

3GPP TSG CN Plenary Meeting #16
5th - 7th June 2002. Marco Island, USA.

NP-020185

Source: CN5 (OSA)
Title: Rel-5 CRs 29.198-02 OSA API Part 2: Common data
Agenda item: 8.2
Document for: APPROVAL

Doc-1 st -Level	Spec	CR	R v	Pha	Subject	Cat	Ver Curr	Ver New	Doc-2 nd -Level	Work item
NP-020185	29.198-02	011	-	Rel-5	Allowing the use of tel URL in TpAddressPlan	B	4.4.0	5.0.0	N5-020303	OSA2
NP-020185	29.198-02	012	-	Rel-5	Adding TpInt64 in order to aling with the new Rel-5 TS 29.198-14	F	4.4.0	5.0.0	N5-020286	OSA2
NP-020185	29.198-02	013	-	Rel-5	Addition of undefined Data types: TpStringList and TpStringSet	F	4.4.0	5.0.0	N5-020363	OSA2
NP-020185	29.198-02	016	-	Rel-5	Deletion of P_SET_LENGTH_EXCEEDED	F	4.4.0	5.0.0	N5-020482	OSA2
NP-020185	29.198-02	017	-	Rel-5	Removal of MIDL	F	4.4.0	5.0.0	N5-020483	OSA2
NP-020185	29.198-02	018	-	Rel-5	Revise the scope of TpSessionID and TpAssignmentID	F	4.4.0	5.0.0	N5-020487	OSA2
NP-020185	29.198-02	019	-	Rel-5	Deprecate P_ADDRESS_PLAN_MSMAIL	F	4.4.0	5.0.0	N5-020511	OSA2
NP-020185	29.198-02	020	-	Rel-5	Addition of support for an Exception Hierarchy	B	4.4.0	5.0.0	N5-020512	OSA2
NP-020185	29.198-02	021	-	Rel-5	Addition of type TpVersion in common data	B	4.4.0	5.0.0	N5-020513	OSA2

CHANGE REQUEST

⌘ **29.198-02** **CR 011** ⌘ rev **-** ⌘ Current version: **4.4.0** ⌘

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

Title:	⌘	Allowing the use of tel URL in TpAddressPlan		
Source:	⌘	CN5		
Work item code:	⌘	OSA2	Date:	⌘ 30/05/2002
Category:	⌘	B	Release:	⌘ REL-5
		Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
		F (correction)	2	(GSM Phase 2)
		A (corresponds to a correction in an earlier release)	R96	(Release 1996)
		B (addition of feature),	R97	(Release 1997)
		C (functional modification of feature)	R98	(Release 1998)
		D (editorial modification)	R99	(Release 1999)
		Detailed explanations of the above categories can	REL-4	(Release 4)
		be found in 3GPP TR 21.900 .	REL-5	(Release 5)

Reason for change:	⌘	The current description of the P_ADDRESS_PLAN_SIP doesn't contain all the URL schemes which are allowed in SIP		
Summary of change:	⌘	Expand the description of the P_ADDRESS_PLAN_SIP to contain all the URL schemes allowed in RFC 3261		
Consequences if not approved:	⌘	Other URL schemes e.g. tel URL in SIP will not be supported in the SCS		

Clauses affected:	⌘			
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> 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.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 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.

5.6.1 TpAddress

Defines the Sequence of Data Elements that specify an address.

Sequence Element Name	Sequence Element Type
Plan	TpAddressPlan
AddrString	TpString
Name	TpString
Presentation	TpAddressPresentation
Screening	TpAddressScreening
SubAddressString	TpString

The AddrString defines the actual address information and the structure of the string depends on the Plan.
The following table gives an overview of the format of the AddrString for the different address plans.

Address Plan	AddrString Format Description	Example
P_ADDRESS_PLAN_NOT_PRESENT	Not applicable	
P_ADDRESS_PLAN_UNDEFINED	Not applicable	
P_ADDRESS_PLAN_IP	For Ipv4 the dotted quad notation is used. Also for IPv6 the dotted notation is used. The address can optionally be followed by a port number separated by a colon.	"127.0.0.1:42"
P_ADDRESS_PLAN_MULTICAST	An Ipv4 class D address or Ipv6 equivalent in dotted notation.	"224.0.0.0"
P_ADDRESS_PLAN_UNICAST	A non-multicast or broadcast IP address in dotted notation.	"127.0.0.1"
P_ADDRESS_PLAN_E164	An international number without the international access code, including the country code and excluding the leading zero of the area code.	"31161249111"

P_ADDRESS_PLAN_AESA	The ATM End System Address in binary format (40 bytes)	01234567890ABCDEF012345 67890ABCDEF01234567
P_ADDRESS_PLAN_URL	A uniform resource locator as defined in IETF RFC 1738 [6]	"http://www.parlay.org"
P_ADDRESS_PLAN_NSAP	The binary representation of the Network Service Access Point	490001AA000400010420
P_ADDRESS_PLAN_SMTP	An e-mail address as specified in IETF RFC822 [7]	"webmaster@parlay.org"
P_ADDRESS_PLAN_MSMAIL	Identical to P_ADDRESS_PLAN_SMTP	"john.doe@hitech.com"
P_ADDRESS_PLAN_X400	The X400 address structured as a set of attribute value pairs separated by semicolons.	"C=n;ADMD=;PRMD=uninet; O=parlay;S=Doe;I=S;G=John'
P_ADDRESS_PLAN_SIP (Note 1)	Any valid SIP address string allowed in RFC 3261 "SIP: Session Initiation Protocol"	sip:user@parlay.org tel:+358-555-1234567;postd=pp22 <sip:enquiries@1.2.3.4:5060> Enquiries
P_ADDRESS_PLAN_ANY (Note 2)	Not applicable	

NOTE 1: It should be noted that two SIP addresses will be regarded as equivalent by a gateway if they correspond to the same user at the same network address. The textual form of the two addresses need not be the same. For example, sip:enquiries@parlay.org will be deemed to match <sip:Enquiries@1.2.3.4:5060>Enquiries (if parlay.org resolves to 1.2.3.4).

NOTE 2: This is only to be used with TpAddressRange

5.6.5 TpAddressPlan

Defines the address plan (or numbering plan) used. It is also used to indicate whether an address is actually defined in a TpAddress data element.

Name	Value	Description
P_ADDRESS_PLAN_NOT_PRESENT	0	No Address Present
P_ADDRESS_PLAN_UNDEFINED	1	Undefined
P_ADDRESS_PLAN_IP	2	IP
P_ADDRESS_PLAN_MULTICAST	3	Multicast
P_ADDRESS_PLAN_UNICAST	4	Unicast
P_ADDRESS_PLAN_E164	5	E.164
P_ADDRESS_PLAN_AESA	6	AESA
P_ADDRESS_PLAN_URL	7	URL

P_ADDRESS_PLAN_NSAP	8	NSAP
P_ADDRESS_PLAN_SMTP	9	SMTP
P_ADDRESS_PLAN_MSMAIL (see Note)	10	Microsoft Mail
P_ADDRESS_PLAN_X400	11	X.400
P_ADDRESS_PLAN_SIP	12	SIP Any URL scheme which is allowed in RFC 3261 "SIP: Session Initiation Protocol"
P_ADDRESS_PLAN_ANY	13	Any address plan is deemed to match (This is only used for TpAddressRange)

NOTE: This value is not used in the scope of 3GPP.

For the case where the P_ADDRESS_PLAN_NOT_PRESENT and P_ADDRESS_PLAN_ANY are indicated, the rest of the information in the TpAddress is not valid.

CHANGE REQUEST

⌘ **29.198-02 CR 012** ⌘ rev **-** ⌘ Current version: **4.4.0** ⌘

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

Title:	⌘ Adding Tplnt64 in order to aling with the new Rel-5 TS 29.198-14		
Source:	⌘ CN5		
Work item code:	⌘ OSA2	Date:	⌘ 30/05/2002
Category:	⌘ F 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-5 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:	⌘ Newly added part 14 of TS 29.198 refers to Tplnt64. However, this type is not declared anywhere and should be declared in the Common Datatypes, Part 2 (29.198-02).
Summary of change:	⌘ Addition of Tplnt64 declaration
Consequences if not approved:	⌘ Part 14 (PAM) will refer to a non-existing type, and will therefore not be possible to implement.

Clauses affected:	⌘ 5.1
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> <input type="checkbox"/> Test specifications ⌘ <input type="checkbox"/> <input type="checkbox"/> O&M Specifications ⌘ <input type="checkbox"/>
Other comments:	⌘

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5.1.14 TpAttributeList

This is a Numbered List of Data Elements of type TpAttribute.

5.1.15 TpAttributeSet

This is a Numbered Set of Data Elements of type TpAttribute.

5.1.16 TpInt64

Defines a signed 64-bit integer.

CHANGE REQUEST

⌘ **29.198-02 CR 013** ⌘ rev **-** ⌘ Current version: **4.4.0** ⌘

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

Title:	⌘ Addition of undefined Data types: TpStringList and TpStringSet		
Source:	⌘ CN5		
Work item code:	⌘ OSA2	Date:	⌘ 17/05/2002
Category:	⌘ F	Release:	⌘ REL-5
	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.		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:	⌘ Alignment with the new OSA Stage 3 specifications 29.198-13 on Policy Management (PM) and 29.198-14 on Presence and Availability Management (PAM). As a result of aligning the data types between the OSA specifications 29.198-13 and 29.198-14, the definitions for TpStringList and TpStringSet were removed from the PM and PAM specifications. However, they have not been added to 29.198-02 the Common Data Type specification. Therefore, currently they are undefined.		
Summary of change:	⌘ Addition of data type definitions for TpStringList and TpStringSet.		
Consequences if not approved:	⌘ Undefined data types.		

Clauses affected:	⌘ 5.1.8, 5.1.9, 5.1.10		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

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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.

**** FIRST MODIFIED SECTION ****

5 Common System Data definitions

These data definitions are assumed to be provided by the client operating system.

5.1 Standard Data types

The APIs assume that the following Data types can be supported.

5.1.1 TpBoolean

Defines a Boolean data type.

5.1.2 TpInt32

Defines a signed 32-bit integer.

5.1.3 TpFloat

Defines a single precision real number.

5.1.4 TpLongString

Defines a Byte string, comprising length and data. The length shall be at least a 32-bit integer.

5.1.5 TpOctet

Defines an 8-bit quantity that is not translated during transmission.

5.1.6 TpOctetSet

Defines a Numbered Set of Data elements of TpOctet.

5.1.7 TpString

Defines a Byte string, comprising length and data. The length shall be at least a 16-bit integer.

5.1.8 TpStringSet

Defines a Numbered Set of Data Elements of type TpString.

5.1.9 TpStringList

Defines a Numbered List of Data Elements of type TpString.

5.1.810 TpAssignmentID

Defines an assignment ID with a value that is unique within the context of the implementation of the interface creating this ID. This ID is used to identify single or multiple event notifications enabled by the requesting interface

implementation. This ID can also be used by the requesting interface implementation to modify or stop further event notifications.

Example 1, myIpUserLocation may implement the IpUserLocation interface. If so, myIpUserLocation may receive multiple Req methods, and will generate a single assignment ID per request that is unique within the context of myIpUserLocation.

Example 2, myIpMultiPartyCallControlManager may implement the IpMultiPartyCallControlManager interface. If so, myIpMultiPartyCallControlManager may receive multiple createNotification method invocations, and will generate a single assignment ID per request that is unique within the context of myIpMultiPartyCallControlManager. myIpMultiPartyCallControlManager may also receive changeNotification or destroyNotification methods that will contain an assignment ID used to correlate these methods with the original createNotification method.

The assignment ID is identical to a [TpInt32](#) type.

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CHANGE REQUEST

⌘ **29.198-02 CR 016** ⌘ rev **-** ⌘ Current version: **4.4.0** ⌘

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

Title:	⌘ Deletion of P_SET_LENGTH_EXCEEDED		
Source:	⌘ CN5		
Work item code:	⌘ OSA2	Date:	⌘ 17/05/2002
Category:	⌘ F 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-5 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:	⌘ P_SET_LENGTH_EXCEEDED is never raised by any method.
Summary of change:	⌘ P_SET_LENGTH_EXCEEDED is deleted.
Consequences if not approved:	⌘ Superfluous exceptions may lead to confusion

Clauses affected:	⌘ 5.4.4
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
Other comments:	⌘

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5.4.4 Exceptions available to all methods on all interfaces

The following are the list of exception classes which are available to all interfaces of the API.

Name	Description
P_APPLICATION_NOT_ACTIVATED	An application is unauthorised to access information and request services with regards to users that have deactivated that particular application. In case the request was for information related to multiple user identities the reference to user identities that are causing this exception will be returned in the extra information of the exception.
P_INFORMATION_NOT_AVAILABLE	The requested information is not available. A reason might be that the information is unavailable in the core network or that the application is unauthorised to access the information. An application is unauthorised to access information and request services with regards to users that have set their privacy flag regarding that particular service. In case the request was for information related to multiple user identities, the reference to user identities that are causing this exception will be returned in the extra information of the exception.
P_INVALID_ADDRESS	Invalid address specified
P_INVALID_AMOUNT	Invalid amount specified.
P_INVALID_ASSIGNMENT_ID	The assignment ID is invalid
P_INVALID_CRITERIA	Invalid criteria specified
P_INVALID_CURRENCY	Invalid currency specified.
P_INVALID_EVENT_TYPE	Invalid event type
P_INVALID_INTERFACE_NAME	Invalid interface name
P_INVALID_INTERFACE_TYPE	The interface reference supplied by the client is the wrong type.
P_INVALID_NETWORK_STATE	Although the sequence of method calls is allowed by the gateway, the underlying protocol can not support it. E.g., in some protocols some methods are only allowed by the protocol, when the call processing is suspended, e.g., after reporting an event that was monitored in interrupt mode.
P_INVALID_SESSION_ID	Invalid session ID.
P_INVALID_TIME_AND_DATE_FORMAT	Invalid date and time format provided
P_SET_LENGTH_EXCEEDED	The maximum set size is exceeded in a method parameter value.
P_UNAUTHORISED_PARAMETER_VALUE	A method parameter value violates the Service Level Agreement
P_UNKNOWN_SUBSCRIBER	The subscriber is not known in the network or the application is An application is unauthorised to access information and request services with regards to users that are not subscribed to the application. In case the request was for information related to multiple user identities, the reference to user identities that are causing this exception will be returned in the extra information of the exception.
P_UNSUPPORTED_ADDRESS_PLAN	An address contains an address plan which is not supported

CHANGE REQUEST

⌘ **29.198-02 CR 017** ⌘ rev **-** ⌘ Current version: **4.4.0** ⌘

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

Title:	⌘ Removal of MIDL				
Source:	⌘ CN5				
Work item code:	⌘ OSA2	Date:	⌘ 17/05/2002		
Category:	⌘ F	Release:	⌘ REL-5		
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:		
	F (correction)		2 (GSM Phase 2)		
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)		
	B (addition of feature),		R97 (Release 1997)		
	C (functional modification of feature)		R98 (Release 1998)		
	D (editorial modification)		R99 (Release 1999)		
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		REL-4 (Release 4)		
			REL-5 (Release 5)		

Reason for change:	⌘ MIDL is never referenced anywhere else in the spec and keeping it will cause confusion
Summary of change:	⌘ MIDL example is changed to C++ example to be consistent with other examples
Consequences if not approved:	⌘ MIDL is never referenced anywhere else in the spec and keeping it will cause confusion

Clauses affected:	⌘ 5.2.3
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/>
	<input type="checkbox"/> Test specifications ⌘ <input type="checkbox"/>
	<input type="checkbox"/> O&M Specifications ⌘ <input type="checkbox"/>
Other comments:	⌘ <input type="text"/>

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5.2.3 Numbered Set of Data Elements

This describes a data type which comprises an integer which indicates the total number of data elements in the set (the *number* part), and an **unordered** set of data elements (the *data* part). *Set* data types do not contain duplicate data elements.

EXAMPLE: The TpAddressSet data type may be defined in ~~MIDL-C++~~ as:

```
typedef struct TpAddressSet
{
  __TpInt32 Number;
  __size_is(Number)} TpAddress Set[Number];
}
TpAddressSet;
```

CHANGE REQUEST

⌘ **29.198-02 CR 018** ⌘ rev **-** ⌘ Current version: **4.4.0** ⌘

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

Title:	⌘	Revise the scope of TpSessionID and TpAssignmentID	
Source:	⌘	CN5	
Work item code:	⌘	OSA2	Date: ⌘ 17/05/2002
Category:	⌘	F	Release: ⌘ REL-5
		Use <u>one</u> of the following categories:	Use <u>one</u> of the following releases:
		F (correction)	2 (GSM Phase 2)
		A (corresponds to a correction in an earlier release)	R96 (Release 1996)
		B (addition of feature),	R97 (Release 1997)
		C (functional modification of feature)	R98 (Release 1998)
		D (editorial modification)	R99 (Release 1999)
		Detailed explanations of the above categories can be found in 3GPP TR 21.900.	REL-4 (Release 4)
			REL-5 (Release 5)

Reason for change:	⌘	It was identified that some of the changes made to the scope or uniqueness of the TpSessionID value causes problems for some current API method signatures, callAborted() for example. Also, some implementations may want to provide a greater degree of uniqueness for TpSessionID and TpAssignmentID, as some SCF implementations may wish to use more unique values of TpSessionID and TpAssignmentID as a way to help with recovering from implementation failure. It should be noted that, by increasing the uniqueness of TpSessionID and TpAssignmentID, the Client Application still does not have to deal with writing code to handle recovery from failure. Recovery is invisible to the Client Application code.	
Summary of change:	⌘	Revise the scope of TpSessionID and TpAssignmentID	
Consequences if not approved:	⌘	Some methods, such as callAborted() pass a TpSessionID without a Call reference. This means the client app will not know which call has aborted.	

Clauses affected:	⌘	5.1.9	
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘
Other comments:	⌘		

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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.

5.1.8 TpAssignmentID

Defines an assignment ID with a value that is at least unique within the context of the implementation of the interface creating this ID. This ID is used to identify single or multiple event notifications enabled by the requesting interface implementation. This ID can also be used by the requesting interface implementation to modify or stop further event notifications.

Example 1, myIpUserLocation may implement the IpUserLocation interface. If so, myIpUserLocation may receive multiple Req methods, and will generate a single assignment ID per request that is unique within the context of myIpUserLocation.

Example 2, myIpMultiPartyCallControlManager may implement the IpMultiPartyCallControlManager interface. If so, myIpMultiPartyCallControlManager may receive multiple createNotification method invocations, and will generate a single assignment ID per request that is unique within the context of myIpMultiPartyCallControlManager. myIpMultiPartyCallControlManager may also receive changeNotification or destroyNotification methods that will contain an assignment ID used to correlate these methods with the original createNotification method.

The assignment ID is identical to a TpInt32 type.

5.1.9 TpSessionID

Defines a session ID with a value that is at least unique within the context of a specific ~~implementation-instance~~ instance of an ~~interface~~ SCF. An instance of an SCF is a single service manager instance plus the associated subordinate instances. For example, a single MultiPartyCallControlManager instance plus all associated MultiPartyCall and MultiPartyCallLeg instances. This session ID is used to identify different sessions (e.g. different call or call leg sessions) of an interface capable of handling multiple sessions.

Example 1, myCallObject may implement the IpCall interface. If so, myCallObject may handle multiple call sessions, and each call session will be identified by a call session ID value (e.g. 1, 2, 3) that is unique within the context of the SCF instance ~~myCallObject~~.

Example 2, myCallAndCallLegObject may implement the IpCall and IpCallLeg interfaces. If so, myCallAndCallLegObject may handle multiple call sessions and multiple call leg sessions. Each call session will be identified by a call session ID value (e.g. 1, 2, 3) that is unique within the context of the SCF instance ~~myCallAndCallLegObject~~. Similarly, each call leg session will be identified by a call leg session ID value (e.g. 1, 2, 3, 4, 5, 6) that is also unique within the context of the SCF instance ~~myCallAndCallLegObject~~. Because call session IDs and call leg session IDs are different data types, overlapping values are permitted and their uniqueness still remains.

The session ID is identical to a TpInt32 type.

CHANGE REQUEST

⌘ **29.198-02 CR 019** ⌘ rev **-** ⌘ Current version: **4.4.0** ⌘

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

Title:	⌘ Deprecate P_ADDRESS_PLAN_MSMAIL				
Source:	⌘ CN5				
Work item code:	⌘ OSA2	Date:	⌘ 24/05/2002		
Category:	⌘ F	Release:	⌘ REL-5		
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:		
	F (correction)		2 (GSM Phase 2)		
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)		
	B (addition of feature),		R97 (Release 1997)		
	C (functional modification of feature)		R98 (Release 1998)		
	D (editorial modification)		R99 (Release 1999)		
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		REL-4 (Release 4)		
			REL-5 (Release 5)		

Reason for change:	⌘ P_ADDRESS_PLAN_MSMAIL is identical to P_ADDRESS_PLAN_SMTP and it's technology specific				
Summary of change:	⌘ P_ADDRESS_PLAN_MSMAIL is deprecated from TpAddressPlan and TpAddress				
Consequences if not approved:	⌘ Keeping P_ADDRESS_PLAN_MSMAIL will cause confusion, as it's identical to P_ADDRESS_PLAN_SMTP. Also, it will mean that the otherwise technology neutral specs will be technology specific				

Clauses affected:	⌘ 5.6.1, 5.6.5				
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications	⌘	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> Test specifications				
	<input type="checkbox"/> 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.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 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.

5.6.1 TpAddress

Defines the Sequence of Data Elements that specify an address.

Sequence Element Name	Sequence Element Type
Plan	<u>TpAddressPlan</u>
AddrString	<u>TpString</u>
Name	<u>TpString</u>
Presentation	<u>TpAddressPresentation</u>
Screening	<u>TpAddressScreening</u>
SubAddressString	<u>TpString</u>

The AddrString defines the actual address information and the structure of the string depends on the Plan. The following table gives an overview of the format of the AddrString for the different address plans.

Address Plan	AddrString Format Description	Example
P_ADDRESS_PLAN_NOT_PRESENT	Not applicable	
P_ADDRESS_PLAN_UNDEFINED	Not applicable	
P_ADDRESS_PLAN_IP	For Ipv4 the dotted quad notation is used. Also for IPv6 the dotted notation is used. The address can optionally be followed by a port number separated by a colon.	"127.0.0.1:42"
P_ADDRESS_PLAN_MULTICAST	An Ipv4 class D address or Ipv6 equivalent in dotted notation.	"224.0.0.0"
P_ADDRESS_PLAN_UNICAST	A non-multicast or broadcast IP address in dotted notation.	"127.0.0.1"
P_ADDRESS_PLAN_E164	An international number without the international access code, including the country code and excluding the leading zero of the area code.	"31161249111"
P_ADDRESS_PLAN_AESA	The ATM End System Address in binary format (40 bytes)	01234567890ABCDEF01234567890ABCDEF01234567
P_ADDRESS_PLAN_URL	A uniform resource locator as defined in IETF RFC 1738 [6]	"http://www.parlay.org"
P_ADDRESS_PLAN_NSAP	The binary representation of the Network Service Access Point	490001AA000400010420
P_ADDRESS_PLAN_SMTP	An e-mail address as specified in IETF RFC822 [7]	"webmaster@parlay.org"
P_ADDRESS_PLAN_MSMAIL	Identical to P_ADDRESS_PLAN_SMTP	"john.doe@hitech.com"
P_ADDRESS_PLAN_X400	The X400 address structured as a set of attribute value pairs separated by semicolons.	"C=nl;ADMD=;PRMD=uninet;O=parlay;S=Doe;I=S;G=John"
P_ADDRESS_PLAN_SIP (Note 1)	A valid SIP address string	sip:user@parlay.org <sip:enquiries@1.2.3.4:5060> Enquiries
P_ADDRESS_PLAN_ANY (Note 2)	Not applicable	

NOTE 1: It should be noted that two SIP addresses will be regarded as equivalent by a gateway if they correspond to the same user at the same network address. The textual form of the two addresses need not be the same. For example, sip:enquiries@parlay.org will be deemed to match <sip:Enquiries@1.2.3.4:5060>Enquiries (if parlay.org resolves to 1.2.3.4).

NOTE 2: This is only to be used with TpAddressRange

5.6.2 TpAddressSet

Defines a Numbered Set of Data Elements of TpAddress.

5.6.3 TpAddressPresentation

Defines whether an address can be presented to an end user.

Name	Value	Description
P_ADDRESS_PRESENTATION_UNDEFINED	0	Undefined
P_ADDRESS_PRESENTATION_ALLOWED	1	Presentation Allowed
P_ADDRESS_PRESENTATION_RESTRICTED	2	Presentation Restricted
P_ADDRESS_PRESENTATION_ADDRESS_NOT_AVAILABLE	3	Address not available for presentation

5.6.4 TpAddressScreening

Defines whether an address can be presented to an end user.

Name	Value	Description
P_ADDRESS_SCREENING_UNDEFINED	0	Undefined
P_ADDRESS_SCREENING_USER_VERIFIED_PASSED	1	user provided address verified and passed
P_ADDRESS_SCREENING_USER_NOT_VERIFIED	2	user provided address not verified
P_ADDRESS_SCREENING_USER_VERIFIED_FAILED	3	user provided address verified and failed
P_ADDRESS_SCREENING_NETWORK	4	Network provided address (see Note)
NOTE:	Even though the application may provide the address to the gateway, from the end-user point of view it is still regarded as a network provided address.	

5.6.5 TpAddressPlan

Defines the address plan (or numbering plan) used. It is also used to indicate whether an address is actually defined in a TpAddress data element.

Name	Value	Description
P_ADDRESS_PLAN_NOT_PRESENT	0	No Address Present
P_ADDRESS_PLAN_UNDEFINED	1	Undefined
P_ADDRESS_PLAN_IP	2	IP
P_ADDRESS_PLAN_MULTICAST	3	Multicast
P_ADDRESS_PLAN_UNICAST	4	Unicast
P_ADDRESS_PLAN_E164	5	E.164
P_ADDRESS_PLAN_AESA	6	AESA
P_ADDRESS_PLAN_URL	7	URL
P_ADDRESS_PLAN_NSAP	8	NSAP
P_ADDRESS_PLAN_SMTP	9	SMTP
<<deprecated>> P_ADDRESS_PLAN_MSMAIL (see Note)	10	Microsoft Mail
P_ADDRESS_PLAN_X400	11	X.400
P_ADDRESS_PLAN_SIP	12	SIP
P_ADDRESS_PLAN_ANY	13	Any address plan is deemed to match (This is only used for TpAddressRange)

NOTE: This value is not to be used in the scope of 3GPP.

For the case where the P_ADDRESS_PLAN_NOT_PRESENT and P_ADDRESS_PLAN_ANY are indicated, the rest of the information in the TpAddress is not valid.

CHANGE REQUEST

⌘ **29.198-02 CR 020** ⌘ rev **-** ⌘ Current version: **4.4.0** ⌘

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

Title:	⌘ Addition of support for an Exception Hierarchy		
Source:	⌘ CN5		
Work item code:	⌘ OSA2	Date:	⌘ 24/05/2002
Category:	⌘ B	Release:	⌘ REL-5
	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.		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:	⌘ To introduce an exception hierarchy for those OSA realisations wishing to support one, thus permitting "cleaner", programmer friendly method signatures that raise fewer exceptions.
Summary of change:	⌘ Exception hierarchy added.
Consequences if not approved:	⌘ OSA realisations unable to utilise an exception hierarchy would have to support method signature which may raise many detailed exceptions, all of which would have to be handled by the programmer even if he/she did not want to. This would lead to longer and more expensive software development times.

Clauses affected:	⌘ A (new)		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

How to create CRs using this form:

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- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 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.

Annex A (normative): Exception Hierarchy

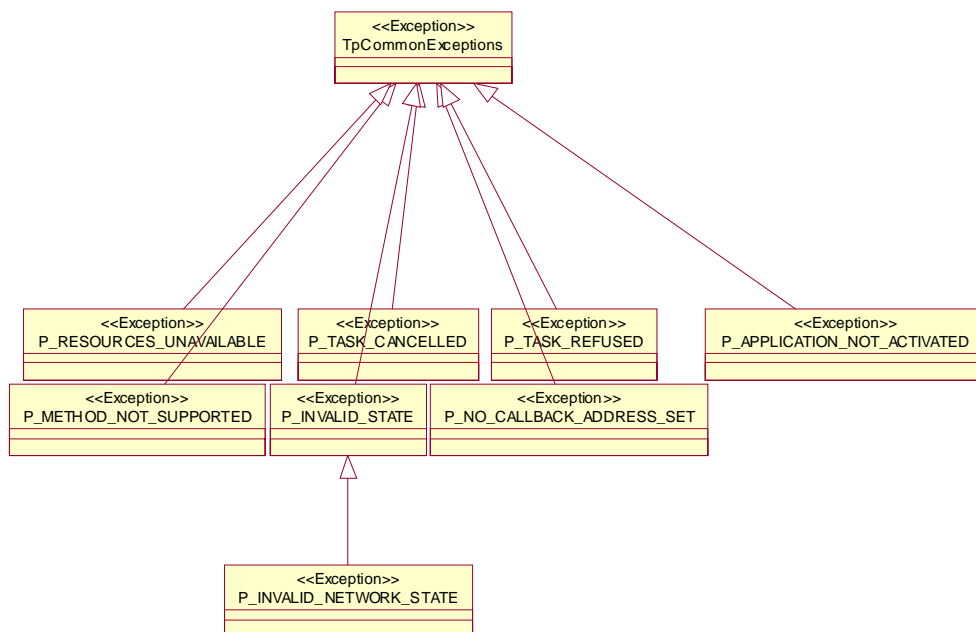
This clause arranges the OSA exceptions as a set of hierarchies that, depending upon the technology realisation, may or may not be utilised to simplify method signatures and software developers' code.

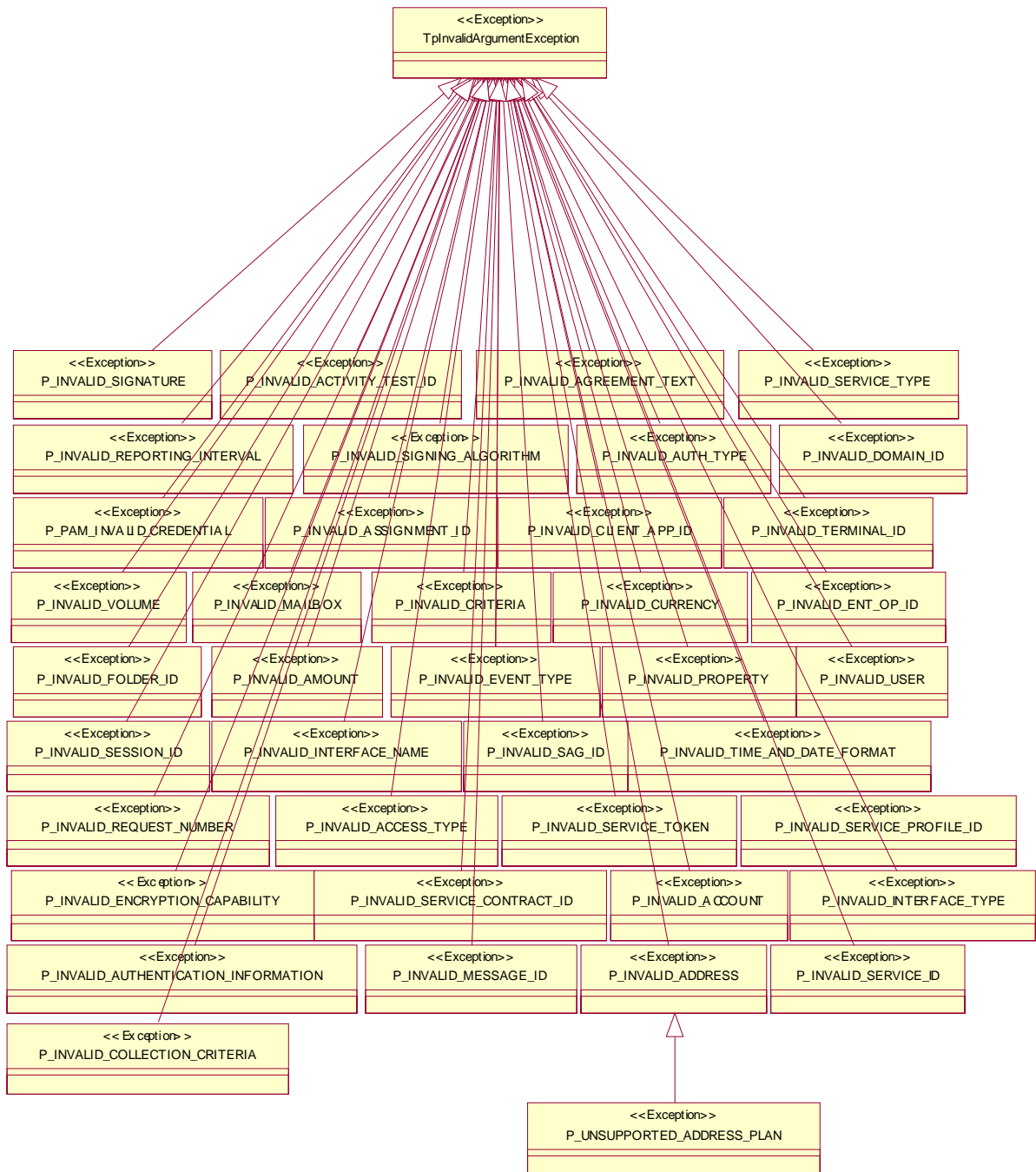
If the exception hierarchy is used in a particular realisation, the following lists all the OSA abstract exceptions:

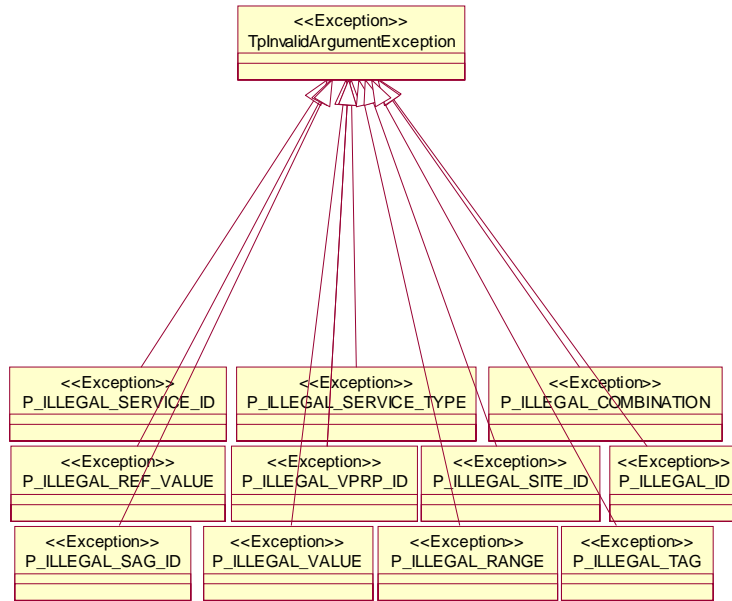
- TpCommonExceptions
- TpInvalidArgumentException
- TpDataSessionException
- TpAccountException
- TpConnectivityException
- TpFrameworkException
- TpMobilityException
- TpMessagingException
- TpPamException
- TpPolicyException

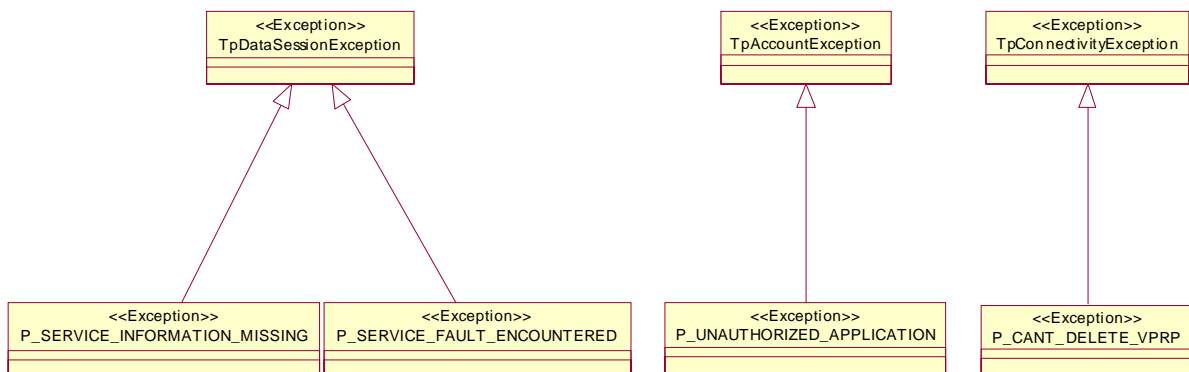
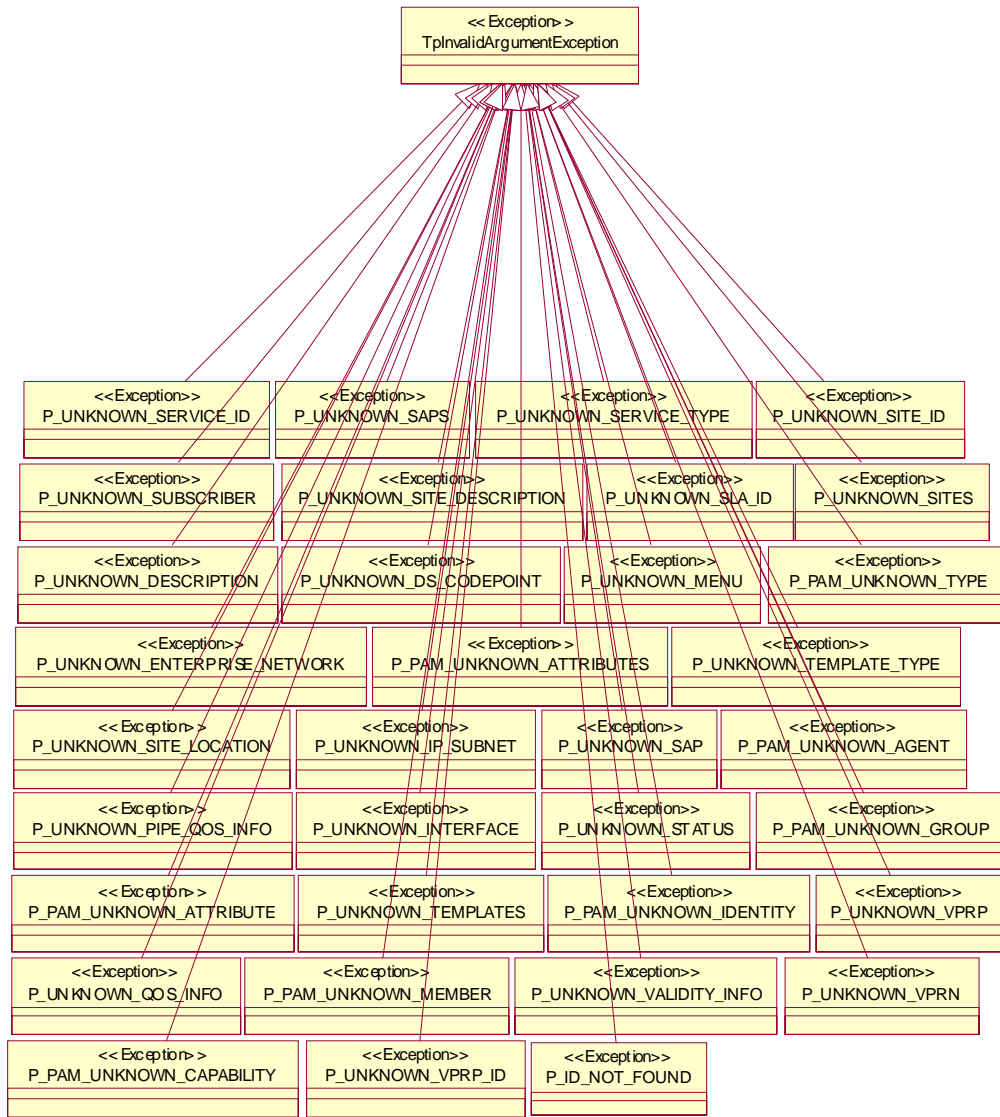
If the exception hierarchy is being used in a particular realisation, these abstract exceptions are the only types of exceptions that may be raised by the OSA methods. All abstract exceptions should be packaged in the org.csapi namespace.

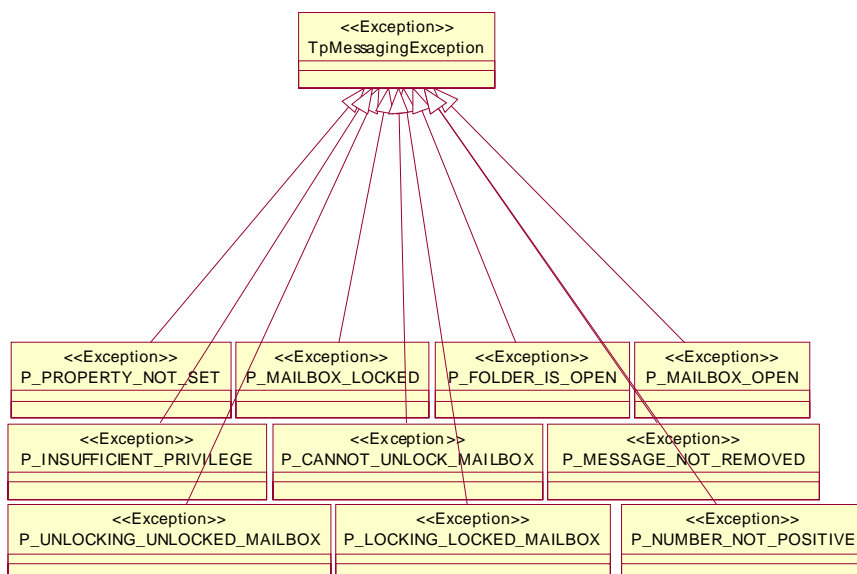
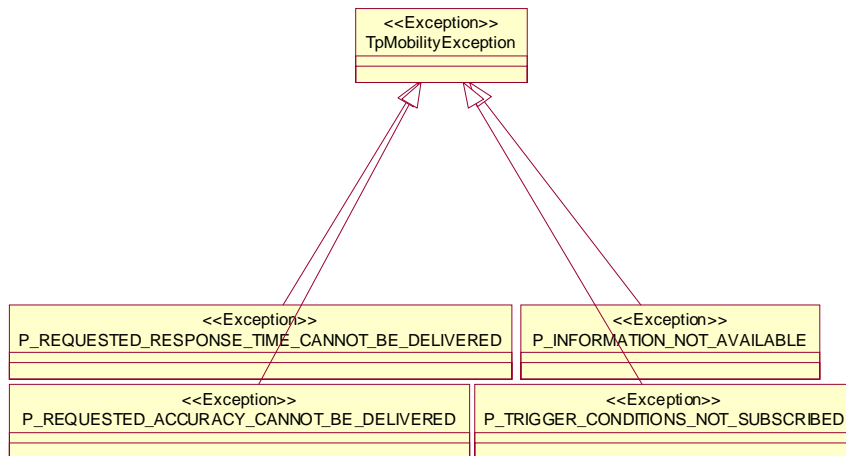
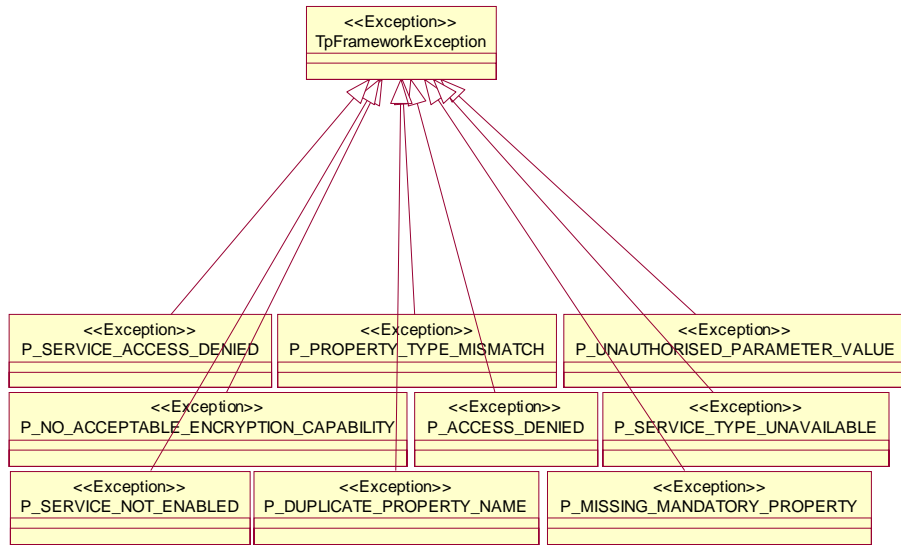
The following diagrams show all the OSA detailed exceptions, and how they relate to the abstract exceptions shown previously. If the exception hierarchy is being used in a particular realisation, the detailed exceptions should not be part of any of the OSA method signatures. If an OSA method needs to raise a detailed exception, it is done so by raising the corresponding abstract exception. It should be noted that for those OSA methods that raise TpCommonExceptions, the P_RESOURCES_UNAVAILABLE, P_TASK_CANCELLED, P_TASK_REFUSED, P_METHOD_NOT_SUPPORTED, P_INVALID_STATE and P_NO_CALLBACK_ADDRESS_SET detailed exceptions should be raised by raising the TpCommonExceptions abstract exception.

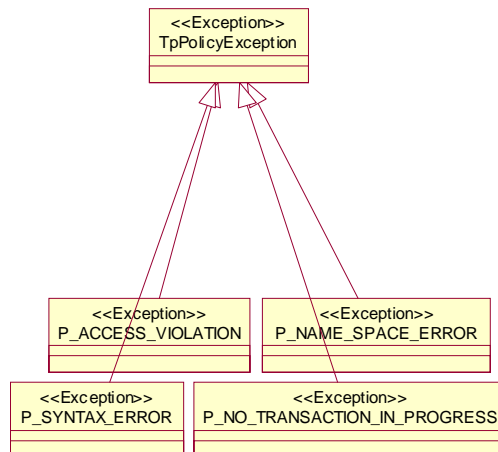
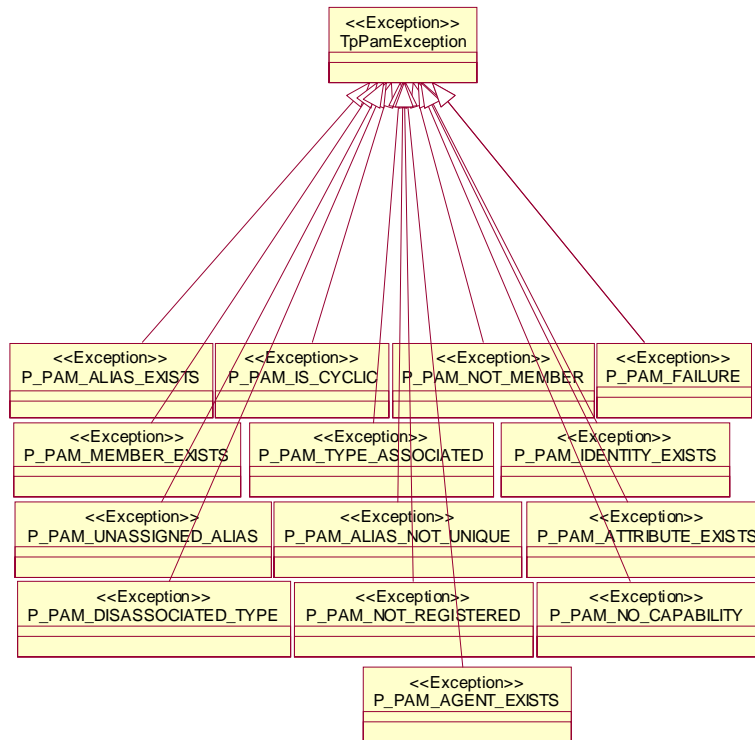












CHANGE REQUEST

⌘ **29.198-02 CR 021** ⌘ rev **-** ⌘ Current version: **4.4.0** ⌘

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

Title:	⌘ Addition of type TpVersion in common data		
Source:	⌘ CN5		
Work item code:	⌘ OSA2	Date:	⌘ 24/05/2002
Category:	⌘ B	Release:	⌘ REL-5
	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 .		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:	⌘ To support backward compatibility it is required for the client to indicate the required version to the server. A datatype capturing this version is therefore required. Furthermore an exception is required to deal with illegal version numbers.
Summary of change:	⌘ Addition of type TpVersion that maps to a TpString with additional syntax and an exception (P_INVALID_VERSION)).
Consequences if not approved:	⌘ Lack of interoperability because clients do not have a standardized way to indicated the required version to the server.

Clauses affected:	⌘ 5.1, 5.4.4		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

How to create CRs using this form:

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- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 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.

Changes to 29.198-02 v4.4.0 are listed below.

5.1.16 TpVersion

This data type is identical to TpString. It is used to uniquely identify the implemented version of the framework or an SCF. The syntax for this datatype is defined as:

P_<publishing body>_<version number>

Where:

<publishing body> is one of the strings listed in the table below.

<u>Character String Value</u>	<u>Description</u>
<u>PARLAY</u>	<u>Specification released by The Parlay Group.</u>
<u>ETSI</u>	<u>Specification released by ETSI.</u>
<u>3GPP</u>	<u>Specification released by 3GPP.</u>

<version number> consists of numbers separated by underscores (e.g. 3_1). It is recommended that not more than the two most significant numbers (major and minor version) of the version are used.

Examples of version strings are:

<u>Character String Value</u>	<u>Description</u>
<u>P_PARLAY_3_1</u>	<u>Parlay v3.1</u>
<u>P_ETSI_2_0</u>	<u>ETSI v2.0</u>
<u>P_3GPP_4_3</u>	<u>3GPP Release 4.3</u>

Note that different version strings can be aliases of each other all pointing to the same SCF/Framework version.

5.4.4 Exceptions available to all methods on all interfaces

The following are the list of exception classes which are available to all interfaces of the API.

Name	Description
P_APPLICATION_NOT_ACTIVATED	An application is unauthorised to access information and request services with regards to users that have deactivated that particular application. In case the request was for information related to multiple user identities the reference to user identities that are causing this exception will be returned in the extra information of the exception.
P_INFORMATION_NOT_AVAILABLE	The requested information is not available. A reason might be that the information is unavailable in the core network or that the application is unauthorised to access the information. An application is unauthorised to access information and request services with regards to users that have set their privacy flag regarding that particular service. In case the request was for information related to multiple user identities, the reference to user identities that are causing this exception will be returned in the extra information of the exception.
P_INVALID_ADDRESS	Invalid address specified
P_INVALID_AMOUNT	Invalid amount specified.
P_INVALID_ASSIGNMENT_ID	The assignment ID is invalid
P_INVALID_CRITERIA	Invalid criteria specified
P_INVALID_CURRENCY	Invalid currency specified.
P_INVALID_EVENT_TYPE	Invalid event type
P_INVALID_INTERFACE_NAME	Invalid interface name
P_INVALID_INTERFACE_TYPE	The interface reference supplied by the client is the wrong type.
P_INVALID_NETWORK_STATE	Although the sequence of method calls is allowed by the gateway, the underlying protocol can not support it. E.g., in some protocols some methods are only allowed by the protocol, when the call processing is suspended, e.g., after reporting an event that was monitored in interrupt mode.
P_INVALID_SESSION_ID	Invalid session ID.
P_INVALID_TIME_AND_DATE_FORMAT	Invalid date and time format provided
P_SET_LENGTH_EXCEEDED	The maximum set size is exceeded in a method parameter value.
P_UNAUTHORISED_PARAMETER_VALUE	A method parameter value violates the Service Level Agreement
P_UNKNOWN_SUBSCRIBER	The subscriber is not known in the network or the application is An application is unauthorised to access information and request services with regards to users that are not subscribed to the application. In case the request was for information related to multiple user identities, the reference to user identities that are causing this exception will be returned in the extra information of the exception.
P_UNSUPPORTED_ADDRESS_PLAN	An address contains an address plan which is not supported
P_INVALID_VERSION	An invalid version is specified.