

# ETSI ES 204 915-7 V1.1.1 (2008-05)

ETSI Standard

## Open Service Access (OSA); Application Programming Interface (API); Part 7: Terminal Capabilities SCF (Parlay 6)



**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)

Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/7a8d9d64-1a47-4392-842c-d08860fde612/etsi-es-204-915-7-v1.1.1-2008-05>



---

Reference

DES/TISPAN-01032-7-OSA

---

Keywords

API, IDL, OSA, UML

**ETSI**

650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° 7803/88

---

**Important notice**

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

[http://portal.etsi.org/chaicor/ETSI\\_support.asp](http://portal.etsi.org/chaicor/ETSI_support.asp)

---

**Copyright Notification**

No part may be reproduced except as authorized by written permission.  
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2008.

© The Parlay Group 2008.

All rights reserved.

DECT™, PLUGTESTS™, UMTS™, TIPHON™, the TIPHON logo and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.

3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

# Contents

Intellectual Property Rights .....	5
Foreword.....	5
1 Scope .....	6
2 References .....	6
3 Definitions and abbreviations.....	6
3.1 Definitions .....	6
3.2 Abbreviations .....	6
4 Terminal Capabilities SCF .....	6
4.1 General requirements on support of methods.....	7
5 Sequence Diagrams .....	7
5.1 Terminal capabilities example.....	7
6 Class Diagrams.....	9
7 The Service Interface Specifications .....	10
7.1 Interface Specification Format .....	10
7.1.1 Interface Class .....	10
7.1.2 Method descriptions.....	10
7.1.3 Parameter descriptions.....	10
7.1.4 State Model.....	10
7.2 Base Interface.....	10
7.2.1 Interface Class IpInterface .....	10
7.3 Service Interfaces .....	11
7.3.1 Overview .....	11
7.4 Generic Service Interface .....	11
7.4.1 Interface Class IpService .....	11
7.4.1.1 Method setCallback().....	11
7.4.1.2 Method setCallbackWithSessionID().....	11
8 Terminal Capabilities Interface Classes.....	12
8.1 Interface Class IpTerminalCapabilities .....	12
8.1.1 Method getTerminalCapabilities().....	12
8.2 Interface Class IpExtendedTerminalCapabilities .....	13
8.2.1 Method triggeredTerminalCapabilityStartReq().....	13
8.2.2 Method triggeredTerminalCapabilityStop() .....	14
8.3 Interface Class IpAppExtendedTerminalCapabilities .....	14
8.3.1 Method triggeredTerminalCapabilityReport().....	15
8.3.2 Method triggeredTerminalCapabilityReportErr().....	15
9 State Transition Diagrams .....	16
10 Service Properties.....	16
11 Terminal Capabilities Data Definitions .....	16
11.1 terminalIdentity .....	16
11.2 TpTerminalCapabilities .....	16
11.3 TpTerminalCapabilitiesError .....	17
11.4 TpTerminalCapabilityChangeCriteria .....	17
11.5 TpTerminalCapabilityScopeType .....	17
11.6 TpTerminalCapabilityScope.....	17
12 Exception Classes.....	18
<b>Annex A (normative):</b> <b>OMG IDL Description of Terminal Capabilities SCF .....</b>	<b>19</b>
<b>Annex B (informative):</b> <b>W3C WSDL Description of Terminal Capabilities SCF .....</b>	<b>20</b>

<b>Annex C (informative):</b>	<b>Java™ API Description of the Terminal Capabilities SCF .....</b>	<b>21</b>
<b>Annex D (informative):</b>	<b>Contents of 3GPP OSA R7 Terminal Capabilities .....</b>	<b>22</b>
<b>Annex E (informative):</b>	<b>Description of Terminal Capabilities SCF for 3GPP2 cdma2000 networks.....</b>	<b>23</b>
E.1	General Exceptions.....	23
E.2	Specific Exceptions .....	23
E.2.1	Clause 1: Scope .....	23
E.2.2	Clause 2: References .....	23
E.2.3	Clause 3: Definitions and abbreviations .....	23
E.2.4	Clause 4: Terminal Capabilities SCF .....	23
E.2.5	Clause 5: Sequence Diagrams .....	23
E.2.6	Clause 6: Class Diagrams.....	23
E.2.7	Clause 7: The Service Interface Specifications .....	23
E.2.8	Clause 8: Terminal Capabilities Interface Classes .....	24
E.2.9	Clause 9: State Transition Diagrams .....	24
E.2.10	Clause 10: Service Properties.....	24
E.2.11	Clause 11: Terminal Capabilities Data Definitions .....	24
E.2.12	Clause 12: Exception Classes.....	24
E.2.13	Annex A (normative): OMG IDL Description of Terminal Capabilities SCF .....	24
E.2.14	Annex B (informative): W3C WSDL Description of Terminal Capabilities SCF .....	24
E.2.15	Annex C (informative): Java™ API Description of Terminal Capabilities SCF.....	24
<b>Annex F (informative):</b>	<b>Record of changes .....</b>	<b>25</b>
F.1	Interfaces .....	25
F.1.1	New .....	25
F.1.2	Deprecated.....	25
F.1.3	Removed.....	25
F.2	Methods .....	25
F.2.1	New .....	25
F.2.2	Deprecated.....	25
F.2.3	Modified.....	26
F.2.4	Removed.....	26
F.3	Data Definitions .....	26
F.3.1	New .....	26
F.3.2	Modified.....	26
F.3.3	Removed.....	26
F.4	Service Properties.....	26
F.4.1	New .....	26
F.4.2	Deprecated.....	27
F.4.3	Modified.....	27
F.4.4	Removed.....	27
F.5	Exceptions .....	27
F.5.1	New .....	27
F.5.2	Modified.....	27
F.5.3	Removed.....	27
F.6	Others .....	27
History .....		28

---

## Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://webapp.etsi.org/IPR/home.asp>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

---

## Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

The present document is part 7 of a multi-part deliverable covering Open Service Access (OSA); Application Programming Interface (API), as identified below. The API specification (ES 204 915) is structured in the following parts:

- Part 1: "Overview";
- Part 2: "Common Data Definitions";
- Part 3: "Framework";
- Part 4: "Call Control";
- 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";
- Part 13: "Policy Management SCF";
- Part 14: "Presence and Availability Management SCF";
- Part 15: "Multi-Media Messaging SCF";
- Part 16: "Service Broker 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 6.0 set of specifications.**

**The present document is equivalent to 3GPP TS 29.198-7 V7.0.0 (Release 7).**

---

# 1 Scope

The present document is part 7 of the Stage 3 specification for an Application Programming Interface (API) for Open Service Access (OSA).

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

The present document specifies the Terminal Capabilities Service Capability Feature (SCF) aspects of the interface. All aspects of the Terminal Capabilities SCF are defined here, these being:

- Sequence Diagrams.
- Class Diagrams.
- Interface specification plus detailed method descriptions.
- State Transition diagrams.
- Data Definitions.
- IDL Description of the interfaces.
- WSDL Description of the interfaces.

The process by which this task is accomplished is through the use of object modelling techniques described by the Unified Modelling Language (UML).

---

# 2 References

The references listed in clause 2 of ES 204 915-1 contain provisions which, through reference in this text, constitute provisions of the present document.

ETSI ES 204 915-1: "Open Service Access (OSA); Application Programming Interface (API); Part 1: Overview (Parlay 6)".

---

# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 204 915-1 apply.

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ES 204 915-1 apply.

---

# 4 Terminal Capabilities SCF

The following clauses describe each aspect of the Terminal Capabilities Capability Feature (SCF).

The order is 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 transition between states in the SCF. The states and transitions are well-defined; either methods specified in the Interface specification or events occurring in the underlying networks cause state transitions.
- The Data Definitions clause shows a detailed expansion of each of the data types associated with the methods within the classes. Note that some data types are used in other methods and classes and are therefore defined within the Common Data types part ES 204 915-2.

## 4.1 General requirements on support of methods

An implementation of this API which supports or implements a method described in the present document, shall support or implement the functionality described for that method, for at least one valid set of values for the parameters of that method.

Where a method is not supported by an implementation of a Service interface, the exception `P_METHOD_NOT_SUPPORTED` shall be returned to any call of that method.

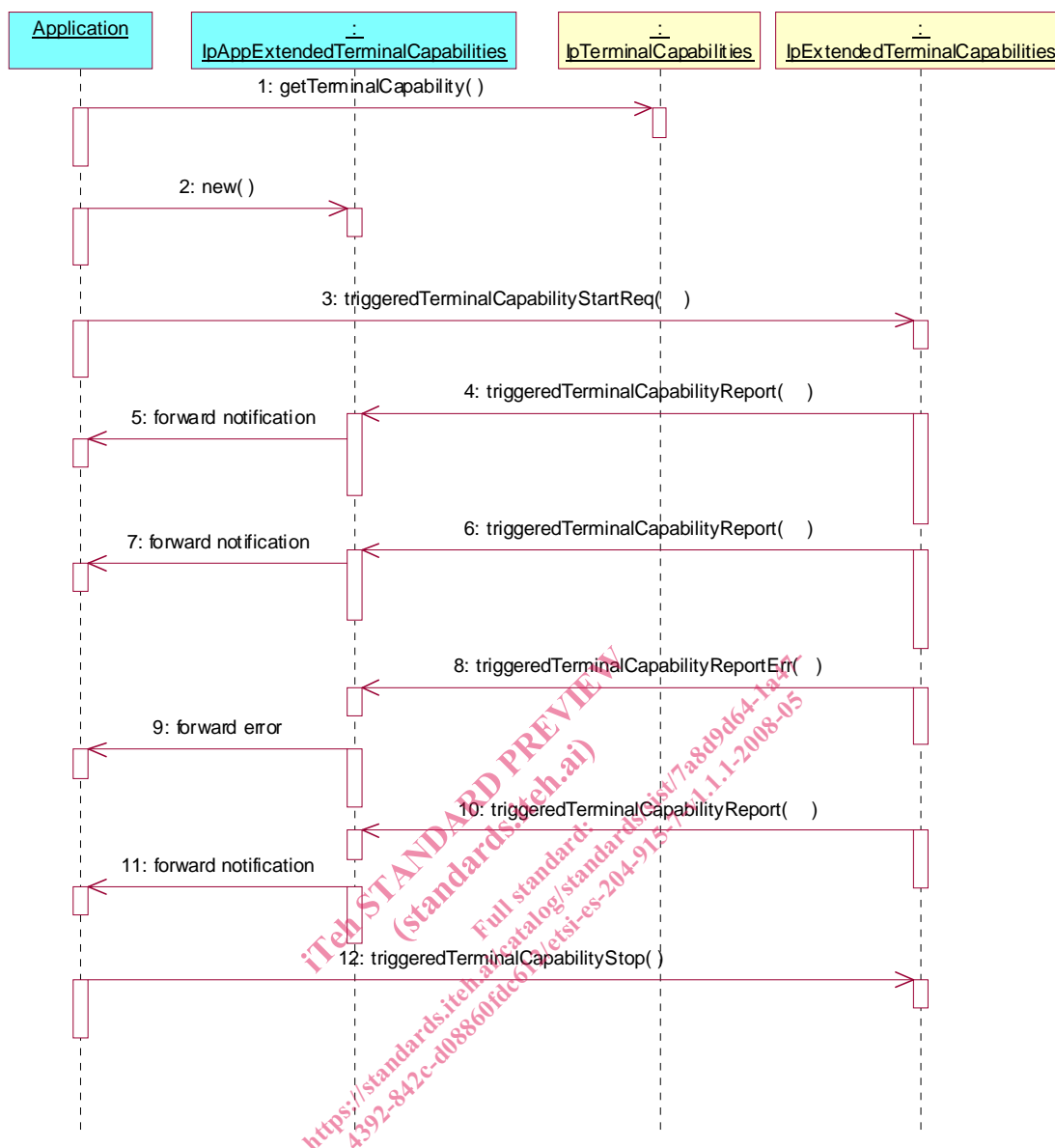
Where a method is not supported by an implementation of an Application interface, a call to that method shall be possible, and no exception shall be returned.

---

## 5 Sequence Diagrams

### 5.1 Terminal capabilities example

The following example sequence diagram illustrates how the terminal capabilities can be retrieved and their changes monitored.



- 1: The application retrieves the terminal capability of a terminal.
- 2: The application creates an object to implement IpAppExtendedTerminalCapabilities.
- 3: The terminal capabilities changes are started to be monitored.
- 4: The terminal capabilities have changed and they are reported as requested.
- 5: The report is forwarded internally to the application.
- 6: The terminal capabilities have changed and they are reported as requested.
- 7: The report is forwarded internally to the application.
- 8: An error has happened in the monitoring and it is reported.
- 9: The error report is forwarded internally to the application.
- 10: The terminal capabilities have changed and they are reported as requested.
- 11: The report is forwarded internally to the application.
- 12: The terminal capability monitoring is stopped.



## 6 Class Diagrams

Terminal Capabilities Class Diagram:

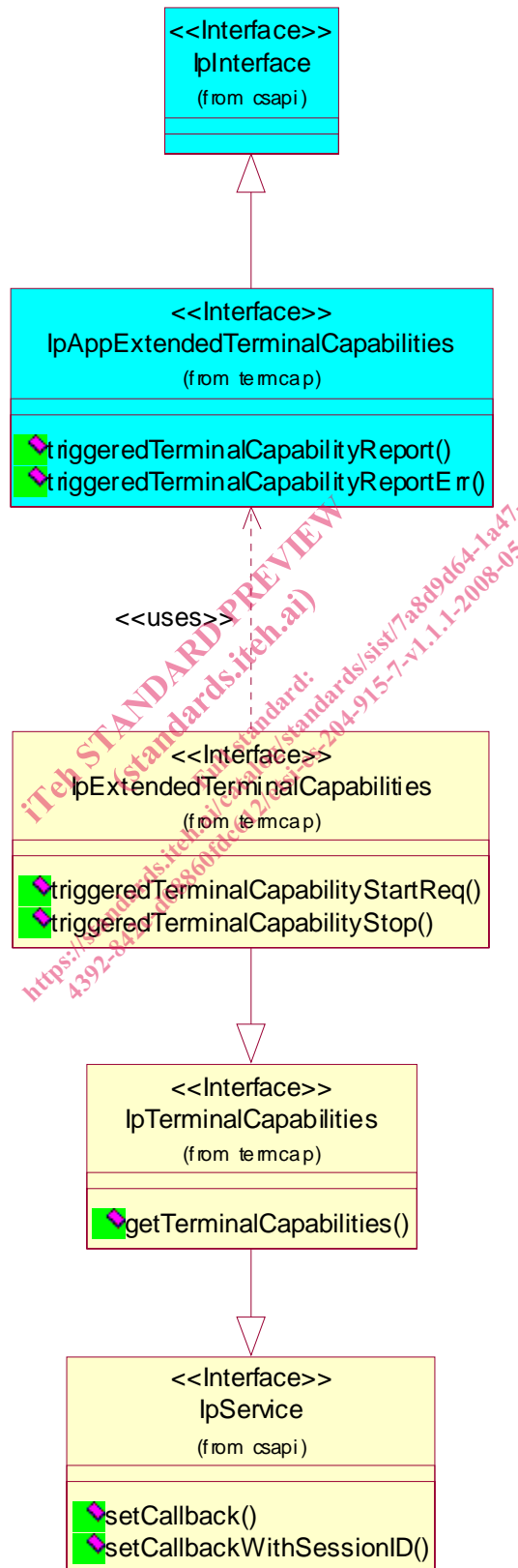


Figure 1: Terminal Capabilities Class Diagram

## 7 The Service Interface Specifications

### 7.1 Interface Specification Format

This clause defines the interfaces, methods and parameters that form a part of the API specification. The Unified Modelling Language (UML) is used to specify the interface classes. The general format of an interface specification is described below.

#### 7.1.1 Interface Class

This shows a UML interface class description of the methods supported by that interface, and the relevant parameters and types. The Service and Framework interfaces for enterprise-based client applications are denoted by classes with name Ip<name>. The callback interfaces to the applications are denoted by classes with name IpApp<name>. For the interfaces between a Service and the Framework, the Service interfaces are typically denoted by classes with name IpSvc<name>, while the Framework interfaces are denoted by classes with name IpFw<name>.

#### 7.1.2 Method descriptions

Each method (API method “call”) is described. Both synchronous and asynchronous methods are used in the API. Asynchronous methods are identified by a 'Req' suffix for a method request, and, if applicable, are served by asynchronous methods identified by either a 'Res' or 'Err' suffix for method results and errors, respectively. To handle responses and reports, the application or service developer must implement the relevant IpApp<name> or IpSvc<name> interfaces to provide the callback mechanism.

#### 7.1.3 Parameter descriptions

Each method parameter and its possible values are described. Parameters described as 'in' represent those that must have a value when the method is called. Those described as 'out' are those that contain the return result of the method when the method returns.

#### 7.1.4 State Model

If relevant, a state model is shown to illustrate the states of the objects that implement the described interface.

### 7.2 Base Interface

#### 7.2.1 Interface Class IpInterface

All application, framework and service interfaces inherit from the following interface. This API Base Interface does not provide any additional methods.

