3GPP TSG CN Plenary Meeting #16 **NP-020184**
5th - 7th June 2002. Marco Island, USA.

Source: **CN5 (OSA)**

Title: **Rel-5 CRs 29.198-01 OSA API Part 1: Overview**

Agenda item: **8.2**

Document for: **APPROVAL**

Doc-1st -Level	Spec	CR	Rv	Pha	Subject	Cat	Ver Curr	Ver New	Doc-2nd -Level	Work item
NP-020184	29.198-01	007	-	Rel-5	Adding the full naming convention for exceptions	F	4.3.1	5.0.0	N5-020493	OSA2
NP-020184	29.198-01	008	-	Rel-5	Correction of References in OSA specifications	F	4.3.1	5.0.0	N5-020506	OSA2
NP-020184	29.198-01	009	-	Rel-5	Addition of text describing the technology realisations of the Parlay/OSA specification	D	4.3.1	5.0.0	N5-020520	OSA2

joint API group (Parlay, ETSI Project OSA, 3GPP TSG_CN WG5) **N5-020493**
Meeting #18, Budapest, HUNGARY, 13 – 17 May 2002

CR-Form-v5

CHANGE REQUEST

⌘ **29.198-01** **CR** **007** ⌘ **rev** **-** ⌘ Current version: **4.3.1** ⌘

*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:	⌘	Adding the full naming convention for exceptions
Source:	⌘	CN5
Work item code:	⌘	OSA2
Date:	⌘	30/05/2002
Category:	⌘	**F**
Release:	⌘	*REL-5*

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 section listing the naming conventions for exceptions only shows the TpClassNameEndsWithException format. However, the majority of the exceptions used in the specification are of the format: P_UPPER_CASE_WITH_UNDERSCORES_AND_START_WITH_P
Summary of change:	⌘	Update 6.4 to give full naming convention for exceptions.
Consequences if not approved:	⌘	The specification is incomplete as it fails to give readers the correct naming convention.

Clauses affected:	⌘	6.4
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ 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.

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.

6.4 Naming scheme

The following naming scheme is used for documentation.

packages:

lowercase.

Using the domain-based naming (For example, org.csapi)

classes, structures and types. Start with T:

TpCapitalizedWithInternalWordsAlsoCapitalized

Exception class:

TpClassNameEndsWithException and
P_UPPER_CASE_WITH_UNDERSCORES_AND_START_WITH_P

Interface. Start with Ip:

IpThisIsAnInterface

constants:

P_UPPER_CASE_WITH_UNDERSCORES_AND_START_WITH_P

methods:

firstWordLowerCaseButInternalWordsCapitalized()

method's parameters:

firstWordLowerCaseButInternalWordsCapitalized

collections (set, array or list types):

TpCollectionEndsWithSet

class/structure members:

FirstWordAndInternalWordsCapitalized

Spaces in between words are not allowed.

joint API group (Parlay, ETSI Project OSA, 3GPP TSG_CN WG5) **N5-020506**
Meeting #18, Budapest, HUNGARY, 13 – 17 May 2002

CR-Form-v5

CHANGE REQUEST

⌘ **29.198-01** **CR** **008** ⌘ **rev** **-** ⌘ Current version: **4.3.1** ⌘

*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 References in OSA specifications
Source:	⌘	CN5
Work item code:	⌘	OSA2
Date:	⌘	30/05/2002
Category:	⌘	**F**
Release:	⌘	*REL-5*

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)*
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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:	⌘	References in OSA are carried in TS 29.198-1. Some of these are not sufficiently precise and others endorse particular products. WAP references need to be updated to WAP 2.0 for Release-5, and existing Release-4 reference restrictions need to be removed
Summary of change:	⌘	Correction of references, removal of potential product endorsements, update of references for Release-5
Consequences if not approved:	⌘	References may not be sufficient to correctly identify the intended document, or may refer to the wrong document. Some readers may interpret some references as endorsement by 3GPP of particular products or software tools.

Clauses affected:	⌘	
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ 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.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications~~3G Vocabulary~~".

[2] 3GPP TS 22.127: "Service Requirement for the Open Services Access (OSA)"~~Stage 1 Service Requirement for the Open Service Access (OSA) (Release 5~~4)".

[3] 3GPP TS 23.127: "Virtual Home Environment / Open Service Access (OSA) " ~~(Release 5~~4)".

[4] 3GPP TS 23.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL); ~~CAMEL Phase 3, S~~stage 2".

[5] 3GPP TS 22.101: "~~Universal Mobile Telecommunications System (UMTS): ~~Service Aspects; Service Principles".

[6] World Wide Web Consortium "Composite Capability/Preference Profiles (CC/PP): A user side framework for content negotiation" (http://www.w3.org/TR/NOTE-CCPP/).~~World Wide Web Consortium Composite Capability/Preference Profiles (CC/PP): A user side framework for content negotiation (www.w3.org).~~

[7] 3GPP TS 29.002: "Mobile Application Part (MAP) specification ~~Mobile Application Part (MAP)~~".

[8] 3GPP TS 29.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL); CAMEL Application Part (CAP) specification ~~CAMEL Phase 3, , CAMEL Application Part (CAP) Specification~~".

[9] Wireless Application Protocol (WAP), Version 2.0: "User Agent Profiling Specification" (WAP-248) (http://www.wapforum.org/what/technical.htm).~~Wireless Application Protocol (WAP), Version 1.2, UAProf Specification (www.wapforum.org).~~

[10] Wireless Application Protocol (WAP), Version 2.0: "WAP Service Indication Specification" (WAP-167) (http://www.wapforum.org/what/technical.htm).~~Wireless Application Protocol (WAP), version 1.2, WAP Service Indication specification, (www.wapforum.org).~~

[11] Wireless Application Protocol (WAP), Version 2.0: "Push Architectural Overview" (WAP-250) (http://www.wapforum.org/what/technical.htm).~~Wireless Application Protocol (WAP), version 1.2, WAP Push Architecture Overview (www.wapforum.org).~~

[12] Wireless Application Protocol (WAP), Version 2.0: "Wireless Application Protocol Architecture Specification" (WAP-210) (http://www.wapforum.org/what/technical.htm).~~Wireless Application Protocol (WAP), version 1.2, WAP Architecture (www.wapforum.org).~~

[13] ~~SUN~~ IDL to Java Compiler (http://www.javasoft.com/products/jdk/idl/index.html).

[14] UML Unified Modelling Language (http://www.omg.org~~www.rational.com~~/uml).

[15] Object Management Group (http://www.omg.org).

[16] 3GPP TS 22.002: "Circuit Bearer Services (BS) supported by a Public Land Mobile Network (PLMN)~~Circuit Bearer Services supported by a PLMN~~".

[17] 3GPP TS 22.003: "Circuit Teleservices supported by a Public Land Mobile Network (PLMN) ~~Circuit Teleservices supported by a PLMN~~".

[18] 3GPP TS 24.002: "GSM - UMTS Public Land Mobile Network (PLMN) Access Reference Configuration~~Public Land Mobile Network (PLMN) Access Reference Configuration~~".

[19] ITU-T Q.763: "Signalling System No. 7 – ISDN user part formats and codes".

[20] ITU-T Q.931: "ISDN user-network interface layer 3 specification for basic call control".

[21] ISO 8601: "Data elements and interchange formats -- Information interchange -- Representation of dates and times".

[22] ISO 4217: "Codes for the representation of currencies and funds".

[23] 3GPP TS 22.121: "Service aspects; The Virtual Home Environment; Stage 1 ~~(Release 5)~~".

[24] http://www.parlay.org

[25] http://www.java.sun.com/products/jain

[26] 3GPP TS 23.057: ~~"Mobile Station Application Execution Environment (MExE)".~~Mobile Execution Environment (MExE); Functional Description; Stage 2".

joint API group (Parlay, ETSI Project OSA, 3GPP TSG_CN WG5) **N5-020520**
Meeting #18, Budapest, HUNGARY, 13 – 17 May 2002

CR-Form-v5

CHANGE REQUEST

⌘ **29.198-01** **CR** **009** ⌘ **rev** **-** ⌘ Current version: **4.3.1** ⌘

*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:	⌘	Addition of text describing the technology realisations of the Parlay/OSA specification
Source:	⌘	CN5
Work item code:	⌘	OSA2 ***Date:*** ⌘ 27/05/2002
Category:	⌘	**D** ***Release:*** ⌘ *REL-5*

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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:	⌘	No clear text explaining the relationship between the Parlay/OSA UML, the technology realisations, and the Parlay/OSA implementations.
Summary of change:	⌘	Text introduced explaining the relationship between the Parlay/OSA UML, the technology realisations, and the Parlay/OSA implementations.
Consequences if not approved:	⌘	Ambiguous understanding on how the Parlay/OSA UML, the technology realisations, and the Parlay/OSA implementations relate.

Clauses affected:	⌘	5
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

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5 Structure of the OSA API (29.198) and Mapping (29.998) documents

The Open Service Access (OSA) Application Programming Interface (API) specifications consist of two sets of documents:

API specification (3GPP TS 29.198)
The Parts of 29.198 - apart from Part 1 (the present document) and Part 2 - define the interfaces, parameters and state models that belong to the API specification. UML (Unified Modelling Language) is used to specify the interface classes.
As such it provides a UML interface class description of the methods (API calls) supported by that interface and the relevant parameters and types. The interfaces are specified in IDL (Interface Description Language).

Mapping specification of the OSA APIs and network protocols (3GPP TR 29.998)
The Parts of 29.998 contain a possible mapping from the APIs defined in 29.198 to various network protocols (i.e. MAP [7], CAP [8], etc.). It is an informative document, since this mapping is considered as implementation- / vendor-dependent. On the other hand this mapping will provide potential service designers with a better understanding of the relationship of the OSA API interface classes and the behaviour of the network associated to these interface classes.

The purpose of the OSA API is to shield the complexity of the network, its protocols and specific implementation from the applications. This means that applications do not have to be aware of the network nodes, a Service Capability Server interacts with, in order to provide the SCFs to the application. The specific underlying network and its protocols are transparent to the application.

The **API specification** (3GPP TS 29.198) is structured in the following Parts:

29.198-1	Part 1:	Overview
29.198-2	Part 2:	Common Data Definitions
29.198-3	Part 3:	Framework
29.198-4	Part 4:	Call Control SCF
29.198-5	Part 5:	User Interaction SCF
29.198-6	Part 6:	Mobility SCF
29.198-7	Part 7:	Terminal Capabilities SCF
29.198-8	Part 8:	Data Session Control SCF
29.198-9	Part 9:	Generic Messaging SCF
29.198-10	Part 10:	Connectivity Manager SCF
29.198-11	Part 11:	Account Management SCF
29.198-12	Part 12:	Charging SCF

The **Mapping specification of the OSA APIs and network protocols** (3GPP TR 29.998) is also structured as above. A mapping to network protocols is however not applicable for all Parts, but the numbering of Parts is kept.
Also in case a Part is not supported in a Release, the numbering of the parts is maintained.

Structure of the Parts of 29.198

The Parts with API specification themselves are structured as follows:

- The Sequence diagrams give the reader a practical idea of how each of the SCF is implemented.
- The Class relationships clause shows how each of the interfaces applicable to the SCF, relate to one another.
- The Interface specification clause describes in detail each of the interfaces shown within the Class diagram part.
- The State Transition Diagrams (STD) show the progression of internal processes either in the application, or Gateway.
- The Data definitions clauses show a detailed expansion of each of the data types associated with the methods within the classes. It is to be noted that some data types are used in other methods and classes and are therefore defined within the Common Data types part of this specification.
- ~~IDL description of the interface (normative Annex).~~

The OSA API is defined using UML and as such is technology independent. OSA can be realised in a number of ways and in addition to the UML defined OSA API, the OSA specification includes:

- A normative annex with the OSA API in IDL that specifies the CORBA distribution technology realisation
- An informative annex with the OSA API in WSDL that specifies the SOAP/HTTP distribution technology realisation
- An informative annex that references the OSA API in Java (known as JAIN™ Service Provider API) that specifies the Java local API technology realisation