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Open Service Access (OSA); Application Programming Interface (API); Part 11: Account Management SCF (Parlay 4)

Open Service Access (OSA); Application Programming Interface (API); Part 11: Account Management SCF (Parlay 4)

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Contents

Intellectual Property Rights	5
Foreword.....	5
1 Scope	6
2 References	6
3 Definitions and abbreviations.....	6
3.1 Definitions	6
3.2 Abbreviations	6
4 Account Management SCF	7
4.1 General requirements on support of methods.....	7
5 Sequence Diagrams	7
5.1 Standard Transaction History Retrieval	7
5.2 Standard Query Handling.....	8
5.3 Standard Notification handling.....	9
5.4 Network Controlled Notifications	10
6 Class Diagrams.....	11
7 The Service Interface Specifications	12
7.1 Interface Specification Format	12
7.1.1 Interface Class	12
7.1.2 Method descriptions.....	12
7.1.3 Parameter descriptions.....	12
7.1.4 State Model.....	13
7.2 Base Interface.....	13
7.2.1 Interface Class IpInterface	13
7.3 Service Interfaces	13
7.3.1 Overview	13
7.4 Generic Service Interface	13
7.4.1 Interface Class IpService	13
7.4.1.1 Method setCallback().....	14
7.4.1.2 Method setCallbackWithSessionID().....	14
8 Account Management Interface Classes	14
8.1 Interface Class IpAccountManager	14
8.1.1 Method createNotification().....	15
8.1.2 Method destroyNotification()	16
8.1.3 Method queryBalanceReq()	16
8.1.4 Method changeNotification().....	16
8.1.5 Method getNotification()	17
8.1.6 Method retrieveTransactionHistoryReq()	17
8.1.7 Method <<new>> enableNotifications().....	17
8.1.8 Method <<new>> disableNotifications().....	18
8.2 Interface Class IpAppAccountManager	18
8.2.1 Method reportNotification().....	19
8.2.2 Method queryBalanceRes()	19
8.2.3 Method queryBalanceErr()	20
8.2.4 Method retrieveTransactionHistoryRes()	20
8.2.5 Method retrieveTransactionHistoryErr()	20
9 State Transition Diagrams	21
9.1 State Transition Diagrams for IpAccountManager.....	21
9.1.1 Active State.....	21
9.1.2 Notifications created State	21
10 Account Management Service Properties	21

11	Data Definitions	22
11.1	Account Management Data Definitions	22
11.1.1	IpAppAccountManager	22
11.1.2	IpAppAccountManagerRef	22
11.1.3	IpAccountManager	22
11.1.4	IpAccountManagerRef	23
11.1.5	TpBalanceQueryError	23
11.1.6	TpChargingEventName	23
11.1.7	TpBalanceInfo	23
11.1.8	TpChargingEventInfo	24
11.1.9	TpChargingEventCriteria	24
11.1.10	TpChargingEventNameSet	24
11.1.11	TpChargingEventCriteriaResult	24
11.1.12	TpChargingEventCriteriaResultSet	24
11.1.13	TpBalance	25
11.1.14	TpBalanceSet	25
11.1.15	TpTransactionHistory	25
11.1.16	TpTransactionHistorySet	25
11.1.17	TpTransactionHistoryStatus	25
12	Exception Classes	26
Annex A (normative):	OMG IDL Description of Account Management SCF	27
Annex B (informative):	W3C WSDL Description of Account Management SCF	28
Annex C (informative):	Contents of 3GPP OSA Rel-5 Account Management	29
Annex D (informative):	Record of changes	30
D.1	Interfaces	30
D.1.1	New	30
D.1.2	Deprecated	30
D.1.3	Removed	30
D.2	Methods	30
D.2.1	New	30
D.2.2	Deprecated	31
D.2.3	Modified	31
D.2.4	Removed	31
D.3	Data Definitions	31
D.3.1	New	31
D.3.2	Modified	31
D.3.3	Removed	32
D.4	Service Properties	32
D.4.1	New	32
D.4.2	Deprecated	32
D.4.3	Modified	32
D.4.4	Removed	32
D.5	Exceptions	33
D.5.1	New	33
D.5.2	Modified	33
D.5.3	Removed	33
D.6	Others	33
History	34

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Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN).

The present document is part 11 of a multi-part deliverable covering Open Service Access (OSA); Application Programming Interface (API), as identified below. The API specification (ES 202 915) 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".

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 4.1 set of specifications.

The present document is equivalent to 3GPP TS 29.198-11 V5.2.0 (Release 5).

1 Scope

The present document is part 11 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 Account Management Service Capability Feature (SCF) aspects of the interface. All aspects of the Account Management 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).

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2 References

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The references listed in clause 2 of ES 202 915-1 contain provisions which, through reference in this text, constitute provisions of the present document.

ETSI ES 202 915-1: "Open Service Access (OSA); Application Programming Interface (API); Part 1: Overview (Parlay 4)".

ETSI ES 202 915-2: "Open Service Access (OSA); Application Programming Interface (API); Part 2: Common Data Definitions (Parlay 4)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 202 915-1 apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations defined in ES 202 915-1 apply.

4 Account Management SCF

The following clauses describe each aspect of the Account Management 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 show 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 202 915-2.

4.1 General requirements on support of methods

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.

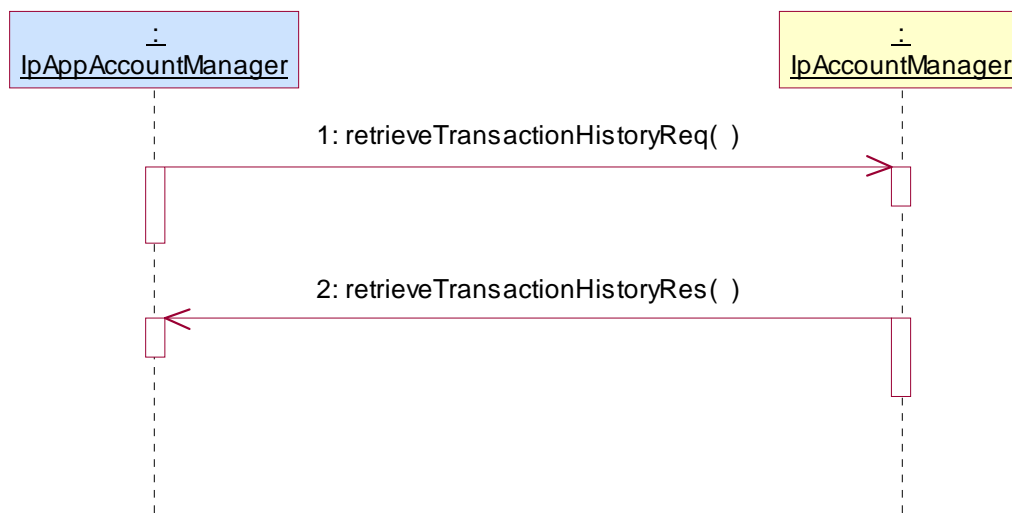
Where a method is not supported by an implementation of a Service interface, the exception P_METHOD_NOT_SUPPORTED shall be returned to any call of that method.

Where a method is not supported by an implementation of an Application interface, a call to that method shall be possible, and no exception shall be returned.

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5 Sequence Diagrams

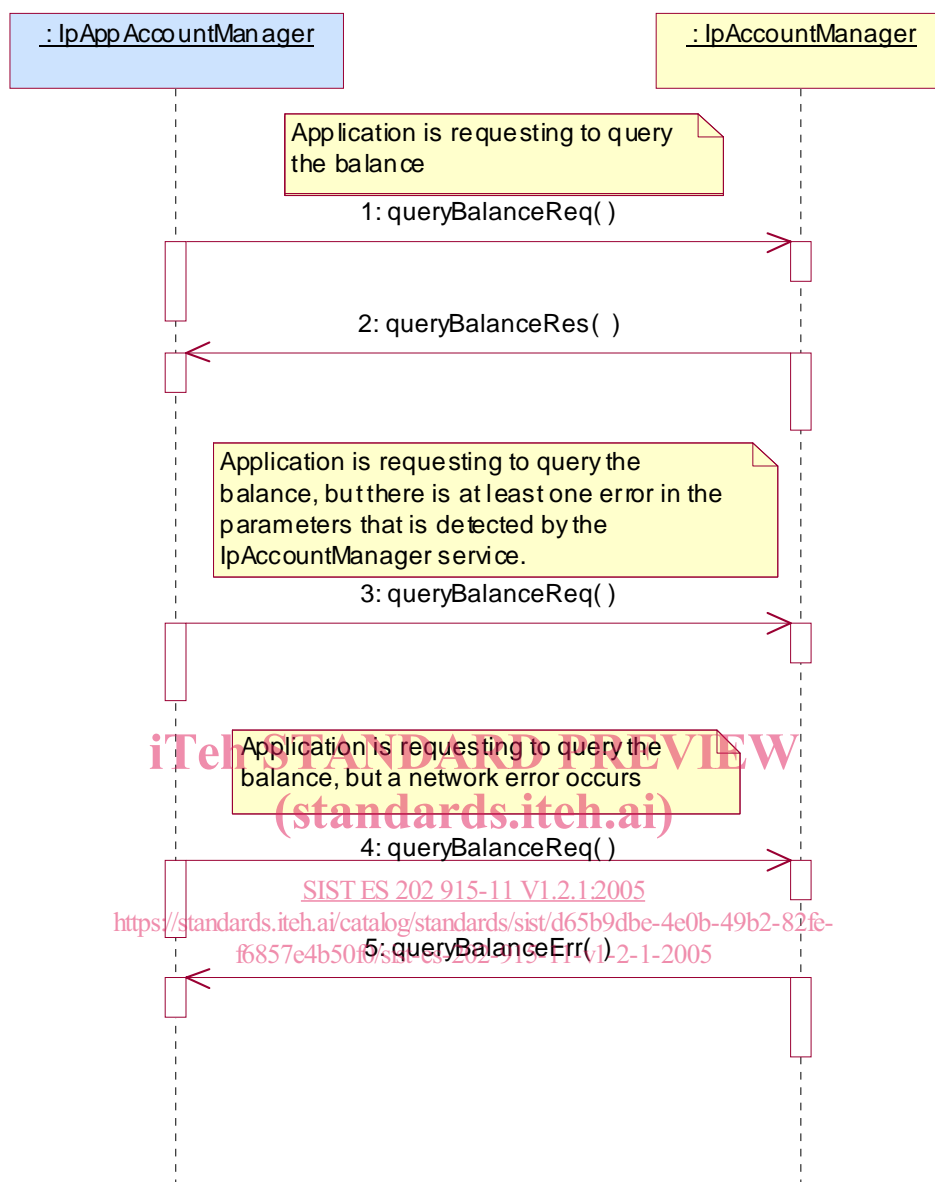
5.1 Standard Transaction History Retrieval



1: This message is used by the application to retrieve a transaction history for a certain subscriber's account.

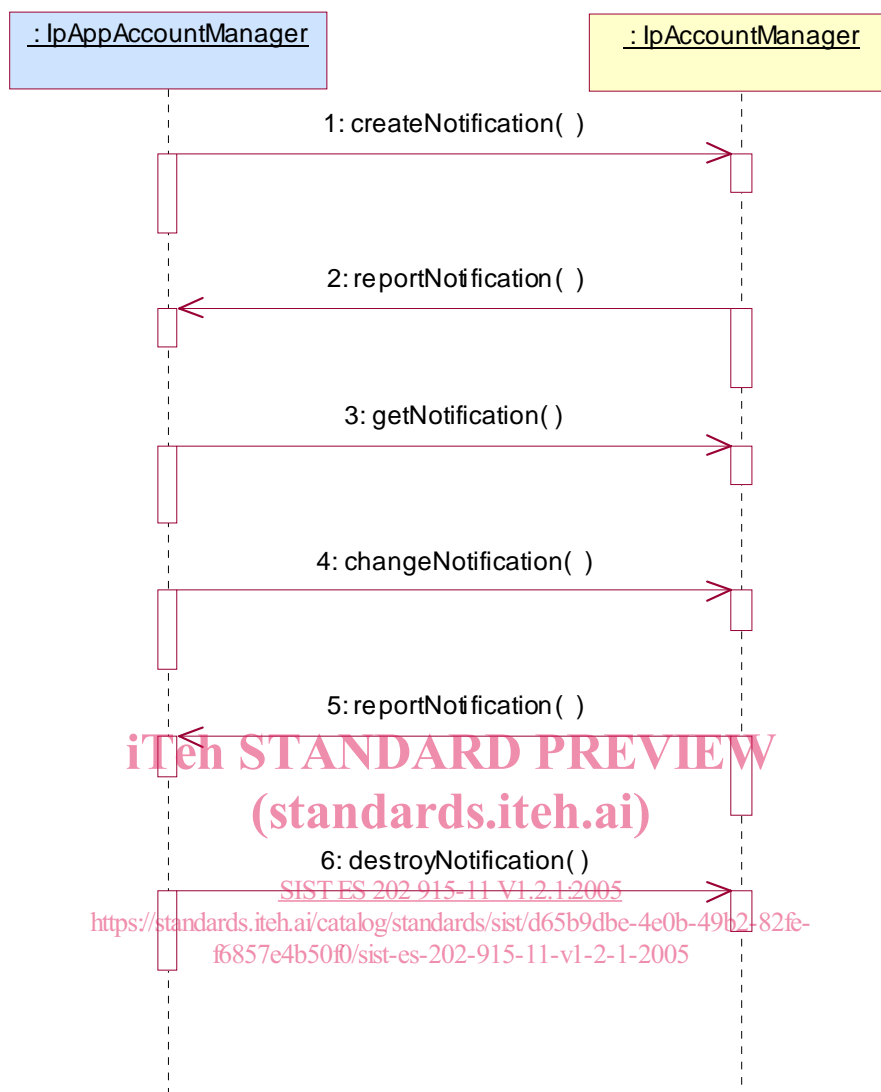
2: This method passes the result of the transaction history retrieval request for a specific user to its callback object.

5.2 Standard Query Handling



- 1: This message is used to query the balance of the account of one or several users.
- 2: This message passes the result of the balance query for one or several users to its callback object.
- 3: This scenario shows the case where at least one error in the parameters of the message is detected by the `IpAccountManager` object. An exception will be thrown.
- 4: This scenario shows the case where a network error occurs.
- 5: This message passes the error of the balance query. No exception is thrown.

5.3 Standard Notification handling



1: This message is used by the application to request notifications from the IpAccountManager service on certain criteria for one or several users.

2: This message is used by the IpAccountManager service to report a charging event that meets the criteria set in the createNotification message.

3: The application can request the current criteria set in the IpAccountManager service by invoking the getNotification method.

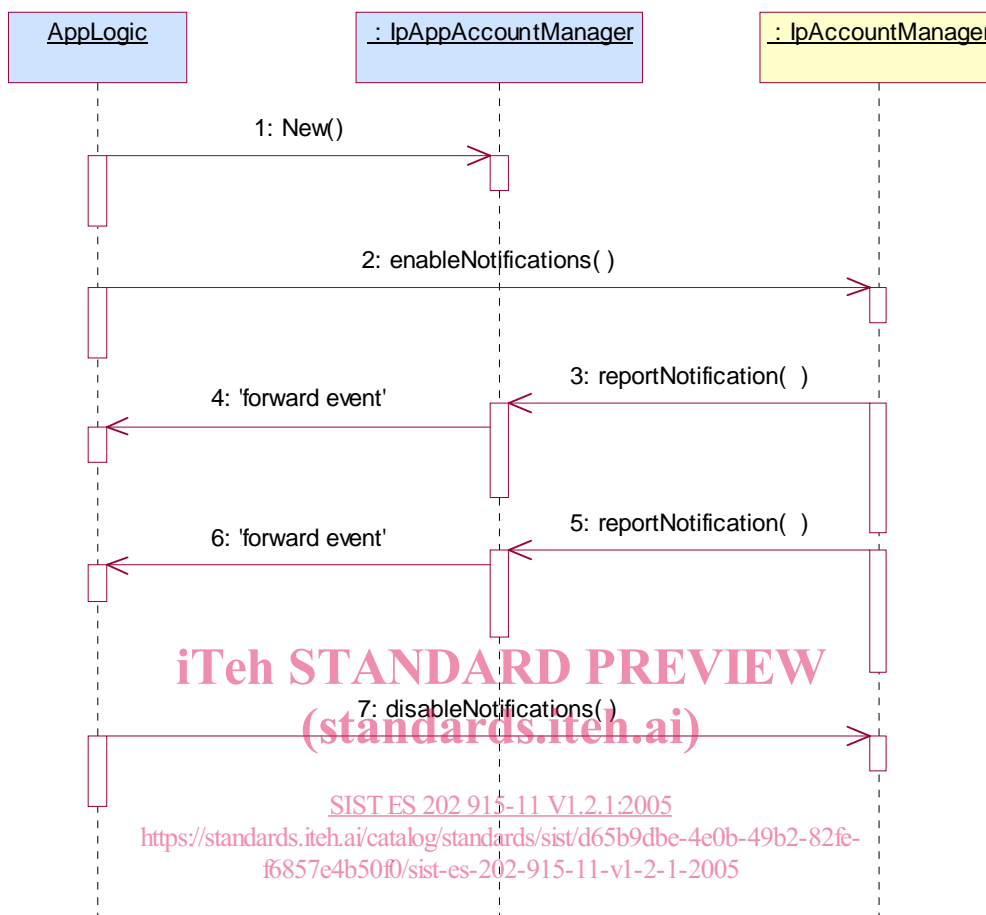
4: This message is used by the application to change the criteria initially created by createNotification, and previously obtained by getNotification.

5: This message is used by the IpAccountManager service to report a charging event that meets the new criteria.

6: This method is used by the application to disable the charging notifications.

5.4 Network Controlled Notifications

The following sequence diagram shows how an application can receive notifications that have not been created by the application, but are provisioned from within the network.



- 1: The application is started. The application creates a new IpAppAccountManager to handle callbacks.
- 2: The enableNotifications method is invoked on the IpAccountManager interface to indicate that the application is ready to receive notifications that are created in the network. For illustrative purposes we assume notifications of type "B" are created in the network.
- 3: When a network created trigger occurs the application is notified on the callback interface.
- 4: The event is forwarded to the application.
- 5: When a network created trigger occurs the application is notified on the callback interface.
- 6: The event is forwarded to the application.
- 7: When the application does not want to receive notifications created in the network anymore, it invokes disableNotifications on the IpMultiPartyCallConrolManager interface. From now on the gateway will not send any notifications to the application that are created in the network. The application will still receive notifications that it has created himself until the application removes them.