

3GPP TSG CN Plenary Meeting #22
10 - 12 December 2003, Maui, Hawaii, USA

NP-030556

Source: CN5 (OSA)
Title: Rel-6 CR 29.198-11 OSA API Part 11: Account management
Agenda item: 9.7
Document for: APPROVAL

Doc-1st-Level	Spec	CR	R	Ph	Subject	Cat	Version-Current	Doc-2nd-Lev	WI
NP-030556	29.198-11	021	-	Rel-6	Add methods for balanceUpdate(), voucherUpdate() and getCreditExpiryDate() to OSA Account Management	B	5.3.0	N5-030336	OSA3

CHANGE REQUEST

⌘ **29.198-11 CR 021** ⌘ rev - ⌘ Current version: **5.3.0** ⌘

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

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Add methods for balanceUpdate(), voucherUpdate() and getCreditExpiryDate() to OSA Account Management		
Source:	⌘ CN5 IBM (scottjb@us.ibm.com)		
Work item code:	⌘ OSA3 Date: ⌘ 18/07/2003		
Category:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> ⌘ B Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Release: ⌘ REL-6 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) </td> </tr> </table>	⌘ B Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: ⌘ REL-6 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
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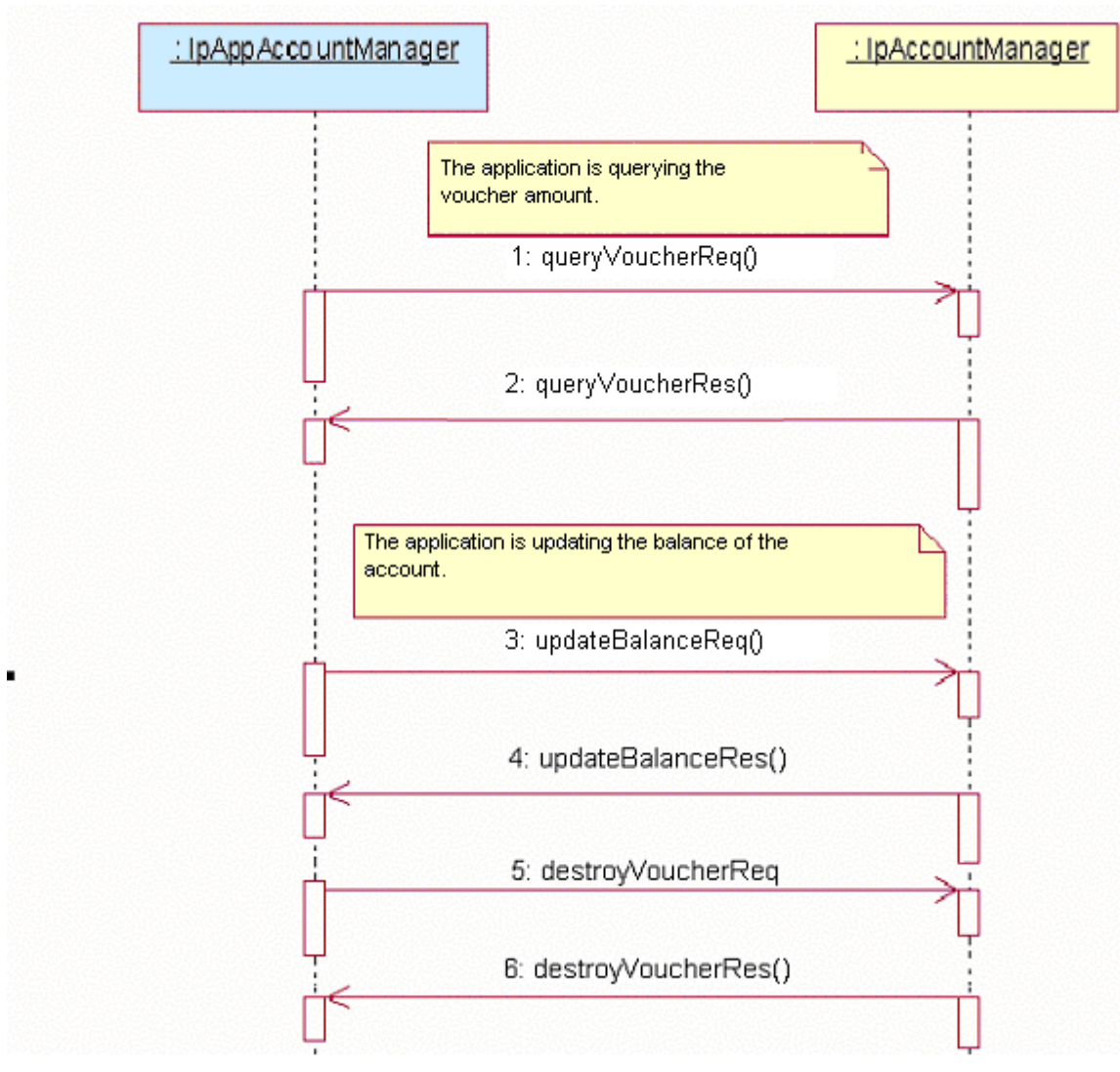
Reason for change:	⌘ The "Parlay X spec" (draft TS 29.199) contains an account management module that contains methods for balanceUpdate(), voucherUpdate() and getCreditExpiryDate(). These concepts do not exist in the OSA Account Management service. The voucher is an indirect reference to an amount.
Summary of change:	⌘ Add the necessary methods to OSA Account Management
Consequences if not approved:	⌘ Parlay X can not be implemented using OSA interfaces. Changes derived from: ftp://ftp.3gpp.org/specs/2003-06/Rel-5/29_series/

Clauses affected:	⌘ 5, 8, 11					
Other specs affected:	<table border="1" style="border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘ Other core specifications ⌘ ⌘ Test specifications ⌘ ⌘ O&M Specifications ⌘
Y	N					
<input type="checkbox"/>	<input checked="" type="checkbox"/>					
Other comments:	⌘					

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

5.4 Standard Voucher Handling



[1: This message is used to get a voucher for an amount.](#)

[2: This message used to return the amount requested.](#)

[3: This message is used to update the balance of the account.](#)

[4: This message is used to return the confirmation of the update.](#)

[5: This message is used to remove the voucher.](#)

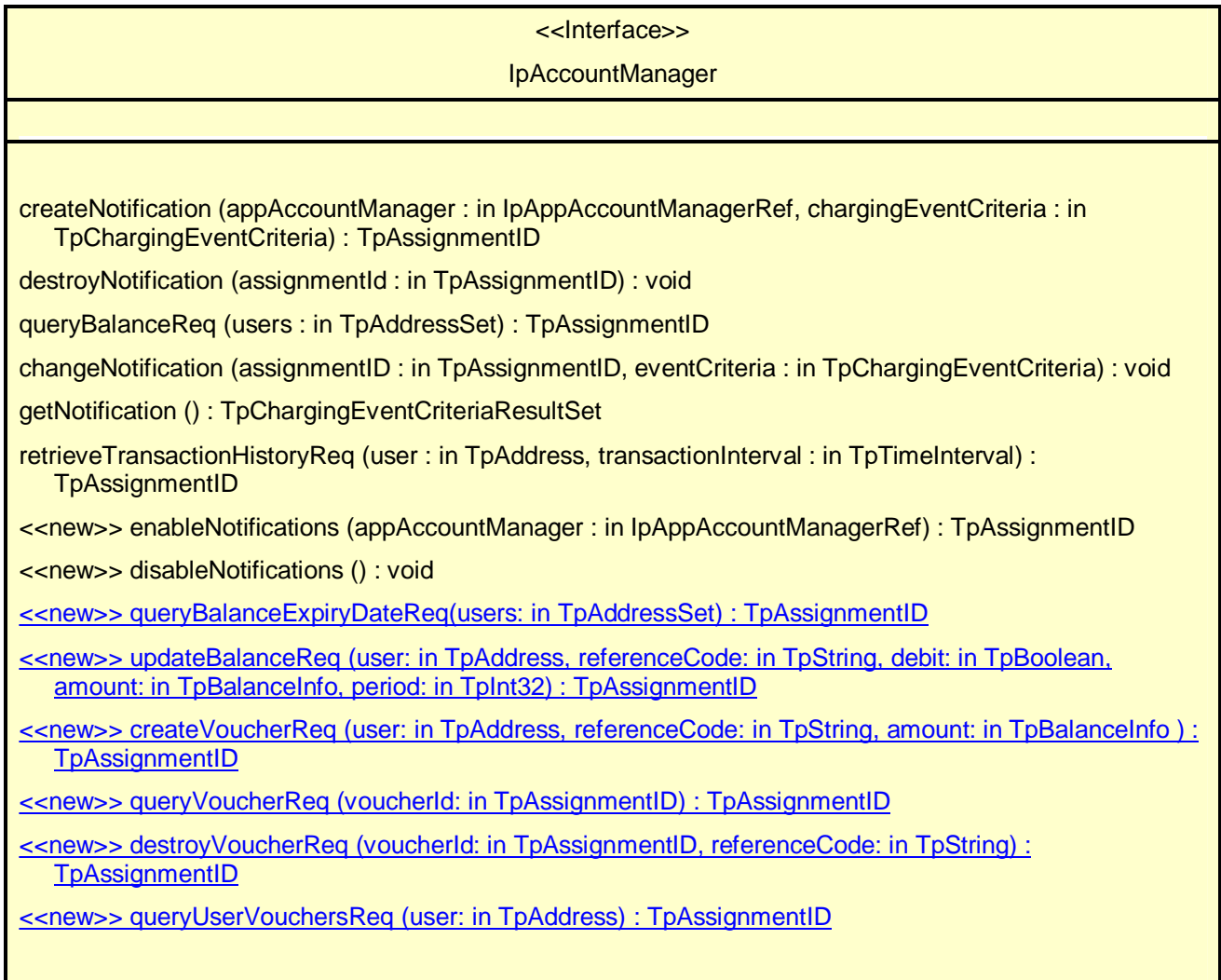
[6: This message is used to confirm that the voucher is removed.](#)

5.8 Account Management Interface Classes

5.18.1 Interface Class IpAccountManager

Inherits from: IpService.

The account manager interface provides methods for ~~managing~~~~monitoring~~ accounts. Applications can use this interface to enable or disable charging-related event notifications and to ~~manage~~~~query~~ account balances. [Vouchers allow indirect references to amounts that can be applied to the account.](#)



8.1.3 Method queryBalanceReq()

This method is used by the application to query the balance of an account for one or several users. [A queryBalanceRes\(\) will be sent for all valid users, and a queryBalanceErr\(\) will be sent for all invalid users or other errors.](#)

Returns queryId : Specifies the ID of the balance query request.

Parameters

users : in TpAddressSet

Specifies the user(s) for which the balance is queried.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_UNKNOWN_SUBSCRIBER, P_UNAUTHORIZED_APPLICATION

8.1.9 Method queryBalanceExpiryDateReq()

This method is used by the application to query the expiration data of the account. The returned date is the is the date the current balance will expire. Nil is returned if the balance does not expire. A queryBalanceExpiryDateRes() will be sent for all valid users, and a queryBalanceExpiryDateErr() will be sent for all invalid users or other errors.

Returns queryId: Specifies the ID of the balance expiry date query request.

Parameters

users : in TpAddressSet

Specifies the user(s) for which the balance expiry date is queried.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_UNKNOWN_SUBSCRIBER, P_UNAUTHORIZED_APPLICATION

8.1.10 Method updateBalanceReq()

This method is used by the application to update the balance of the account.

Returns assignentId: Specifies the ID of the balance expiry date query request.

Parameters

user : in TpAddress

Specifies the user for which the balance update will be done.

referenceCode : in TpString

Specifies the reference code. The reference code is used to uniquely identify the request, and it is the application's responsibility to provide a unique reference code within the scope of the application.

debit : in TpBoolean

Specifies that the amount will be subtracted from the balance if the debit parameter is true, or that the amount will be added to the account if the debit parameter is false.

amount : in TpBalanceInfo

Specifies the amount that will be added or subtracted to the user's account. The charge is specified as a currency amount.

period : in TpInt32

Specifies the period at which the balance will expire. The balance is requested to expire in a number of days indicated by the period parameter. The operator's policy may overrule this parameter. If the period parameter is 0, the operator's policy on the balance expiration is always in effect.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_UNKNOWN_SUBSCRIBER, P_UNAUTHORIZED_APPLICATION

8.1.11 Method createVoucherReq()

This method is used by the application to create a voucher for an amount.

Returns voucherId: Specifies the ID of the voucher that is created.

Parameters

user : in TpAddress

Specifies the user for which the voucher create will be done.

referenceCode : in TpString

Specifies the reference code. The reference code is used to uniquely identify the request, and it is the application's responsibility to provide a unique reference code within the scope of the application.

amount : in TpBalanceInfo

Specifies the amount of the voucher. The charge is specified as a currency amount.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_UNKNOWN_SUBSCRIBER, P_UNAUTHORIZED_APPLICATION

8.1.12 Method destroyVoucherReq()

This method is used by the application to destroy a voucher for an amount.

Parameters

voucherId : in TpAssignmentID

Specifies the voucher to be destroyed.

referenceCode : in TpString

Specifies the reference code. The reference code is used to uniquely identify the request, and it is the application's responsibility to provide a unique reference code within the scope of the application.

Raises

TpCommonExceptions, P_UNKNOWN_SUBSCRIBER, P_UNAUTHORIZED_APPLICATION, P_INVALID_ASSIGNMENTID

8.1.13 Method queryVoucherReq()

This method is used by the application to get the voucher information.

Returns assignmentId: Specifies the identifier for this request.

Parameters

voucherId : in TpAssignmentID

Specifies the voucher to be queried.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_UNKNOWN_SUBSCRIBER, P_UNAUTHORIZED_APPLICATION, P_INVALID_ASSIGNMENTID

8.1.14 Method queryUserVouchersReq()

This method is used by the application to get the vouchers for a user.

Returns vouchersID: Specifies the ID for the get vouchers request.

Parameters

user : in TpAddress

Specifies the user for which the vouchers will be returned.

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_UNKNOWN_SUBSCRIBER, P_UNAUTHORIZED_APPLICATION, P_INVALID_ASSIGNMENTID

IpAppAccountManager

8.2.6 Method queryBalanceExpiryDateRes()

This method indicates that the request to query the balance expiry date was successful and it reports the requested balance expiry date of an account to the application.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the balance query request.

balances : in TpBalanceExpiryDateSet

Specifies the balance expiry date for one or more user accounts.

8.2.7 Method queryBalanceExpiryDateErr()

This method indicates that the request to query the balance expiry date failed and it reports the cause of failure to the application.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the balance query request.

cause : in TpBalanceQueryError

Specifies the error that led to the failure.

8.2.8 Method updateBalanceRes()

This method indicates that the request to update the balance update was successful and it reports the balance of an account to the application.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the balance query request.

balance : in TpBalance

Specifies the balance of the account.

8.2.9 Method updateBalanceErr()

This method indicates that the request to update the balance failed and it reports the cause of failure to the application.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the balance query request.

cause : in TpBalanceQueryError

Specifies the error that led to the failure.

8.2.10 Method createVoucherRes()

This method indicates that the request to create a voucher was successful.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the balance query request.

voucherId : in TpAssignmentID

Specifies the voucher .

8.2.11 Method createVoucherErr()

This method indicates that the request to create a voucher failed and it reports the cause of failure to the application.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the balance query request.

voucherId : in TpAssignmentID

Specifies the voucher.

cause : in TpVoucherError

Specifies the error that led to the failure.

8.2.12 Method destroyVoucherRes()

This method indicates that the request to destroy a voucher was successful.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the request.

voucherId : in TpAssignmentID

Specifies the voucher.

8.2.13 Method destroyVoucherErr()

This method indicates that the request to destroy a voucher failed and it reports the cause of failure to the application.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the request.

voucherId : in TpAssignmentID

Specifies the voucher.

cause : in TpVoucherError

Specifies the error that led to the failure.

8.2.14 Method queryVoucherRes()

This method indicates that the request to query the voucher information was successful and it reports the amount to the application.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the query voucher amount request.

voucherId : in TpAssignmentID

Specifies the voucher.

voucher : in TpVoucher

Specifies the information of the voucher.

8.2.15 Method queryVoucherErr()

This method indicates that the request to query the voucher failed and it reports the cause of failure to the application.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the query voucher amount request.

voucherId : in TpAssignmentID

Specifies the voucher.

cause : in TpVoucherError

Specifies the error that led to the failure.

8.2.15 Method queryUserVouchersRes()

This method indicates that the request to query the vouchers was successful and it reports the set of vouchers to the application.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the query vouchers request.

vouchers : in TpVoucherSet

Specifies the set of vouchers for the user.

8.2.16 Method queryUserVouchersErr()

This method indicates that the request to query the vouchers for a user failed and it reports the cause of failure to the application.

Parameters

queryId : in TpAssignmentID

Specifies the ID of the query vouchers request.

cause : in TpVoucherError

Specifies the error that led to the failure.

11.1.13 TpBalanceExpiryDate

Defines the structure of data elements that specifies a balance expiry date.

<u>Structure Element Name</u>	<u>Structure Element Type</u>	<u>Structure Element Description</u>
<u>UserID</u>	<u>TpAddress</u>	<u>Specifies the user to whom the account belongs.</u>
<u>StatusCode</u>	<u>TpBalanceQueryError</u>	<u>Specifies the status code for the balance query request</u>
<u>ExpiryDate</u>	<u>TpDateAndTime</u>	<u>Defines the expiry date and time</u>

11.1.14 TpBalanceExpiryDateSet

Defines a collection of TpBalanceExpiryDate elements.

11.1.5 TpVoucherError

Defines an error that is reported as a result of a voucher request.

<u>Name</u>	<u>Value</u>	<u>Description</u>
<u>P_VOUCHER_OK</u>	<u>0</u>	<u>No error occurred while processing the request</u>
<u>P_VOUCHER_UNDEFINED</u>	<u>1</u>	<u>General error, unspecified</u>
<u>P_VOUCHER_UNKNOWN_SUBSCRIBER</u>	<u>2</u>	<u>Subscriber is unknown</u>
<u>P_VOUCHER_UNAUTHORIZED_APPLICATION</u>	<u>3</u>	<u>Application is not authorized</u>
<u>P_VOUCHER_SYSTEM_FAILURE</u>	<u>4</u>	<u>System failure. The request could not be handled</u>

11.1.5 TpVoucher

Defines the structure of data elements that specifies a voucher.

<u>Structure Element Name</u>	<u>Structure Element Type</u>	<u>Structure Element Description</u>
<u>VoucherID</u>	<u>TpAssignmentID</u>	<u>Specifies the unique identifier for this voucher.</u>
<u>UserID</u>	<u>TpAddress</u>	<u>Specifies the user to who the voucher belongs.</u>
<u>BalanceInfo</u>	<u>TpBalanceInfo</u>	<u>Specifies the amount of the voucher.</u>
<u>ReferenceCode</u>	<u>TpString</u>	<u>Defines the reference code of the voucher.</u>

11.1.5 TpVoucherSet

Defines the set of TpVoucher objects.