3GPP TSG CN Plenary Meeting #19 **NP-030032**
12- 14 March 2003, Birmingham, UK

Source: **CN5 (OSA)**

Title: **Rel-5 CRs 29.198-04-4 OSA API Part 4: Call control;**
Sub-part 4: Multi-Media Call Control SCF

Agenda item: **8.2**

Document for: **APPROVAL**

Doc-1st-Level	Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Doc-2nd-Level	Workitem
NP-030032	29.198-04-4	002	-	Rel-5	Correction of status of MMCC methods	F	5.1.0	N5-020892	OSA2
NP-030032	29.198-04-4	003	-	Rel-5	Correction of TpMediaStreamDataTypeRequest	F	5.1.0	N5-030067	OSA2
NP-030032	29.198-04-4	004	-	Rel-5	Addition of missing TpMultiMediaCallIdentifierSet to data types	F	5.1.0	N5-030094	OSA2

joint-API-group (Parlay, ETSI Project OSA, 3GPP TSG_CN WG5) **N5-020892**
Meeting #20, Miami/ FL, USA, 23 – 27 September 2002

CR-Form-v7

CHANGE REQUEST

⌘ **29.198-04-4** **CR** **002** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Correction of status of MMCC methods
Source:	⌘	N5
Work item code:	⌘	OSA2
Date:	⌘	27/09/2002
Category:	⌘	**F**
Release:	⌘	*REL-5*

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	There is no requirement in the standard about the necessity to implement all or only some of the methods defined for an interface.
Summary of change:	⌘	Clarify which methods are mandatory and which are optional.
Consequences if not approved:	⌘	Application developers will not know which methods will actually be available.

Clauses affected:	⌘	6 Multi Media Call Control Service Interface Classes

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6 MultiMedia Call Control Service Interface Classes

The MultiMedia Call Control service enhances the functionality of the MultiParty Call Control Service with multi-media capabilities.

The MultiMedia Call Control Service is represented by the IpMultiMediaCallControlManager, IpMultiMediaCall, IpMultiMediaCallLeg and IpMultiMediaStream interfaces that interface to services provided by the network. Some methods are asynchronous, in that they do not lock a thread into waiting whilst a transaction performs. In this way, the client machine can handle many more calls, than one that uses synchronous message calls. To handle responses and reports, the developer must implement IpAppMultiMediaCallControlManager, IpAppMultiMediaCall and IpAppMultiMediaCallLeg to provide the callback mechanism.

To handle the multi-media aspects of a call the concept of media stream is introduced. A media stream is bi-directional media stream and is associated with a call leg. These media streams are usually negotiated between the terminals in the call. The multi-party Call Service gives the application control over the media streams associated with the legs in a multi-media call in the following way:

· the application can be triggered on the establishment of a media stream that meets the application defined characteristics.

· the application can monitor on the establishment (addition) or release (subtraction) of media streams of an ongoing call.

· the application can allow or deny the establishment of media streams (provided the stream establishment was monitored/notified in interrupt mode).

· the application can explicitly subtract already established media streams.

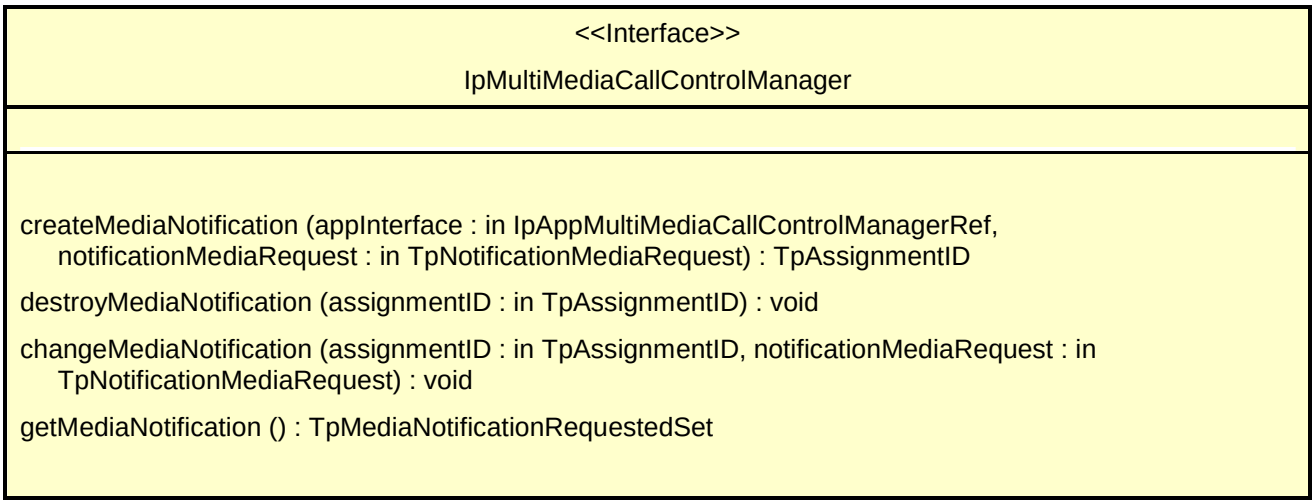
· the application can request the media streams associated with a specific leg.

6.1 Interface Class IpMultiMediaCallControlManager

Inherits from: IpMultiPartyCallControlManager

The Multi Media Call Control Manager is the factory interface for creating multimedia calls. The multi-media call control manager interface provides the management functions to the multi-media call control service. The application programmer can use this interface to create, destroy, change and get media stream related notifications.

This interface shall be implemented by a Multi Media Call Control SCF. As a minimum requirement the createMediaNotification() and destroyMediaNotification() methods shall be implemented. The minimum required methods from IpMultiPartyCallControlManager are also required.



6.1.1 Method createMediaNotification()

This method is used to create media stream notifications so that events can be sent to the application.

This applies both to callsetup media (e.g., SIP initial INVITE or H.323 with faststart) and for media setup during the call.

This is the first step an application has to do to get initial notifications of media streams happening in the network. When such an event happens, the application will be informed by reportMediaNotification(). In case the application is interested in other events during the context of a particular call session it has to use the mediaStreamMonitorReq() method on the Multi-Media call leg object.

The createMediaNotification method is purely intended for applications to indicate their interest to be notified when certain media stream events take place. It is possible to subscribe to a certain media stream event for a whole range of addresses, e.g. the application can indicate it wishes to be informed when a call is made to any number starting with 800.

If some application already requested notifications with criteria that overlap the specified criteria, the request is refused with P_INVALID_CRITERIA. The criteria are said to overlap if both originating and terminating ranges overlap and the same number plan is used.

If the same application requests two notifications with exactly the same criteria but different callback references, the second callback will be treated as an additional callback. Both notifications will share the same assignmentID. The gateway will always use the most recent callback. In case this most recent callback fails the second most recent is used. In case the createMediaNotification contains no callback, at the moment the application needs to be informed the gateway will use as callback the one that has been registered by setCallback().

Returns assignmentID: Specifies the ID assigned by the multi-media call control manager interface for this newly-created notification.

Parameters

`appInterface : in IpAppMultiMediaCallControlManagerRef`

Specifies a reference to the application interface, which is used for callbacks.

`notificationMediaRequest : in TpNotificationMediaRequest`

The mediaMonitorMode is a parameter of TpMediaStreamRequest and can be in interrupt or in notify mode. If in interrupt mode the application has to specify which media streams are allowed by calling mediaStreamAllow on the callLeg.

The notificationMediaRequest parameter specifies the event specific criteria used by the application to define the event required. This is the media portion of the criteria. Only events that meet the notificationMediaRequest are reported.

Individual addresses or address ranges may be specified for the destination and/or origination.

Returns

`TpAssignmentID`

Raises

`TpCommonExceptions, P_INVALID_CRITERIA, P_INVALID_INTERFACE_TYPE, P_INVALID_EVENT_TYPE`

6.1.2 Method destroyMediaNotification()

This method is used by the application to disable Multi Media Channel notifications

Parameters

assignmentID : in TpAssignmentID

Specifies the assignment ID given by the Multi Media call control manager interface when the previous enableMediaNotification was called. If the assignment ID does not correspond to one of the valid assignment IDs, the exception P_INVALID_ASSIGNMENTID will be raised.

Raises

TpCommonExceptions

6.1.3 Method changeMediaNotification()

This method is used by the application to change the event criteria introduced with createMediaNotification. Any stored criteria associated with the specified assignmentID will be replaced with the specified criteria.

Parameters

assignmentID : in TpAssignmentID

Specifies the ID assigned by the multi-media call control manager interface for the media stream notification. If two callbacks have been registered under this assignment ID both of them will be disabled.

notificationMediaRequest : in TpNotificationMediaRequest

Specifies the new set of event specific criteria used by the application to define the event required. Only events that meet these criteria are reported.

Raises

TpCommonExceptions, P_INVALID_ASSIGNMENT_ID, P_INVALID_CRITERIA, P_INVALID_EVENT_TYPE

6.1.4 Method getMediaNotification()

This method is used by the application to query the event criteria set with createMediaNotification or changeMediaNotification.

Returns notificationsMediaRequested: Specifies the notifications that have been requested by the application.

Parameters
No Parameters were identified for this method

Returns

TpMediaNotificationRequestedSet

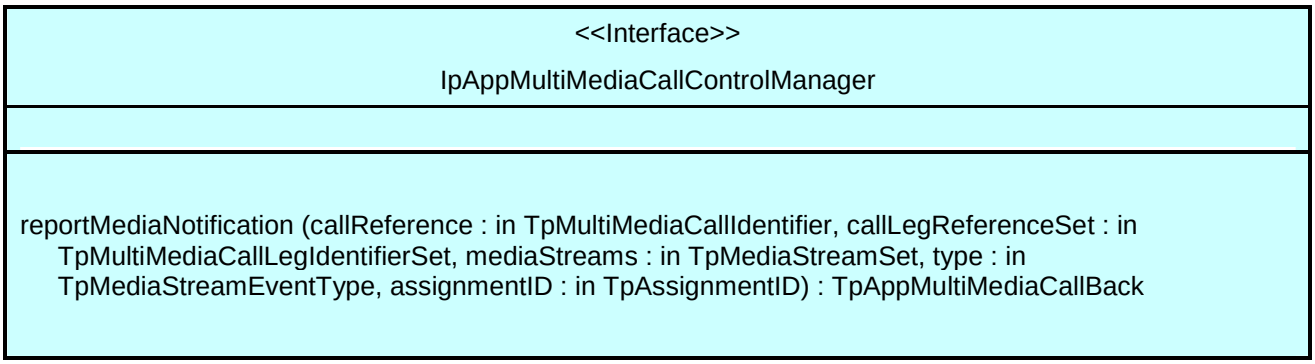
Raises

TpCommonExceptions

6.2 Interface Class IpAppMultiMediaCallControlManager

Inherits from: IpAppMultiPartyCallControlManager

The Multi Media call control manager application interface provides the application call control management functions to the multi media call control service.



6.2.1 Method reportMediaNotification()

This method is used to inform the application about the establishment of media streams.

If the corresponding monitor was in interrupt mode, then the application has to allow or deny the streams using mediaStreamAllow() method.

Returns appInterface : Specifies a reference to the application interface which implements the callback interface for the new call.

Returns appMultiMediaCallBack: Specifies references to the application interface which implements the callback interface for the new multi-media call and/or new call leg. This parameter may be null if the notification is being given in NOTIFY mode

Parameters

`callReference : in TpMultiMediaCallIdentifier`

Specifies the call interface on which the media streams were added or subtracted. It also gives the corresponding sessionID.

`callLegReferenceSet : in TpMultiMediaCallLegIdentifierSet`

Specifies set of all callLeg references (interface and sessionID) for which the media streams were established or subtracted.

First in the set is the reference to the originating callLeg. It indicates the call leg related to the originating party. In case there is a destination call leg this will be the second leg in the set. from the notificationInfo can be found on whose behalf the notification was sent.

However, this parameter will be null if the notification is being given in NOTIFY mode

`mediaStreams : in TpMediaStreamSet`

Specifies all the media streams that are established. Note that this can be more media streams than requested in the createMediaNotification, e.g., when faststart is used in H.323 or in SIP when an INVITE method with SDP media stream parameters is used.

`type : in TpMediaStreamEventType`

Refers to the type of event on the media stream, i.e., added or subtracted.

`assignmentID : in TpAssignmentID`

Specifies the assignment id which was returned by the createMediaNotification() method. The application can use assignment id to associate events with event specific criteria and to act accordingly.

Returns

TpAppMultiMediaCallBack

6.3 Interface Class IpMultiMediaCall

Inherits from: IpMultiPartyCall

This interface shall be implemented by a Multi Media Call Control SCF. Implementation of the superviseVolumeReq() method is optional. The minimum required methods from IpMultiPartyCall are required.

<<Interface>> IpMultiMediaCall
superviseVolumeReq (callSessionID : in TpSessionID, volume : in TpCallSuperviseVolume, treatment : in TpCallSuperviseTreatment) : void

6.3.1 Method superviseVolumeReq()

The application calls this method to supervise a call. The application can set a granted data volume this call.

Parameters

callSessionID : in TpSessionID

Specifies the call session ID of the call.

volume : in TpCallSuperviseVolume

Specifies the granted time in milliseconds for the connection.

treatment : in TpCallSuperviseTreatment

Specifies how the network should react after the granted volume expired.

Raises

TpCommonExceptions, P_INVALID_SESSION_ID

6.4 Interface Class IpAppMultiMediaCall

Inherits from: IpAppMultiPartyCall

The application multi-media call interface contains the callbacks that will be used from the multi-media call interface for asynchronous results to requests performed by the application. The application should implement this interface.

<<Interface>> IpAppMultiMediaCall
superviseVolumeRes (callSessionID : in TpSessionID, report : in TpCallSuperviseReport, usedVolume : in TpCallSuperviseVolume) : void superviseVolumeErr (callSessionID : in TpSessionID, errorIndication : in TpCallError) : void

6.4.1 Method superviseVolumeRes()

This asynchronous method reports a call supervision event to the application when it has indicated its interest in these kind of events.

It is also called when the connection is terminated before the supervision event occurs. Furthermore, this method is invoked as a response to the request also when a tariff switch happens in the network during an active call.

Parameters

`callSessionID : in TpSessionID`

Specifies the call session ID of the call

`report : in TpCallSuperviseReport`

Specifies the situation which triggered the sending of the call supervision response.

`usedVolume : in TpCallSuperviseVolume`

Specifies the used time for the call supervision (in milliseconds).

6.4.2 Method superviseVolumeErr()

This asynchronous method reports a call supervision error to the application.

Parameters

`callSessionID : in TpSessionID`

Specifies the call session ID of the call.

`errorIndication : in TpCallError`

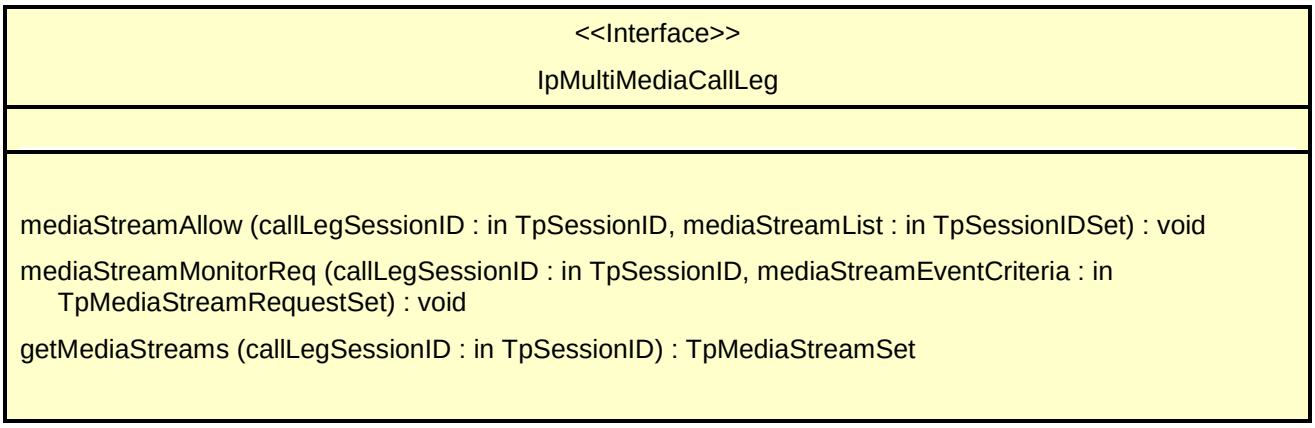
Specifies the error which led to the original request failing.

6.5 Interface Class IpMultiMediaCallLeg

Inherits from: IpCallLeg

The Multi-Media call leg represents the signalling relationship between the call and an address. Associated with the signalling relationship there can be multiple media channels. Media channels can be started and stopped by the terminals themselves. The application can monitor on these changes and influence them.

This interface shall be implemented by a Multi Media Call Control SCF. The mediaStreamAllow() and mediaStreamMonitorReq() methods shall be implemented as a minimum requirement. The minimum required methods from IpCallLeg are also required.



6.5.1 Method mediaStreamAllow()

This method can be used to allow setup of a media stream that was reported by a mediaStreamMonitorRes method.

Parameters

callLegSessionID : in TpSessionID

Specifies the call leg session ID of the call leg.

mediaStreamList : in TpSessionIDSet

Refers to the media streams (sessionIDs) as received in the mediaStreamMonitorRes() or in the reportMediaNotification() that is allowed to be established.

Raises

TpCommonExceptions, P_INVALID_SESSION_ID

6.5.2 Method mediaStreamMonitorReq()

With this method the application can set monitors on the addition and subtraction of media streams. The monitors can either be general or restricted to certain types of codecs.

Monitoring on addition of media streams can be done in either interrupt of notify mode. In the first case the application has to allow or deny the establishment of the stream with mediaStreamAllow.

Monitoring on subtraction of media streams is only allowed in notify mode.

Parameters

callLegSessionID : in TpSessionID

Specifies the session ID of the call leg.

mediaStreamEventCriteria : in TpMediaStreamRequestSet

Specifies the event specific criteria used by the application to define the event required. The mediaMonitorMode .is a parameter of TpMediaStreamRequest and can be in interrupt or in notify mode. If in interrupt mode the application has to respond with mediaStreamAllow().

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_INVALID_CRITERIA, P_INVALID_EVENT_TYPE

6.5.3 Method getMediaStreams()

This method is used to return all currently established media streams for the leg.

Parameters

callLegSessionID : in TpSessionID

This method is used to return all currently open media channels for the leg,

Returns

TpMediaStreamSet

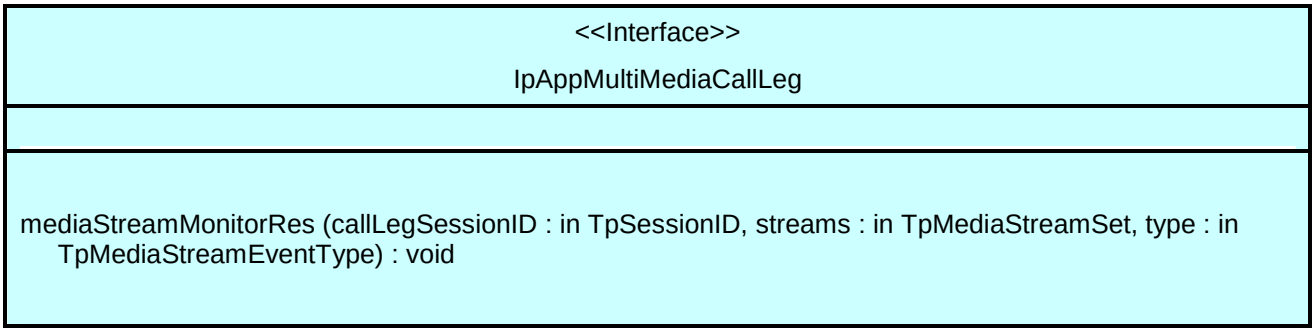
Raises

TpCommonExceptions, P_INVALID_SESSION_ID

6.6 Interface Class IpAppMultiMediaCallLeg

Inherits from: IpAppCallLeg

The application multi-media call leg interface contains the callbacks that will be called from the multi-media call leg for asynchronous results to requests performed by the application. The application should implement this interface.



6.6.1 Method mediaStreamMonitorRes()

This method is used to inform the application about the media streams that are being established (added) or subtracted.

If the corresponding request was done in interrupt mode, the application has to allow or deny the media streams using mediaStreamAllow().

Parameters

callLegSessionID : in TpSessionID

Specifies the session ID of the call leg for which the media channels are opened or closed.

streams : in TpMediaStreamSet

Specifies all the media streams that are added. Note that this can be more media streams than requested in the createMediaNotification, e.g., when faststart is used in H.323 or SIP INVITE with SDP media stream parameters is used.

type : in TpMediaStreamEventType

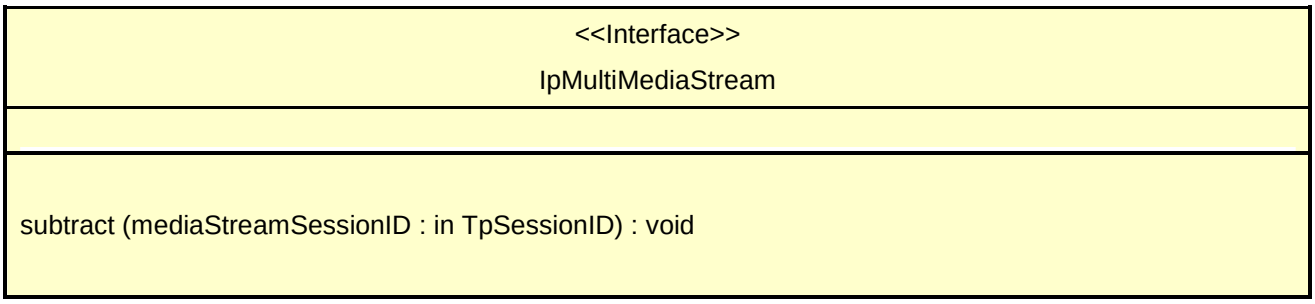
Refers to the type of event on the media stream, i.e., added or subtraced.

6.7 Interface Class IpMultiMediaStream

Inherits from: IpService

The Multi Media Stream Interface represents a bi-directional information stream associated with a call leg. Currently, the only available method is to subtract the media stream.

This interface and ~~its~~the subtract() method shall be implemented by a Multi Media Call Control SCF.



6.7.1 Method subtract()

This method can be used to subtract the multi-media stream.

Parameters

mediaStreamSessionID : in TpSessionID

Specifies the sessionID for the media stream.

Raises

TpCommonExceptions, P_INVALID_SESSION_ID

joint-API-group (Parlay, ETSI Project OSA, 3GPP TSG_CN WG5) **N5-030094**
Meeting #22, Bangkok, THAILAND, 27 – 31 January 2003

CR-Form-v7

CHANGE REQUEST

⌘ **29.198-04-4** **CR** **004** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Addition of missing TpMultiMediaCallIdentifierSet to data types
Source:	⌘	N5
Work item code:	⌘	OSA2
Date:	⌘	31/01/2003
Category:	⌘	**F**
Release:	⌘	*REL-5*

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
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2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	TpMultiMediaCallIdentifierSet is a datatype which is used and referenced in TS 29.198-4-4, but is not defined in that document, or in any other part of the OSA specification set. (The type is present in the IDL and WSDL code.)
Summary of change:	⌘	Add TpMultiMediaCallIdentifierSet to the list of data types in clause 8.
Consequences if not approved:	⌘	The specification will remain incomplete, with no description of this type in the specification, yet it is used in the specification.

Clauses affected:	⌘	8

Other specs affected:	⌘	Y	N		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘

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6.2 Interface Class IpAppMultiMediaCallControlManager

Inherits from: IpAppMultiPartyCallControlManager

The Multi Media call control manager application interface provides the application call control management functions to the multi media call control service.

<<Interface>> IpAppMultiMediaCallControlManager
reportMediaNotification (callReference : in TpMultiMediaCallIdentifier, callLegReferenceSet : in TpMultiMediaCallLegIdentifierSet, mediaStreams : in TpMediaStreamSet, type : in TpMediaStreamEventType, assignmentID : in TpAssignmentID) : TpAppMultiMediaCallBack

6.2.1 Method reportMediaNotification()

This method is used to inform the application about the establishment of media streams.

If the corresponding monitor was in interrupt mode, then the application has to allow or deny the streams using mediaStreamAllow() method.

Returns appInterface: Specifies a reference to the application interface which implements the callback interface for the new call.

Returns appMultiMediaCallBack: Specifies references to the application interface which implements the callback interface for the new multi-media call and/or new call leg. This parameter may be null if the notification is being given in NOTIFY mode.

Parameters

`callReference : in TpMultiMediaCallIdentifier`

Specifies the call interface on which the media streams were added or subtracted. It also gives the corresponding sessionID.

`callLegReferenceSet : in TpMultiMediaCallLegIdentifierSet`

Specifies set of all callLeg references (interface and sessionID) for which the media streams were established or subtracted.

First in the set is the reference to the originating callLeg. It indicates the call leg related to the originating party. In case there is a destination call leg this will be the second leg in the set. From the notificationInfo can be found on whose behalf the notification was sent.

However, this parameter will be null if the notification is being given in NOTIFY mode.

`mediaStreams : in TpMediaStreamSet`

Specifies all the media streams that are established. Note that this can be more media streams than requested in the createMediaNotification, e.g. when faststart is used in H.323 or in SIP when an INVITE method with SDP media stream parameters is used.

`type : in TpMediaStreamEventType`

Refers to the type of event on the media stream, i.e. added or subtracted.

`assignmentID : in TpAssignmentID`

Specifies the assignment id which was returned by the createMediaNotification() method. The application can use assignment id to associate events with event specific criteria and to act accordingly.

Returns

`TpAppMultiMediaCallBack`

←==========→

8.2.10 TpMultiMediaCallIdentifier

Defines the Sequence of Data Elements that unambiguously specify the MultiMediaCall object.

Sequence Element Name	Sequence Element Type	Sequence Element Description
MMCallReference	IpMultiMediaCallRef	This element specifies the interface reference for the call object.
MMCallSessionID	TpSessionID	This element specifies the call session ID of the call created.

8.2.11 TpMultiMediaCallIdentifierSet

Defines a Numbered Set of Data Elements of TpMultiMediaCallIdentifier.

8.2.12 TpMultiMediaCallLegIdentifier

Defines the Sequence of Data Elements that unambiguously specify the Call Leg object.

Sequence Element Name	Sequence Element Type	Sequence Element Description
MMCallLegReference	IpMultiMediaCallLegRef	This element specifies the interface reference for the callLeg object.
MMCallLegSessionID	TpSessionID	This element specifies the callLeg session ID of the call created.

8.2.13 TpMultiMediaCallLegIdentifierSet

Defines a Numbered Set of Data Elements of TpMultiMediaCallLegIdentifier.

~~8.2.13~~8.2.14 IpAppMultiMediaCallControlManager

Defines the address of an `IpAppMultiMediaCallControlManager` Interface.

~~8.2.14~~8.2.15 IpAppMultiMediaCallControlManagerRef

Defines a `Reference` to type IpAppMultiMediaCallControlManager.

~~8.2.15~~8.2.16 TpAppMultiMediaCallBack

Defines the Tagged Choice of Data Elements that references the application callback interfaces.

	Tag Element Type	
	TpAppMultiMediaCallBackRefType	

Tag Element Value	Choice Element Type	Choice Element Name
P_APP_CALLBACK_UNDEFINED	NULL	Undefined
P_APP_MULTIMEDIA_CALL_CALLBACK	IpAppMultiMediaCallRef	AppMultiMediaCall
P_APP_CALL_LEG_CALLBACK	IpAppMultiMediaCallLegRef	AppMultiMediaCallLeg
P_APP_CALL_AND_CALL_LEG_CALLBACK	TpAppMultiMediaCallLegCallBack	AppMultiMediaCallAndCallLeg

~~8.2.16~~8.2.17 TpAppMultiMediaCallBackRefType

Defines the type application call back interface.

Name	Value	Description
P_APP_CALLBACK_UNDEFINED	0	Application Call back interface undefined
P_APP_MULTIMEDIA_CALL_CALLBACK	1	Application Multi-Media Call interface referenced
P_APP_CALL_LEG_CALLBACK	2	Application Multi-Media CallLeg interface referenced
P_APP_CALL_AND_CALL_LEG_CALLBACK	3	Application Multi-Media Call and CallLeg interface referenced

~~8.2.17~~8.2.18 TpAppMultiMediaCallLegCallBack

Defines the Sequence of Data Elements that references a call and a call leg application interface.

Sequence Element Name	Sequence Element Type	Description
AppMultiMediaCall	IpAppMultiMediaCallRef	
AppCallLegSet	TpAppMultiMediaCallLegRefSet	Specifies the set of all call leg call back references. First in the set is the reference to the call back of the originating callLeg. In case there is a call back to a destination call leg this will be second in the set.

~~8.2.18~~8.2.19 TpCallSuperviseVolume

Defines the Sequence of Data Elements that specify the amount of volume that is allowed to be transmitted for the specific connection.

Sequence Element Name	Sequence Element Type	Sequence Element Description
VolumeQuantity	TpInt32	This data type is identical to a TpInt32, and defines the quantity of the granted volume that can be transmitted for the specific connection.
VolumeUnit	TpInt32	This data type is identical to a TpInt32, and defines the unit of the granted volume that can be transmitted for the specific connection. Unit must be specified as 10^n number of bytes, where n denotes the power. When the unit is for example in kilobytes, VolumeUnit must be set to 3.

~~8.2.19~~8.2.20 TpNotificationMediaRequest

Defines the Sequence of Data Elements that specify the criteria for a media stream notification

Sequence Element Name	Sequence Element Type	Description
MediaNotificationScope	TpCallNotificationScope	Defines the scope of the notification request.
MediaStreamsRequested	TpMediaStreamRequestSet	Defines the media stream events which are requested

~~8.2.20~~8.2.21 TpMediaNotificationRequested

Defines the Sequence of Data Elements that specify the criteria relating to event requests.

Sequence Element Name	Sequence Element Type
AppNotificationMediaRequest	TpNotificationMediaRequest
AssignmentID	TpInt32

~~8.2.21~~8.2.22 TpMediaNotificationsRequestedSet

Defines a numbered Set of Data Elements of TpMediaNotificationRequested.

CR-Form-v7

CHANGE REQUEST

⌘ **29.198-04-4** **CR** **003** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Correction of TpMediaStreamDataTypeRequest
Source:	⌘	N5
Work item code:	⌘	OSA2
Date:	⌘	31/01/2003
Category:	⌘	**F**
Release:	⌘	*REL-5*

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	The current `TpMediaType` is not guaranteed to have a discreet value (since logical 'OR's are allowed) it is therefore unsuitable to be the discriminator in a `Tagged Choice of Data Elements`, such as `TpMediaStreamDataTypeRequest.`
Summary of change:	⌘	This contribution provides an updated TpMediaStreamDataTypeRequest with a new type to use as its discriminator.
Consequences if not approved:	⌘	A data type should only serve one purpose in order to prevent ambiguous behaviour of interoperability problems. The current dual purpose use of TpMediaType contradicts this and should be corrected.

Clauses affected:	⌘	8.1.4			
Other specs affected:	⌘	**Y**	**N**		⌘
			✓	Other core specifications	
			✓	Test specifications	
			✓	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Problem Description:

The TpMediaType definition states that its allowed values are 1,2 and 4, and that these may be combined by a logical 'OR' function. (as used in the MediaAllowed sequence element within TpMultiMediaConfPolicy.)

TpMediaStreamDataTypeRequest is a Tagged Choice of Data Elements and currently uses TpMediaType as its discriminator.

Since the type TpMediaType is not guaranteed to have a discreet value (since logical 'OR's are allowed) it is therefore unsuitable to be the discriminator in a Tagged Choice of Data Elements, such as TpMediaStreamDataTyeRequest

This proposal suggests a new type TpMediaStreamDataTypeRequestType that can be used as the discriminator in a TpMediaStreamDataTypeRequest.

This will result in two types: TpMediaStreamDataTypeRequestType and TpMediaType which will contain quite similar information, but for two distinct and differing purposes that will correct the existing contradiction in the use of TpMediaType.

The following shows the modification that needs to be carried out.

For clarity TpMultiMediaConfPolicy from the ETSI spec and TpMediaType are also shown below. Although they do not change, they are included in order to demonstrate that elsewhere in the API the 'Bitwise' behaviour of TpMediaType is used and therefore TpMediaType itself cannot be changed.

From ETSI 2029150405 v111

8.2.20 TpMultiMediaConfPolicy

Sequence of items for multi-media conferences.

Sequence Element Name	Sequence Element Type	Description
JoinAllowed	TpBoolean	Specifies if dial-in to the conference is allowed. Parties can dial-in to the conference using the address returned during reservation. If this is specified the application will receive partyJoined for each participant dialling into the conference.
MediaAllowed	TpMediaType	Specifies the media that are allowed to be used by the participants. E.g., this can be used to limit the conference to audio only, even when all participants support video.
Chaired	TpBoolean	Specifies whether the conference is chaired or free. In a chaired conference the application or one of the participants acting as chair has special privileges; e.g., can control the video distribution.
VideoHandling	TpVideoHandlingType	Specifies how the video should be handled.

From 3GPP 29.198-04-1 v 5.1.0

6.29 TpMediaType

Defines the media type of a media stream. The values may be combined by a logical 'OR' function.

Name	Value	Description
P_AUDIO	1	Audio stream
P_VIDEO	2	Video stream
P_DATA	4	Data stream (e.g., T.120)

******* **Start of Changes** **********

8.1.4 TpMediaStreamDataTypeRequest

Defines the Tagged Choice of Data Elements that specify the media type and associated codecs that are of interest.

	Tag Element Type	
	TpMediaStreamDataTypeRequestType~~TpMediaType~~	

Tag Element Value	Choice Element Type	Choice Element Name
P_AUDIO_CAPABILITIES	TpAudioCapabilitiesType	Audio
P_VIDEO_CAPABILITIES	TpVideoCapabilitiesType	Video
P_DATA_CAPABILITIES	TpDataCapabilities	Data

~~8.1.4~~8.1.5 TpMediaStreamDataTypeRequestType

Defines the media type of a media stream data type request.

Name	Value	Description
P_AUDIO_CAPABILITIES	1	Audio stream capabilities
P_VIDEO_CAPABILITIES	2	Video stream capabilities
P_DATA_CAPABILITIES	3	Data stream (e.g., T.120) capabilities

******** End of Changes **********