3GPP TSG CN Plenary Meeting #15
6 – 8 March 2002. Jeju, KOREA

NP-020111

Source:	**CN5 (OSA)**	
Title:	**Rel-4 CRs 29.198-11 OSA API Part 11: Account management**	
Agenda item:	**8.5**	
Document for:	**Decision**	

Doc-1st-Level	Spec	CR	R	Phase	Subject	Cat	Ver-Curr	Ver-New	Doc-2nd-Level	Workitem
NP-020111	29.198-11	005		Rel-4	**Add P_INVALID_INTERFACE_TYPE exception to IpService.setCallback() and IpService.setCallbackWithSessionID()**	F	4.2.0	4.3.0	N5-020026	OSA1
NP-020111	29.198-11	006		Rel-4	**Correction of parameter name in IpAccountManager.createNotification()**	F	4.2.0	4.3.0	N5-020033	OSA1
NP-020111	29.198-11	007		Rel-4	**Correction of result parameter of getNotification, set in stead of single result**	F	4.2.0	4.3.0	N5-020082	OSA1

3GPP TSG_CN5 (Open Service Access – OSA)
Meeting #16, Hong Kong, CHINA, 4 – 8 February 2002

N5-020026

CR-Form-v5

CHANGE REQUEST

⌘	**29.198-11** CR **005**	⌘**rev**	**-**	⌘	Current version:	**4.2.0**	⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Add P_INVALID_INTERFACE_TYPE exception to IpService.setCallback() and IpService.setCallbackWithSessionID()	
Source: ⌘	CN5	
Work item code: ⌘	OSA1	***Date:*** ⌘ 08/02/2002
Category: ⌘	**F**	***Release:*** ⌘ REL-4

Use one 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.

Use one 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)*

Reason for change: ⌘	The 2 methods setCallback() and setCallbackWithSessionID() are both used to pass an interface reference, yet there is no possible exception to indicate if an incorrect interface reference has been passed.
Summary of change: ⌘	Add the exception P_INVALID_INTERFACE_TYPE to the exception list of setCallback() and setCallbackWithSessionID()
Consequences if not approved: ⌘	If an incorrect interface reference is received, a service instance will not be able to indicate this to the application, therefore no callback interface reference will have been provided, and so interworking between instances of an application and a service will fail.

Clauses affected: ⌘	7.4.1
Other specs affected: ⌘ **X** Other core specifications ⌘	TS 29.198-3 to -8 inclusive, -12
☐ Test specifications	
☐ O&M Specifications	
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/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

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

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 SessionID's.

Parameters

appInterface : in IpInterfaceRef

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

Raises

TpCommonExceptions, P_INVALID_INTERFACE_TYPE

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 uses SessionID's.

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

Raises

TpCommonExceptions, P_INVALID_SESSION_ID, P_INVALID_INTERFACE_TYPE

CR-Form-v6.1

CHANGE REQUEST

⌘	**29.198-11** CR	**007**	⌘ **rev**	**-**	⌘	Current version:	**4.2.0**	⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Correction of result parameter of getNotification, set in stead of single result	
Source: ⌘	CN5	
Work item code: ⌘	OSA1	**Date:** ⌘ 08/02/2002
Category: ⌘	**F**	**Release:** ⌘ REL-4

Use <u>one</u> of the following categories:
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C (functional modification of feature)
D (editorial modification)
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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)

Reason for change: ⌘	In its current definition, the getNotification method can only return a single instance of charging criteria previously created.
Summary of change: ⌘	A set of charging criteria results is creatred, rather than a single instance of the charging criteria.
Consequences if not approved: ⌘	In its current definition, the getNotification method can only return a single instance of charging criteria previously created. This is incorrect behaviour according to the method description and semantics. In addition, it is inconsistent with the pattern used throughout the set of OSA APIs.

Clauses affected: ⌘	8.1, 11.1.8
Other specs affected: ⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments: ⌘	

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8 Account Management Interface Classes

8.1 Interface Class IpAccountManager

Inherits from: IpService.

The account manager interface provides methods for monitoring accounts. Applications can use this interface to enable or disable charging-related event notifications and to query account balances.

<<Interface>>
IpAccountManager
createNotification (ChargingEventCriteria : in TpChargingEventCriteria) : TpAssignmentID
destroyNotification (assignmentId : in TpAssignmentID) : void
queryBalanceReq (users : in TpAddressSet) : TpSessionID
changeNotification (assignmentID : in TpAssignmentID, eventCriteria : in TpChargingEventCriteria) : void
getNotification () : TpChargingEventCriteriaResultSet
retrieveTransactionHistoryReq (user : in TpAddress, transactionInterval : in TpTimeInterval) : TpSessionID

Method
createNotification()

This method is used by the application to enable charging event notifications to be sent to the application.

Returns assignmentId : Specifies the ID assigned by the account management object for this newly enabled event notification.

Parameters

ChargingEventCriteria : in TpChargingEventCriteria

Specifies the event specific criteria used by the application to define the charging event required. Individual addresses or address ranges may be specified for subscriber accounts. Example of events are "charging" and "recharging".

Returns

TpAssignmentID

Raises

TpCommonExceptions, P_INVALID_ADDRESS, P_INVALID_CRITERIA, P_INVALID_EVENT_TYPE, P_UNKNOWN_SUBSCRIBER

Method
destroyNotification()

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

Parameters

assignmentId : in TpAssignmentID

Specifies the assignment ID that was given by the account management object when the application enabled the charging notification.

Raises

TpCommonExceptions, P_INVALID_ASSIGNMENT_ID

Method
queryBalanceReq()

This method is used by the application to query the balance of an account for one or several users.

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

TpSessionID

Raises

TpCommonExceptions, P_UNKNOWN_SUBSCRIBER, P_UNAUTHORIZED_APPLICATION

Method
changeNotification()

This method is used by the application to change the event criteria introduced with createNotification. Any stored criteria associated with the specified assignementID will be replaced with the specified criteria.

Parameters

assignmentID : in TpAssignmentID

Specifies the ID assigned by the manager interface for the event notification.

eventCriteria : in TpChargingEventCriteria

Specifies the new set of event criteria used by the application to define the event required. Only events that meet these criteria are reported

Raises

TpCommonExceptions, P_INVALID_ASSIGNMENT_ID, P_INVALID_CRITERIA, P_INVALID_EVENT_TYPE, P_UNKNOWN_SUBSCRIBER, P_INVALID_ADDRESS

Method
getNotification()

This method is used by the application to query the event criteria set with createNotification or changeNotification.

Returns eventCriteria : Specifies the event criteria used by the application to define the event required. Only events that meet these criteria are reported.

Parameters
No Parameters were identified for this method

Returns

TpChargingEventCriteriaResultSet

Raises

TpCommonExceptions

Method
retrieveTransactionHistoryReq()

This asynchronous method is used by the application to retrieve a transaction history of a subscriber's account. The history is a set of Detailed Records.

Returns retrievalID : Specifies the retrieval ID of the transaction history retrieval request.

Parameters

user : in TpAddress
Specifies the subscriber for whose account the transaction history is to be retrieved.

transactionInterval : in TpTimeInterval
Specifies the time interval for which the application history is to be retrieved.

Returns

TpSessionID

Raises

TpCommonExceptions, P_UNKNOWN_SUBSCRIBER, P_UNAUTHORIZED_APPLICATION, P_INVALID_TIME_AND_DATE_FORMAT

11.1.7 TpChargingEventCriteriaResult

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

Sequence Element Name	Sequence Element Type
ChargingEventCriteria	TpChargingEventCriteria
AssignmentID	TpAssignmentID

11.1.8 TpChargingEventCriteriaResultSet

Defines a collection of TpChargingEventCriteriaResult elements.

CR-Form-v5

CHANGE REQUEST

| ✠ | **29.198-11** CR **006** | ✠ **rev** | **-** | ✠ | Current version: | **4.2.0** | ✠ |

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

Proposed change affects: ✠ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network **X**

Title:	✠	Correction of parameter name in IpAccountManager.createNotification()

Source:	✠	CN5

Work item code:	✠	OSA1		*Date:*	✠	08/02/2002

Category:	✠	**F**		*Release:*	✠	REL-4

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2 (GSM Phase 2)
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R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	✠	IpAccountManager.createNotification() has a parameter name which starts with an uppercase letter, when convention is that it starts with a lower case letter. This is a technical change which has a direct impact on implementation code, and if not corrected now, might never be corrected

Summary of change:	✠	Change ChargingEventCriteria parameter of IpAccountManager.createNotification() ot chanrgingEventCriteria

Consequences if not approved:	✠	This change has a direct impact on implementation code. If it's not corrected now, it will be impossible to correct once implementations appear. If it's not corrected in the specifications, some implementers will follow convention and correct this, others will follow the specification to the letter, and interworking problems will result.

Clauses affected:	✠	8.1

Other specs affected:	✠	☐ Other core specifications ✠	
		☐ Test specifications	
		☐ O&M Specifications	

Other comments:	✠	

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Inherits from: IpService.

The account manager interface provides methods for monitoring accounts. Applications can use this interface to enable or disable charging-related event notifications and to query account balances.

<<Interface>>
IpAccountManager
createNotification (~~ChargingEventCriteria~~ <u>chargingEventCriteria</u> : in TpChargingEventCriteria) : TpAssignmentID destroyNotification (assignmentId : in TpAssignmentID) : void queryBalanceReq (users : in TpAddressSet) : TpAssignmentID changeNotification (assignmentID : in TpAssignmentID, eventCriteria : in TpChargingEventCriteria) : void getNotification () : TpChargingEventCriteriaResult retrieveTransactionHistoryReq (user : in TpAddress, transactionInterval : in TpTimeInterval) : TpAssignmentID