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

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	Spec	CR	R	Pha	Subject	Cat	Ver	Ver	Doc-2 nd	Work
-Level	-		v				Curr	New	-Level	item
NP-020185	29.198-02	011	-	Rel-5	Allowing the use of tel URL in TpAddressPlan	В	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	В	4.4.0	5.0.0	N5-020512	OSA2
NP-020185	29.198-02	021	-	Rel-5	Addition of type TpVersion in common data	В	4.4.0	5.0.0	N5-020513	OSA2

joint API grou Meeting #17,	up (Parlay, ETSI Project OSA, 3GPP TSG_CN WG5) , Sophia Antipolis, FRANCE, 8 – 12 April 2002	N5-020303
	CHANGE REQUEST	CR-Form-v5
ж	29.198-02 CR 011 #rev - [#] Current version:	4.4.0 [#]
For <u>HELP</u> of	on using this form, see bottom of this page or look at the pop-up text over the	he X symbols.
Proposed char	ange affects: \$\$ (U)SIM ME/UE Radio Access Network	Core Network X
Title:	Comparison of the URL in TpAddressPlan	
Source:	ж CN5	
Work item cod	de:ቹ OSA2 Date: [#] 30/05	5/2002
Category:	Image: Solution of the following categories: Use one of the following categories: Use one of the follo Image: Solution of F (correction) 2 (GSM F Image: A (corresponds to a correction in an earlier release) R96 (Release) Image: B (addition of feature), R97 (Release) Image: B (addition of feature), R98 (Release) Image: D (editorial modification) R99 (Release) Image: D (editorial modification) R10 (Release) Image: D (editorial modification) R10 (Release) Image: D (editorial modification) R20 (Release) Image: D (editorial modification)	5 wing releases: Phase 2) Se 1996) Se 1997) Se 1998) Se 1999) Se 4) Se 5)
Reason for cha	hange: # The current description of the P_ADDRESS_PLAN_SIP doesn't URL schemes which are allowed in SIP	contain all the
Summary of cl	change:# Expand the description of the P_ADDRESS_PLAN_SIP to contain schemes allowed in RFC 3261	in all the URL
Consequences not approved:	es if % Other URL schemes e.g. tel URL in SIP will not be supported in t	the SCS
Clauses affect	ted: [#]	
Other specs affected:	% Other core specifications % Test specifications 0&M Specifications	
Other commen	ents: [#]	

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 <u>ftp://ftp.3gpp.org/specs/</u> 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=nl;ADMD=;PRMD=uninet; O=parlay;S=Doe;I=S;G=John'
P_ADDRESS_PLAN_SIP (Note 1)	Any valid SIPaddress string allowed in RFC 3261 "SIP: Session	sip:user@parlay.org
	Initiation Protocol"	tel:+358-555-1234567;postd=pp22
		<sip:enquiries@1.2.3.4:5060></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@l.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	SIPAny 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 <code>P_ADDRESS_PLAN_NOT_PRESENT</code> and <code>P_ADDRESS_PLAN_ANY</code> are indicated, the rest of the information in the <code>TpAddress</code> is not valid.

joint API group Meeting #17, Sc	(Parlay ophia Ai	, ETSI ntipolis	Project 5, FRAN	OSA, 30 CE, 8 –	3PP 12 A	TSG pril 2	_CN 2002	I WG5) 2		N5	-020286
			CHAN	IGE RI	EQI	JES	ST				CR-Form-v5
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- 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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

5.1.14 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.

joint API group (Par Meeting #18, Budap	lay, ETSI Project OS est, HUNGARY, 13 –	A, 3GPP TSG_CN 17 May 2002	WG5) N5-020363			
CHANGE REQUEST						
[#] 29.19	8-02 CR 013	ж геv - ^{ж Сі}	urrent version: 4.4.0 [#]			
For <u>HELP</u> on using t	this form, see bottom of thi	s page or look at the p	op-up text over the X symbols.			
Proposed change affect		E/UE Radio Acces	ss Network Core Network X			
Title: % Add	dition of undefined Data typ	pes: TpStringList and T	TpStringSet			
Source: # CN	15					
Work item code: # OS	A2		Date:			
Category: # F Use Deta be fo	one of the following categorie F (correction) A (corresponds to a correction B (addition of feature), C (functional modification) illed explanations of the above ound in 3GPP <u>TR 21.900</u> . Alignement with the new Management (PM) and 2 (PAM). As a result of aligning the and 29.198-14, the definit from the PM and PAM sp 29.198-02 the Common I undefined.	R s: on in an earlier release) feature) e categories can OSA Stage 3 specifica 9.198-14 on Presence e data types between the itions for TpStringList a pecifications. However, Data Type specification	Pelease: % REL-5 Use one of the following releases: 2 (GSM Phase 2) R96 R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5) ations 29.198-13 on Policy and Availability Management he OSA specifications 29.198-13 and TpStringSet were removed they have not been added to h. Therefore, currently they are			
Summary of change: #	Addition of data type defi	nitions for TpStringList	t and ToStringSet.			
Consequences if % not approved:	Undefined data types.					
Clauses affected: #	5.1.8, 5.1.9, 5.1.10					
Other specs ж affected:	Other core specification Test specifications O&M Specifications	ons ¥				
Other comments: #						

- 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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

**** 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 <u>TpInt32</u> type.

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- 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.

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

joint API group (Parlay, ETSI Project O Meeting #18, Budapest, HUNGARY, 13	SA, 3GPP TSG_CN WG5) N5-020483 – 17 May 2002
CHANG	CR-Form-v5
* 29.198-02 CR 017	# rev - # Current version: 4.4.0 # #
For HELP on using this form, see bottom of t	this page or look at the pop-up text over the % symbols.
Proposed change affects: 第 (U)SIM	ME/UE Radio Access Network Core Network X
Title: # Removal of MIDL	
Source: % CN5	
Work item code: # OSA2	Date: ₩ 17/05/2002
Category: % F Use <u>one</u> of the following categor F (correction) A (corresponds to a correct B (addition of feature), C (functional modification) D (editorial modification) Detailed explanations of the about be found in 3GPP <u>TR 21.900</u> .	Release: % REL-5ories:Use one of the following releases: 2ction in an earlier release)R96R97(Release 1996) R97of feature)R98R98(Release 1998) R99R99(Release 1999)ove categories canREL-4REL-5(Release 5)
Reason for change: % MIDL is never reference confusion	ced anywhere else in the spec and keeping it will cause
Summary of change: # MIDL example is chang	ged to C++ example to be consistent with other examples
Consequences if # MIDL is never reference not approved: confusion	ced anywhere else in the spec and keeping it will cause
Clauses affected: % 5.2.3	
Other specs#Other core specificationsaffected:#Other core specifications0&M Specifications0&M Specifications	ations #
Other comments: ೫	

- 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.

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 <u>TpAddressSet</u> data type may be defined in <u>MIDL_C++</u> as:

typedef struct TpAddressSet
{
 __TpInt32 Number;
 __{size_is(Number)]} TpAddress Set[Number];
}
_TpAddressSet;

joint API group (Pa Meeting #18, Budap	rlay, ETSI Project (best, HUNGARY, 1	OSA, 3GPP 3 – 17 May	7 TSG_CN 2002	WG5)	N5-020487
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Proposed change affect	cts: ೫ (U)SIM	ME/UE	Radio Acces	ss Network	Core Network X
Title: # Re	evise the scope of TpSe	essionID and T	pAssignmen	tID	
Source: ೫ Cl	N5				
Work item code: 🕷 🛛 🕄	SA2			<i>Date:</i>	/05/2002
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	Client Application co	de.			
Summary of change: #	Revise the scope of	TpSessionID a	and TpAssign	mentID	
Consequences if # not approved:	Some methods, such reference. This mean	as callAborte	ed() pass a Tr op will not kno	SessionID wi ow which call I	thout a Call nas aborted.
Clauses affected: #	5.1.9				
Other specs # affected:	Other core specific Test specifications O&M Specification	cations ೫ S IS			
Other comments: #					

How to create CRs using this form: Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. Below is a brief summary:

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downloaded from the 3GPP server under <u>ftp://ftp.3gpp.org/specs/</u> 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.

5.1.8 TpAssignmentID

Defines an assignment ID with a value that is <u>at least</u> 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 <u>TpInt32</u> type.

5.1.9 TpSessionID

Defines a session ID with a value that is <u>at least</u> unique within the context of a specific <u>implementation instance</u> of an <u>interfaceSCF</u>. An instance of an SCF is a single service manager instance plus the associated subordinate instances. For <u>example</u>, a single <u>MultiPartyCallControlManager</u> instance plus all associated <u>MultiPartyCall and MultiPartyCallLeg</u> <u>instances</u>. The <u>is session</u> 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 <u>the</u> <u>SCF instancemyCallObject</u>.

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 <u>the SCF</u> <u>instancemyCallAndCallLegObject</u>. 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 <u>the SCF instancemyCallAndCallLegObject</u>. 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 <u>TpInt32</u> type.

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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.

5.6.1 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)	01234567890ABCDEF01234 567890ABCDEF01234567
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=Joh n'
P_ADDRESS_PLAN_SIP (Note 1)	A valid SIP address string	sip:user@parlay.org
		<sip:enquiries@1.2.3.4:5060> Enquiries</sip:enquiries@1.2.3.4:5060>
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 <u>TpAddress</u>.

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

I

Defines the address plan (or numbering plan) used. It is also used to indicate whether an address is actually defined in a <u>TpAddress</u> 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
<pre><<deprecated>>_P_ADDRESS_PLAN_MSMAIL (see Note)</deprecated></pre>	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.

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<u>Annex A (normative):</u> 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

<u>P METHOD NOT SUPPORTED, P INVALID STATE and P NO CALLBACK ADDRESS SET detailed</u> exceptions should be raised by raising the TpCommonExceptions abstract exception.



















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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.

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

<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:

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