

**Open Service Access (OSA);
Parlay X Web Services;
Part 7: Account Management
(Parlay X 3)**



iTeh STANDARD PREVIEW
(standards.iteh.ai)

Full standard:
<https://standards.iteh.ai/catalog/standards/sist/e5611a6d-7c88-4571-8ed0-d6310eb27176/etsi-es-202-504-7-v1.1.1-2008-05>



Reference

DES/TISPAN-01034-7-OSA

Keywords

API, OSA, service

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

http://portal.etsi.org/chaicor/ETSI_support.asp

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2008.

© The Parlay Group 2008.

All rights reserved.

DECT™, PLUGTESTS™, UMTS™, TIPHON™, the TIPHON logo and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.

3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

Contents

Intellectual Property Rights	5
Foreword.....	5
1 Scope	7
2 References	7
2.1 Normative references	7
3 Definitions and abbreviations.....	8
3.1 Definitions	8
3.2 Abbreviations	8
4 Detailed service description	8
5 Namespaces.....	8
6 Sequence diagrams	9
6.1 Prepaid account recharge using a voucher	9
6.2 Prepaid account recharge using direct payment	10
7 XML Schema data type definition	11
7.1 DatedTransaction structure.....	11
7.2 Balance structure	11
7.3 BalanceExpireDetails structure	11
7.4 AccountChangedEvent enumeration	11
8 Web Service interface definition	11
8.1 Interface: AccountManagement	11
8.1.1 Operation: getBalance.....	11
8.1.1.1 Input message: getBalanceRequest	12
8.1.1.2 Output message: getBalanceResponse	12
8.1.1.3 Referenced faults.....	12
8.1.2 Operation: getCreditExpiryDate	12
8.1.2.1 Input message: getCreditExpiryDateRequest.....	12
8.1.2.2 Output message: getCreditExpiryDateResponse.....	12
8.1.2.3 Referenced faults.....	12
8.1.3 Operation: balanceUpdate	13
8.1.3.1 Input message: balanceUpdateRequest	13
8.1.3.2 Output message: balanceUpdateResponse	13
8.1.3.3 Referenced faults.....	13
8.1.4 Operation: voucherUpdate	13
8.1.4.1 Input message: voucherUpdateRequest.....	14
8.1.4.2 Output message: voucherUpdateResponse	14
8.1.4.3 Referenced Faults.....	14
8.1.5 Operation: getHistory	14
8.1.5.1 Input message: getHistoryRequest	14
8.1.5.2 Output message: getHistoryResponse	15
8.1.5.3 Referenced faults.....	15
8.1.6 Operation: getBalanceTypes	15
8.1.6.1 Input message: getBalanceTypesRequest	15
8.1.6.2 Output message: getBalanceTypesResponse	15
8.1.6.3 Referenced faults.....	15
8.2 Interface: AccountManagementNotificationManager	15
8.2.1 Operation: startNotification	16
8.2.1.1 Input message: startNotificationRequest.....	16
8.2.1.2 Output message: startNotificationResponse.....	16
8.2.1.3 Referenced faults.....	16
8.2.2 Operation: endNotification	16
8.2.2.1 Input message: endNotificationRequest.....	16

8.2.2.2	Output message: endNotificationResponse	16
8.2.2.3	Referenced faults.....	17
8.3	Interface: AccountManagementNotification	17
8.3.1	Operation: accountCharged	17
8.3.1.1	Input message: accountChargedRequest	17
8.3.1.2	Output message: accountChargedResponse	17
8.3.1.3	Referenced faults.....	17
8.3.2	Operation: accountRecharged	17
8.3.2.1	Input message: accountRechargedRequest	17
8.3.2.2	Output message: accountRechargedResponse	17
8.3.2.3	Referenced faults.....	18
8.3.3	Operation: accountLow.....	18
8.3.3.1	Input message: accountLowRequest	18
8.3.3.2	Output message: accountLowResponse	18
8.3.3.3	Referenced faults.....	18
9	Fault definitions.....	18
9.1	ServiceException.....	18
9.1.1	SVC0250: End user authentication failed	18
9.1.2	SVC0251: Unknown Voucher	18
9.2	PolicyException	19
9.2.1	POL0220: Vouchers not accepted	19
10	Service policies	19
Annex A (normative):	WSDL for Account Management.....	20
Annex B (informative):	Bibliography.....	21
History		22

iTeh STANDARD PREVIEW
 (standards.iteh.ai)
 Full standard:
<https://standards.iteh.ai/catalog/standards/sist/65611a4d-7e88-4571-8ed0-d6310eb27176/etsi-es-202-504-7-v1.1.1-2008-05>

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://webapp.etsi.org/IPR/home.asp>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

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 7 of a multi-part deliverable covering Open Service Access (OSA); Parlay X 3 Web Services, as identified below:

- Part 1: "Common";
- Part 2: "Third Party Call";
- Part 3: "Call Notification";
- Part 4: "Short Messaging";
- Part 5: "Multimedia Messaging";
- Part 6: "Payment";
- Part 7: "Account Management";**
- Part 8: "Terminal Status";
- Part 9: "Terminal Location";
- Part 10: "Call Handling";
- Part 11: "Audio Call";
- Part 12: "Multimedia Conference";
- Part 13: "Address List Management";
- Part 14: "Presence";
- Part 15: "Message Broadcast";
- Part 16: "Geocoding";
- Part 17: "Application-driven Quality of Service (QoS)";
- Part 18: "Device Capabilities and Configuration";
- Part 19: "Multimedia Streaming Control";
- Part 20: "Multimedia Multicast Session Management".

ITEH STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/e5611a6d-7e88-4571-8ed0-d6310eb27176/etsi-es-202-504-7-v1.1.1-2008-05>

The present document has been defined jointly between ETSI, The Parlay Group (<http://www.parlay.org>) and the 3GPP.

The present document forms part of the Parlay X 3.0 set of specifications.

The present document is equivalent to 3GPP TS 29.199-07 V7.2.2 (Release 7).

ITEH STANDARD PREVIEW
(standards.iteh.ai)

Full standard:
<https://standards.iteh.ai/catalog/standards/sist/e5611a6d-7e88-4571-8ed0-d6310eb27176/etsi-es-202-504-7-v1.1.1-2008-05>

1 Scope

The present document is part 7 of the Stage 3 Parlay X 3 Web Services specification 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 present document specifies the Account Management Web Service. The following are defined here:

- Name spaces.
- Sequence diagrams.
- Data definitions.
- Interface specification plus detailed method descriptions.
- Fault definitions.
- Service Policies.
- WSDL Description of the interfaces.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
 - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
 - for informative references.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

For online referenced documents, information sufficient to identify and locate the source shall be provided. Preferably, the primary source of the referenced document should be cited, in order to ensure traceability. Furthermore, the reference should, as far as possible, remain valid for the expected life of the document. The reference shall include the method of access to the referenced document and the full network address, with the same punctuation and use of upper case and lower case letters.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

[1] W3C Recommendation (2 May 2001): "XML Schema Part 2: Datatypes".

NOTE: Available at <http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/>.

- [2] ETSI ES 202 504-1: "Open Service Access (OSA); Parlay X Web Services; Part 1: Common (Parlay X 3)".
- [3] ISO 4217:2001: "Codes for the representation of currencies and funds".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 202 504-1 [2] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ES 202 504-1 [2] apply.

4 Detailed service description

Pre-paid subscribers, whether they have subscribed to pre-paid telephony, SMS, or data service, have credits with their service providers; the consumption of services will lead to reduction of their credit, or the credit may expire. Therefore, from time to time, subscribers may have to recharge their accounts. This occurs through an application that interfaces with the subscriber either directly or indirectly. Examples of direct interaction are voice prompts and WAP/web pages, or even SMS. Typically, such multi-modal applications either request a currency amount and, e.g. credit card information, or a voucher number plus credentials. The voucher number and credentials are then validated and causes a pre-determined currency amount to be transferred.

The Parlay X 3 Account Management API described in the present document supports account querying, direct recharging and recharging through vouchers. As a side effect, it may prevent subscribers from having their account balance credits expire.

5 Namespaces

The AccountManagement interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/account_management/v3_1

The AccountManagementNotification interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/account_management/notification/v3_2

The AccountManagementNotificationManager interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/account_management/notification_manager/v3_2

The data types are defined in the namespace:

http://www.csapi.org/schema/parlayx/account_management/v3_0

The 'xsd' namespace is used in the present document to refer to the XML Schema data types defined in XML Schema [1]. The use of the name 'xsd' is not semantically significant.

6 Sequence diagrams

This clause discusses three scenarios; one where a subscriber uses a voucher, one where the subscriber directly recharges after the payment is cleared, and one where the subscriber checks the recent transactions.

NOTE: Associated Account Management API messages are shown in 'bold' format: e.g. (**getBalance**).

6.1 Prepaid account recharge using a voucher

The prepaid subscriber wishes to recharge their account with a voucher and query their account balance. The subscriber uses their mobile phone or other wireline phone to interact with an IVR system. In order to recharge their account, the subscriber must enter the voucher number, the MSISDN to be recharged, and PIN(s). The IVR system accesses an external voucher database to validate the voucher number. The subscriber's account balance is then increased with the value of the voucher (**voucherUpdate**). The subscriber queries their account balance (**getBalance**), before and/or after the recharge.

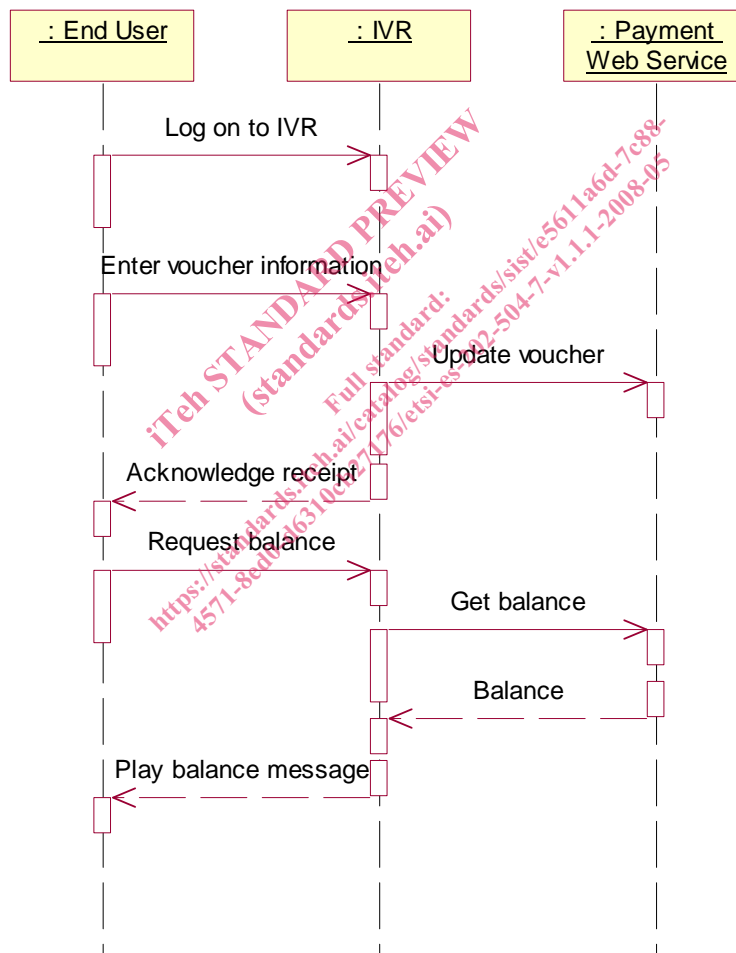


Figure 1

6.2 Prepaid account recharge using direct payment

Directly recharging (i.e. without a voucher) works much along the same way. In this case, we assume the prepaid subscriber interacts with a web page. After providing the MSISDN, along with the PIN, the user can query the account balance (**getBalance**). For recharging, the subscriber must enter payment details, for example credit card information, from which the payment will be made. After clearing the payment details, the currency amount will be transferred and the subscriber's prepaid account balance expiration date will be reset (**balanceUpdate**). The subscriber also queries their account balance expiration date (**getCreditExpiryDate**), after the recharge.

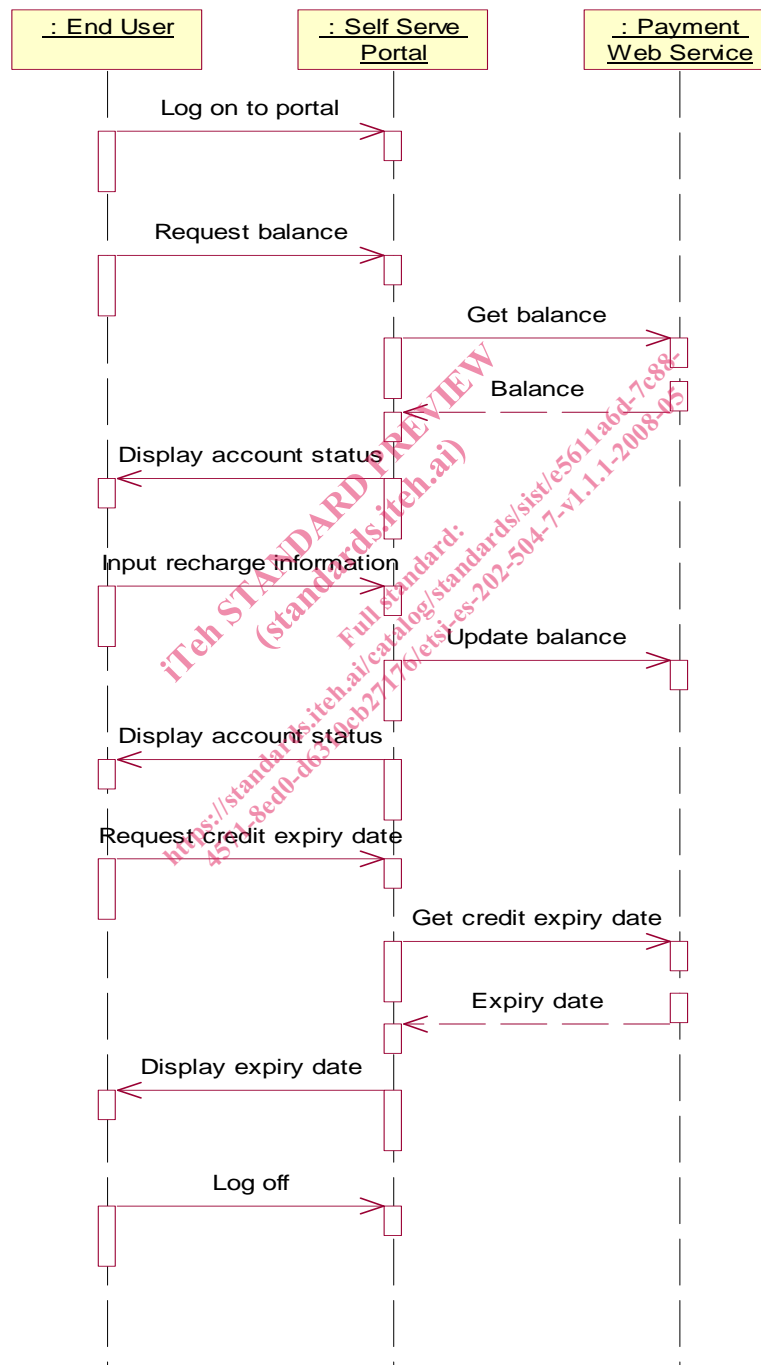


Figure 2