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Open Service Access (OSA); Application Programming Interface (API); Part 15: Multi-Media Messaging SCF (Parlay 6)

Reference

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Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN), and is now submitted for the ETSI standards Membership Approval Procedure.

The present document is part 15 of a multi-part deliverable covering Open Service Access (OSA); Application Programming Interface (API), as identified below. The API specification (ES 204 915) is structured in the following parts:

Part 1: "Overview";

Part 2: "Common Data Definitions";

Part 3: "Framework";

Part 4: "Call Control";

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";

Part 10: "Connectivity Manager SCF";

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";

Part 16: "Service Broker SCF".

The present document has been defined jointly between ETSI, The Parlay Group (http://www.parlay.org) and the 3GPP, in co-operation with a number of JAIN™ Community (http://www.java.sun.com/products/jain) member companies.

The present document forms part of the Parlay 6.0 set of specifications.

The present document is equivalent to 3GPP TS 29.198-15 V7.1.0 (Release 7).

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 standardised interface, i.e. the OSA APIs.

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.

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

2 References

The references listed in clause 2 of ES 204 915-1 contain provisions which, through reference in this text, constitute provisions of the present document.

ETSI ES 204 915-1: "Open Service Access (OSA); Application Programming Interface (API); Part 1: Overview (Parlay 6)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 204 915-1 apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ES 204 915-1 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:

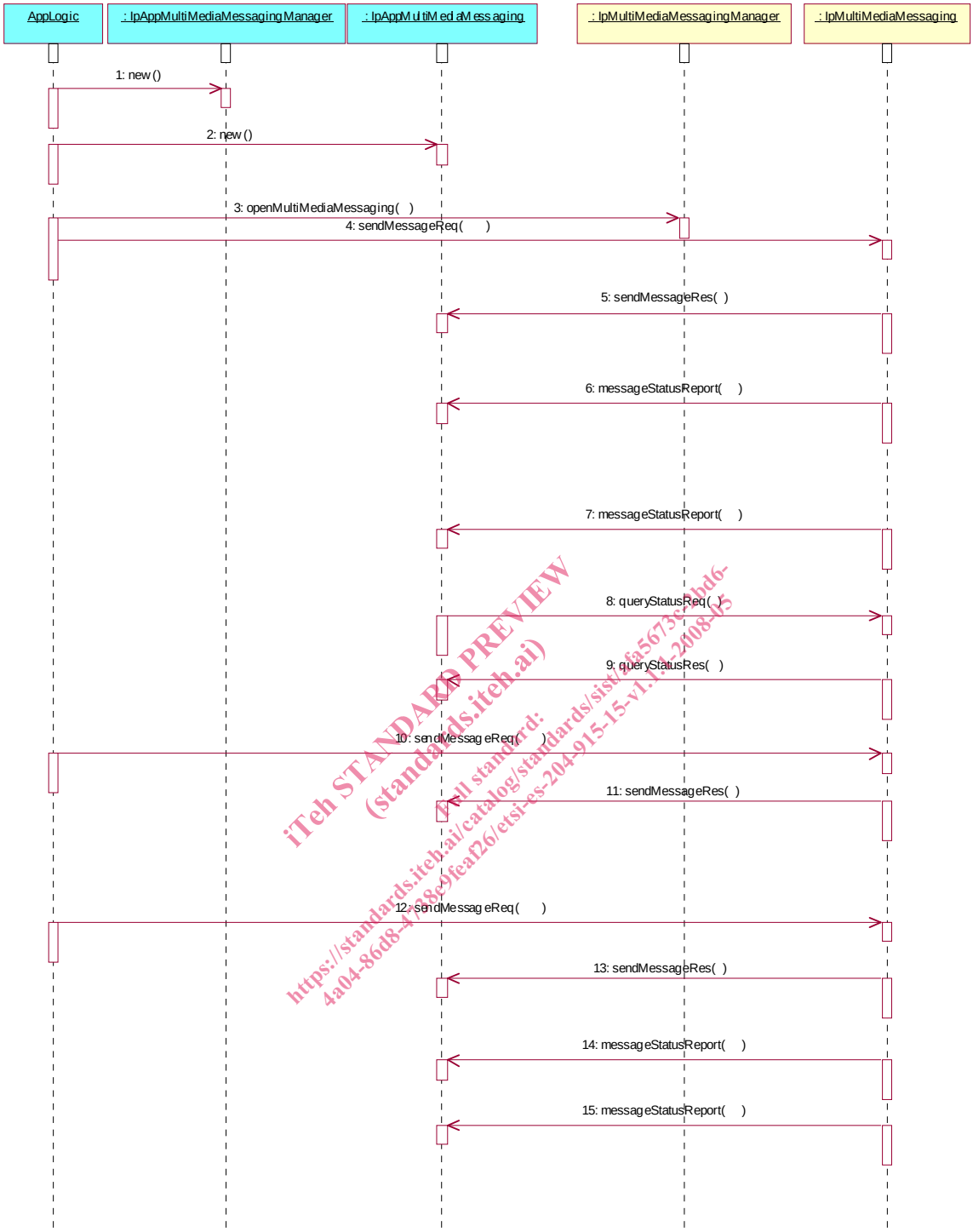
- The Sequence diagrams give the reader a practical idea of how each of the SCF is implemented.
- The Class relationships clause shows how each of the interfaces applicable to the SCF, relate to one another.
- The Interface specification clause describes in detail each of the interfaces shown within 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 ES 204 915-2.

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.

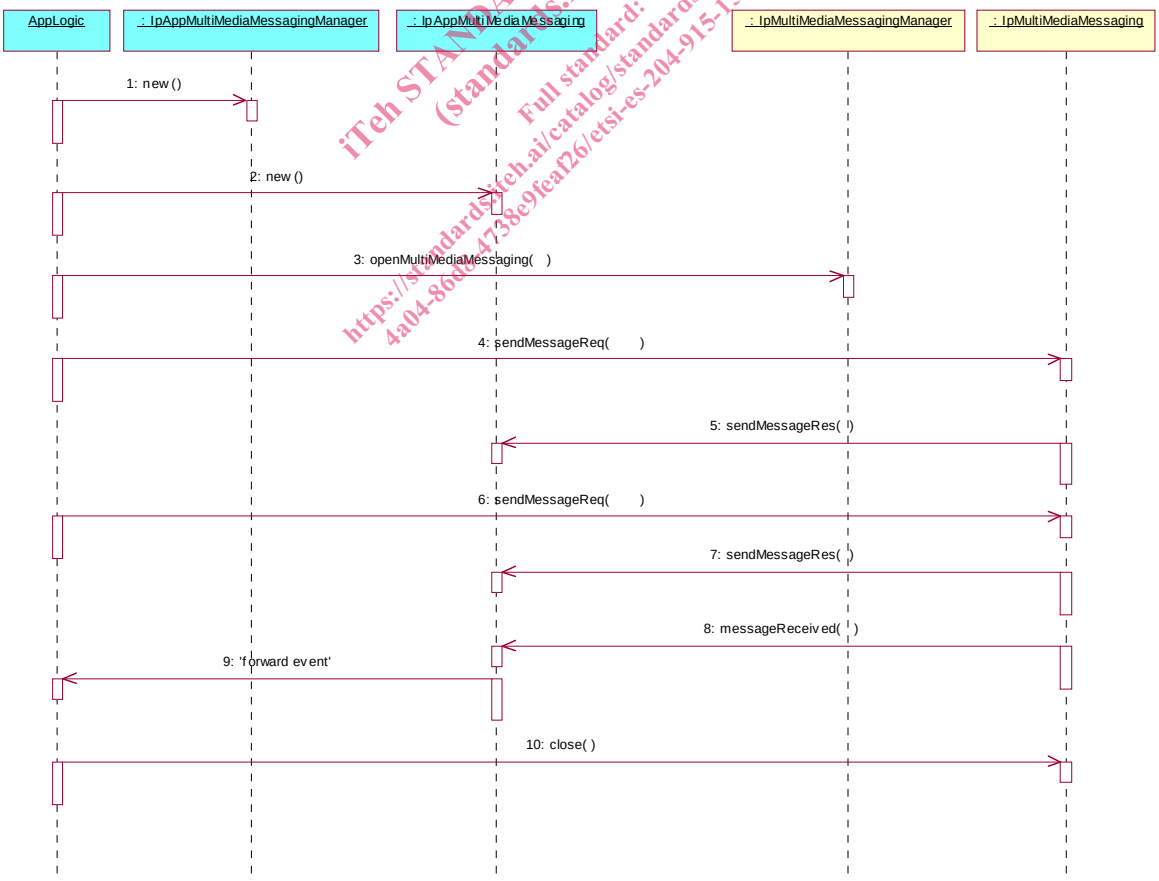
12: The application sends another message, to a different destination. It has requested a read receipt to be returned.

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.

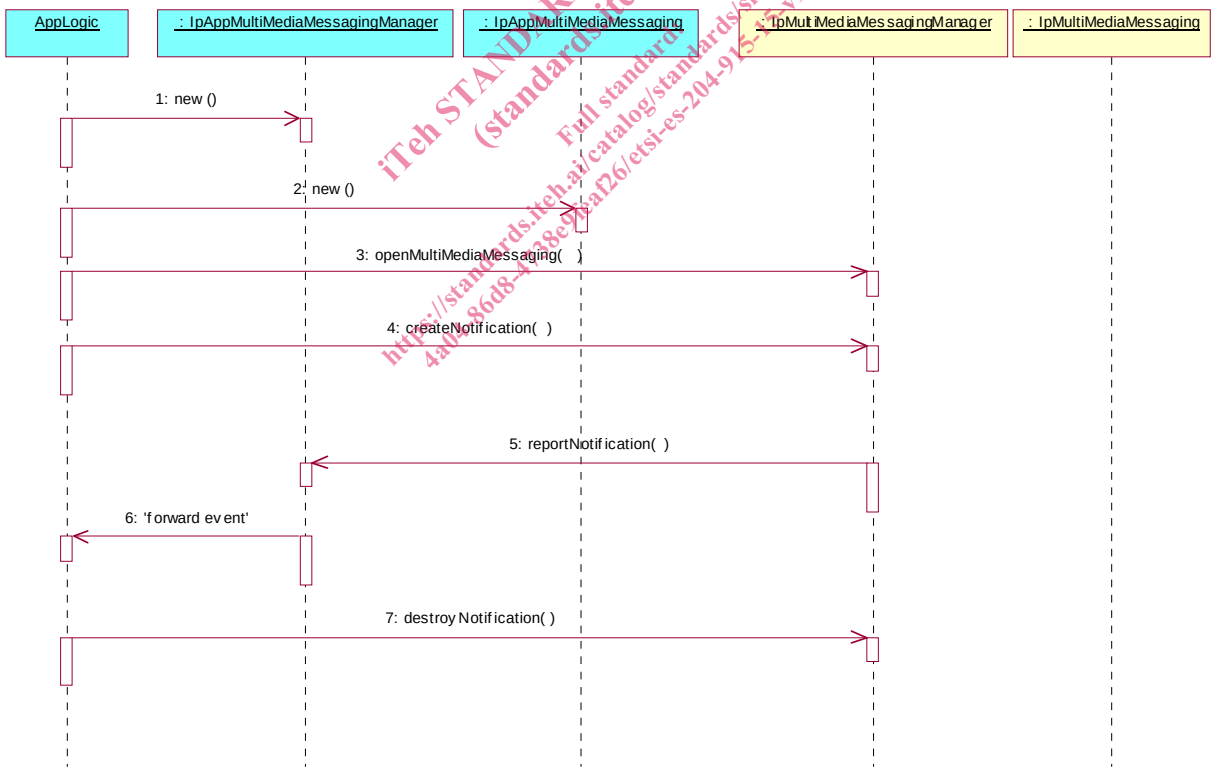
7: This method indicates successful processing of the sendMessageReq by the SCF, and that the message has been sent. It does not indicate a delivery status.

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.