Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Primitives concerning interference control and network-based DFS**
Date Submitted	**2008-05-05**
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Abstract	The document is a proposal for profiles based on the poll taken in November 2007 meeting, in relation with comment 092 in database IEEE 802.16/07-53r2
Purpose	[Description of what *specific* action is requested of the 802.16 Working Group or subgroup.]
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Primitives concerning interference control and network-based DFS

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Introduction

This contribution provides primitives instead of the CXP messages 11-18 and 35-38 (33-36 according to the messages in-text numbering).

Table h8—CX ~~message~~ primitives ~~codes~~

Code	CX~~P~~ ~~Message~~ Primitive Name	~~CXP Message Type over the backhaul~~	~~Protocol type~~	Direction	~~Connection~~	SAP type	Precedence	Reliability
0	Reserved	—	—	—	—			
1	Search Neighbors Request (M-CX-SRC-REQ)	~~CX-REQ~~	~~TCP~~	BS~~IS~~->BSIS	~~Basic~~	M-SAP	Low	High
2	Search Neighbors Response (M-CX-SRC-RSP)	~~CX-RSP~~	~~TCP~~	BSIS->BS~~IS~~	~~Basic~~	M-SAP	Low	High
3	~~BSD~~	~~CX-REQ~~	~~n/a~~	~~BS -> SS~~	~~Broadcast~~			
4	~~SSURF~~	~~CX-REQ~~	~~n/a~~	~~SS -> BS~~	~~Basic~~			
5	Leaving Neighborhood Indication (M-CX-LV-NBR-IND)	~~CX-REQ~~	~~TCP~~	BS-> BSIS	~~Basic~~	M-SAP	Low	High
6	Leaving Neighborhood ~~Reply~~Response (M-CX-LV-NBR-RSP)	~~CX-RSP~~	~~TCP~~	BSIS->BS	~~Basic~~	M-SAP	Low	High
7	Add Coexistence Neighbor Request (M-CX-ADD-NBR-REQ)	~~CX-REQ~~	~~TCP~~	BS->BS	~~Basic~~	M-SAP	Low	High
8	Add Coexistence Neighbor Response~~ply~~ (M-CX-ADD-NBR-RSP)	~~CX-RSP~~	~~TCP~~	BS->BS	~~Basic~~	M-SAP	Low	High
9	Delete Coexistence Neighbor Request (M-CX-DEL-NBR-REQ)	~~CX-REQ~~	~~TCP~~	BS->BS	~~Basic~~	M-SAP	Low	High
10	Delete Coexistence Neighbor ~~Reply~~Response (M-CX-DEL-NBR-RSP)	~~CX-RSP~~	~~TCP~~	BS->BS	~~Basic~~	M-SAP	Low	High
11	Get_Param_For_Radio_Signature_Request (C-CX-R-SIG-REQ)	~~CX-REQ~~	~~UDP~~	BS->BS	~~Basic~~	C-SAP	High	Low
12	Get_Param_For_Radio_Signature_~~Reply~~Response (C-CX-R-SIG-RSP)	~~CX-RSP~~	~~UDP~~	BS->BS	~~Basic~~	C-SAP	High	Low
13	Evaluate_Interference_Request (C-CX-EV-INTRF-REQ)	~~CX-REQ~~	~~UDP~~	BS->BS	~~Basic~~	C-SAP	High	Low
14	Evaluate_Interference_~~Reply~~Response (C-CX-EV-INTRF-RSP)	~~CX-RSP~~	~~UDP~~	BS->BS	~~Basic~~	C-SAP	High	Low

15	Work_In_Parallelas_Slave_Request (C-CX-SLAVE-REQ)	CX-REQ	UDP	BS->BS	Basic	C-SAP	High	Low
16	Work_In_Parallelas_Slave_ReplyResponse (C-CX-SLAVE-RSP)	CX-RSP	UDP	BS->BS	Basic	C-SAP	High	Low
17	Reduce_Power_or_Quit_Sub_Frame_Request (C-CX-RED-PWR-REQ)	CX-REQ	UDP	BS->BS	Basic	C-SAP	High	Low
18	Reduce_Power_or_Quit_Sub_Frame_ReplyResponse (C-CX-RED-PWR-RSP)	CX-RSP	UDP	BS->BS	Basic	C-SAP	High	Low
19	CMI_Interference_Resolution_Indication (C-CX-INTRF—RES-IND)	CX-REQ	UDP	BS->BS	Basic	C-SAP	High	Low
20	CMI_Interference_Resolution_Response (C-CX-INTRF-RES-RSP)	CX-RSP	UDP	BS->BS	Basic	C-SAP	High	Low
21								
22								
23	Channel Switch Request (C-CX-CH-SWTCH-REQ)	CX-REQ	TCP	BS->BS	Basic	C-SAP	Low	High
24	Channel Switch ReplyResponse (C-CX-CH-SWTCH-RSP)	CX-RSP	TCP	BS->BS	Basic	C-SAP	Low	High
25	Token Advertise Request (C-CX-CT- CX-ADV-REQ)	CX-REQ	TCP	BS->BS	Broadcast	C-SAP	Low	High
26	Token Advertise_Response (C-CX-CT- CX-ADV-RSP)	CX-RSP	TCP	BS->BS	Basic	C-SAP	Low	High
27	Token Negotiation Request (C-CX-CT- CX-NEG-REQ)	CX-REQ	TCP	BS->BS	Basic	C-SAP	Low	High
28	Token Negotiation Response (C-CX-CT- CX-NEG-RSP)	CX-RSP	TCP	BS->BS	Basic	C-SAP	Low	High
29	Token Resource Allocation Request (C-CX-CT-CX-RA-REQ)	CX-REQ	TCP	BS->BS	Basic	C-SAP	Low	High
30	Token Resource Allocation Response (C-CX-CT-CX-RA-RSP)	CX-RSP	TCP	BS->BS	Basic	C-SAP	Low	High
31	CT-CX-ADPD	CX-RSP	TCP	BS->BS	Multicast			
32	CT-CX-ACK	CX-RSP	TCP	BS->BS	Basic			
33	CT-CX-NTF	CX-RSP	TCP	BS->BS	Basic			
34	Token Frame Status Update Indication (M-CX-CT- CX-FRSU-IND)	CX-RSP	TCP	BS->BS	Broadcast	M-SAP	Low	High
35	Regulatory Authority Request (M-CX-REG-AUTH-REQ)	CX-REQ	TCP	RAIS ->BSIS	Basic	M-SAP	Low	High
36	Regulatory Authority Response (M-CX-REG-AUTH-RSP)	CX-RSP	TCP	BSIS->RAIS	Basic	M-SAP	Low	High
36'	Regulatory Authority Acknowledge (M-CX-REG-AUTH-ACK)			RAIS ->BS		M-SAP	Low	High
37	FREQ_AVOIDANCE Request (C-CX-FRQ-AV-REQ)	CX-REQ	TCP	BSIS-BS	Basic	C-SAP	Low	High
38	FREQ_AVOIDANCE Response (C-CX-FRQ-AV-RSP)	CX-RSP	TCP	BS-BSIS	Basic	C-SAP	Low	High
39	Master sub-frame Switch Request (C-CX-M-SWTCH-REQ)	CX-REQ	TCP	BS->BS	Basic	C-SAP	Low	High
40	Master sub-frame Switch ReplyResponse (C-CX-M-SWTCH-RSP)	CX-RSP	TCP	BS->BS	Basic	C-SAP	Low	High
41	OCSI back-off request message (C-CX-OCSI-BOFF-REQ)	CX-REQ	TCP	BS->BS	Basic	C-SAP	Low	High
42	OCSI back-off response message (C-CX-OCSI-BOFF-RSP)	CX-RSP	TCP	BS->BS	Basic	C-SAP	Low	High
43-255	reserved							

Table h8—

Text changes

1. ***Introduce the following parameters in Table h9:***

Master sub-frame ID	The ID on the Master sub-frame in the CX-Frame: 0,1,2.

2. Modify the text between the pages 155, L33 and 159, L26 according to the changes below

15.6.1.11 Get_Param_For_Radio_Signature_Request (C-CX-R-SIG-REQ)~~message~~

~~Messages between BSs, used to request the up-dated list of parameters~~

~~Parameter: none~~

Function:
This primitive is used by a Base Station or by a BS to request another BS to clarify the parameters used for the transmission of its Radio Signatures.

Semantics:

C-CX-R-SIG-REQ
(
Destination: BS
Attribute_List:
(
Null
)
)

When generated:

- It should be generated before the interpretation of the measured Radio Signatures

Effect of Receipt

- BS should transmit the message based on the **C-CX-R-SIG-RSP** primitive.

15.6.1.12 Get_Param_For_Radio_Signature_ResponseReply message (C-CX-R-SIG-RSP)

Function:

This primitive is used by a BS to indicate which are powers, antenna gains, etc used for the transmission of its Radio Signatures.

Semantics:

M-CX-SRC-RSP

(

Destination: BS

Attribute List:

(

GPS coordinates

Channel Center Frequency(ChannelCenterFrequency)

Channel Width (ChW)

Maximum Power to be used

Transmit antenna type (1 – omni, 2 – directional)

Transmit antenna gain (dBi)

Number of distinct BS configurations

Number of SSs

MAC Frame number

)

)

The attribute list significance for this primitive is presented in Table h27.

Messages between BSs, reply to the Get_Param_Request

Table h27—Get_Param_Reply Parameter set

Attribute	Contents
GPS coordinates	The GPS coordinates of the IBSBS
Channel Center Frequency(*ChannelCenterFrequency*)	in 10kHz
Channel Width (*ChW*)	in 10kHz
Maximum Power to be used	Electrical transmitted power in dBm
Transmit antenna type (1 – omni, 2 – directional)	
Transmit antenna gain (dBi)	
MAC Frame number	Requested MAC Frame number to place the Radio-signature (see the MAC Frame numbering starting from the absolute time)
Number of distinct BS configurations	Number of distinct BS configurations, for different combinations of powers and beam directions, to be used for radio signatures (<20)
Number of SSs	Total number of SSs to which will be used for radio signatures (<200)

~~Type of sub-frame allocation~~	~~The type of sub-frame scheduling (*15.4.1.2*)~~
MAC Frame number	The first MAC Frame number which contains the Master sub-frame

Table h27—

When generated:

- It should be generated as response to the message based on the **C-CX-R-SIG-RSP** primitive.

Effect of Receipt

- BS can use the information for parametric calculations of the interference from the BS.

15.6.1.13 Evaluate_Interference_Request (C-CX-EV-INTRF-REQ)~~message~~

Function:

~~A message sent by~~ This primitive is used by a BS for requesting other BSs in the community to either transmit their Radio Signatures or to be silent, in order to coordinate their operation during this measurement. This measurement allows to evaluate the maximum aggregated co-channel and adja~~n~~cent channel interference. The message is sent to every Base Station in the Community, indicating either the request to send the Radio Signature or to insert Gap DIUC/UIUC interval for the duration of the Radio Signature. ~~Alternatively, a BSIS can broadcast the message to an IP multicast group including all the BSs in the community.~~ The Radio signature may be transmitted by the BS or by the associated SSs. In case of the Radio Signature transmission by the BS, which is denoted as RBS, 20 different radio signatures are defined, which may differ due to Beam Forming or power concentration on specific sub-channels. The various RBS signatures are identified by the configuration number. The various SS signatures are identified by the RSS number, which runs from 1 to 199. The message is indicating the MAC Frame number, the offset from its start and the duration of the requested Radio Signature time-slot. A number of radio signatures may be concatenated, under the constraint that their total duration, including the propagation delays, does not exceed the total time-slot duration. It is recommended that this duration will be lower than 1ms. The time-slot shall use the DL sub-frame for BS signatures and UL sub-frame for SS signatures. The Radio Signature should be transmitted using operational characteristics.

Semantics:

C-CX-EV-INTRF-REQ
(
Destination: BS
Attribute List:
(
GPS coordinates
Channel Center Frequency(ChannelCenterFrequency)
Channel width
Number of concatenated signatures
Radio signature type
Gap DIUC/UIUC insertion

MAC Frame number
Time shift from the MAC Frame start
Duration of the time-slot
)
)

The attributes are indicated in the *Evaluate_Interference_Request Parameter* set~~*Evaluate_Interference_Request Parameter* set~~.

Table h28—Evaluate_Interference_Request Parameter set

Attribute	Contents
GPS coordinates	The GPS coordinates of the ~~IBS~~ BS
Channel Center Frequency(*ChannelCenterFrequency*)	Channel Center Frequency of the requesting BS**,** for sending the Radio signature (see *8.5.1*)
Channel width	Channel width of the Requesting BS, in units of 10kHz
Number of concatenated signatures	The number of concatenated radio signatures in a time-slot = N
Radio signature type	List with N values
Gap DIUC/UIUC insertion	Gap DUIC/UIUC insertion for this system or systems which do not comply with
MAC Frame number	MAC Frame number for sending the radio signature
Time shift from the MAC Frame start	Start of the signature slot or Gap interval, as offset from the MAC Frame start, in microseconds
Duration of the time-slot	Duration of the signature slot or Gap interval, in microseconds; the duration of the Gap interval may be higher than the duration of the Radio signature slot, in order to cover the propagation delays. The duration of the time-slot shall be less than 1ms.

Table h28—

When generated:

- When a Radio Signature measurement is requested

Effect of Receipt

- BS shall send C-CX-EV-INTRF-RSP

15.6.1.14 Evaluate_Interference_Response (C-CX-EV-INTRF-RSP)~~Reply message~~

Function:

This primitive is used ~~A message sent~~ by the BS to ~~existing Master BSs,~~ reply to the Evaluate_Interference_Request. It provides the timing and the identification of the scheduled radio signatures.

Semantics:

C-CX-EV-INTRF-RSP
(

Destination: BS
Attribute List:
(
Acceptance indication
MAC Frame number
Time shift from the MAC Frame start
Duration of the time-slot
Number of concatenated signatures
Two field structure
)
)

The attributes are indicated in the *Evaluate_Interference_Response Parameter* set~~*Evaluate_Interference_Parameter* set~~.

Table h29—Evaluate_Interference_~~Reply~~ Response Parameter set

Attribute	Contents
Acceptance indication	Acceptance code**:** 1, if the request is fully accepted 2, if the request is rejected 3, if the requested will be executed at a different time; in this case the message will supplementary include the following three fields indicating when will be transmitted the radio signatures.
MAC Frame number	MAC Frame number for sending the radio signature
Time shift from the MAC Frame start	Start of the signature slot or Gap interval, as offset from the MAC Frame start, in microseconds
Duration of the time-slot	Duration of the signature slot or Gap interval, in microseconds; the duration of the Gap interval may be higher than the duration of the Radio signature slot, in order to cover the propagation delays.
Number of concatenated signatures	The number of structures in the list

Two field structure	{
	- Offset from the start of the signature slot, in microseconds (8 bits)
	- Radio Signature type (8 bits)
	}

Table h29—

When generated:

- When a Radio Signature measurement was requested

Effect of Receipt

- The receiving BS shall send **C-CX-EV-INTRF-ACK.**

15.6.1.15 Work_~~In~~As_~~Parallel~~Slave_Request (C-CX-SLAVE-REQ)~~message~~

Function:

~~A message~~This primitive is sent by a new BS to request the use an existing Master sub-frame as Slave. In general, the Master BS will evaluate the interference created by the requesting BS before answering this request. ~~, to a BS already acting as Master in the specific sub-frame, and requesting the existing BS to evaluate its interference.~~

If more than one Base Station is using the sub-frame as Master, the IBS will send this message to every BS separately.

The Radio Signature will be transmitted during the claimed Master sub-frame and will consist of a DL sub-frame, starting with the first zone using the mandatory permutation (if applicable) and continuing with other used zones and their permutations. Each zone will be transmitted using the operational power.

Semantics:

C-CX-SLAVE-REQ

(
Destination: BS
Attribute List:
(
GPS coordinates
Channel Center Frequency
Channel width
Master Frame Index
Power to be used in dBm
Transmit antenna type
Transmit antenna gain
MAC Frame number
Time shift from the MAC Frame start
Duration of the time-slot
)
)

The attributes are indicated in the *Work_In_Paralel_Request Parameter* set~~*Work_In_Paralel_Request Parameter* set~~.

Table h30—Work_In_Paralel_Request Parameter set

Attribute	Contents
GPS coordinates	The GPS coordinates of the IBS
Channel Center Frequency~~*(ChannelCenterFrequency)*~~	Channel Center Frequency of the requesting BS, for sending the Radio signature (see *8.5.1*)
Channel width	Channel width of the requesting BS for sending the Radio Signature, in 10kHz unit
Master Frame Index	
Power to be used in dBm	
Transmit antenna type (1 – omni, 2 – directional)	
Transmit antenna gain (dBi)	

MAC Frame number	Requested MAC Frame number to place the BS Radio Signatures (see the MAC Frame numbering starting from the absolute time)
Time shift from the MAC Frame start	Start of the claimed Master sub-frame, relative to start of the mentioned MAC frame, in µs
Duration of the time-slot	Duration of the Radio signature (shall be shorter than the claimed sub-frame duration), in µs

Table h30—

When generated:

- When an IBS enters a system or when a BS decides to increase the time resource.

Effect of Receipt

- The receiving BS shall respond with **C-CX-SLAVE-RSP.**

15.6.1.16 Work_As~~In~~_Slave~~Parallel~~_Response (C-CX-Slave-RSP)~~Reply message~~

Function:

This primitive is ~~A message~~ sent by a existing Master BS in response to the Work_~~In~~As_~~Paralle~~rSlave_Request ~~message.~~primitive.

Semantics:

C-CX-SLAVE-RSP

(

Destination: BS

Attribute List:

(

Channel Center Frequency

Channel width

Receive antenna type (1 – omni, 2 – directional)

Receive Antenna Gain

Acceptance indication

Request for reduction of the transmit power, in dB

)

)

The attributes are indicated in the *Work_As_Slave_Response Parameter* set~~*Work___Parameter* set~~.

Table h31—Work_~~In~~As_~~Parallel~~Slave_Response~~Reply~~ Parameter set

Attribute	Contents

Channel Center Frequency (*ChannelCenterFrequency*)	Channel identifier of the responding OBS
Channel wid~~i~~th	Channel width of the responding ~~OBS~~ Master BS
Receive antenna type ~~(1 – omni, 2 – directional)~~	For the ~~OBS~~Master BS
Receive Antenna Gain	For the ~~OBS~~Master BS
Acceptance indication	1:=Acceptance 2 = Rejection 3 – Accepted if the IBS transmit power is reduced
Request for reduction of the transmit power, in dB	indicates the request for transmit power reduction, in dB

Table h31—

When generated:

- When C-CX-SLAVE-REQ was received.

Effect of Receipt

- The receiving BS shall respond with **C-CX-SLAVE-ACK.**

15.6.1.17 Reduce_Power_or_Quit_Sub_Frame_Request (C-CX-RED-PWR-REQ) ~~message~~

Function:

~~A message~~This primitive is sent by an operating Base Station, using the sub-frame as Master, in order to request ~~the~~ another~~newer~~ Base Station to cease the operation as Master or Slave in the current sub-frame. Supplementary, the ~~message~~ primitive may indicate the power reduction for accepting the Base Station to use the sub-frame as Slave.

Semantics:

C-CX-RED-PWR-REQ
(
Destination: BS
Attribute List:
(
Channel Center Frequency
Channel width
Master sub-frame ID
Number of concatenated structures
Two field structure
)
)

The attributes are indicated in the *Reduce_Power_or_Quit_Sub_Frame_Request Parameter set*~~*Reduce_Power_or_Quit_Sub_Frame_Request Parameter set*~~.

Table h32—Reduce_Power_or_Quit_Sub_Frame_Request Parameter set

Attribute	Contents
Channel Center Frequency (*ChannelCenterFrequency*)	Channel Center Frequency of the requesting BS, in 10kHz unit
Channel width	Channel width of the requesting BS, in 10kHz unit
~~MAC Frame number~~ Master sub-frame ID	~~MAC Frame number containing the Master sub-frame~~The Master sub-frame used by the requesting BS
~~Time shift from the MAC Frame start~~	~~Start of the claimed Master sub-frame, relative to start of the mentioned MAC frame, in µs~~
~~Duration of the time slot~~	~~Duration of the sub-frame~~
Number of concatenated structures	

Two field structure	{
	- Radio Signature identifier (8bits)
	- Reduction of transmit power for operating in parallel; 255 dB has the significance of a request to STOP using the sub-frame (8 bits)
	}

Table h32—

When generated:

- When a Master BS perceives a too high interference

Effect of Receipt

- The receiving BS shall respond with **C-CX-RED-PWR-RSP.**

15.6.1.18 Reduce_Power_or_Quit_Sub_Frame_~~Reply message~~Response (C-CX-RED-PWR-RSP)

Function:

~~A message~~This primitive is sent by a ~~new~~ Base Station, in response to the ~~old~~ Master Base Station's ~~Quit_Sub_Frame_Request~~C-CX-RED-PWR-REQ ~~message~~primitive. ~~The message~~This primitive indicates the actual power reduction for the requested signatures.

Semantics:

C-CX-RED-PWR-RSP
(
Destination: BS
Attribute List:
(
Channel Center Frequency
Channel width
Number of concatenated structures
Two field structure
)
)

The attributes are indicated in the *Reduce_Power_or_Quit_Sub_Frame_Reply Parameter* set~~*Reduce_Power_or_Quit_Sub_Frame_Reply Parameter* set~~.

Table h33—Reduce_Power_or_Quit_Sub_Frame_Reply Parameter set

Attribute	Contents
Channel Center Frequency ~~*(ChannelCenterFrequency)*~~	Channel Center Frequency of the replying BS
Channel width	Channel width of the replying BS, in units of 10kHz
Number of concatenated structures	

Two field structure	{
	- Signature identifier (8bits)
	- Reduction of transmit power for operating in parallel; 255 dB has the significance of a request to STOP using the sub-frame (8 bits)
	}

Table h33—

3. Modify the text between page 170, L50 and page 173, L18 as shown below:

15.6.1.33 Regulatory Authority Request (M-CX-REG-AUTH-REQ)~~Message~~

Function:

The Regulatory Authority (RAIS) ~~communicates to~~asks the BS~~IS~~ to protect specific services. The RAIS specifies which are the operating parameters of the service to be protected, the date and time requested for protection, the area of protection, etc. The ~~message~~ primitive is sent separately for each application to be protected. This ~~message~~primitive is also used for the administration (policy) of credit token for CT-CXP.

Semantics:

M-CX-REG-AUTH-REQ
(
Destination: BS
Attribute List:
(
Radio Application identifier
Tx power
Antenna type
Antenna gain
Antenna direction
Latitude
Longitude
Altitude
Maximum coverage
Number of structures
Number of TLVs in a structure
Channel Center Frequency of the transmit channel

Channel width of the transmit channel
Channel Center Frequency of the receive channel
Tx power
ACLR
ACLR
Channel width of the receive channel
Date
Absolute time
Long duration
Credit token budget
Negotiation mode
Pricing method
Credit token policy
)
)

Attributes are show in *Regulatory Authority* Request attributes~~*Regulatory Authority* Request attributes~~

Table h48—Regulatory Authority Request ~~Message~~ attributes

Attribute	Contents
Radio Application identifier	Radio Application identifier
Tx power	Tx power (EIRP) of the application to be protected
Antenna type	Of the application to be protected, same for Tx and Rx
Antenna gain	Of the application to be protected, same for Tx and Rx
Antenna direction	Of the application to be protected, same for Tx and Rx
Latitude	The latitude information of the center of the area to be protected.
Longitude	The longitude information of the center of the area to be protected.
Altitude	The altitude information of the center of the area to be protected.
Maximum coverage	Required radius of the protection area (optional) for a transmitter power of 1W EIRP
Number of structures	Number of elements of the following seven fields structures
Number of TLVs in a structure	7
Channel Center Frequency of the transmit channel	Center frequency of Tx operation of the protected application
Channel width of the transmit channel	Channel width of operation of the protected application
Channel Center Frequency of the receive channel	Center frequency of Rx operation of the protected application
Tx power	Maximum transmitted power in the channel
ACLR	ACLR of the first adjacent channel, for the protected application

ACLR	ACLR of the second adjacent channel, for the protected application
Channel width of the receive channel	Channel width of operation of the protected application
Date	Date of the requested operation start
Absolute time	Hour/min/sec/millisecond of the requested operation start
Long duration	Duration of the requested operation
~~BSIS destination~~	~~Id of the BSIS to be reached by RAIS~~
Credit token budget	Credit token budget policy per BS covered by the BSIS
Negotiation mode	Negotiation mode(s) policy applicable BSs covered by the BSIS
Pricing method	Pricing methods(s) policy applicable BSs covered by the BSIS
Credit token policy (reserved)	Reserved field as additional material to further administrate the credit token usage for CT-CXP.

Table h48—

When generated:

- When a RAIS was asked to provide protection for a specific time, at a given location, to a SSU.

Effect of Receipt

- The receiving BS shall respond with **C-CX-RED-PWR-RSP.**

15.6.1.34 Regulatory Authority Response (M-CX-REG-AUTH-RSP)~~Message~~

Function:

This primitive is used for transmitting the BS response~~The BSIS responds~~ to the RAIS, following a ~~to~~ Regulatory Authority Request ~~with a Regulatory Authority Response message~~primitive.
The ~~messages~~ primitive specify, ~~as confirmation,~~ the actual date and time at which the requested protection will take place.

Semantics:
M-CX-REG-AUTH-RSP
(
Destination: RAIS
Attribute List:
(
Radio Application identifier
Date
Absolute time
Long duration
)
)

The attributes are shown in *Regulatory Authority* Response attributes~~*Regulatory Authority* Response attributes~~.

Table h49—Regulatory Authority Response attributes

Attribute	Contents
Radio Application identifier	Radio Application identifier
Date	Date of the requested operation start
Absolute time	Hour/min/sec/millisecond of the requested operation start
Long duration	Duration of the requested operation

Table h49—

When generated:

- After a BS was asked by the RAIS to provide protection for a specific time, at a given location, to a SSU.

Effect of Receipt

- The RAIS shall respond with **M-CX-REG-AUTH-ACK.**

~~**15.6.1.35 FREQ_AVOIDANCE Request Message**~~

~~The BSIS communicates to BS which are the operating parameters of the application to be protected, the date and time requested for protection, the area of protection, etc. The message is sent separately for each application to be protected.~~

~~Attributes are show in *Table h 50*. The BSIS can adapt the parameters received in the Regulatory Authority Request message to the BS specific radio capability (ACLR, selectivity, etc.)~~

~~**Table h50—FREQ_AVOIDANCE Request Message attributes**~~

~~Attribute~~	~~Contents~~
~~Radio Application identifier~~	~~Radio Application identifier~~
~~Tx power~~	~~Tx power (EIRP) of the application to be protected~~
~~Antenna type~~	~~Of the application to be protected, same for Tx and Rx~~
~~Antenna gain~~	~~Of the application to be protected, same for Tx and Rx~~
~~Antenna direction~~	~~Of the application to be protected, same for Tx and Rx~~
~~Latitude~~	~~The latitude information of the center of the area to be protected.~~
~~Longitude~~	~~The longitude information of the center of the area to be protected.~~
~~Altitude~~	~~The altitude information of the center of the area to be protected.~~
~~Maximum coverage~~	~~Required radius of the protection area (optional) for a transmitter power of 1W EIRP~~
~~Number of structures~~	~~Number of elements of the following seven fields structures~~
~~Number of TLVs in a structure~~	~~7~~

ChannelCenterFrequency of the transmit channel	Center frequency of Tx operation of the protected application
Channel width of the transmit channel	Channel width of operation of the protected application
ChannelCenterFrequency of the receive channel	Center frequency of Rx operation of the protected application
Tx power	Maximum transmitted power in the channel
ACLR	ACLR of the first adjacent channel, for the protected application
ACLR	ACLR of the second adjacent channel, for the protected application
Channel width of the receive channel	Channel width of operation of the protected application
Date	Date of the requested operation start
Absolute time	Hour/min/sec/millisecond of the requested operation start
Long duration	Duration of the requested operation

Table h50—

15.6.1.36 FREQ_AVOIDANCE Response Message

The BS responds to the BSIS to FREQ_AVOIDANCE Request with a FREQ_AVOIDANCE Response message.

The messages specify, as confirmation, the date and time at which the requested protection will take place.

The attributes are shown in *Table h 51*

Table h51—FREQ_AVOIDANCE Response attributes

Attribute	Contents
Radio Application identifier	Radio Application identifier
Date	Date of the requested operation start
Absolute time	Hour/min/sec/millisecond of the requested operation start
Long duration	Duration of the requested operation

Table h51—

4. Delete from Table h8 the Freq Avoidance REQ and Freq Avoidance RSP
5. Delete from Table h9 the attribute "type of sub-frame allocation".