResponse BOOLEAN

}

}

--Payload types

CxPayload ::= CHOICE {

 --CM association request

 cmAssociationRequest CMAssociationRequest,

 --CM association response

 cmAssociationResponse CMAssociationResponse,

--GCO subscription request

 subscriptionRequest SubscriptionRequest,

 --GCO subscription response

 subscriptionResponse SubscriptionResponse,

 --GCO subscription change request

 subscriptionChangeRequest SubscriptionChangeRequest,

 --GCO subscription change response

 subscriptionChangeResponse SubscriptionChangeResponse,

 --CE registration request

 ceRegistrationRequest CERegistrationRequest,

 --Registration response

 registrationResponse RegistrationResponse,

 --Reconfiguration request

 reconfigurationRequest ReconfigurationRequest,

 --Reconfiguration response

 reconfigurationResponse ReconfigurationResponse,

 --Coexistence report request

 coexistenceReportRequest CoexistenceReportRequest,

 --Coexistence report response

 coexistenceReportResponse CoexistenceReportResponse,

 --CM registration request

 cmRegistrationRequest CMRegistrationRequest,

 --Coexistence set information request

 coexistenceSetInformationRequest CoexistenceSetInformationRequest,

 --Coexistence set information response

 coexistenceSetInformationResponse CoexistenceSetInformationResponse,

 --CM Reconfiguration request

 cmReconfigurationRequest CMReconfigurationRequest,

 --CM Reconfiguration response

 cmReconfigurationResponse CMReconfigurationResponse,

 --Master/Slave CM configuration request

 masterSlaveCMconfigurationRequest MasterSlaveCMconfigurationRequest,

 --Master/Slave CM configuration response

 masterSlaveCMconfigurationResponse MasterSlaveCMconfigurationResponse,

 -- CE Proxy Coexistence Service Request

 ceProxyCoexistenceServiceRequest CEProxyCoexistenceServiceRequest,

 -- CM Proxy Coexistence Service Request

 cmProxyCoexistenceServiceRequest CMProxyCoexistenceServiceRequest,

 --Inter-CM association request

interCMAssociationRequest InterCMAssociationRequest,

--Inter-CM association response

interCMAssociationResponse InterCMAssociationResponse,

--Inter-COE association request

interCOEAssociationRequest InterCOEAssociationRequest,

--Inter-COE association response

interCOEAssociationResponse InterCOEAssociationResponse,

--Operating frequency information request

operatingFreqInformationRequest OperatingFreqInformationRequest,

--Operating frequency information response

operatingFreqInformationResponse OperatingFreqInformationResponse,

-- Inter-COE operating frequency information request

interCOEOperatingFreqInformationRequest InterCOEOperatingFreqInformationRequest,

-- Inter-COE operating frequency information request

interCOEOperatingFreqInformationResponse InterCOEOperatingFreqInformationResponse,

...

}

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

**--CM Association**

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

CMAssociationRequest ::= SEQUENCE {

 --GCO subscription ID

 clientID IA5String OPTIONAL,

 ...

}

CMAssociationResponse ::= SEQUENCE {

 --Status

 status Status OPTIONAL,

 ...

}

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

**--GCO and CM subscription**

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

--GCO subscription request

SubscriptionRequest ::= SEQUENCE {

 --GCO subscription ID

 clientID IA5String OPTIONAL,

 --GCO subscription password

 clientPassword IA5String OPTIONAL,

 --Coexistence service to which GCO is subscribed

 coexistenceService CoexistenceService OPTIONAL

}

--GCO subscription response

SubscriptionResponse ::= SEQUENCE {

 --CM subscription ID

 serverID IA5String OPTIONAL,

 --CM subscription password

 serverPassword IA5String OPTIONAL,

 --Subscription status

 status Status OPTIONAL

}

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

**--GCO subscription change**

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

--Request to change subscription

SubscriptionChangeRequest ::= SEQUENCE {

 --Coexistence service to which GCO is subscribed

 coexistenceService CoexistenceService OPTIONAL

}

--Response for subscription change

SubscriptionChangeResponse :: = SEQUENCE {

 --Status

 cxMediaStatus CxMediaStatus OPTIONAL

}

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

**--GCO registration**

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

CERegistrationRequest ::= SEQUENCE OF SEQUENCE {

 --New registration, registration update or deregistration

 operationCode OperationCode OPTIONAL,

 --GCO ID

 gcoID OCTET STRING OPTIONAL,

 --Network ID

 networkID OCTET STRING OPTIONAL,

 --GCO Descriptor (Profile 3)

 gcoDescriptor GCODescriptor 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 supported frequencies

 listOfSuppFrequencies ListOfSupportedFrequencies OPTIONAL,

 --Required resource

 requiredResource RequiredResource OPTIONAL,

 --Measurement capability

 measurementCapability MeasurementCapability OPTIONAL,

 --List of desired performance

 listOfDesiredPerformances ListOfDesiredPerformances OPTIONAL,

 --Spectrum transition capability

 spectrumTransitionCapability BOOLEAN OPTIONAL,

 --Operation region

 operationRegion Range OPTIONAL

}

--Registration response

RegistrationResponse ::= SEQUENCE {

 --Registration status

 status Status OPTIONAL,

 --Registration update duration [s]

 registrationUpdateDuration REAL OPTIONAL

}

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

**--GCO reconfiguration**

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

--Reconfiguration request

ReconfigurationRequest ::= SEQUENCE OF SEQUENCE {

 --GCO ID

 gcoID OCTET STRING OPTIONAL,

 --List of operating frequencies and operation parameters to be configured

 listOfOperatingFrequencies ListOfOperatingFrequencies OPTIONAL,

 --Network technology to be configured

 newNetworkTechnology NetworkTechnology OPTIONAL,

 specRequestModification SpecRequestModification OPTIONAL

}

--Reconfiguration response

ReconfigurationResponse ::= SEQUENCE OF SEQUENCE {

 --GCO ID

 gcoID OCTET STRING OPTIONAL,

 --Reconfiguration status

 status Status OPTIONAL,

 --list of available frequencies

 listOfAvailableFrequencies ListOfAvailableFrequencies OPTIONAL

}

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

**--Coexistence report**

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

--Response for coexistence report

CoexistenceReportResponse ::= SEQUENCE {

 --Coexistence report information

 coexistenceReport CoexistenceReport OPTIONAL,

 --List of coexistence report

 listOfCoexistenceReports ListOfCoexistenceReports OPTIONAL

}

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

**--CM registration**

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

--CM registration request

CMRegistrationRequest ::= SEQUENCE {

 --CM profile

 cmProfile EntityProfile OPTIONAL,

 --CM registration

 cmRegistration CMRegistration OPTIONAL,

 --CE registration

 ceRegistration CERegistration OPTIONAL,

 --Operation code

 operationCode OperationCode OPTIONAL,

 --CM ID

 cmID CxID OPTIONAL,

 --Maximum number of controllable GCO

 maximumNumberOfControllableGCO INTEGER OPTIONAL

}

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

**--Coexistence set information**

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

--Request for coexistence set information

CoexistenceSetInformationRequest ::= SEQUENCE {

 --List of network IDs

 listOfNetworkIDs SEQUENCE OF OCTET STRING OPTIONAL,

 --Operation code

 operationCode OperationCode OPTIONAL

}

--Response for coexistence set information

CoexistenceSetInformationResponse ::= SEQUENCE {

 --Network ID

 networkID OCTET STRING OPTIONAL,

 --List of neighbor CMs

 listOfNeighborCMs listOfNeighborCMs OPTIONAL,

 --List of master CM candidates

 listOfMasterCMCandidates ListOfMasterCMCandidates OPTIONAL

}

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

**--GCO reconfiguration for another CM**

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

--CM Reconfiguration request

CMReconfigurationRequest ::= SEQUENCE {

 --Network technology to be configured

 newNetworkTechnology NetworkTechnology OPTIONAL,

 --GCO ID

 gcoID OCTET STRING OPTIONAL,

 --Target CE ID

 ceID CxID OPTIONAL,

 --List of operating frequencies and operation parameters to be configured

 listOfOperatingFrequencies ListOfOperatingFrequencies OPTIONAL

}

--CM Reconfiguration response

CMReconfigurationResponse ::= SEQUENCE {

 --Status

 status Status OPTIONAL

}

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

**--Master/Slave CM configuration**

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

--Master/Slave CM configuration request

MasterSlaveCMConfigurationRequest ::= SEQUENCE {

 --CM ID

 cmID CxID OPTIONAL,

 --Operation code

 operationCode OperationCode OPTIONAL,

 --CM profile

 cmProfile EntityProfile OPTIONAL,

 --CE registration information

 ceRegistration CERegistration OPTIONAL

}

--Master/Slave CM configuration response

MasterSlaveCMConfigurationResponse ::= SEQUENCE {

 --Status

 status Status OPTIONAL

}

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

**--Proxy coexistence service**

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

--CEProxyCoexistenceServiceRequest

CEProxyCoexistenceServiceRequest ::= SEQUENCE {

--CE ID

ceID CxID OPTIONAL,

--List of GCOs

listOfGCOs ListOfGCOs OPTIONAL,

...

}

--CMProxyCoexistenceServiceRequest

CMProxyCoexistenceServiceRequest ::= SEQUENCE {

--CM ID

cmID CxID OPTIONAL,

--List of CEs

listOfCEs ListOfCEs OPTIONAL,

...

}

--InterCMAssociationRequest

InterCMAssociationRequest ::= SEQUENCE {

--CM ID

cmID CxID,

--Management region of the CM

managementRegion Region OPTIONAL

}

--InterCMAssociationResponse

InterCMAssociationResponse ::= SEQUENCE {

--status of request processing

status Status,

--List of accessible CMs

listOfAccessibleCMs ListOfAccessibleCMs OPTIONAL

}

-- OperatingFreqInformationRequest

OperatingFreqInformationRequest ::= SEQUENCE {

--CM ID

cmID CxID,

--region information

region Region

}

-- OperatingFreqInformationResponse

OperatingFreqInformationResponse ::= SEQUENCE {

--Status of request processing

status Status,

--List of coexistence reports

listOfCoexistenceReports ListOfCoexistenceReports

}

-- InterCOEAssociationRequest

InterCOEAssociationRequest ::= SEQUENCE {

--COE ID

coeID CxID,

--InterCMAssociationRequest

interCMAssociationRequest InterCMAssociationRequest

}

-- InterCOEOperatingFreqInformationRequest

InterCOEOperatingFreqInformationRequest ::= SEQUENCE {

--COE ID

coeID CxID,

--OperatingFreqInformationRequest

operatingFreqInformationRequest OperatingFreqInformationRequest

}

-- InterCOEOperatingFreqInformationResponse

InterCOEOperatingFreqInformationResponse ::= SEQUENCE {

--COE ID

coeID CxID,

--OperatingFreqInformationResponse

operatingFreqInformationResponse OperatingFreqInformationResponse

}

END