SLOVENSKI STANDARD
SIST ES 201 915-1 V1.4.1:2005

01-januar-2005

Odprti dostop do storitve (OSA) – Vmesnik za aplikacijsko programiranje (API) – 1. del: Pregled

Open Service Access (OSA); Application Programming Interface (API); Part 1: Overview

Ta slovenski standard je istoveten z: ES 201 915-1 Version 1.4.1

ICS:

33.040.01	Telekomunikacijski sistemi na splošno	Telecommunication systems in general

SIST ES 201 915-1 V1.4.1:2005 **en**

ETSI ES 201 915-1 V1.4.1 (2003-07)

ETSI Standard

Open Service Access (OSA);
Application Programming Interface (API);
Part 1: Overview
(Parlay 3)

Reference
RES/SPAN-120095-1

Keywords
API, OSA, IDL, UML

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Sous-Préfecture de Grasse (06) N° 7803/88

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Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN).

The present document is part 1 of a multi-part deliverable covering Open Service Access (OSA); Application Programming Interface (API), as identified below. The API specification (ES 201 915) is structured in the following parts:

Part 1: "Overview";

Part 2: "Common Data Definitions";

Part 3: "Framework";

Part 4: "Call Control SCF";

Part 5: "User Interaction SCF";

Part 6: "Mobility SCF";

Part 7: "Terminal Capabilities SCF";

Part 8: "Data Session Control SCF";

Part 9: "Generic Messaging SCF";

Part 10: "Connectivity Manager SCF";

Part 11: "Account Management SCF";

Part 12: "Charging SCF".

The present document has been defined jointly between ETSI, The Parlay Group (http://www.parlay.org) and the 3GPP, in co-operation with a number of JAIN™ Community (http://www.java.sun.com/products/jain) member companies.

The present document forms part of the Parlay 3.3 set of specifications.

The present document is equivalent to 3GPP TS 29.198-1 V4.3.2 (Release 4).

1 Scope

The present document is part 1 of the Stage 3 specification for an Application Programming Interface (API) for Open Service Access (OSA), and provides an overview of the content and structure of the various parts of the present document, and of the relation to other standards documents.

The OSA specifications define an architecture that enables service application developers to make use of network functionality through an open standardized interface, i.e. the OSA APIs.

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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

[1] ETSI TR 121 905: "Universal Mobile Telecommunications System (UMTS); Vocabulary for 3GPP Specifications (3GPP TR 21.905)".

[2] ETSI TS 122 024: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Description of Charge Advice Information (CAI) (3GPP TS 22.024)".

[3] ITU-T Recommendation Q.850: "Usage of cause and location in the Digital Subscriber Signalling System No. 1 and the Signalling System No. 7 ISDN User Part".

[4] ITU-T Recommendation Q.2931: "Digital Subscriber Signalling System No. 2 - User-Network Interface (UNI) layer 3 specification for basic call/connection control".

[5] ETSI TS 122 101: "Universal Mobile Telecommunications System (UMTS); Service aspects; Service principles (3GPP TS 22.101)".

[6] World Wide Web Consortium: "Composite Capability/Preference Profiles (CC/PP): A user side framework for content negotiation".

NOTE: http://www.w3.org/TR/NOTE-CCPP/.

[7] ETSI TS 129 002: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile Application Part (MAP) specification (3GPP TS 29.002)".

[8] ETSI TS 129 078: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Customized Applications for Mobile network Enhanced Logic (CAMEL); CAMEL Application Part (CAP) specification (3GPP TS 29.078)".

[9] Wireless Application Protocol (WAP) Version 1.2: "User Agent Profiling Specification" (WAP-174).

NOTE: http://www.wapforum.org/what/technical_1_2.htm.

[10] Wireless Application Protocol (WAP) Version 1.2: "WAP Service Indication Specification" (WAP-167).

NOTE: http://www.wapforum.org/what/technical_1_2.htm.

[11] Wireless Application Protocol (WAP) Version 1.2: "Push Architectural Overview" (WAP-165).

NOTE: http://www.wapforum.org/what/technical_1_2.htm.

[12] Wireless Application Protocol (WAP) Version 1.2: "Wireless Application Protocol Architecture Specification" (WAP-100).

NOTE: http://www.wapforum.org/what/technical_1_2.htm.

[13] ETSI TS 122 002: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Circuit Bearer Services (BS) supported by a Public Land Mobile Network (PLMN) (3GPP TS 22.002)".

[14] ETSI TS 122 003: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Circuit Teleservices supported by a Public Land Mobile Network (PLMN) (3GPP TS 22.003)".

[15] ETSI TS 124 002: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); GSM-UMTS Public Land Mobile Network (PLMN) access reference configuration (3GPP TS 24.002)".

[16] ITU-T Recommendation Q.763: "Signalling System No. 7 - ISDN User Part formats and codes".

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

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

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

[20] ISO 639: "Code for the representation of names of languages".

[21] IETF RFC 822: "Standard for the format of ARPA Internet text messages".

[22] IETF RFC 1738: "Uniform Resource Locators (URL)".

[23] ETSI TS 129 198-1: "ETSI TS 129 198 (V3.4.0): "Universal Mobile Telecommunications System (UMTS); Open Service Architecture (OSA) Application Programming Interface (API) - Part 1 (3GPP TS 29.198 version 3.4.0 Release 1999)".".

[24] ETSI TS 129 198 V4 (all parts): "Universal Mobile Telecommunications System (UMTS); Open Service Access (OSA) Application Programming Interface (API); (3GPP TS 29.198 Release 4)".

[25] ETSI TS 123 107: "Universal Mobile Telecommunications System (UMTS); Quality of Service (QoS) concept and architecture (3GPP TS 23.107)".

[26] ETSI TS 123 271:"Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Location Services (LCS); Functional description; Stage 2 (3GPP TS 23.271)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 122 101 [5] and the following apply:

applications: services, which are designed using service capability features

gateway: synonym for Service Capability Server

NOTE 1: From the viewpoint of applications, a Service Capability Server can be seen as a gateway to the core network.

NOTE 2: This is a VASP that has an agreement with the Home Environment to provide services.

Home Environment: responsible for overall provision of services to users

Local Service: service which can be exclusively provided in the current serving network by a Value Added Service Provider

OSA Interface: standardized Interface used by application to access service capability features

Personal Service Environment (PSE): contains personalized information defining how subscribed services are provided and presented towards the user

NOTE: The Personal Service Environment is defined in terms of one or more User Profiles.

Service: alternative for Service Capability Feature (in the present document)

Service Capabilities (SC): bearers defined by parameters, and/or mechanisms needed to realize services

NOTE: These are within networks and under network control.

Service Capability Feature (SCF): functionality offered by service capabilities that are accessible via the standardized OSA interface

Service Capability Server: Functional Entity providing OSA interfaces towards an application

User Interface Profile: contains information to present the personalized user interface within the capabilities of the terminal and serving network

User Profile: label identifying a combination of one user interface profile, and one user services profile

User Services Profile: contains identification of subscriber services, their status and reference to service preferences

Value Added Service Provider: provides services other than basic telecommunications service for which additional charges may be incurred

Virtual Home Environment: concept for personal service environment portability across network boundaries and between terminals

3.2 Abbreviations

For the purposes of the present document, the abbreviations defined in TR 121 905 [1] and the following apply:

API	Application Programming Interface
CAMEL	Customized Application for Mobile Network Enhanced Logic
CSE	Camel Service Environment
HE	Home Environment
HE-VASP	Home Environment Value Added Service Provider
HLR	Home Location Register
IDL	Interface Description Language
INAP	Intelligent Networks Application Part
MAP	Mobile Application Part
ME	Mobile Equipment
MExE	Mobile Station (Application) Execution Environment
MS	Mobile Station
MSC	Mobile Switching Centre
OSA	Open Service Access
PLMN	Public Land Mobile Network
PSE	Personal Service Environment
SAT	SIM Application Tool-Kit
SC	Service Capabilities

SCF	Service Capability Feature
SCP	Service Control Point
SIM	Subscriber Identity Module
SMS	Short Message Service
SMTP	Simple Mail Transfer Protocol
STD	State Transition Diagrams
USIM	User Service Identity Module
VASP	Value Added Service Provider
VHE	Virtual Home Environment
VLR	Visited Location Register
WAP	Wireless Application Protocol
WGP	Wireless Gateway Proxy
WPP	Wireless Push Proxy

4 Open Service Access API's

The OSA specifications define an architecture that enables service application developers to make use of network functionality through an open standardized interface, i.e. the OSA API's. The network functionality is describes as Service Capability Features or Services (see note). The OSA Framework is a general component in support of Services (Service Capabilities) and Applications.

The OSA API is split into three types of interface classes, Service and Framework.

- Interface classes between the Applications and the Framework, that provide applications with basic mechanisms (e.g. Authentication) that enable them to make use of the service capabilities in the network.
- Interface classes between Applications and Service Capability Features (SCF), which are individual services that may be required by the client to enable the running of third party applications over the interface e.g. Messaging type service.
- Interface classes between the Framework and the Service Capability Features, that provide the mechanisms necessary for multi-vendorship.

These interfaces represent interfaces 1, 2 and 3 of figure 1. The other interfaces are not yet part of the scope of the work.

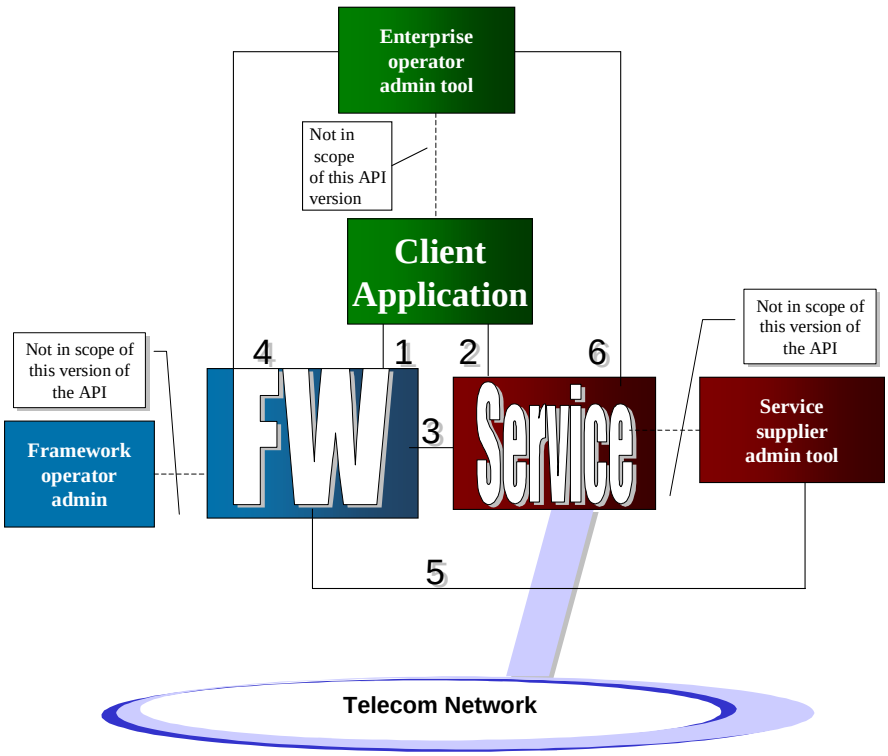

Figure 1

Within the OSA concept a set of Service Capability Features has been specified. The OSA documentation is structured in parts. The first Part (the present document) contains an overview, the second Part contains common Data Definitions, the third Part the Framework interfaces. The rest of the Parts contain the description of the SCFs.

NOTE: The terms "Service" and "Service Capability Feature" are used as alternatives for the same concept in the present document. In the OSA API itself the Service Capability Features as identified in the 3GPP requirements and architecture are reflected as 'service', in terms like serviceFactory, serviceDiscovery.

5 Document structure

The parts of the present document ES 201 915 (apart from 1 (the present document) and 2) define the interfaces, parameters and state models that form part of the API specification. UML 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.

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 Service Capability Features to the application. The specific underlying network and its protocols are transparent to the application.

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