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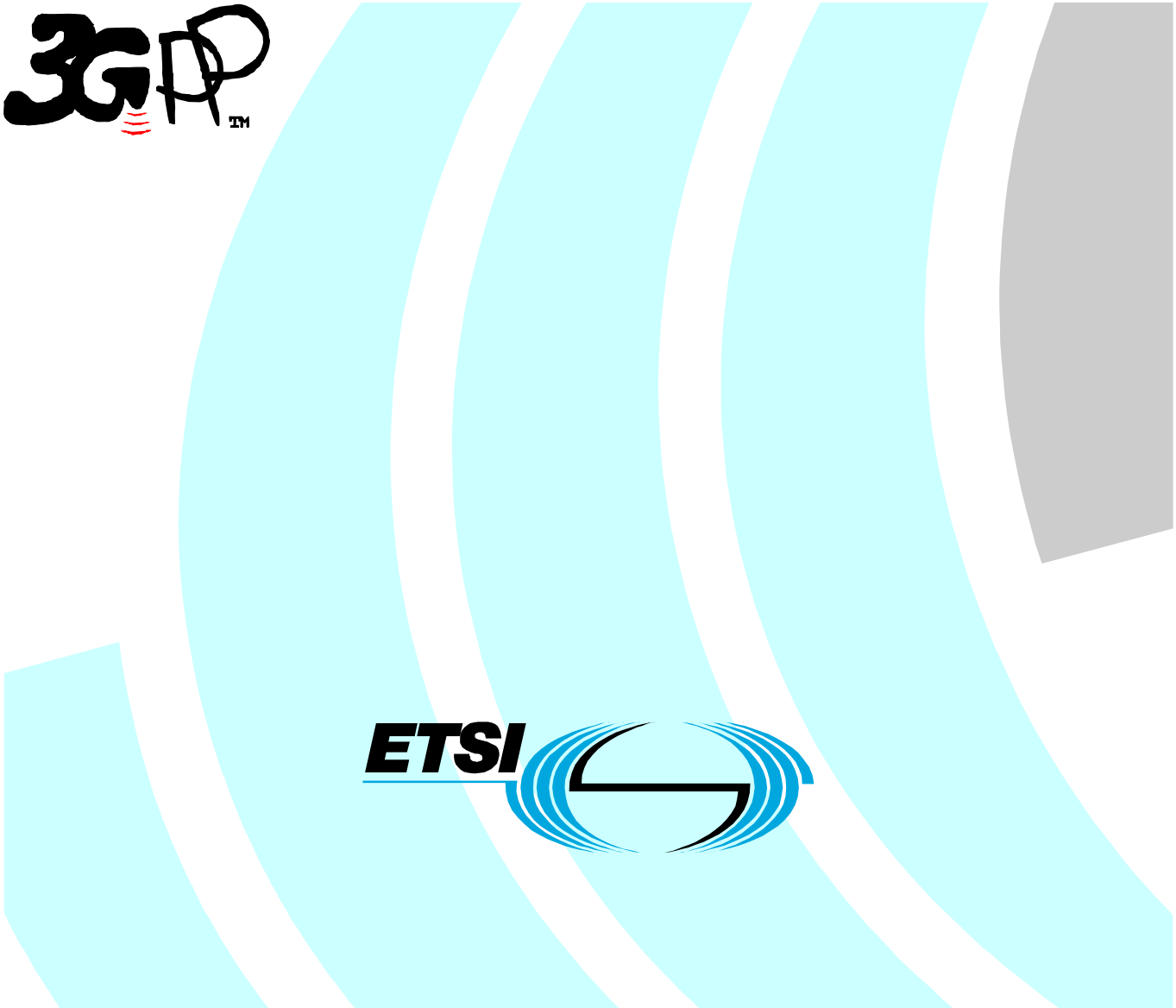
Technical Specification

Universal Mobile Telecommunications System (UMTS);
Open Service Access (OSA)
Application Programming Interface (API);
Part 15: Multi-media Messaging (MM)
Service Capability Feature (SCF)
(3GPP TS 29.198-15 version 6.3.1 Release 6)



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Foreword

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Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

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- z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

The present document is part 15 of a multi-part TS covering the 3rd Generation Partnership Project: Technical Specification Group Core Network and Terminals; Open Service Access (OSA); Application Programming Interface (API), as identified below. The **API specification** (3GPP TS 29.198) is structured in the following Parts:

Part 1: "Overview";

Part 2: "Common Data Definitions";

Part 3: "Framework";

Part 4: "Call Control";

- Sub-part 1: "Call Control Common Definitions";
- Sub-part 2: "Generic Call Control SCF";
- Sub-part 3: "Multi-Party Call Control SCF";
- Sub-part 4: "Multi-Media Call Control SCF";
- Sub-part 5: "Conference Call Control SCF"; (not part of 3GPP Release 6)

Part 5: "User Interaction SCF";

Part 6: "Mobility SCF";

Part 7: "Terminal Capabilities SCF";

Part 8: "Data Session Control SCF";

Part 9: "Generic Messaging SCF"; (not part of 3GPP Release 6)

Part 10: "Connectivity Manager SCF"; (not part of 3GPP Release 6)

Part 11: "Account Management SCF";

Part 12: "Charging SCF".

Part 13: "Policy Management SCF";

Part 14: "Presence and Availability Management SCF";

Part 15: "Multi-Media Messaging SCF"; (new in Release 6)

The **Mapping specification of the OSA APIs and network protocols** (3GPP TR 29.998) is also structured as above. A mapping to network protocols is however not applicable for all Parts, but the numbering of Parts is kept. Also in case a Part is not supported in a Release, the numbering of the parts is maintained.

Table: Overview of the OSA APIs & Protocol Mappings 29.198 & 29.998-family

OSA API specifications - 29.198-family					OSA API Mapping - 29.998-family	
29.198-01	Overview				29.998-01	Overview
29.198-02	Common Data Definitions				*29.998-02*	*Not Applicable*
29.198-03	Framework				*29.998-03*	*Not Applicable*
Call Control (CC) SCF	29.198-04-1 Common CC data definitions	29.198-04-2 Generic CC SCF	29.198-04-3 Multi-Party CC SCF	29.198-04-4 Multi-media CC SCF	29.998-04-1	Generic Call Control - CAP mapping
					29.998-04-2	*Generic Call Control - INAP mapping*
					29.998-04-3	*Generic Call Control - Megaco mapping*
					29.998-04-4	Multiparty Call Control - SIP mapping
29.198-05	User Interaction SCF				29.998-05-1	User Interaction - CAP mapping
					29.998-05-2	*User Interaction - INAP mapping*
					29.998-05-3	*User Interaction - Megaco mapping*
					29.998-05-4	User Interaction - SMS mapping
29.198-06	Mobility SCF				29.998-06	User Status and User Location - MAP mapping
29.198-07	Terminal Capabilities SCF				*29.998-07*	*Not Applicable*
29.198-08	Data Session Control SCF				29.998-08	Data Session Control - CAP mapping
29.198-09	*Generic Messaging SCF*				*29.998-09*	*Not Applicable*
29.198-10	*Connectivity Manager SCF*				*29.998-10*	*Not Applicable*
29.198-11	Account Management SCF				*29.998-11*	*Not Applicable*
29.198-12	Charging SCF				*29.998-12*	*Not Applicable*
29.198-13	Policy Management SCF				*29.998-13*	*Not Applicable*
29.198-14	Presence & Availability Management SCF				*29.998-14*	*Not Applicable*
29.198-15	**Multi-Media Messaging SCF**				*29.998-15*	*Not Applicable*

1 Scope

The present document is Part 15 of the Stage 3 specification for an Application Programming Interface (API) for Open Service Access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e. the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3GPP TS 23.198 [3]. The requirements for OSA are contained in 3GPP TS 22.127 [2].

The present document specifies the Multi Media Messaging Service Capability Feature (SCF) aspects of the interface. All aspects of the Multi Media Messaging SCF are defined here, these being:

- Sequence Diagrams.
- Class Diagrams.
- Interface specification plus detailed method descriptions.
- State Transition diagrams.
- Data definitions.
- IDL Description of the interfaces.
- WSDL Description of the interfaces.

The process by which this task is accomplished is through the use of object modelling techniques described by the Unified Modelling Language (UML).

The present document has been defined jointly between 3GPP TSG CT WG5, ETSI TISPAN and the Parlay Group, in co-operation with a number of JAIN™ Community member companies.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document.*

[1] 3GPP TS 29.198-01: "Open Service Access (OSA); Application Programming Interface (API); Part 1: Overview".

[2] 3GPP TS 22.127: "Service Requirement for the Open Services Access (OSA); Stage 1".

[3] 3GPP TS 23.198: "Open Service Access (OSA); Stage 2".

[4] 3GPP TS 29.198-02: "Open Service Access (OSA); Application Programming Interface (API); Part 2: Common data".

[5] IETF RFC 2045: "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies".

[6] IETF RFC 822: "Standard for the format of ARPA Internet text messages".

[7] IETF RFC 2183: "Communicating Presentation Information in Internet Messages: The Content-Disposition Header Field".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TS 29.198-01 [1] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TS 29.198-01 [1] apply.

4 Multi Media Messaging SCF

The following clauses describe each aspect of the Multi Media Messaging Service Capability Feature (SCF).

The order is as follows:

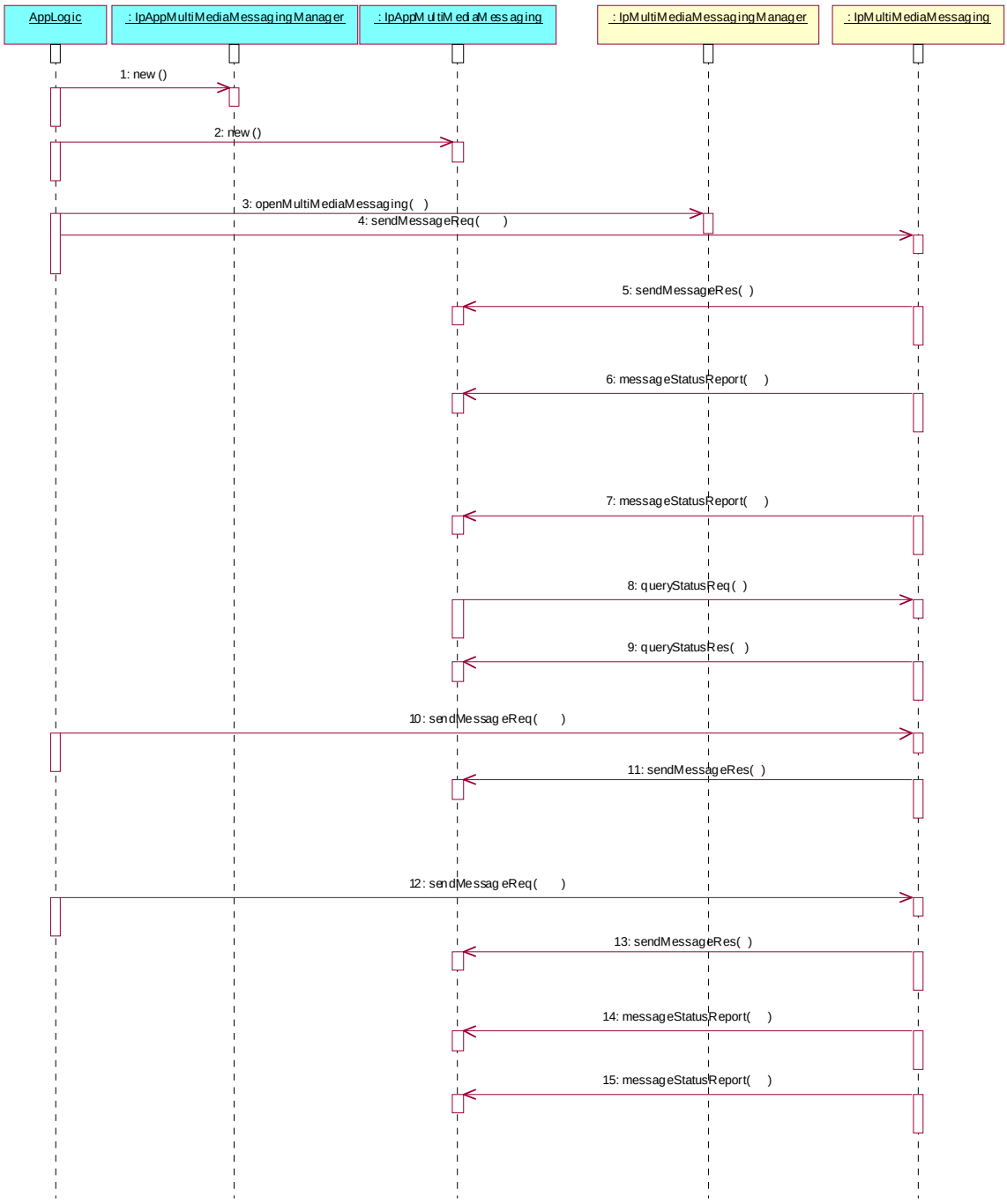
- The Sequence diagrams give the reader a practical idea of how each of the SCF is implemented.
- The Class relationships clause shows how each of the interfaces applicable to the SCF, relate to one another.
- The Interface specification clause describes in detail each of the interfaces shown within the Class diagram part.
- The State Transition Diagrams (STD) show the transition between states in the SCF. The states and transitions are well-defined; either methods specified in the Interface specification or events occurring in the underlying networks cause state transitions.
- The Data Definitions clause shows a detailed expansion of each of the data types associated with the methods within the classes. Note that some data types are used in other methods and classes and are therefore defined within the Common Data types part TS 29.198-2.

An implementation of this API which supports or implements a method described in the present document, shall support or implement the functionality described for that method, for at least one valid set of values for the parameters of that method. Where a method is not supported by an implementation of a Service interface, the exception P_METHOD_NOT_SUPPORTED shall be returned to any call of that method.

5 Sequence Diagrams

5.1 Sending messages and receiving delivery notification

This sequence diagram shows how the application can send messages on the IpMultiMediaMessaging interface with sendMessageReq(), and how the application can be informed about the delivery status of the message with messageStatusReport(). It also shows how the application can query the delivery status of a message, with queryStatusReq().



3: Request the opening of a MultiMedia Messaging object. The application intends to use this object to send messages to multiple destinations, so it has not specified any defaultDestinationAddressList.

4: The application sends a message. The destination address is included in the destinationAddressList parameter. If the source address was not provided when the IpMultiMediaMessaging object was created, it can be provided in the sourceAddress parameter. The application has requested delivery receipt and read receipt in the messageTreatment parameter. The assignmentID received as a return parameter enables the application to match any message status information with this message.

5: This method indicates successful processing of the sendMessageReq by the SCF, and that the message has been sent. It does not indicate a delivery status.

6: This method contains a delivery receipt for the message just sent.

7: This method contains a read receipt for the message just sent.

8: The application queries the status of the message it has sent (to verify the read receipt? or it has discarded the read receipt?).

9: The status of the message is returned.

10: The application sends another message, this time to a different destination. It has requested a read receipt to be returned.

11: This method indicates successful processing of the sendMessageReq by the SCF, and that the message has been sent. It does not indicate a delivery status.

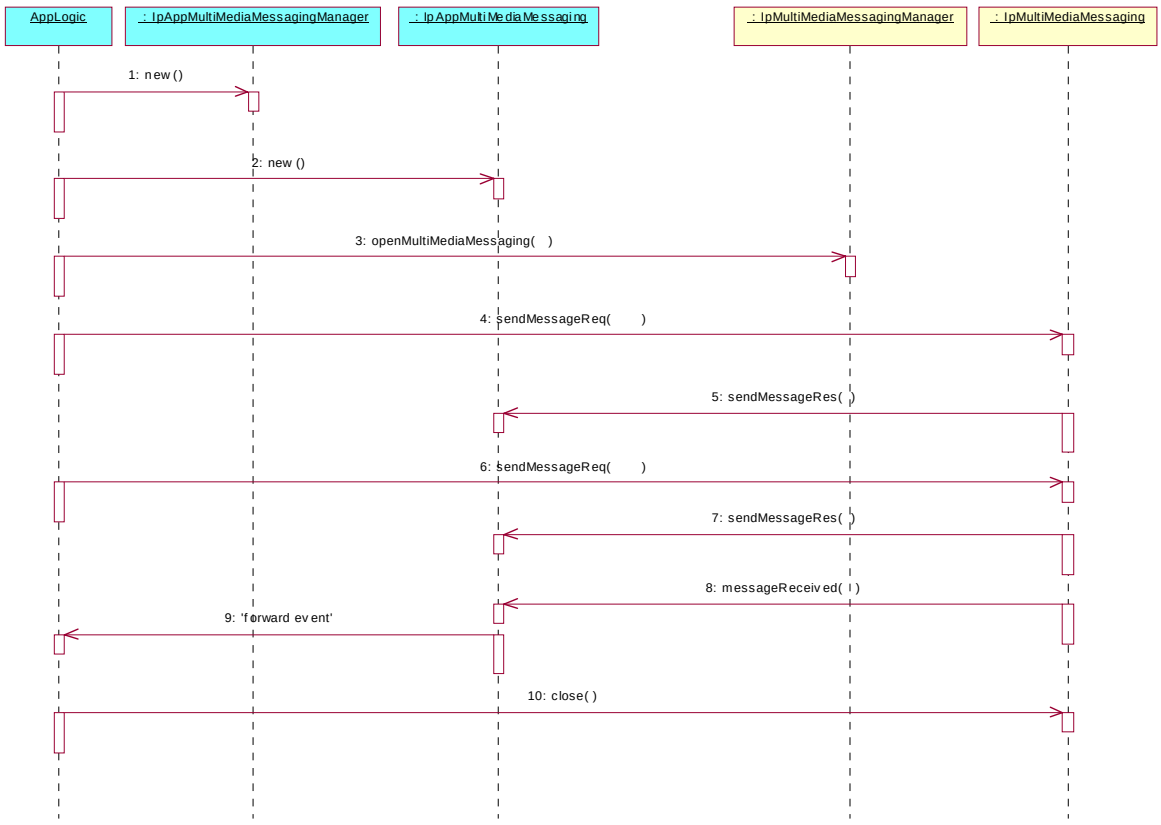
12: The application sends another message, to a different destination. It has requested a read receipt to be returned.

14: This method contains an indication that the previous message has been read.

15: This method contains an indication that the second message has been read. The assignmentID is used to match this report to the corresponding sendMessageReq().

5.2 Sending, and receiving messages in same context

This sequence diagram shows how the application can send and receive messages within the same communication context using sendMessageReq() on the IpMultiMediaMessaging interface and messageReceived() on the IpAppMultiMediaMessaging interface.



3: Request the opening of a MultiMedia Messaging object. The application intends to use this object to send messages to the same destination, so it has specified the defaultdestinationAddressList. The defaultSourceAddress is also specified.

4: The application sends a message. The application has not included a destination address in the destinationAddressList parameter, as a default value has already been supplied in the openMultiMediaMessaging() method. Likewise the default source address was provided when the IpMultiMediaMessaging object was created, so there is no need to provide the sourceAddress parameter. The application has not requested delivery receipt or read receipt in the messageTreatment parameter.

5: This method indicates successful processing of the sendMessageReq by the SCF, and that the message has been sent. It does not indicate a delivery status.

6: The application sends another message to the same destination, again using default values for the destination and source addresses.

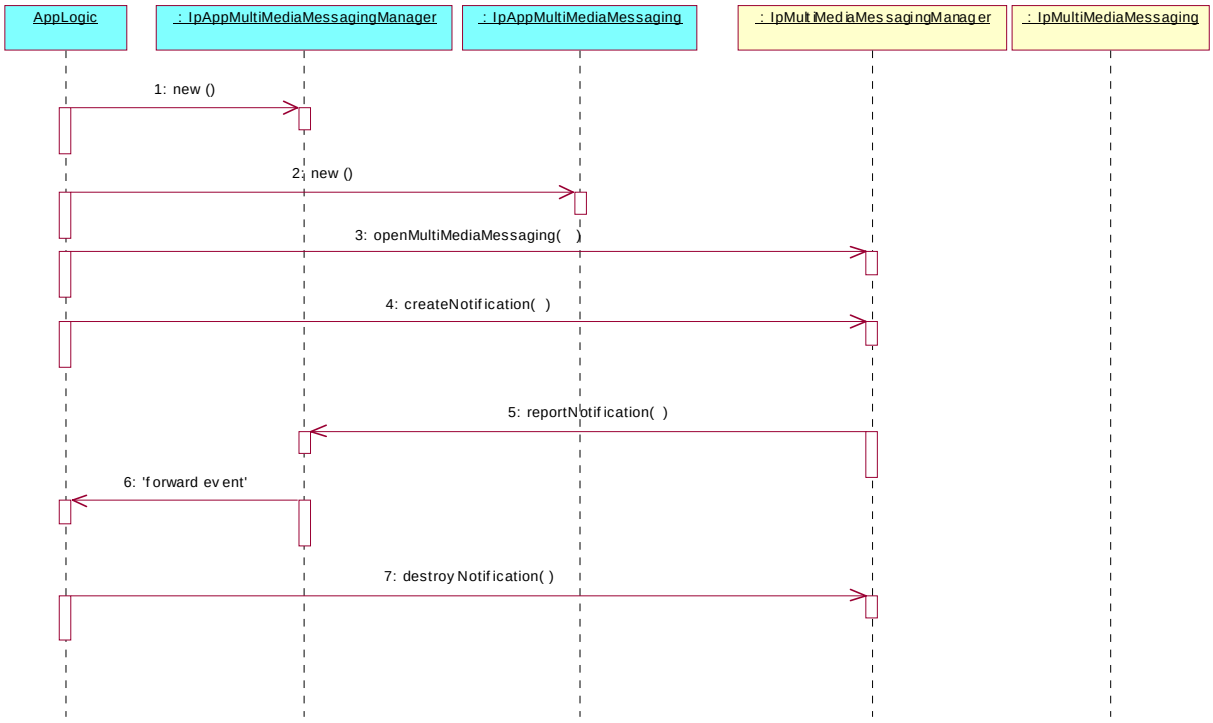
7: This method indicates successful processing of the sendMessageReq by the SCF, and that the message has been sent. It does not indicate a delivery status.

8: A new message is received in this communication context. The full message contents are carried in this method. It is not specified how the SCF identifies that this message is to be delivered in this communication context. The SCF could use source or destination addresses, content type, time or subject, among other parameters, to identify the context.

10: The application closes the session, i.e. closes the communication context.

5.3 Setting notification of received messages

This sequence diagram shows how the application can subscribe to notifications, and how it can receive messages using reportNotifications() method.



3: The application requests the opening of a MultiMedia Messaging object.

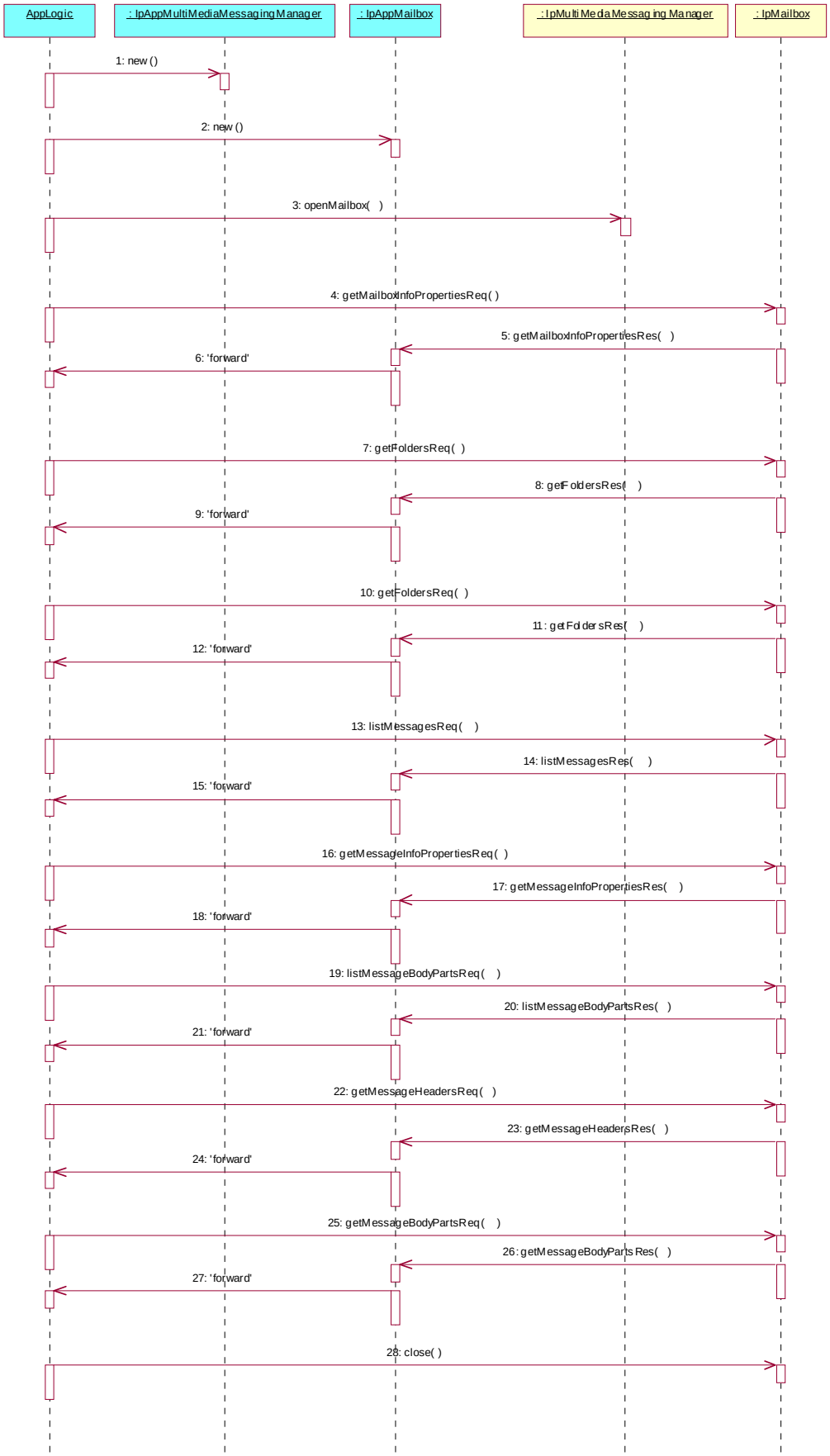
4: The application requests to be notified of any messages received for a particular destination address, using the P_EVENT_MSG_NEW_MESSAGE_ARRIVED criteria. The application may request that a MultiMedia Messaging session is created upon receipt of a message.

5: A message is received for the destination address identified in the createNotification() method. In this type of event (P_EVENT_MSG_NEW_MESSAGE_ARRIVED), the entire message contents are delivered in the reportNotification() method.

7: The application is no longer interested in receiving notifications of received messages. It de-subscribes from notification of received messages.

5.4 Using Mailbox functions

This sequence diagram shows how an application can retrieve message details from the mailbox.


AppLogic
: IpAppMultiMediaMessagingManager
: IpAppMailbox
: IpMultiMediaMessagingManager
: IpMailbox
1: new ()
2: new ()
3: openMailbox( )
4: getMailboxInfoPropertiesReq( )
5: getMailboxInfoPropertiesRes( )
6: 'forward'
7: getFoldersReq( )
8: getFoldersRes( )
9: 'forward'
10: getFoldersReq( )
11: getFoldersRes( )
12: 'forward'
13: listMessagesReq( )
14: listMessagesRes( )
15: 'forward'
16: getMessageInfoPropertiesReq( )
17: getMessageInfoPropertiesRes( )
18: 'forward'
19: listMessageBodyPartsReq( )
20: listMessageBodyPartsRes( )
21: 'forward'
22: getMessageHeadersReq( )
23: getMessageHeadersRes( )
24: 'forward'
25: getMessageBodyPartsReq( )
26: getMessageBodyPartsRes( )
27: 'forward'
28: close( )

3: The application requests to open the mailbox identified by the mailboxID parameter.

4: The application requests the properties of the Mailbox.

5: The property set of the mailbox is returned. The properties include the owner, date created, date changed and size of the mailbox.

7: The application requests a list of the top-level folders in the mailbox. The folderID parameter is left empty.

8: The list of top-level folders is returned to the application.

10: The application requests a list of the sub-folders in a folder returned earlier. The folderID parameter identifies the folder for which the list of sub-folders is requested.

11: The list of sub-folders is returned to the application.

13: The application requests a list of messages in a folder returned earlier. The folderID parameter identifies the folder for which the list of messages is requested.

14: The list of messages in the folder is returned.

16: The application requests the property set of a message returned earlier. The message is identified by its messageID, returned in the listMessagesRes().

17: The message properties are returned. These properties may include the date created, date received, date changed, size or status.

19: The application requests a list of the body parts of the message identified in the messageID parameter. The location of the message is identified in the folderID parameter.

20: The list of the message parts is returned.

22: The application requests the set of headers of the message, identified by the messageID parameter. The location of the message is identified in the folderID parameter.

23: The list of headers is returned to the application.

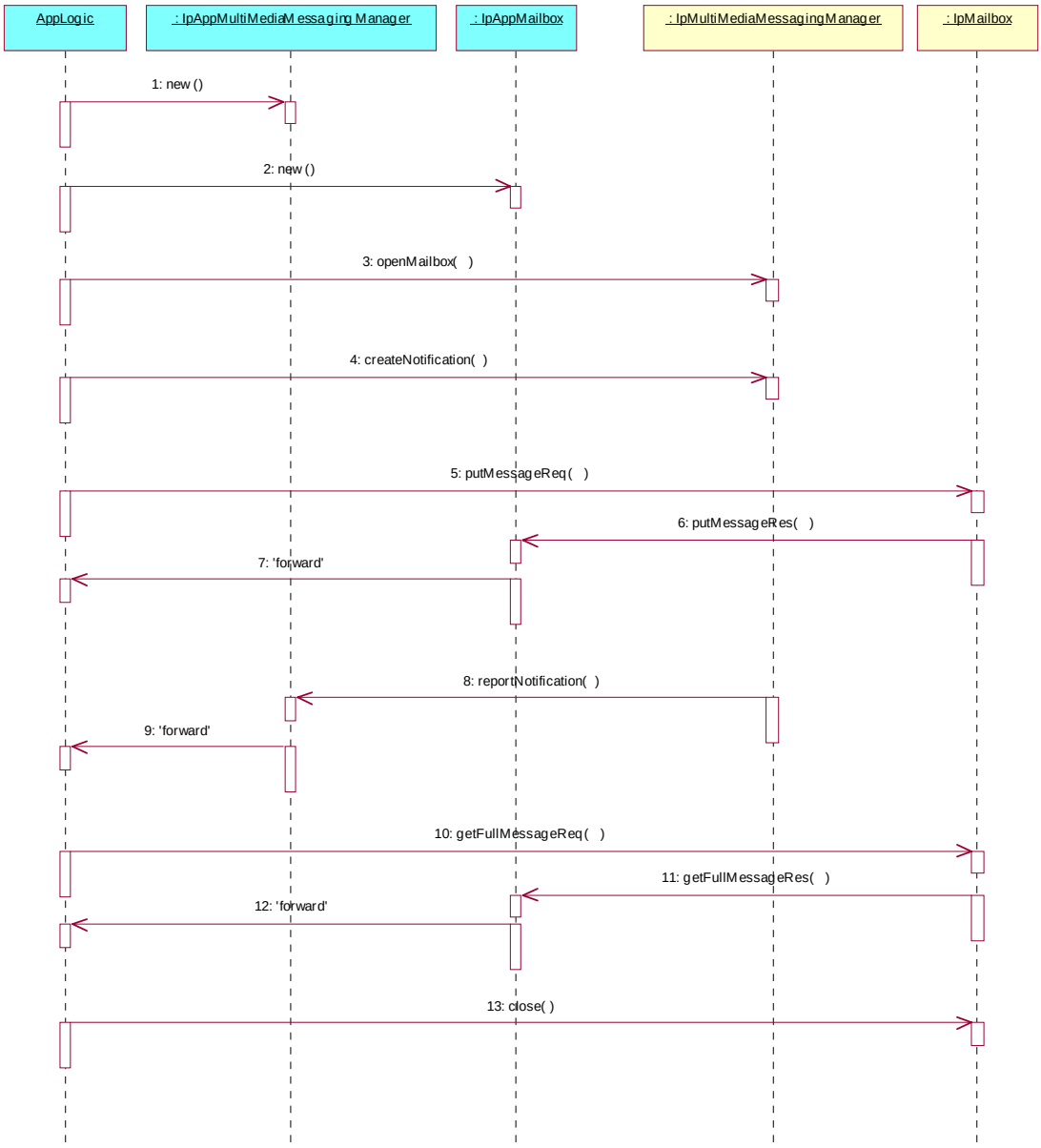
25: The application retrieves one or more parts of the message, as identified in the partIDs parameter.

26: The contents of the requested messge parts are returned.

28: The application closes the mailbox session.

5.5 Using Mailbox to send and receive

This sequence diagram shows how an application can use a mailbox to send and receive messages, if this functionality is supported by the SCF.



3: The application requests to open the mailbox identified by the mailboxID parameter.

4: The application requests to be notified of any messages received in the specified mailbox, using the P_EVENT_MSG_NEW_MAILBOX_MESSAGE_ARRIVED criteria.

5: The application places a message in a folder in the mailbox. The message contents are specified in the message parameter, and the folder in which to place it is specified in the folderID. The application chooses to place the message in the folder identified in the service property P_PUT_MESSAGE_FOLDER_TO_SEND. Any message placed in this folder is automatically sent. Typically it could be an Outbox folder.

6: This method indicates that the message has been successfully placed in the specified folder, and a messageID is returned. This does not necessarily indicate that the message has been sent, nor does it indicate that it has been delivered or received.

8: The application is notified that a message has been received in the mailbox. In this type of event (P_EVENT_MSG_NEW_MAILBOX_MESSAGE_ARRIVED), the messageID, location of the message and message description are delivered in the reportNotification() method, but the message contents are not. These need to be retrieved from the mailbox.

10: Using the messageID and folderID received in the reportNotification() method, the application requests to retrieve the full contents of the received message from the mailbox. The application could have chosen to retrieve individual parts of the message using getMessageBodyPartsReq(), or to retrieve just the headers using getMessageHeadersReq().

11: The full contents of the message are returned to the application.

13: The application closes the mailbox session.

6 Class Diagrams

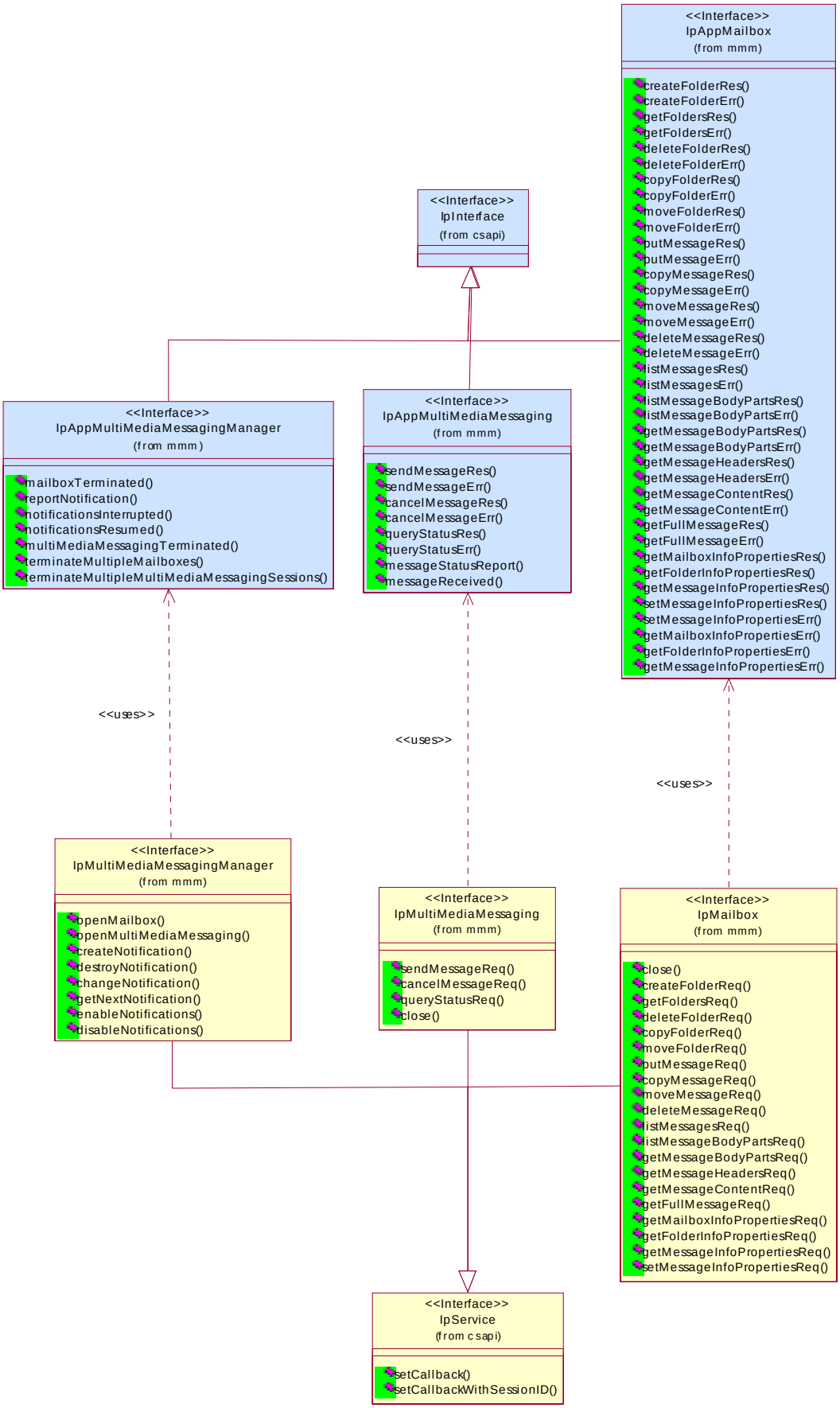

<<Interface>>
IpAppMailbox
(from mmm)
createFolderRes()
createFolderErr()
getFoldersRes()
getFoldersErr()
deleteFolderRes()
deleteFolderErr()
copyFolderRes()
copyFolderErr()
moveFolderRes()
moveFolderErr()
putMessageRes()
putMessageErr()
copyMessageRes()
copyMessageErr()
moveMessageRes()
moveMessageErr()
deleteMessageRes()
deleteMessageErr()
listMessagesRes()
listMessagesErr()
listMessageBodyPartsRes()
listMessageBodyPartsErr()
getMessageBodyPartsRes()
getMessageBodyPartsErr()
getMessageHeadersRes()
getMessageHeadersErr()
getMessageContentRes()
getMessageContentErr()
getFullMessageRes()
getFullMessageErr()
getMailboxInfoPropertiesRes()
getFolderInfoPropertiesRes()
getMessageInfoPropertiesRes()
setMessageInfoPropertiesRes()
setMessageInfoPropertiesErr()
getMailboxInfoPropertiesErr()
getFolderInfoPropertiesErr()
getMessageInfoPropertiesErr()
<<Interface>>
IpInterface
(from csapi)
<<Interface>>
IpAppMultiMediaMessagingManager
(from mmm)
mailboxTerminated()
reportNotification()
notificationsInterrupted()
notificationsResumed()
multiMediaMessagingTerminated()
terminateMultipleMailboxes()
terminateMultipleMultiMediaMessagingSessions()
<<Interface>>
IpAppMultiMediaMessaging
(from mmm)
sendMessageRes()
sendMessageErr()
cancelMessageRes()
cancelMessageErr()
queryStatusRes()
queryStatusErr()
messageStatusReport()
messageReceived()
<<uses>>
<<uses>>
<<uses>>
<<Interface>>
IpMultiMediaMessagingManager
(from mmm)
openMailbox()
openMultiMediaMessaging()
createNotification()
destroyNotification()
changeNotification()
getNextNotification()
enableNotifications()
disableNotifications()
<<Interface>>
IpMultiMediaMessaging
(from mmm)
sendMessageReq()
cancelMessageReq()
queryStatusReq()
close()
<<Interface>>
IpMailbox
(from mmm)
close()
createFolderReq()
getFoldersReq()
deleteFolderReq()
copyFolderReq()
moveFolderReq()
putMessageReq()
copyMessageReq()
moveMessageReq()
deleteMessageReq()
listMessagesReq()
listMessageBodyPartsReq()
getMessageBodyPartsReq()
getMessageHeadersReq()
getMessageContentReq()
getFullMessageReq()
getMailboxInfoPropertiesReq()
getFolderInfoPropertiesReq()
getMessageInfoPropertiesReq()
setMessageInfoPropertiesReq()
<<Interface>>
IpService
(from csapi)
setCallback()
setCallbackWithSessionID()

Figure: Messaging Interfaces Overview

7 The Service Interface Specifications

7.1 Interface Specification Format

This clause defines the interfaces, methods and parameters that form a part of the API specification. The Unified Modelling Language (UML) is used to specify the interface classes. The general format of an interface specification is described below.

7.1.1 Interface Class

This shows a UML interface class description of the methods supported by that interface, and the relevant parameters and types. The Service and Framework interfaces for enterprise-based client applications are denoted by classes with name `Ip<name>`. The callback interfaces to the applications are denoted by classes with name `IpApp<name>`. For the interfaces between a Service and the Framework, the Service interfaces are typically denoted by classes with name IpSvc<name>, while the Framework interfaces are denoted by classes with name IpFw<name>.

7.1.2 Method descriptions

Each method (API method “call”) is described. Both synchronous and asynchronous methods are used in the API. Asynchronous methods are identified by a '`Req`' suffix for a method request, and, if applicable, are served by asynchronous methods identified by either a '`Res`' or '`Err`' suffix for method results and errors, respectively. To handle responses and reports, the application or service developer must implement the relevant `IpApp<name> or IpSvc<name>` interfaces to provide the callback mechanism.

7.1.3 Parameter descriptions

Each method parameter and its possible values are described. Parameters described as 'in' represent those that must have a value when the method is called. Those described as 'out' are those that contain the return result of the method when the method returns.

7.1.4 State Model

If relevant, a state model is shown to illustrate the states of the objects that implement the described interface.

7.2 Base Interface

7.2.1 Interface Class IpInterface

All application, framework and service interfaces inherit from the following interface. This API Base Interface does not provide any additional methods.

<<Interface>> IpInterface

7.3 Service Interfaces

7.3.1 Overview

The Service Interfaces provide the interfaces into the capabilities of the underlying network - such as call control, user interaction, messaging, mobility and connectivity management.

The interfaces that are implemented by the services are denoted as 'Service Interface'. The corresponding interfaces that must be implemented by the application (e.g. for API callbacks) are denoted as 'Application Interface'.

7.4 Generic Service Interface

7.4.1 Interface Class IpService

Inherits from: IpInterface.

All service interfaces inherit from the following interface.

<<Interface>> IpService
setCallback (appInterface : in IpInterfaceRef) : void setCallbackWithSessionID (appInterface : in IpInterfaceRef, sessionID : in TpSessionID) : void

7.4.1.1 Method setCallback()

This method specifies the reference address of the callback interface that a service uses to invoke methods on the application. It is not allowed to invoke this method on an interface that uses SessionIDs. Multiple invocations of this method on an interface shall result in multiple callback references being specified. The SCS shall use the most recent callback interface provided by the application using this method. In the event that a callback reference fails or is no longer available, the next most recent callback reference available shall be used.

Parameters

`appInterface : in IpInterfaceRef`

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

Raises

`TpCommonExceptions, P_INVALID_INTERFACE_TYPE`

7.4.1.2 Method setCallbackWithSessionID()

This method specifies the reference address of the application's callback interface that a service uses for interactions associated with a specific session ID: e.g. a specific call, or call leg. It is not allowed to invoke this method on an interface that does not use SessionIDs. Multiple invocations of this method on an interface shall result in multiple callback references being specified. The SCS shall use the most recent callback interface provided by the application using this method. In the event that a callback reference fails or is no longer available, the next most recent callback reference available shall be used.

Parameters

`appInterface : in IpInterfaceRef`

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

`sessionID : in TpSessionID`

Specifies the session for which the service can invoke the application's callback interface.

Raises

`TpCommonExceptions, P_INVALID_SESSION_ID, P_INVALID_INTERFACE_TYPE`

8 Multi Media Messaging Interface Classes

The MultiMedia Messaging SCF (MMM SCF) is used by applications to send, store and receive messages either from within the context of a mailbox paradigm, or outside of it. MMM SCF also supports voice mail and electronic mail as the messaging mechanisms. The messaging service interface can be used by both.

The MMM SCF is represented by the IpMultiMediaMessagingManager, IpMailbox and IpMultiMediaMessaging interfaces to services provided by the network. To handle responses and reports, the developer must implement IpAppMultiMediaMessagingManager to provide the callback mechanism for the MultiMediaMessaging service manager.

The MMM SCF also supports messaging in the context of Instant Messaging (IM), SMS, MMS, GSM USSD etc., These contexts, IM in particular, may support communication in either the page mode or the session mode. The reader is encouraged to refer to "The Message Session Relay Protocol" work [] being done in the IETF for more details.

A messaging system that is conformant with the mailbox paradigm is assumed to have the following entities:

· Mailboxes. This is the application's main entry point to the messaging system. The framework may or may not need to authenticate an application before it accesses a mailbox

· Folders. Folders may have sub-folders. The names of these sub-folders are appended to their parents' names with '/' as the delimiter. For instance, if there is a folder called INBOX and a sub-folder in INBOX called 'Personal' and a sub-folder in that folder called 'archive' then the fully qualified names, which are required for all operations, of the three folders are 'INBOX', 'INBOX/Personal', and 'INBOX/Personal/archive'. The names are case sensitive.

· Messages. Messages are stored in folders. Messages consist of a message header and message body.

Non-mailbox paradigm messaging is supported through the IpMultiMediaMessagingManager and IpMultiMediaMessaging interfaces.

8.1 Interface Class IpMultiMediaMessagingManager

Inherits from: IpService.

This interface is the 'service manager' interface for the MultiMedia Messaging Service. The service manager interface provides the management functions to the MultiMedia Messaging service. The application programmer can use this

interface to open mailbox objects, MultiMedia Messaging objects, and also to enable or disable event notifications on them.

<<Interface>> IpMultiMediaMessagingManager
openMailbox (mailboxID : in TpString, authenticationInfo : in TpString, appMailbox : in IpAppMailboxRef) : TpMailboxIdentifier openMultiMediaMessaging (defaultDestinationAddressList : in TpTerminatingAddressList, defaultSourceAddress : in TpAddress, appMultiMediaMessaging : in IpAppMultiMediaMessagingRef) : TpMultiMediaMessagingIdentifier createNotification (appMultiMediaMessagingManager : in IpAppMultiMediaMessagingManagerRef, eventCriteria : in TpMessagingEventCriteriaSet) : TpAssignmentID destroyNotification (assignmentID : in TpAssignmentID) : void changeNotification (assignmentID : in TpAssignmentID, eventCriteria : in TpMessagingEventCriteriaSet) : void getNextNotification (reset : in TpBoolean) : TpMessagingNotificationRequestedSetEntry enableNotifications (appMultiMediaMessagingManager : in IpAppMultiMediaMessagingManagerRef) : TpAssignmentID disableNotifications () : void

8.1.1 Method openMailbox()

This method opens a mailbox for the application. The session ID and reference to the IpMailbox interface for use by the application is returned. Authentication information may be needed to open the mailbox.

The application can open more than one mailbox at the same time. The application is not allowed to open the same mailbox more than once at the same time.

Returns: mailboxIndentifier.

Specifies the reference to the opened mailbox and the session ID.

Parameters

`mailboxID : in TpString`

Specifies the identity of the mailbox. If the mailbox chosen is invalid, the P_MMM_INVALID_MAILBOX exception is thrown.

`authenticationInfo : in TpString`

Authentication information needed for the application to open a mailbox in the messaging system, such as a key or password. This is distinct from the authentication performed by the Framework. If the Framework authentication process is considered strong enough for the application to gain access to the mailbox, then this parameter will be an empty string. If the authentication information is not valid, the error code P_MMM_INVALID_AUTHENTICATION_INFORMATION is returned.

`appMailbox : in IpAppMailboxRef`

Specifies the client callback interface to be used with this mailbox session. P_INVALID_INTERFACE_TYPE is thrown if the reference is not an IpAppMailbox.

Returns

TpMailboxIdentifier

Raises

TpCommonExceptions, P_MMM_INVALID_MAILBOX, P_MMM_INVALID_AUTHENTICATION_INFORMATION, P_INVALID_INTERFACE_TYPE

8.1.2 Method openMultiMediaMessaging()

This method is used to open a MultiMedia Messaging object that can be used for single-shot (page mode), or session mode messaging (e.g. instant-messaging).

The defaultDestinationAddressList is used to identify the default set of users that a message is to be sent to when using this interface. This default set is overridden by the information supplied in the sendMessageReq() method. If no destinationAddressList is present in the sendMessageReq(), then the default list supplied here applies. If no address is provided in the defaultDestinationAddressList, then the instance can be re-used for multiple invocations of sendMessageReq() to different destination addresses, with the destination address specified each time in the sendMessageReq() method.

The defaultSourceAddress is used to identify the default address to be used as the source of any message sent when using this interface. This default address is overridden by the information supplied in the sendMessageReq() method. If no sourceAddress is present in the sendMessageReq(), then the default address supplied here applies. If no address is provided in the defaultSourceAddress here, then the instance can be re-used for multiple invocations of sendMessageReq(), with a sourceAddress specified each time in the sendMessageReq() method.

Returns: multimediaMessagingIdentifier

Specifies the reference to the opened MultiMediaMessaging object and session ID.

Parameters

defaultDestinationAddressList : in TpTerminatingAddressList

Used to identify the default set of users that a message is to be sent to when using this interface. This default set is overridden by the information supplied in the sendMessageReq() method. If no destinationAddressList is present in the sendMessageReq(), then the default list supplied here applies. If no address is provided in the defaultDestinationAddressList, then the instance can be re-used for multiple invocations of sendMessageReq() to different destination addresses, with the destination address specified each time in the sendMessageReq() method.

defaultSourceAddress : in TpAddress

Used to identify the default address to be used as the source of any message sent when using this interface. This default address is overridden by the information supplied in the sendMessageReq() method. If no sourceAddress is present in the sendMessageReq(), then the default address supplied here applies. If no address is provided in the defaultSourceAddress here, then the instance can be re-used for multiple invocations of sendMessageReq(), with a sourceAddress specified each time in the sendMessageReq() method.

appMultiMediaMessaging : in IpAppMultiMediaMessagingRef

If this parameter is set (i.e. not NULL) it specifies a reference to the MultiMedia Messaging application interface, which is used for callbacks. If set to NULL, the application interface defaults to the interface specified via the setCallback() method. P_INVALID_INTERFACE_TYPE is thrown if the reference is not an IpAppMultiMediaMessaging interface.

Returns

TpMultiMediaMessagingIdentifier

Raises

TpCommonExceptions, P_INVALID_INTERFACE_TYPE, P_INVALID_ADDRESS

8.1.3 Method createNotification()

This method enables the application to indicate that it wishes to receive notifications of messaging related events (e.g. receipt of an incoming message).

If the same application invokes this method multiple times with exactly the same criteria but with different callback references, then these shall be treated as additional callback references. Each such notification request shall share the same assignmentID. The gateway shall use the most recent callback interface provided by the application using this method. Therefore in the event that a callback reference fails or is no longer available, the next most recent callback reference available shall be used.

In case the createNotification contains no callback, at the moment the application needs to be informed the gateway will use as callback the callback that has been registered by setCallback().

Returns: assignmentID.

Specifies the ID assigned by the multimedia messaging manager interface for this newly-enabled event notification.

Parameters

appMultiMediaMessagingManager : in IpAppMultiMediaMessagingManagerRef

If this parameter is set (i.e. not NULL) it specifies a reference to the application interface, which is used for callbacks. If set to NULL, the application interface defaults to the interface specified via the setCallback() method. P_INVALID_INTERFACE_TYPE is thrown if the reference is not an IpAppMultiMediaMessagingManager.

eventCriteria : in TpMessagingEventCriteriaSet

Specifies the event specific criteria used by the application to define the event required.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_CRITERIA, P_INVALID_INTERFACE_TYPE

8.1.4 Method destroyNotification()

This method is used by the application to destroy or delete a notification previously set using createNotification. The notification tied to the assignment ID is deleted by this operation.

Parameters

assignmentID : in TpAssignmentID

Specifies the assignment ID given by the generic communications manager interface when the previous createNotification() was called. If the assignment ID does not correspond to one of the valid assignment IDs, the service manager will return the error code P_INVALID_ASSIGNMENT_ID.

Raises

TpCommonExceptions, P_INVALID_ASSIGNMENT_ID

8.1.5 Method changeNotification()

This method is used by the application to modify or change a notification previously set using createNotification. The assignment ID tied to the original notification is not changed by this operation.

Parameters

assignmentID : in TpAssignmentID

Specifies the assignment ID given by the multimedia messaging manager interface when the previous createNotification() was called. If the assignment ID does not correspond to one of the valid assignment IDs, the service manager will return the error code P_INVALID_ASSIGNMENT_ID.

eventCriteria : in TpMessagingEventCriteriaSet

Specifies the event specific criteria used by the application to define the event required.

Raises

TpCommonExceptions, P_INVALID_ASSIGNMENT_ID, P_INVALID_CRITERIA

8.1.6 Method getNextNotification()

This method is used by the application to query the event criteria set with createNotification or changeNotification. Since a lot of data can potentially be returned (which might cause problem in the middleware), this method must be used in an iterative way. Each method invocation may return part of the total set of notifications if the set is too large to return it at once. The reset parameter permits the application to indicate whether an invocation to getNextNotification is requesting more notifications from the total set of notifications or is requesting that the total set of notifications shall be returned from the beginning.

Returns messagingNotificationRequestedSetEntry: The set of notifications and an indication whether all off the notifications have been obtained or if more notifications are available that have not yet been obtained by the application. If no notifications exist, an empty set is returned and the final indication shall be set to TRUE.

Note that the (maximum) number of items provided to the application is determined by the gateway.

Parameters

reset : in TpBoolean

TRUE: indicates that the application intends to obtain the set of notifications starting at the beginning.

FALSE: indicates that the application requests the next set of notifications that have not (yet) been obtained since the last call to this method with this parameter set to TRUE.

The first time this method is invoked, reset shall be set to TRUE. Following the receipt of a final indication in TpNotificationRequestedSetEntry, for the next call to this method reset shall be set to TRUE. P_TASK_REFUSED may be thrown if these conditions are not met.

Returns

TpMessagingNotificationRequestedSetEntry

Raises

TpCommonExceptions

8.1.7 Method enableNotifications()

This method is used to indicate that the application is able to receive notifications which are provisioned from within the network (i.e. these notifications are NOT set using createNotification() but via, for instance, a network management system). If notifications provisioned for this application are created or changed, the application is unaware of this until the notification is reported.

If the same application invokes this method multiple times with different IpAppMultiMediaMessagingManager references, then these shall be treated as additional callback references. Each such notification request shall share the same assignmentID. The gateway shall use the most recent callback interface provided by the application using this method. Therefore in the event that a callback reference fails or is no longer available, the next most recent callback reference available shall be used.

When this method is used, it is still possible to use createNotification() for service provider provisioned notifications on the same interface as long as the criteria in the network and provided by createNotification() do not overlap. However, it is NOT recommended to use both mechanisms on the same service manager.

The methods changeNotification(), getNotification(), and destroyNotification() do not apply to notifications provisioned in the network and enabled using enableNotifications(). These only apply to notifications created using createNotification().

Returns: assignmentID.

Specifies the ID assigned by the manager interface for this operation. This ID is contained in any reportNotification() that relates to notifications provisioned from within the network.

Parameters

appMultiMediaMessagingManager : in IpAppMultiMediaMessagingManagerRef

If this parameter is set (i.e. not NULL) it specifies a reference to the application interface, which is used for callbacks. If set to NULL, the application interface defaults to the interface specified via the setCallback() method. P_INVALID_INTERFACE_TYPE is thrown if the reference is not an IpAppMultiMediaMessagingManager.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_INTERFACE_TYPE

8.1.8 Method disableNotifications()

This method is used to indicate that the application is not able to receive notifications for which the provisioning has been done from within the network. (i.e. these notifications that are NOT set using createNotification() but via, for instance, a network management system). After this method is called, no such notifications are reported anymore.

Parameters
No Parameters were identified for this method

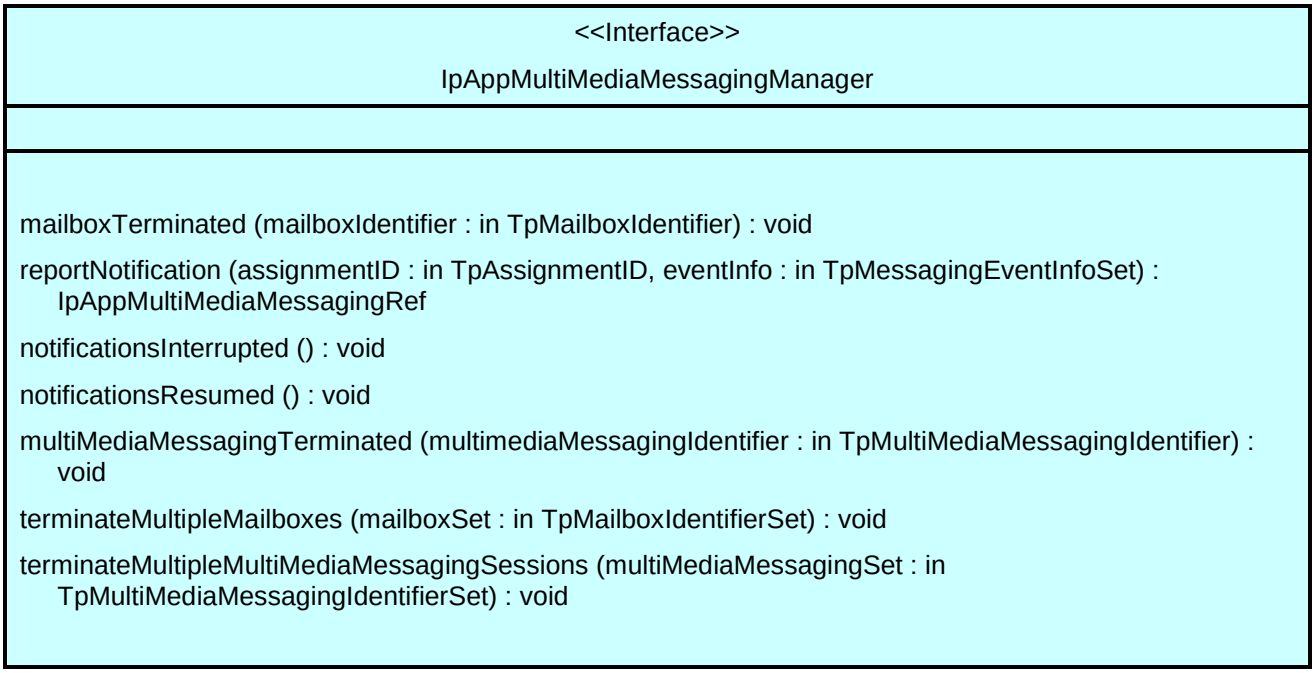
Raises

`TpCommonExceptions`

8.2 Interface Class IpAppMultiMediaMessagingManager

Inherits from: IpInterface.

The client application developer implements the multimedia messaging manager application interface to handle mailbox termination, mailbox fault and messaging notifications.



8.2.1 Method mailboxTerminated()

This method indicates to the application that the mailbox has terminated or closed abnormally. No further communication will be possible between the mailbox and application.

Parameters

`mailboxIdentifier : in TpMailboxIdentifier`

Specifies the interface and session ID of the mailbox that has terminated.

8.2.2 Method reportNotification()

This method notifies the application of the arrival of messaging-related events.

Returns appMultiMediaMessaging: Specifies a reference to an IpAppMultiMediaMessaging interface, if the application has requested the creation of an IpMultiMediaMessaging session upon receipt of a new message arrived event outside

the context of a mailbox, and the event reported is P_EVENT_MSG_NEW_MESSAGE_ARRIVED. In all other cases this parameter will be null.

Parameters

assignmentID : in TpAssignmentID

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

eventInfo : in TpMessagingEventInfoSet

Specifies data associated with the events.

Returns

IpAppMultiMediaMessagingRef

8.2.3 Method notificationsInterrupted()

This method indicates to the application that all event notifications have been temporarily interrupted (for example, due to faults detected in communication with underlying messaging system).

Note that more permanent failures are reported via the Framework (integrity management).

Parameters
No Parameters were identified for this method

8.2.4 Method notificationsResumed()

This method indicates to the application that event notifications will again be possible.

Parameters
No Parameters were identified for this method

8.2.5 Method multiMediaMessagingTerminated()

This method indicates to the application that a MultiMediamessaging session has terminated or closed abnormally. No further communication will be possible between the session and application.

Parameters

multimediaMessagingIdentifier : in TpMultiMediaMessagingIdentifier

Specifies the interface and session ID of the MultiMediaMessaging session that has terminated.

8.2.6 Method terminateMultipleMailboxes()

The service may invoke this method on the IpAppMultiMediaMessagingManager interface to indicate that a number of mailboxes have terminated or closed abnormally. No further communication will be possible between the application and the mailbox. This may be used for example in the event of service failure and recovery in order to instruct the application that a number of mailboxes have failed. The service shall provide a set of TpMailboxIdentifiers, indicating to the application the interface references and sessionsIDs of the mailboxes that have aborted. In the case that the service invokes this method and provides an empty set of TpMailboxIdentifiers, this shall be used to indicate that all mailboxes previously active on the IpMultiMediaMessagingManager interface have been aborted.

Parameters

mailboxSet : in TpMailboxIdentifierSet

Specifies the set of interfaces and sessionIDs of the mailboxes that have aborted or terminated abnormally. The empty set shall be used to indicate that all mailboxes have aborted.

8.2.7 Method terminateMultipleMultiMediaMessagingSessions()

The service may invoke this method on the IpAppMultiMediaMessagingManager interface to indicate that a number of ongoing multi media messaging sessions have aborted or terminated abnormally. No further communication will be possible between the application and the multi media messaging sessions. This may be used for example in the event of service failure and recovery in order to instruct the application that a number of sessions have failed. The service shall provide a set of TpMultiMediaMessagingIdentifiers, indicating to the application the interface references and sessionsIDs of the multi media messaging sessions that have aborted. In the case that the service invokes this method and provides an empty set of TpMultiMediaMessagingIdentifiers, this shall be used to indicate that all multi media messaging sessions previously active on the IpMultiMediaMessaginManager interface have been aborted.

Parameters

`multiMediaMessagingSet : in TpMultiMediaMessagingIdentifierSet`

Specifies the set of interfaces and sessionIDs of the multi media messaging sessions that have aborted or terminated abnormally. The empty set shall be used to indicate that all multi media messaging sessions have aborted.

8.3 Interface Class IpMailbox

Inherits from: IpService.

This interface supports methods which enable the application to access and manipulate the contents of the mailbox. In order to send messages from the mailbox, the putMessageReq() method is used to put messages in a specified folder, which will automatically result in their being sent.

<<Interface>> IpMailbox
close (mailboxSessionID : in TpSessionID) : void getMessageInfoPropertiesReq (mailboxSessionID : in TpSessionID, messageID : in TpString) : TpAssignmentID setMessageInfoPropertiesReq (mailboxSessionID : in TpSessionID, messageID : in TpString, properties : in TpMessageInfoPropertySet) : TpAssignmentID createFolderReq (mailboxSessionID : in TpSessionID, folderID : in TpString) : TpAssignmentID getFoldersReq (mailboxSessionID : in TpSessionID, folderID : in TpString) : TpAssignmentID deleteFolderReq (mailboxSessionID : in TpSessionID, folderID : in TpString) : TpAssignmentID copyFolderReq (mailboxSessionID : in TpSessionID, sourceFolderID : in TpString, destinationFolderID : in TpString) : TpAssignmentID moveFolderReq (mailboxSessionID : in TpSessionID, sourceFolderID : in TpString, destinationFolderID : in TpString) : TpAssignmentID putMessageReq (mailboxSessionID : in TpSessionID, folderID : in TpString, message : in TpOctetSet) : TpAssignmentID copyMessageReq (mailboxSessionID : in TpSessionID, fromFolderID : in TpString, toFolderID : in TpString, messageID : in TpString) : TpAssignmentID moveMessageReq (mailboxSessionID : in TpSessionID, fromFolderID : in TpString, toFolderID : in TpString, messageID : in TpString) : TpAssignmentID deleteMessageReq (mailboxSessionID : in TpSessionID, fromFolderID : in TpString, messageID : in TpString) : TpAssignmentID listMessagesReq (mailboxSessionID : in TpSessionID, folderID : in TpString, criteria : in TpListMessagesCriteria, reset : in TpBoolean) : TpAssignmentID listMessageBodyPartsReq (mailboxSessionID : in TpSessionID, folderID : in TpString, messageID : in TpString, maxNestingLevel : in TpInt32) : TpAssignmentID getMessageBodyPartsReq (mailboxSessionID : in TpSessionID, folderID : in TpString, messageID : in TpString, partIDs : in TpStringList) : TpAssignmentID getMessageHeadersReq (mailboxSessionID : in TpSessionID, folderID : in TpString, messageID : in TpString) : TpAssignmentID getMessageContentReq (mailboxSessionID : in TpSessionID, folderID : in TpString, messageID : in TpString) : TpAssignmentID getFullMessageReq (mailboxSessionID : in TpSessionID, folderID : in TpString, messageID : in TpString) : TpAssignmentID getMailboxInfoPropertiesReq (mailboxSessionID : in TpSessionID) : TpAssignmentID getFolderInfoPropertiesReq (mailboxSessionID : in TpSessionID, folderID : in TpString) : TpAssignmentID

8.3.1 Method close()

This method closes the mailbox. After closing, the interfaces to the mailbox and any associated folders are automatically de-assigned and are no longer valid.

Parameters

mailboxSessionID : in TpSessionID

The session ID of the open mailbox previously opened by openMailbox. From now on, the session ID is no longer valid. If by coincidence an identical session ID is returned by a subsequent openMailbox, the session ID will be associated with the new session and has nothing to do with the closed session. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

Raises

TpCommonExceptions, P_INVALID_SESSION_ID

8.3.2 Method getMessageInfoPropertiesReq()

This asynchronous method requests the values of properties of a message. The response is provided in getMessageInfoPropertiesRes().

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

messageID : in TpString

Identifies the message for which the properties are to be retrieved.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_MESSAGE_ID

8.3.3 Method setMessageInfoPropertiesReq()

This asynchronous method requests to set the properties of a message. In cases where more than one property was requested to be set, and where not all properties were successfully set, a setMessageInfoPropertiesRes() will be returned indicating those properties successfully set, and a setMessageInfoPropertiesErr() method will be returned as well, indicating those properties which were not set.

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

messageID : in TpString

Identifies the message for which the properties are to be set.

properties : in TpMessageInfoPropertySet

The message properties (names and values) to be set.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_MESSAGE_ID, P_MMM_INVALID_PROPERTY

8.3.4 Method createFolderReq()

This method creates a new folder in the mailbox opened by that Mailbox Session. The name of the new folder may be passed in. If the operation fails, a createFolderErr() is invoked by the SCF on the IpAppMailbox interface.

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

folderID : in TpString

This is the proposed fully qualified name of the new folder to be created.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID

8.3.5 Method getFoldersReq()

This method requests a list of the (sub)folder names in the mailbox or a folder. The list is provided as a string list, returned in getFoldersRes(). Only the names of the 1st (top) level of folders is returned.

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

folderID : in TpString

This contains the fully qualified name of the folder for which the names of the top level of sub-folders are to be returned. If an emptystring is provided, the getFoldersReq requests the names of the top level of folders in the Mailbox.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID

8.3.6 Method deleteFolderReq()

This method requests to remove a folder from the currently open mailbox session. The operation is carried out even for non-empty folders (i.e. folders with subtended folders or email messages within them).

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

folderID : in TpString

This contains the fully qualified name of the folder to be deleted.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID

8.3.7 Method copyFolderReq()

This method copies a folder from a mailbox session context, including all its contents into a new folder with the provided name but in the same mailbox context.

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

sourceFolderID : in TpString

The fully qualified name of the folder to be copied.

destinationFolderID : in TpString

The fully qualified name of the folder to be created, which will contain a copy of the source folder.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID

8.3.8 Method moveFolderReq()

This method moves a folder from a mailbox session context, including all its contents into a new folder with the provided name but in the same mailbox context.

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

sourceFolderID : in TpString

The fully qualified name of the folder to be moved.

destinationFolderID : in TpString

The fully qualified name of the folder to be created, which will contain a copy of the source folder.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID

8.3.9 Method putMessageReq()

This method requests to put a message into an open mailbox folder. The message and the headers are transferred to the Messaging service. The message will be taken as is. No checking is done on the message. Furthermore, the message is assumed to be a simple message, that is, with no attachments. If the application knows the messaging system and understands the format to send attachments, it can do so. The service will not flag any inconsistencies if the formatting of the message is not correct.

In order to send messages from the mailbox, the application can use putMessageReq to place messages in a specified folder, from which they will be sent. The folder to use is indicated by the service property P_PUT_MESSAGE_FOLDER_TO_SEND.

The messageID associated with the message is returned in putMessageRes().

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

folderID : in TpString

This is the fully qualified name of the folder in which the message should be placed.

message : in TpOctetSet

The message to put into the mailbox.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID, P_MMM_MAX_MESSAGE_SIZE_EXCEEDED

8.3.10 Method copyMessageReq()

This method requests to copy a message with the specified ID from its current folder into the folder specified by the toFolderID. The message will be copied as is. This effects a deep copy, not just a cloning of pointers to the message.

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

fromFolderID : in TpString

This specifies the name of the folder from which the message is to be copied.

toFolderID : in TpString

This specifies the name of the folder into which the message is to be copied.

messageID : in TpString

The ID of the message to be copied into the specified folder.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID, P_MMM_INVALID_MESSAGE_ID

8.3.11 Method moveMessageReq()

This method requests to move a message with the specified ID from its current position into the folder specified by the toFolderID. The message will be moved as is.

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

fromFolderID : in TpString

This specifies the name of the folder from which the message is to be moved.

toFolderID : in TpString

This specifies the name of the folder into which the message is to be moved.

messageID : in TpString

The ID of the message to be moved into the specified folder.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID, P_MMM_INVALID_MESSAGE_ID

8.3.12 Method deleteMessageReq()

This method requests to delete the message with the specified ID from its current position in the folder. If the messaging system supports a file or folder structure with a "Trash" folder, the message may be put into that folder. In other systems, the message may be permanently deleted. If this method is invoked on a message in the trash folder, it is permanently deleted.

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

fromFolderID : in TpString

This specifies the name of the folder from which the message is to be deleted.

messageID : in TpString

The ID of the message to be deleted.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID, P_MMM_INVALID_MESSAGE_ID

8.3.13 Method listMessagesReq()

Request a list of messages in a mailbox folder, the list can be narrowed down by providing listing criteria. The maximum size of the list returned for a request is depending on the System configuration. In that case subsequent requests can be used to obtain the complete list, see also the description of the reset parameter.

Returns requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

folderID : in TpString

Specifies the identity of the folder for which a list of messages is requested. The folderID parameter is only relevant if the reset parameter is set to TRUE. If the reset parameter is set to FALSE it is ignored.

criteria : in TpListMessagesCriteria

Specifies the criteria that items to be listed need to conform to. The criteria parameter is only relevant if the reset parameter is set to TRUE. If the reset parameter is FALSE it is ignored.

reset : in TpBoolean

TRUE: Indicates that the application is intended to obtain the list of messages starting from the beginning.

FALSE: Indicates that the application requests the next part of the list that have not (yet) been obtained since the last call to this method with this parameter set to TRUE.

The first time this method is invoked, reset shall be set to TRUE. Following the receipt of a final indication in the ListMessagesRes(), for the next call to this method reset shall be set to TRUE. P_TASK_REFUSED may be thrown if these conditions are not met.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID, P_INVALID_CRITERIA

8.3.14 Method listMessageBodyPartsReq()

Request a list of body parts that are contained in a message. This is especially useful with MIME multipart messages. The Application shall indicate up to what nesting level it wants the structure presented. When an Application wants to download only a specific attachment with the GetBodyPartReq() method this method needs to invoked first in order to find out the partID of the attachment to be retrieved.

Returns requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

folderID : in TpString

Specifies the identity of the folder in which the targeted message is contained.

messageID : in TpString

Identifies the exact message on which to perform this operation.

maxNestingLevel : in TpInt32

Parts of a multipart message can be multipart structures themselves. The Application can indicate what is the maximum nesting level it wants the structure to be reported. A nesting level of 0 means that only the message content itself will be reported. A nesting level of 1 means that the parts of a multipart type on level 0 will be reported as well. In general a maxNestingLevel of nl=n means that the parts of a multipart type on level nl-1 will be reported, for every nl in the range 0..n.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID, P_MMM_INVALID_MESSAGE_ID

8.3.15 Method getMessageBodyPartsReq()

Request for retrieval of one or more parts of a multipart message. The targeted message is identified by its messageID and the folderID to know where in the mailbox the message is stored. The messageID is typically obtained either by having received a notification of new message arrival or from the result of a list-message request. The partIDs that identify which parts of the message shall be retrieved is obtained by listing the messages body parts first.

Returns requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

folderID : in TpString

Specifies the identity of the folder in which the targeted message is contained.

messageID : in TpString

Identifies the exact message on which to perform this operation.

partIDs : in TpStringList

Identifies the parts of the message to retrieve. If an emptystring is provided, all parts are to be retrieved.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID, P_MMM_INVALID_MESSAGE_ID, P_MMM_INVALID_PART_ID

8.3.16 Method getMessageHeadersReq()

Request the headers of a message. The targeted message is identified by its messageID and the folderID to know where in the mailbox the message is stored. The messageID is typically obtained either by having received a notification of new message arrival or from the result of a list-message request.

Returns requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

folderID : in TpString

Specifies the identity of the folder in which the targeted message is contained.

messageID : in TpString

Identifies the exact message on which to perform this operation.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID, P_MMM_INVALID_MESSAGE_ID

8.3.17 Method getMessageContentReq()

Request the entire body of a message. The targeted message is identified by its messageID and the folderID to know where in the mailbox the message is stored. The messageID is obtained either by having recieved a notification of new message arrival or from the result of a list-message request.

Returns requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

folderID : in TpString

Specifies the identity of the folder in which the targeted message is contained.

messageID : in TpString

Identifies the exact message on which to perform this operation.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID, P_MMM_INVALID_MESSAGE_ID

8.3.18 Method getFullMessageReq()

Request the entire message, including headers and body. The targeted message is identified by its messageID and the folderID to know where in the mailbox the message is stored. The messageID is typically obtained either by having recieved a notification of new message arrival or from the result of a list-message request.

Returns requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

folderID : in TpString

Specifies the identity of the folder in which the targeted message is contained.

messageID : in TpString

Identifies the exact message on which to perform this operation.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID, P_MMM_INVALID_MESSAGE_ID

8.3.19 Method getMailboxInfoPropertiesReq()

This asynchronous method requests the values of properties of a mailbox. The response is provided in getMailboxInfoPropertiesRes().

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID

8.3.20 Method getFolderInfoPropertiesReq()

This asynchronous method requests the values of properties of a folder. The response is provided in getFolderInfoPropertiesRes().

Returns: requestID:

A reference to the request for later use by the application.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

folderID : in TpString

Identifies the folder for which the properties are to be retrieved.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_MMM_INVALID_FOLDER_ID

8.4 Interface Class IpAppMailbox

Inherits from: IpInterface.

<<Interface>>

IpAppMailbox

getMessageInfoPropertiesRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, messageID : in TpString, returnedProperties : in TpMessageInfoPropertySet) : void

setMessageInfoPropertiesRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, messageID : in TpString, propertiesUpdated : in TpMessageInfoPropertySet) : void

setMessageInfoPropertiesErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, messageID : in TpString, propertiesNotUpdated : in TpMessageInfoPropertyErrorSet) : void

getMailboxInfoPropertiesErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

getFolderInfoPropertiesErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

getMessageInfoPropertiesErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

createFolderRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, folderID : in TpString) : void

createFolderErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

getFoldersRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, folderID : in TpString, folderNames : in TpStringList) : void

getFoldersErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, folderID : in TpString, error : in TpMessagingError, errorDetails : in TpString) : void

deleteFolderRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID) : void

deleteFolderErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

copyFolderRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID) : void

copyFolderErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

moveFolderRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID) : void

moveFolderErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

putMessageRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, messageID : in TpString) : void

putMessageErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

copyMessageRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID) : void

copyMessageErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

moveMessageRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID) : void

moveMessageErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

deleteMessageRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID) : void

deleteMessageErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

listMessagesRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, messageList : in TpMessageDescriptionList, mailboxStatusInfo : in TpMailboxFolderStatusInformation, final : in TpBoolean) : void

listMessagesErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

listMessageBodyPartsRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, partsList : in TpBodyPartDescriptionList) : void

listMessageBodyPartsErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

getMessageBodyPartsRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, bodyParts : in TpBodyPartList) : void

getMessageBodyPartsErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

getMessageHeadersRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, headers : in TpMessageHeaderFieldSet) : void

getMessageHeadersErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

getMessageContentRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, contentType : in TpString, contentTransferEncoding : in TpString, content : in TpOctetSet) : void

getMessageContentErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

getFullMessageRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, message : in TpOctetSet) : void

getFullMessageErr (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void

getMailboxInfoPropertiesRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, returnedProperties : in TpMailboxInfoPropertySet) : void

getFolderInfoPropertiesRes (mailboxSessionID : in TpSessionID, requestID : in TpAssignmentID, folderID : in TpString, returnedProperties : in TpFolderInfoPropertySet) : void

8.4.1 Method getMessageInfoPropertiesRes()

This method returns the properties of a message, requested by getMessageInfoPropertiesReq().

Parameters

`mailboxSessionID : in TpSessionID`

This is the session ID of the open mailbox.

`requestID : in TpAssignmentID`

This specifies the requestID associated with the corresponding getMessageInfoPropertiesReq() that was previously invoked by the client application.

`messageID : in TpString`

Identifies the message for which the properties are being returned.

`returnedProperties : in TpMessageInfoPropertySet`

The message properties (names and values).

8.4.2 Method setMessageInfoPropertiesRes()

This method returns the list of properties updated following a setMessageInfoPropertiesReq() invoked by the application. In cases where more than one property was requested to be set, and where not all properties were successfully set, a setMessageInfoPropertiesRes() will be returned indicating those properties successfully set, and a setMessageInfoPropertiesErr() method will be returned as well, indicating those properties which were not set.

Parameters

`mailboxSessionID : in TpSessionID`

This is the session ID of the open mailbox.

`requestID : in TpAssignmentID`

This specifies the requestID associated with the corresponding setMessageInfoPropertiesReq() that was previously invoked by the client application.

`messageID : in TpString`

Identifies the message for which the properties were set.

`propertiesUpdated : in TpMessageInfoPropertySet`

This identifies the properties whose values were successfully updated as a result of invoking setMessageInfoPropertiesReq().

8.4.3 Method setMessageInfoPropertiesErr()

This method returns the list of properties which were not updated, and a reason why not, following a setMessageInfoPropertiesReq() invoked by the application. In cases where more than one property was requested to be set, and where not all properties were successfully set, a setMessageInfoPropertiesReq() will be returned indicating those properties successfully set, and a setMessageInfoPropertiesErr() method will be returned as well, indicating those properties which were not set.

Parameters

`mailboxSessionID : in TpSessionID`

This is the session ID of the open mailbox.

`requestID : in TpAssignmentID`

This specifies the requestID associated with the corresponding setMessageInfoPropertiesReq() that was previously invoked by the client application.

`messageID : in TpString`

Identifies the message for which the properties were requested to be set.

`propertiesNotUpdated : in TpMessageInfoPropertyErrorSet`

This identifies the names of the properties whose values were not updated as a result of invoking setMessageInfoPropertiesReq(), and the reason why each property was not updated.

8.4.4 Method getMailboxInfoPropertiesErr()

This method indicates that the getMailboxInfoPropertiesReq() was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getMailboxInfoPropertiesReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.5 Method getFolderInfoPropertiesErr()

This method indicates that the getFolderInfoPropertiesReq() was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getFolderInfoPropertiesReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.6 Method getMessageInfoPropertiesErr()

This method indicates that the getMessageInfoPropertiesReq() was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getMessageInfoPropertiesReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.7 Method createFolderRes()

This method indicates the successful creation of a folder, requested by createFolderReq().

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding createFolderReq() that was previously invoked by the client application.

folderID : in TpString

This is the name of the new folder which has been created.

8.4.8 Method createFolderErr()

This method indicates that the attempt to create a folder, requested by createFolderReq(), was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding createFolderReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.9 Method getFoldersRes()

This method returns the list of the (sub)folder names in the mailbox or a folder. Only the names of the 1st (top) level of folders is returned.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getFoldersReq() that was previously invoked by the client application.

folderID : in TpString

This contains the name of the folder for which the names of the top level of sub-folders are returned. If an emptystring is provided, the list contains the names of the top level of folders in the Mailbox.

folderNames : in TpStringList

Contains the list of names of folders contained within the mailbox or folder.

8.4.10 Method getFoldersErr()

This method indicates that the request for a list of folder names, requested by getFoldersReq(), has failed.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getFoldersReq() that was previously invoked by the client application.

folderID : in TpString

This contains the name of the folder for which the names of the top level of sub-folders are requested. If an emptystring is provided, the request was for the names of the top level of folders in the Mailbox.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.11 Method deleteFolderRes()

This method indicates the successful deletion of a folder, requested by deleteFolderReq().

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding deleteFolderReq() that was previously invoked by the client application.

8.4.12 Method deleteFolderErr()

This method indicates that the attempt to delete a folder, requested by deleteFolderReq(), was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding deleteFolderReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.13 Method copyFolderRes()

This method indicates the successful copying of a folder, requested by copyFolderReq().

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding copyFolderReq() that was previously invoked by the client application.

8.4.14 Method copyFolderErr()

This method indicates that the attempt to copy a folder, requested by copyFolderReq(), was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding copyFolderReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.15 Method moveFolderRes()

This method indicates the successful move of a folder, requested by moveFolderReq().

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding moveFolderReq() that was previously invoked by the client application.

8.4.16 Method moveFolderErr()

This method indicates that the attempt to move a folder, requested by moveFolderReq(), was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding moveFolderReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.17 Method putMessageRes()

This method indicates the successful placing of a message in a folder, requested by putMessageReq().

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding putMessageReq() that was previously invoked by the client application.

messageID : in TpString

The new ID of the message which has been placed in the folder as requested.

8.4.18 Method putMessageErr()

This method indicates that the attempt to put a message in a folder, requested by putMessageReq(), was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding putMessageReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.19 Method copyMessageRes()

This method indicates the successful copying of a message from one folder to another, as requested by copyMessageReq().

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding copyMessageReq() that was previously invoked by the client application.

8.4.20 Method copyMessageErr()

This method indicates that the attempt to copy a message from one folder to another, requested by copyMessageReq(), was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding copyMessageReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.21 Method moveMessageRes()

This method indicates the successful move of a message from one folder to another, as requested by moveMessageReq().

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding moveMessageReq() that was previously invoked by the client application.

8.4.22 Method moveMessageErr()

This method indicates that the attempt to move a message from one folder to another, requested by moveMessageReq(), was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding moveMessageReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.23 Method deleteMessageRes()

This method indicates the successful deletion of a message, as requested by deleteMessageReq().

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding deleteMessageReq() that was previously invoked by the client application.

8.4.24 Method deleteMessageErr()

This method indicates that the attempt to delete a message, requested by deleteMessageReq(), was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding deleteMessageReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.25 Method listMessagesRes()

This method delivers the result of a completed list messages request. Whether there are still more messages that can be listed yet will be indicated with the final parameter.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding listMessagesReq() that was previously invoked by the client application.

messageList : in TpMessageDescriptionList

A list with each entry giving a short description of the message.

mailboxStatusInfo : in TpMailboxFolderStatusInformation

Gives some information about the status of the mailbox regarding the number of messages it holds, how many new messages etc.

final : in TpBoolean

Indication whether the returned list is the final part of the complete list (TRUE) or if there are still parts of the list to retrieve (FALSE).

8.4.26 Method listMessagesErr()

This method indicates that the list messages request was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding listMessagesReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.27 Method listMessageBodyPartsRes()

This method delivers the result of a completed list message body parts request.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding listMessageBodyPartsReq() that was previously invoked by the client application.

partsList : in TpBodyPartDescriptionList

Specifies the structure of the message up to the requested nesting level.

8.4.28 Method listMessageBodyPartsErr()

This method indicates that the list message body parts request was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding listMessageBodyPartsReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.29 Method getMessageBodyPartsRes()

This method delivers the result of a completed get message body parts request.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getMessageBodyPartsReq() that was previously invoked by the client application.

bodyParts : in TpBodyPartList

Contains the details and content of the requested Body Parts of the message.

8.4.30 Method getMessageBodyPartsErr()

This method indicates that the get message body parts request was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getMessageBodyPartsReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.31 Method getMessageHeadersRes()

This method delivers the result of a completed get message headers request.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getMessageHeadersReq() that was previously invoked by the client application.

headers : in TpMessageHeaderFieldSet

Carries the headers of the message.

8.4.32 Method getMessageHeadersErr()

This method indicates that the get message headers request was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getMessageHeadersReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.33 Method getMessageContentRes()

This method delivers the result of a completed get message content request.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getMessageContentReq() that was previously invoked by the client application.

contentType : in TpString

Specifies the content type value according to the RFC2045 format.

contentTransferEncoding : in TpString

Specifies the content transfer encoding value according to the RFC2045 format.

content : in TpOctetSet

Contains the body of the message.

8.4.34 Method getMessageContentErr()

This method indicates that the get message content request was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getMessageContentReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.35 Method getFullMessageRes()

This method delivers the result of a completed get full message request.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getFullMessageReq() that was previously invoked by the client application.

message : in TpOctetSet

Contains the entire message (headers and body) in unstructured format.

8.4.36 Method getFullMessageErr()

This method indicates that the get full message request was unsuccessful.

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getFullMessageReq() that was previously invoked by the client application.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.4.37 Method getMailboxInfoPropertiesRes()

This method returns the properties of a mailbox, requested by getMailboxInfoPropertiesReq().

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getMailboxInfoPropertiesReq() that was previously invoked by the client application.

returnedProperties : in TpMailboxInfoPropertySet

The mailbox properties (names and values).

8.4.38 Method getFolderInfoPropertiesRes()

This method returns the properties of a folder, requested by getFolderInfoPropertiesReq().

Parameters

mailboxSessionID : in TpSessionID

This is the session ID of the open mailbox.

requestID : in TpAssignmentID

This specifies the requestID associated with the corresponding getFolderInfoPropertiesReq() that was previously invoked by the client application.

folderID : in TpString

Identifies the folder for which the properties are being returned.

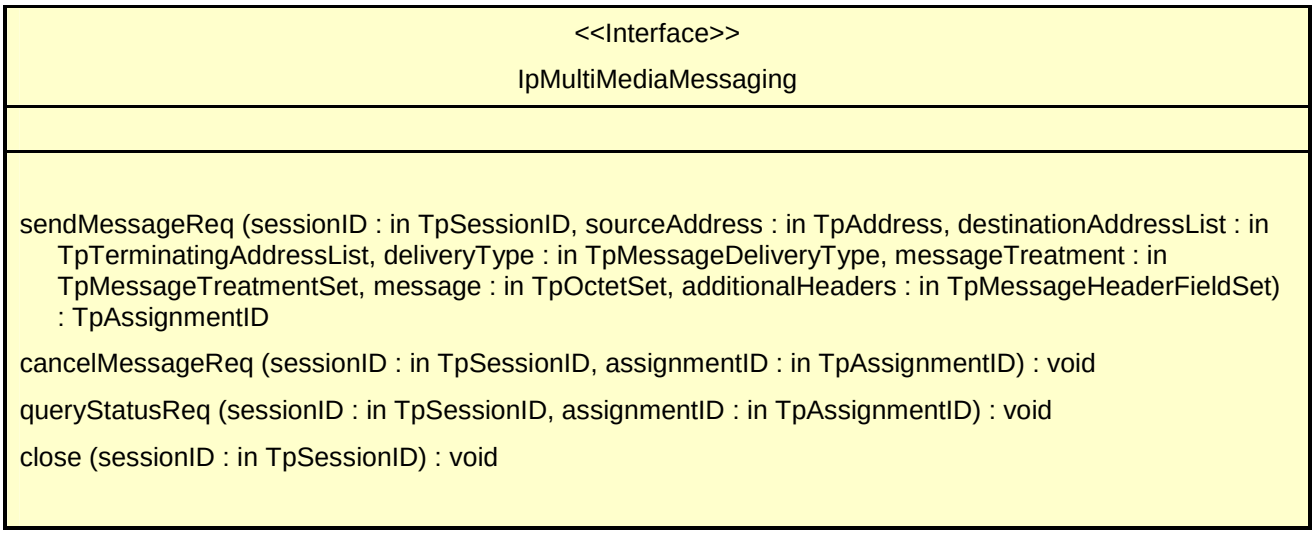
returnedProperties : in TpFolderInfoPropertySet

The folder properties (names and values).

8.5 Interface Class IpMultiMediaMessaging

Inherits from: IpService.

This interface supports methods that enable messages to be sent or received when the mailbox paradigm is not in use. Mechanisms such as SMS, MMS, GSM USSD, etc., could be used in this context for either single-shot (page mode), or session mode messaging (e.g. instant-messaging). Default source and destination addresses can be provided by the application when an instance of IpMultiMediaMessaging is created. These addresses are overridden by including source or destination addresses in the sendMessageReq() method. If no default source or destination address is provided when an instance of IpMultiMediaMessaging is created, then the instance can be reused for multiple invocations of sendMessageReq() to different targets or from different sources, with the addresses specified each time in the sendMessageReq() method.



8.5.1 Method sendMessageReq()

This method requests the underlying network infrastructure to send the message being passed in through the message parameter as one of the data elements, to the set of identified targets specified using the supported addressing schemes from the specification.

As a response to this method invocation, the SCF will respond with either a sendMessageRes(), or a sendMessageErr(), indicating that the SCF has or has not succeeded to send the message.

If the application requests further reports about the message status, such as successful delivery, read receipt, or wishes to be notified of non-delivery, it must request this explicitly in the messageTreatment parameter. These reports are delivered in the messageStatusReport() method on IpAppMultiMediaMessaging.

Returns: assignmentID.

A reference to the request for later use by the application.

Parameters

`sessionID : in TpSessionID`

This is the session ID of the open multimedia messaging session. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

`sourceAddress : in TpAddress`

The address that is used to represent the sender of the message. For alphanumeric SMS addresses the address plan P_ADDRESS_PLAN_UNDEFINED shall be used.

The address provided here overrides the default address provided in the openMultiMediaMessaging() method, if one was provided then. If this parameter is empty, then the default address is used.

destinationAddressList : in TpTerminatingAddressList

A list of addresses of users to whom the message will be sent. A terminatingAddressList contains a TO, CC and BCC address list. When the underlying network technology can not distinguish these all addresses can be concatenated.

The address list provided here overrides the default address list provided in the openMultiMediaMessaging() method, if one was provided then. If this parameter is empty, then the default address is used.

deliveryType : in TpMessageDeliveryType

Specifies what delivery method shall be used to deliver the message to the user. If an unsupported delivery type is specified, the exception P_MMM_INVALID_DELIVERY_TYPE is returned.

messageTreatment : in TpMessageTreatmentSet

This parameter contains instructions to the messaging system about how to process and send the message. These instructions can include a request for report of delivery, read receipt, message expiry or non-delivery of the message.

message : in TpOctetSet

The actual message that needs to be sent.

additionalHeaders : in TpMessageHeaderFieldSet

This parameter contains additional header information which is intended to be sent as part of the message. This information could have been provided in the raw message, if correctly formulated. Information contained in the additional headers may duplicate information provided in the sourceAddress and destinationAddressList parameters of the sendMessageReq(). In case of conflict, the SCF will take as priority the information provided in the sourceAddress and the destinationAddressList parameters.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_INVALID_ADDRESS, P_MMM_INVALID_DELIVERY_TYPE, P_MMM_MAX_MESSAGE_SIZE_EXCEEDED, P_MMM_DELIVERY_TYPE_ADDRESS_TYPE_MISMATCH, P_MMM_DELIVERY_TYPE_MESSAGE_TYPE_MISMATCH, P_MMM_INVALID_DELIVERY_TIME, P_MMM_INVALID_VALIDITY_TIME, P_MMM_MAX_SUBJECT_SIZE_EXCEEDED, P_MMM_INVALID_HEADER

8.5.2 Method cancelMessageReq()

This method requests the underlying network infrastructure to cancel an undelivered message previously sent in a sendMessageReq.

Parameters

sessionID : in TpSessionID

This is the session ID of the open multimedia messaging session. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

assignmentID : in TpAssignmentID

This specifies the assignmentID associated with the sendMessageReq that was previously invoked by the client application on the SCS and which now needs to be cancelled. If an invalid assignment ID is used, a P_INVALID_ASSIGNMENT_ID exception is thrown.

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_INVALID_ASSIGNMENT_ID, P_INVALID_NETWORK_STATE, P_MMM_CANNOT_CANCEL

8.5.3 Method queryStatusReq()

This method requests the underlying network infrastructure to query the status of messages already sent using the sendMessageReq(). A session ID and an assignment ID are used to identify individual messages. Implementations may choose to use the same assignment ID in different sessions to reference different messages, but the specification merely requires that assignment IDs in individual sessions be unique.

Parameters

sessionID : in TpSessionID

This is the session ID of the open communications session. If the session ID is not a valid session ID, the exception P_INVALID_SESSION_ID is returned.

assignmentID : in TpAssignmentID

This specifies the assignment ID associated with the sendMessageReq that was previously invoked by the client application on the SCS and which now needs to be cancelled. If an invalid assignment ID is issued, a P_INVALID_ASSIGNMENT_ID exception is thrown.

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_INVALID_ASSIGNMENT_ID, P_MMM_INFORMATION_NOT_AVAILABLE

8.5.4 Method close()

This method requests the SCS to close a previously opened session. Once closed, the application can no longer send new messages, query the status of already sent messages, nor cancel the transmission of pending messages on that session.

Parameters

sessionID : in TpSessionID

This is the session ID of the open multi media messaging session. If the session ID is not a valid session ID, the error code P_INVALID_SESSION_ID is returned.

Raises

TpCommonExceptions, P_INVALID_SESSION_ID

8.6 Interface Class IpAppMultiMediaMessaging

Inherits from: IpInterface.

This interface provides methods that may be invoked by the SCS on the client application as callbacks to asynchronously inform it of the status of pending requests, etc., for requests issued within the context of non-mailbox messaging systems employed for either single-shot or session-based messaging.

<<Interface>> IpAppMultiMediaMessaging
sendMessageRes (sessionID : in TpSessionID, assignmentID : in TpAssignmentID) : void sendMessageErr (sessionID : in TpSessionID, assignmentID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void cancelMessageRes (sessionID : in TpSessionID, assignmentID : in TpAssignmentID) : void cancelMessageErr (sessionID : in TpSessionID, assignmentID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void queryStatusRes (sessionID : in TpSessionID, assignmentID : in TpAssignmentID, result : in TpQueryStatusReportSet) : void queryStatusErr (sessionID : in TpSessionID, assignmentID : in TpAssignmentID, error : in TpMessagingError, errorDetails : in TpString) : void messageStatusReport (sessionID : in TpSessionID, assignmentID : in TpAssignmentID, destinationAddress : in TpAddress, deliveryReportType : in TpMessageDeliveryReportType, deliveryReportInfo : in TpString) : void messageReceived (sessionID : in TpSessionID, message : in TpOctetSet, headers : in TpMessageHeaderFieldSet) : void

8.6.1 Method sendMessageRes()

This asynchronous method informs the application about the completion of a sendMessageReq(). Receipt of this method indicates that the SCF has successfully processed the sendMessageReq() method and successfully sent the message. It does not indicate that the message was delivered or read.

Parameters

`sessionID : in TpSessionID`

This is the session ID of the multimedia messaging session.

`assignmentID : in TpAssignmentID`

This specifies the assignment ID associated with the sendMessageReq that was previously invoked by the client application on the SCS.

8.6.2 Method sendMessageErr()

This asynchronous method indicates that the request to send a message was unsuccessful. The SCF was unable to process the sendMessageReq() or was unable to send the message. Further details are provided in the error parameter.

Parameters

sessionID : in TpSessionID

This is the session ID of the multimedia messaging session.

assignmentID : in TpAssignmentID

This specifies the assignment ID associated with the sendMessageReq that was previously invoked by the client application on the SCS.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.6.3 Method cancelMessageRes()

This method indicates successful execution of a cancelMessageReq() method by the SCS.

Parameters

sessionID : in TpSessionID

This is the session ID of the multimedia messaging session.

assignmentID : in TpAssignmentID

This specifies the assignment ID associated with the cancelMessageReq that was previously invoked by the client application on the SCS.

8.6.4 Method cancelMessageErr()

This asynchronous method indicates that the request to cancel a message was unsuccessful.

Parameters

sessionID : in TpSessionID

This is the session ID of the multimedia messaging session.

assignmentID : in TpAssignmentID

This specifies the assignment ID associated with the cancelMessageReq that was previously invoked by the client application on the SCS.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.6.5 Method queryStatusRes()

This method indicates successful execution of a queryStatusReq() method by the SCS, and provides the status along with the response indication.

Parameters

sessionID : in TpSessionID

This is the session ID of the multimedia messaging session.

assignmentID : in TpAssignmentID

This specifies the assignment ID associated with the queryStatusReq that was previously invoked by the client application on the SCS.

result : in TpQueryStatusReportSet

This is a list of each destination address of the message, together with the reported status from that address.

8.6.6 Method queryStatusErr()

This method indicates a failure in the execution of the queryStatusReq() method by the SCS.

Parameters

sessionID : in TpSessionID

This is the session ID of the multimedia messaging session.

assignmentID : in TpAssignmentID

This specifies the assignment ID associated with the queryStatusReq that was previously invoked by the client application on the SCS.

error : in TpMessagingError

Indicates the error that occurred.

errorDetails : in TpString

Provides additional information which may help to locate the source of the error. There is no specified format for this information.

8.6.7 Method messageStatusReport()

This method is used to provide the application with any read or delivery etc. reports it has explicitly requested in the sendMessageReq() method. This method may be received more than once for a single invocation of sendMessageReq(), if multiple report types have been requested, or if the message had multiple destination addresses.

Parameters

sessionID : in TpSessionID

This is the session ID of the multimedia messaging session.

assignmentID : in TpAssignmentID

This specifies the assignment ID associated with the sendMessageReq that was previously invoked by the client application on the SCS.

destinationAddress : in TpAddress

Identifies from which destination address of the original message that this report arrives.

deliveryReportType : in TpMessageDeliveryReportType

Indicates the type of report carried by this messageStatusReport method. If more than one report type needs to be delivered to the application, the SCF will invoke a separate messageStatusReport for each report type.

deliveryReportInfo : in TpString

Additional information which may have been provided by the messaging system in its read, delivery etc. report, and which the SCF passes to the application. The format of this information is not specified.

8.6.8 Method messageReceived()

This method is used to inform the application that a message has been received for a remote party within the context of the conversation or session currently active. The full contents of the message are provided. The message may be, but is not necessarily in reply to a message sent by the application using the sendMessageReq().

Messages which are received outside the context of the conversation or session are notified to the application using the IpAppMultiMediaMessagingManager.reportNotification() method.

It is not specified how the SCF is expected to identify that a received message is inside or outside of the context of a currently active conversation or session.

Parameters

sessionID : in TpSessionID

This is the session ID of the multimedia messaging session.

message : in TpOctetSet

The actual message received. Contains the entire message (headers and body) in unstructured format.

headers : in TpMessageHeaderFieldSet

This parameter contains header information which was sent as part of the message. This information could be duplicated in the raw message, depending on its format.

9 State Transition Diagrams

There are no State Transition Diagrams for the Multi-Media Messaging SCF.

10 Multi-Media Messaging Service Properties

The following table lists properties relevant for the Multi-Media Messaging API.

Property	Type	Description
P_MESSAGE_DELIVERY_TYPE	STRING_SET	Specifies the message delivery capabilities which the SCS supports. Values are defined by TpMessageDeliveryType.
P_PUT_MESSAGE_FOLDER_TO_SEND	STRING_SET	Identifies the folder in the mailbox into which messages should be placed in order to be sent.

The previous table lists properties related to capabilities of the SCS itself. The following table lists properties that are used in the context of the Service Level Agreement, e.g. to restrict the access of applications to the capabilities of the SCS.

Property	Type	Description
P_NOTIFICATION_ADDRESS_RANGES	XML_ADDRESS_RANGE_SET	Indicates for which numbers notifications may be set. More than one range may be present.

11 Data Definitions

All data types referenced but not defined in this clause are common data definitions which may be found in TS 29.198-2.

11.1 Multi-Media Messaging data definitions

11.1.1 IpMultiMediaMessagingManager

Defines the address of an `IpMultiMediaMessagingManager` Interface.

11.1.2 IpMultiMediaMessagingManagerRef

Defines a `Reference` to type IpMultiMediaMessagingManager.

11.1.3 IpAppMultiMediaMessagingManager

Defines the address of an `IpAppMultiMediaMessagingManager` Interface.

11.1.4 IpAppMultiMediaMessagingManagerRef

Defines a `Reference` to type `IpAppMultiMediaMessagingManager`.

11.1.5 IpMailbox

Defines the address of an `IpMailbox` Interface.

11.1.6 IpMailboxRef

Defines a `Reference` to type `IpMailbox`.

11.1.7 IpAppMailbox

Defines the address of an `IpAppMailbox` Interface.

11.1.8 IpAppMailboxRef

Defines a `Reference` to type `IpAppMailbox`.

11.1.9 IpMultiMediaMessaging

Defines the address of an `IpMultiMediaMessaging` Interface.

11.1.10 IpMultiMediaMessagingRef

Defines a `Reference` to type `IpMultiMediaMessaging`.

11.1.11 IpAppMultiMediaMessaging

Defines the address of an `IpAppMultiMediaMessaging` Interface.

11.1.12 IpAppMultiMediaMessagingRef

Defines a `Reference` to type `IpAppMultiMediaMessaging`.

11.1.13 TpBodyPartDescription

Defines a `sequence of data elements` that specify the properties of a body part.

Sequence Element Name	Sequence Element Type	Description
ContentDescription	TpString	The contents of the field shall be interpreted as the RFC 2045 Content-Description field body.
ContentSize	TpInt32	This field specifies the length of the body part content in bytes.
ContentType	TpString	The contents of the field shall be interpreted as the RFC 2045 Content-Type field body.
ContentTransferEncoding	TpString	The contents of the field shall be interpreted as the RFC 2045 Content-Transfer-Encoding field body.
ContentID	TpString	The contents of the field shall be interpreted as the RFC 2045 Content-ID field body.
ContentDisposition	TpString	The contents of the field shall be interpreted as the RFC 2183 Content-Disposition field body.
PartID	TpString	Identifies the body part uniquely within the message. This identifier is created by the System and shall always be the same for the same message, whether a structure was listed with a nesting level of n or n+1 should not make a difference.
NestingLevel	TpInt32	Specifies how deep the part is nested within the structure.

11.1.14 TpBodyPartDescriptionList

Defines a `numbered list of data elements` of `TpBodyPartDescription`.

11.1.15 TpBodyPart

Defines a `sequence of data elements` that specify a body part.

Sequence Element Name	Sequence Element Type	Description
BodyPartHeader	TpBodyPartDescription	Specifies details about the body part that are needed in order to interpret the content correctly.
BodyPartContent	TpOctetSet	Contains the content of a body part.

11.1.16 TpBodyPartList

Defines a `numbered list of data elements` of `TpBodyPart`.

11.1.17 TpDeliveryTime

Defines the `Tagged Choice of Data Elements` that specifies when the message shall be delivered.

	Tag Element Type	
	TpDeliveryTimeType	

Tag Element Value	Choice Element Type	Choice Element Name
P_MMM_SEND_IMMEDIATE	NULL	Undefined
P_MMM_DELIVERY_TIME	TpDateAndTime	DeliveryTime

11.1.18 TpDeliveryTimeType

Defines whether a message shall be delivered instantly or at some specified time.

Name	Value	Description
P_MMM_SEND_IMMEDIATE	0	The message shall be delivered as soon as possible.
P_MMM_DELIVERY_TIME	1	The message shall be delivered at a certain specified time.

11.1.19 TpFolderInfoProperty

Defines the `Tagged Choice of Data Elements` that specify the information properties of a folder.

	Tag Element Type	
	TpFolderInfoPropertyName	

Tag Element Value	Choice Element Type	Choice Element Name
P_MMM_FOLDER_DATE_CREATED	TpDateAndTime	FolderDateCreated
P_MMM_FOLDER_DATE_CHANGED	TpDateAndTime	FolderDateChanged
P_MMM_FOLDER_SIZE	TpInt32	FolderSize
P_MMM_FOLDER_NUMBER_OF_MESSAGES	TpInt32	FolderNumberOfMessages

11.1.20 TpFolderInfoPropertyName

Defines a specific folder information property name.

Name	Value	Description
P_MMM_FOLDER_UNDEFINED	0	Undefined
P_MMM_FOLDER_DATE_CREATED	1	Indicates the date created. The application cannot modify this property.
P_MMM_FOLDER_DATE_CHANGED	2	Indicates the date last changed. The application cannot modify this property.
P_MMM_FOLDER_SIZE	3	Indicates the size of the Folder in Bytes. The application cannot modify this property.
P_MMM_FOLDER_NUMBER_OF_MESSAGES	4	Indicates the number of messages in the Folder. The application cannot modify this property.

11.1.21 TpFolderInfoPropertySet

Defines a `Numbered Set of Data Elements` of TpFolderInfoProperty.

11.1.22 TpGenericHeaderField

Specifies the name and value of a header field.

Sequence Element Name	Sequence Element Type	Description
FieldName	TpString	Contains the field name of an RFC 822 header field.
FieldValue	TpString	Contains the field body of a RFC 822 header field.

11.1.23 TpListMessagesCriteria

The list message criteria can be used to narrow down the list of messages reported to the Application by specifying extra criteria that the listed messages need to conform to.

Sequence Element Name	Sequence Element Type	Description
OnlyUnreadMessages	TpBoolean	When this field is TRUE only unread messages shall be reported.

11.1.24 TpMailboxFolderStatusInformation

Describes the status of a mailbox folder.

Sequence Element Name	Sequence Element Type	Description
TotalMessageCount	TpInt32	Specifies the total number of messages in the mailbox folder.

11.1.25 TpMailboxIdentifier

Defines the `Sequence of Data Elements` that identify a mailbox.

Sequence Element Name	Sequence Element Type
Mailbox	IpMailboxRef
SessionID	TpSessionID

11.1.26 TpMailboxIdentifierSet

Defines a `Numbered Set of Data Elements` of TpMailboxIdentifier.

11.1.27 TpMailboxInfoProperty

Defines the `Tagged Choice of Data Elements` that specify the information properties of a mailbox.

	Tag Element Type	
	TpMailboxInfoPropertyName	

Tag Element Value	Choice Element Type	Choice Element Name
P_MMM_MAILBOX_OWNER	TpString	MailboxOwner
P_MMM_MAILBOX_DATE_CREATED	TpDateAndTime	MailboxDateCreated
P_MMM_MAILBOX_DATE_CHANGED	TpDateAndTime	MailboxDateChanged
P_MMM_MAILBOX_SIZE	TpInt32	MailboxSize

11.1.28 TpMailboxInfoPropertyName

Defines a specific mailbox information property name.

Name	Value	Description
P_MMM_MAILBOX_UNDEFINED	0	Undefined.
P_MMM_MAILBOX_OWNER	1	The owner of the mailbox. The application cannot modify this property.
P_MMM_MAILBOX_DATE_CREATED	2	Indicates the date created. The application cannot modify this property.
P_MMM_MAILBOX_DATE_CHANGED	3	Indicates the date last changed. The application cannot modify this property.
P_MMM_MAILBOX_SIZE	4	Indicates the size of the Mailbox in Bytes. The application cannot modify this property.

11.1.29 TpMailboxInfoPropertySet

Defines a `Numbered Set of Data Elements` of TpMailboxInfoProperty.

11.1.30 TpMailboxMessageStatus

Defines the status of messages stored in the Mailbox.

The first 4 status items are applicable to messages which have been received.

The 5th status item refers to messages which have been created or put in the Mailbox and not yet sent.

The remaining items are applicable to messages which have been sent from the mailbox, and for which a status is recorded and updated depending on any delivery reports which have been received.

Name	Value	Description
P_MMM_RECEIVED_MSG_STATUS_READ	0	The message received has been read
P_MMM_RECEIVED_MSG_STATUS_UNREAD	1	The message received has not been read
P_MMM_RECEIVED_MSG_STATUS_FORWARDED	2	The message received has been forwarded
P_MMM_RECEIVED_MSG_STATUS_REPLIED_TO	3	The message received has been replied to
P_MMM_DRAFT_MSG_STATUS_SAVED_OR_UNSENT	4	The message has been saved as a draft or is unsent
P_MMM_SENT_MSG_STATUS_SENT	5	The message has been sent. No further information is available, because no delivery report was received, or none was requested
P_MMM_SENT_MSG_STATUS_DELIVERED	6	The message sent has been delivered
P_MMM_SENT_MSG_STATUS_READ	7	The message sent has been read
P_MMM_SENT_MSG_STATUS_DELETED_UNREAD	8	The message sent has been deleted without being read
P_MMM_SENT_MSG_STATUS_NOT_DELIVERABLE	9	The message sent was undeliverable
P_MMM_SENT_MSG_STATUS_EXPIRED	10	The message sent has expired before it was delivered

11.1.31 TpMessageDeliveryType

This data type is identical to a TpString, and is defined as a string of characters that identify the names of the modes of delivery for a message. Other Network operator specific names may also be used, but should be preceded by the string "SP_". The following values are defined.

Name	Description
P_MMM_SMS	The message shall be delivered as a Short Message.
P_MMM_SMS_BINARY	The message shall be delivered as a Binary Short Message.
P_MMM_MMS	The message shall be delivered as a Multimedia Message.
P_MMM_WAP_PUSH	The message shall be delivered as a WAP-push Message.
P_MMM_EMAIL	The message shall be delivered as an e-mail Message.

11.1.32 TpMessageInfoProperty

Defines the `Tagged Choice of Data Elements` that specify the information properties of a message.

	Tag Element Type	
	TpMessageInfoPropertyName	

Tag Element Value	Choice Element Type	Choice Element Name
P_MMM_MESSAGE_DATE_CREATED	TpDateAndTime	MessageDateCreated
P_MMM_MESSAGE_DATE_RECEIVED	TpDateAndTime	MessageDateReceived
P_MMM_MESSAGE_DATE_CHANGED	TpDateAndTime	MessageDateChanged
P_MMM_MESSAGE_SIZE	TpInt32	MessageSize
P_MMM_MESSAGE_STATUS	TpMailboxMessageStatus	MessageStatus

11.1.33 TpMessageInfoPropertyName

Defines a specific message information property name.

Name	Value	Description
P_MMM_MESSAGE_UNDEFINED	0	Undefined.
P_MMM_MESSAGE_CREATED	1	Indicates the date created. The application cannot modify this property.
P_MMM_MESSAGE_DATE_RECEIVED	2	Indicates the date received. The application cannot modify this property.
P_MMM_MESSAGE_DATE_CHANGED	3	Indicates the date last changed. The application cannot modify this property.
P_MMM_MESSAGE_SIZE	4	Indicates the size of the message in bytes. The application cannot modify this property.
P_MMM_MESSAGE_STATUS	5	The status of the message. This property can be modified by the application.

11.1.34 TpMessageInfoPropertySet

Defines a Numbered Set of Data Elements of TpMessageInfoProperty.

11.1.35 TpMessageHeaderFieldType

Specifies the different types of header fields recognized.

Name	Value	Description
P_MESSAGE_DATE_SENT	0	The origination date specifies the date and time at which the creator of the message indicated that the message was complete and ready to enter the mail delivery system.
P_MESSAGE_SENT_FROM	1	Specifies the author(s) of the message, that is, the mailbox address(es) of the person(s) or system(s) responsible for the writing of the message.
P_MESSAGE_SENDER	2	Specifies the mailbox address of the agent responsible for the actual transmission of the message.
P_MESSAGE_REPLY_TO	3	Indicates the mailbox adress(es) to which the author of the message suggests that replies be sent.
P_MESSAGE_SENT_TO	4	Specifies the address(es) of the primary recipient(s) of the message.
P_MESSAGE_CC_TO	5	Specifies the addresses of others who are to receive the message, though the content of the message may not be directed at them.
P_MESSAGE_BCC_TO	6	Specifies addresses of recipients of the message whose addresses are not to be revealed to other recipients of the message.
P_MESSAGE_RFC822_MESSAGE_ID	7	Specifies a unique message identifier that refers to a particular version of a particular message. This field has the same semantics as the RFC 822 / RCF 2822 "Message-ID:" field. Note that this message ID can not be used on the messaging interface to address this specific message. See TpMessageDescription for more information.
P_MESSAGE_IN_REPLY_TO	8	May be used to identify the message (or messages) to which the new message is a reply. The messages are referred by their RFC 822 / RCF 2822 Message-ID.
P_MESSAGE_REFERENCES	9	May be used to identify the message (or messages) with which this message forms a thread of conversation. The messages are referred by their RFC 822 / RCF 2822 Message-ID.
P_MESSAGE_SUBJECT	10	A short string identifying the topic of the message.
P_MESSAGE_COMMENTS	11	This field has the same semantics as the RFC 822 / RCF 2822 "Comments:" field.
P_MESSAGE_KEYWORDS	12	This field has the same semantics as the RFC(2)822 "Keywords:" field.
P_MESSAGE_TRACE_FIELD	13	All trace fields like for example RFC 822 / RCF 2822 "Return-Path:" and "Received:" will be gathered under this flag.
P_MESSAGE_RESENT_FIELD	14	All RFC 822 / RCF 2822 resent fields will be gathered under this flag.
P_MESSAGE_MIME_VERSION	15	Declare the version of the Internet message body format standard in use. This field has the same semantics as the RFC 2045 "MIME-Version:" field.
P_MESSAGE_MIME_CONTENT	16	The Content-Type header field specifies the nature of the data in the body of an entity by giving media type and subtype identifiers, and by providing auxiliary information that may be required for certain media types. This field has the same semantics as the RFC 2045 "Content-Type:" field.
P_MESSAGE_MIME_ENCODING	17	This field's value is a single token specifying the type of encoding. This field has the same semantics as the RFC 2045 "Content-Transfer-Encoding:" field.
P_MESSAGE_MIME_ID	18	When present uniquely identifies a MIME entity. This field has the same semantics as the RFC 2045 "Content-ID:" field.
P_MESSAGE_MIME_DESCRIPTION	19	Specifies some descriptive information about the MIME entity. This field has the same semantics as the RFC 2045 "Content-Description:" field.
P_MESSAGE_MIME_DISPOSITION	20	Specifies how the MIME entity shall be presented, inline or as an attachment. This field has the same semantics as the

		RFC 2183 "Content-Disposition:" field.
P_MESSAGE_MIME_EXTENSION_FIELD	21	Any RFC 822 header field which begins with the string "Content-" and does not match the description of the other MIME fields.
P_MESSAGE_EXTENSION_FIELD	22	Any header field that does not match any of the of the other field types in this datatype.
P_MESSAGE_PRIORITY	23	The Priority of the message

11.1.36 TpMessageHeaderField

Carries the contents of one message header field.

	Tag Element Type	
	TpMessageHeaderFieldType	

Tag Element Value	Choice Element Type	Choice Element Name
P_MESSAGE_DATE_SENT	TpDateAndTime	DateSent
P_MESSAGE_SENT_FROM	TpAddressSet	From
P_MESSAGE_SENDER	TpAddress	Sender
P_MESSAGE_REPLY_TO	TpAddressSet	ReplyTo
P_MESSAGE_SENT_TO	TpAddressSet	To
P_MESSAGE_CC_TO	TpAddressSet	Cc
P_MESSAGE_BCC_TO	TpAddressSet	Bcc
P_MESSAGE_RFC822_MESSAGE_ID	TpString	RFC822MessageID
P_MESSAGE_IN_REPLY_TO	TpStringSet	InReplyTo
P_MESSAGE_REFERENCES	TpStringSet	References
P_MESSAGE_SUBJECT	TpString	Subject
P_MESSAGE_COMMENTS	TpString	Comments
P_MESSAGE_KEYWORDS	TpStringSet	Keywords
P_MESSAGE_TRACE_FIELD	TpGenericHeaderField	TraceField
P_MESSAGE_RESENT_FIELD	TpGenericHeaderField	ResentField
P_MESSAGE_MIME_VERSION	TpString	MimeVersion
P_MESSAGE_MIME_CONTENT	TpString	MimeContent
P_MESSAGE_MIME_ENCODING	TpString	MimeEncoding
P_MESSAGE_MIME_ID	TpString	MimeID
P_MESSAGE_MIME_DESCRIPTION	TpString	MimeDescription
P_MESSAGE_MIME_DISPOSITION	TpString	MimeDisposition
P_MESSAGE_MIME_EXTENSION_FIELD	TpGenericHeaderField	MimeExtensionField
P_MESSAGE_EXTENSION_FIELD	TpGenericHeaderField	ExtensionField
P_MESSAGE_PRIORITY	TpMessagePriority	Priority

11.1.37 TpMessageHeaderFieldSet

Defines a `numbered set of data elements` of TpMessageHeaderField.

11.1.38 TpMessagePriority

Defines the priority of a message.

Name	Value	Description
P_MMM_MESSAGE_PRIORITY_UNDEFINED	0	Undefined/Normal
P_MMM_MESSAGE_PRIORITY_HIGH	1	High priority
P_MMM_MESSAGE_PRIORITY_LOW	2	Low priority

11.1.39 TpMessageDeliveryReportType

Defines the type of message delivery report requested or reported. In order to request multiple report types at once,.the values can be added together (i.e. a logical OR function). So a value of 3 identifies both Read and Delivery reports.

Name	Value	Description
P_MESSAGE_REPORT_DELIVERY_UNDEFINED	0	Undefined / status unknown
P_MESSAGE_REPORT_DELIVERED	1	A report that the message has been successfully delivered.
P_MESSAGE_REPORT_READ	2	A report that the message was read.
P_MESSAGE_REPORT_DELETED_UNREAD	4	A report that the message was deleted without being read.
P_MESSAGE_REPORT_NOT_DELIVERABLE	8	A report that the message could not be successfully delivered.
P_MESSAGE_REPORT_EXPIRED	16	A report that the message could not be delivered before the validity time of the message expired.

11.1.40 TpMessageTreatment

Defines the specific message treatment which an application requests of the messaging system when sending a message.

	Tag Element Type	
	TpMessageTreatmentType	

Tag Element Value	Choice Element Type	Choice Element Name
P_MMM_TREATMENT_REPORT_REQUESTED	TpMessageDeliveryReportType	DeliveryReport
P_MMM_TREATMENT_BILLING_ID	TpString	BillingID
P_MMM_TREATMENT_DELIVERY_TIME	TpDeliveryTime	DeliveryTime
P_MMM_TREATMENT_VALIDITY_TIME	TpDateAndTime	ValidityTime

11.1.41 TpMessageTreatmentType

Specifies the various types of message treatment which the application may request when sending a message.

Name	Value	Description
P_MMM_TREATMENT_UNDEFINED	0	Undefined
P_MMM_TREATMENT_REPORT_REQUESTED	1	Request various delivery notifications
P_MMM_TREATMENT_BILLING_ID	2	A Billing Identifier/Charging Code that can be used to indicate how the costs for this transaction shall be charged.
P_MMM_TREATMENT_DELIVERY_TIME	3	Specifies whether the message shall be delivered instantly or at some specified time.
P_MMM_TREATMENT_VALIDITY_TIME	4	Specifies the time within which the message keeps its validity. When the message is not delivered before the validity time passes, the message is dropped by the messaging system.

11.1.42 TpMessageTreatmentSet

Defines a `Numbered Set of Data Elements` of TpMessageTreatment.

11.1.43 TpMultiMediaMessagingIdentifier

Defines the `Sequence of Data Elements` that identify a mailbox.

Sequence Element Name	Sequence Element Type
MultiMediaMessaging	IpMultiMediaMessagingRef
SessionID	TpSessionID

11.1.44 TpMultiMediaMessagingIdentifierSet

Defines a `Numbered Set of Data Elements` of TpMultiMediaMessagingIdentifier.

11.1.45 TpQueryStatusReport

Defines the `Sequence of Data Elements` that identify the status of a message, as reported in messageStatusReport. If a message is sent to more than one addressee, a different status can apply to the message sent to each addressee.

Sequence Element Name	Sequence Element Type
DestinationAddress	TpAddress
ReportedStatus	TpMessageDeliveryReportType

11.1.46 TpQueryStatusReportSet

Defines a `numbered set of data elements` of `TpQueryStatusReport.`

11.1.47 TpTerminatingAddressList

Defines the `Sequence of Data Elements` that specify a send message request.

Sequence Element Name	Sequence Element Type	Description
ToAddressList	TpAddressSet	The list of addresses that are the main target of the message.
CcAddressList	TpAddressSet	The list of addresses that receive a copy of the message.
BccAddressList	TpAddressSet	The list of addresses that receive a copy of the message, without this being visible to other receivers.

11.2 Event Notification data definitions

11.2.1 TpMessagingEventName

Defines the names of the messaging events which can be notified.

Name	Value	Description
P_EVENT_MSG_NAME_UNDEFINED	0	Undefined.
P_EVENT_MSG_NEW_MAILBOX_MESSAGE_ARRIVED	1	New message arrived in the mailbox. The message contents are not requested/delivered - the message can be retrieved from the mailbox.
P_EVENT_MSG_NEW_MESSAGE_ARRIVED	2	New message arrived. The Message contents are requested/delivered with this event.

11.2.2 TpMessagingEventCriteria

Defines the `Tagged Choice of Data Elements` that specify the criteria for an event notification to be generated.

	Tag Element Type	
	TpMessagingEventName	

Tag Element Value	Choice Element Type	Choice Element Name
P_EVENT_MSG_NAME_UNDEFINED	NULL	Undefined
P_EVENT_MSG_NEW_MAILBOX_MESSAGE_ARRIVED	TpNewMailboxMessageArrivedCriteria	EventNewMailboxMessageArrived
P_EVENT_MSG_NEW_MESSAGE_ARRIVED	TpNewMessageArrivedCriteria	EventNewMessageArrived

11.2.3 TpMessagingEventCriteriaSet

Defines a `numbered set of data elements` of `TpMessagingEventCriteria`.

11.2.4 TpNewMailboxMessageArrivedCriteria

Defines the `Sequence of Data Elements` that specify the criteria for a New Mailbox Message Arrived event.

Sequence Element Name	Sequence Element Type
MailboxID	TpString
AuthenticationInfo	TpString

11.2.5 TpNewMessageArrivedCriteria

Defines the `Sequence of Data Elements` that specify the criteria for a New Message Arrived event, for messages which are received outside the context of a mailbox.

Sequence Element Name	Sequence Element Type	Description
SourceAddress	TpAddressRange	Defines the source address for which the notification is requested.
DestinationAddress	TpAddressRange	Defines the destination address or address range for which the notification is requested.
CreateMultiMediaMessagingSession	TpBoolean	Used by the application to indicate if the SCF should create an instance of IpMultiMediaMessaging upon receipt of an event which matches these criteria.

11.2.6 TpMessagingEventInfo

Defines the `Tagged Choice of Data Elements` that specify the information returned to the application in an event notification.

	Tag Element Type	
	TpMessagingEventName	

Tag Element Value	Choice Element Type	Choice Element Name
P_EVENT_MSG_NAME_UNDEFINED	TpString	EventNameUndefined
P_EVENT_MSG_NEW_MAILBOX_MESSAGE_ARRIVED	TpNewMailboxMessageArrivedInfo	EventNewMailboxMessageArrived
P_EVENT_MSG_NEW_MESSAGE_ARRIVED	TpNewMessageArrivedInfo	EventNewMessageArrived

11.2.7 TpMessagingEventInfoSet

Defines a `numbered set of data elements` of `TpMessagingEventInfo`.

11.2.8 TpNewMailboxMessageArrivedInfo

Defines the `Sequence of Data Elements` that specify the information returned to the application in a New Mailbox Message Arrived event. Basic information is provided in the Message Description field. If further information is to be provided, it is included in the ExtendedHeaderInformation field.

Sequence Element Name	Sequence Element Type
MailboxID	TpString
FolderID	TpString
MessageDescription	TpMessageDescription
ExtendedHeaderInformation	TpMessageHeaderFieldSet

11.2.9 TpNewMessageArrivedInfo

Defines the `Sequence of Data Elements` that specify the information returned to the application in a New Message Arrived event. The Source and Destination addresses are included, as they are used in the criteria for this event. The actual message received is included in the Message field. This contains the entire message (headers and body) in unstructured format. The Headers field contains header information which was sent as part of the message. This information could be duplicated in the raw message, depending on its format.

Sequence Element Name	Sequence Element Type
SourceAddress	TpAddress
DestinationAddressSet	TpAddressSet
Message	TpOctetSet
Headers	TpMessageHeaderFieldSet
MultiMediaMessagingIdentifier	TpMultiMediaMessagingIdentifier

11.2.10 TpMessageDescription

Specifies the properties of a message.

Sequence Element Name	Sequence Element Type	Description
MessageID	TpString	This is the messageID as it is used on the API to identify a message. This should not be confused with the RFC 822 "Message-ID" field body. The latter can be obtained with getMessageHeadersReq(). The messageID used on the API is persistent over sessions and at least unique within the context of a mailbox.
From	TpAddress	The address of the sender of the message.
To	TpAddressSet	A set of addresses representing the primary recipients of the message.
Subject	TpString	Specifies the subject of the message.
ReceivedDate	TpDateAndTime	Specifies the date/time that the message was received by the messaging system.
Size	TpInt32	Specifies the size of the message in bytes.

11.2.11 TpMessageDescriptionList

Defines a `numbered list of data elements` of `TpMessageDescription`.

11.2.12 TpMessagingNotificationRequested

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

Sequence Element Name	Sequence Element Type
EventCriteria	TpMessagingEventCriteriaSet
AssignmentID	TpInt32

11.2.13 TpMessagingNotificationRequestedSet

Defines a `numbered Set of Data Elements` of TpMessagingNotificationRequested.

11.2.14 TpMessagingNotificationRequestedSetEntry

Defines the `Sequence of Data Elements` that specify a set of requested notifications and an indication whether more notifications can be requested.

Sequence Element Name	Sequence Element Type	Description
MessagingNotificationRequested Set	TpMessagingNotificationRequestedSet	Numbered set of requested notifications.
Final	TpBoolean	Indication whether the set of notifications is the final set (TRUE) or if there are more notifications available (FALSE).

11.3 Error type data definitions

11.3.1 TpMessageInfoPropertyError

Defines the `Sequence of Data Elements` that identify a message property and the reason why it was not set.

Sequence Element Name	Sequence Element Type
MessagePropertyName	TpMessageInfoPropertyName
Error	TpSetPropertyError

11.3.2 TpMessagingError

A set of general error identifiers to include in Err methods.

Name	Value	Description

P_MMM_ERROR_UNDEFINED	0	Undefined
P_MMM_ERROR_INVALID_AUTHENTICATION_INFORMATION	1	Authentication Information is not valid
P_MMM_ERROR_INVALID_MAILBOX	2	Chosen Mailbox Address is invalid
P_MMM_ERROR_INVALID_DELIVERY_TYPE	3	The delivery mechanism specified is invalid or is not supported
P_MMM_ERROR_MAX_MESSAGE_SIZE_EXCEEDED	4	The maximum size of a message has been exceeded
P_MMM_ERROR_INVALID_FOLDER_ID	5	The folder ID is invalid
P_MMM_ERROR_INVALID_MESSAGE_ID	6	The message ID is invalid
P_MMM_ERROR_INVALID_PART_ID	7	The part ID is invalid
P_MMM_ERROR_DELIVERY_TYPE_ADDRESS_TYPE_MISMATCH	8	The address type does not match the message delivery type
P_MMM_ERROR_DELIVERY_TYPE_MESSAGE_TYPE_MISMATCH	9	The message format does not match the message delivery type
P_MMM_ERROR_INVALID_DELIVERY_TIME	10	The requested delivery time is invalid
P_MMM_ERROR_INVALID_VALIDITY_TIME	11	The requested validity time is invalid
P_MMM_ERROR_MAX_SUBJECT_SIZE_EXCEEDED	12	The maximum size of the subject field has been exceeded
P_MMM_ERROR_INVALID_ID	13	The BillingID is invalid
P_MMM_ERROR_INVALID_NESTING_LEVEL	14	The nesting level is invalid
P_MMM_ERROR_INVALID_CRITERIA	15	The criteria specified are invalid
P_MMM_ERROR_INFORMATION_NOT_AVAILABLE	16	The requested information is not available, e.g. message status information
P_MMM_ERROR_CANNOT_CANCEL	17	The message cannot be cancelled
P_MMM_ERROR_INVALID_HEADER	18	The message header is invalid
P_MMM_INVALID_NETWORK_STATE	19	Although the sequence of method calls is allowed by the gateway, the underlying protocol cannot support it.
P_MMM_ERROR_RESOURCE_UNAVAILABLE	20	The information resources used by the messaging service are unavailable, e.g. due to an overload situation.
P_MMM_ERROR_RESOURCE_TIMEOUT	21	The request has been accepted by the resource but it did not report a result.

11.3.3 TpMessageInfoPropertyErrorSet

Defines a `Numbered Set of Data Elements` of TpMessageInfoPropertyError.

11.3.4 TpSetPropertyError

Identifies the reason why a property was not set.

Name	Value	Description
P_MMM_PROPERTY_NOT_SET	0	The property was not set. No further information is available.
P_MMM_PROPERTY_READONLY	1	The property is readonly and cannot be modified by an application.
P_MMM_PROPERTY_INSUFFICIENT_PRIVILEGE	2	The application is not authorised to modify the property.
P_MMM_PROPERTY_NAME_UNKNOWN	3	The property name is unknown.

12 Exception Classes

The following are the list of exception classes which are used in this interface of the API.

Name	Description
P_MMM_INVALID_AUTHENTICATION_INFORMATION	Authentication Information is not valid
P_MMM_INVALID_MAILBOX	Chosen Mailbox Address is invalid
P_MMM_INVALID_DELIVERY_TYPE	The delivery mechanism specified is invalid or is not supported
P_MMM_MAX_MESSAGE_SIZE_EXCEEDED	The maximum size of a message has been exceeded
P_MMM_INVALID_FOLDER_ID	The folder ID is invalid
P_MMM_INVALID_MESSAGE_ID	The message ID is invalid
P_MMM_INVALID_PART_ID	The part ID is invalid
P_MMM_DELIVERY_TYPE_ADDRESS_TYPE_MISMATCH	The address type does not match the message delivery type
P_MMM_DELIVERY_TYPE_MESSAGE_TYPE_MISMATCH	The message format does not match the message delivery type
P_MMM_INVALID_PROPERTY	The property name is invalid
P_MMM_INVALID_DELIVERY_TIME	The requested delivery time is invalid
P_MMM_INVALID_VALIDITY_TIME	The requested validity time is invalid
P_MMM_MAX_SUBJECT_SIZE_EXCEEDED	The maximum size of the subject field has been exceeded
P_MMM_INFORMATION_NOT_AVAILABLE	The requested information is not available, e.g. message status information
P_MMM_CANNOT_CANCEL	The message cannot be cancelled
P_MMM_INVALID_HEADER	The message header is invalid

Each exception class contains the following structure.

Structure Element Name	Structure Element Type	Structure Element Description
ExtraInformation	TpString	Carries extra information to help identify the source of the exception, e.g. a parameter name

Annex A (normative): OMG IDL Description of Multi-Media Messaging SCF

The OMG IDL representation of this interface specification is contained in a text file (mmm.idl) contained in archive 2919815V630IDL.ZIP which accompanies the present document.

Annex B (informative): W3C WSDL Description of Multi-Media Messaging SCF

The W3C WSDL representation of this interface specification is contained in zip file 2919815V630WSDL.ZIP, which accompanies the present document.

Annex C (informative): Java API Description of the Multi-Media Messaging SCF

The Java API realization of this interface specification is produced in accordance with the Java Realization rules defined in Part 1 of the present document. These rules aim to deliver for Java, a developer API, provided as a realization, supporting a Java API that represents the UML specifications. The rules support the production of both J2SE and J2EE versions of the API from the common UML specifications.

The J2SE representation of this interface specification is provided as Java Code, contained in archive 2919815V630J2SE.ZIP that accompanies the present document.

The J2EE representation of this interface specification is provided as Java Code, contained in archive 2919815V630J2EE.ZIP that accompanies the present document.

Annex D (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Sep 2004	CN_25	NP-040359	--	--	Draft v100 submitted to TSG CN#25 for Approval.	1.0.0	6.0.0
Dec 2004	CN_26	NP-040485	0001	--	Removal of OSA API SCFs description in W3C WSDL	6.0.0	6.1.0
Dec 2004	--	--	--	--	Added missing code attachments	6.1.0	6.1.1
Jun 2005	CT_28	CP-050220	0002	1	Clarification of Multi Media Messaging using Sequence Diagrams	6.1.1	6.2.0
Jun 2005	CT_28	CP-050220	0003	--	Correction to TpMessageTreatment in IDL	6.1.1	6.2.0
Jun 2005	--	--	--	--	Java code attachments not available at TS delivery deadline	6.1.1	6.2.0
Jul 2002	--	--	--	--	Added the missing Java code attachments	6.2.0	6.2.1
Jun 2006	CT_32	CP-060194	0004	--	Resubmission of OSA API SCFs description in W3C WSDL	6.2.1	6.3.0
Jun 2006	CT_32	CP-060197	0005	--	Correct J2SE values of TpMessageHeaderFieldType	6.2.1	6.3.0
Jul 2006	--	--	--	--	Added missing code attachments	6.3.0	6.3.1

History

Document history		
V6.1.0	December 2004	Publication (Withdrawn)
V6.1.1	December 2004	Publication
V6.2.1	July 2005	Publication
V6.3.1	July 2006	Publication