

**Open Service Access (OSA);  
Parlay X Web Services;  
Part 16: Geocoding  
(Parlay X 3)**



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Reference

DES/TISPAN-01034-16-OSA

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Keywords

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API, OSA, service

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## Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN), and is now submitted for the ETSI standards Membership Approval Procedure.

The present document is part 16 of a multi-part deliverable covering Open Service Access (OSA); Parlay X 3 Web Services, as identified below:

- Part 1: "Common";
- Part 2: "Third Party Call";
- Part 3: "Call Notification";
- Part 4: "Short Messaging";
- Part 5: "Multimedia Messaging";
- Part 6: "Payment";
- Part 7: "Account Management";
- Part 8: "Terminal Status";
- Part 9: "Terminal Location";
- Part 10: "Call Handling";
- Part 11: "Audio Call";
- Part 12: "Multimedia Conference";
- Part 13: "Address List Management";
- Part 14: "Presence";
- Part 15: "Message Broadcast";
- Part 16: "Geocoding";**
- Part 17: "Application-driven Quality of Service (QoS)";
- Part 18: "Device Capabilities and Configuration";
- Part 19: "Multimedia Streaming Control";
- Part 20: "Multimedia Multicast Session Management".

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The present document has been defined jointly between ETSI, The Parlay Group (<http://www.parlay.org>) and the 3GPP.

**The present document forms part of the Parlay X 3.0 set of specifications.**

**The present document is equivalent to 3GPP TS 29.199-16 V7.1.2 (Release 7).**

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# 1 Scope

The present document is part 16 of the Stage 3 Parlay X 3 Web Services specification for Open Service Access (OSA).

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

The present document specifies the Geocoding Web Service. The following are defined here:

- Name spaces.
- Sequence diagrams.
- Data definitions.
- Interface specification plus detailed method descriptions.
- Fault definitions.
- Service Policies.
- WSDL Description of the interfaces.

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# 2 References

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.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
  - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
  - for informative references.

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For online referenced documents, information sufficient to identify and locate the source shall be provided. Preferably, the primary source of the referenced document should be cited, in order to ensure traceability. Furthermore, the reference should, as far as possible, remain valid for the expected life of the document. The reference shall include the method of access to the referenced document and the full network address, with the same punctuation and use of upper case and lower case letters.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

## 2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

[1] W3C Recommendation (2 May 2001): "XML Schema Part 2: Datatypes".

NOTE: Available at <http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/>.

- [2] ETSI ES 202 504-1: "Open Service Access (OSA); Parlay X Web Services; Part 1: Common (Parlay X 3)".
- [3] ETSI ES 202 504-9: "Open Service Access (OSA); Parlay X Web Services; Part 9: Terminal Location (Parlay X 3)".
- [4] ISO 3166: "Codes for the representation of names of countries and their subdivisions".

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## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 202 504-1 [2] and the following apply.

**address:** Set of strings that represent address information for a geographical place. It consists of the country, state, district, city, street, house number and zip/postal code. In this specification, the address means a location address except where otherwise noted.

**coordinates:** latitude, longitude pair that identifies a point on the Earth's surface

**geocoding:** transformation of a description of a address, such as a place name, street address or postal code, into a normalized description of the location with a geographical coordinates

**location:** specific set of coordinates

**reverse geocoding:** transformation of a given location into a normalized description of address

**terminal number:** string of decimal digits that uniquely identify a terminal

NOTE: Address is a name that is used in both the Geocoding and Terminal Location Web Services. The former uses address in the customary sense of a location address, while the latter uses it in the sense of a terminal identifier represented as a URI string. So **terminal number** is a better name for what Parlay X Terminal Location calls an address.

### 3.2 Abbreviations

For the purposes of the present document, the abbreviations defined in ES 202 504-1 [2], ES 202 504-9 [3] and the following apply:

GMLC	Gateway Mobile Location Center
MLP	Mobile Location Protocol
MMS	Multimedia Message
MPC	Mobile Positioning Center
OMA	Open Mobile Alliance
OpenLS	Open Location Services
URI	Uniform Resource Identifier
XML	Extensible Markup Language

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## 4 Detailed service description

While the Parlay X Terminal Location Web Service provides access to the geographical coordinates at which a terminal is located, the Geocoding Web Service provides an additional level of refinement, allowing the service developer to work with actual location addresses and the like:

- Request the location address of a terminal number.
- Request the location address of a group of terminals.

- Request the distance of a terminal from a specific location address.

When a request is made on behalf of a group of terminals, the response may be a full or a partial set of results. This allows the service to provide results based on a number of criteria, including number of terminals for which the request is made and amount of time required to retrieve the information. This allows the requestor to initiate additional requests for those terminals for which information was not provided.

Figure 1 shows the Geocoding Web Service architecture comprising Parlay X Application, Parlay X Gateway, Parlay Gateway, GMLC/MPC, Addressing server. OMA/MLP is used between the Parlay X Gateway and GMLC/MPC and OpenLS/XML is used between the Parlay X Gateway and the Addressing server.

If the subscriber asks for someone's address or for group addresses, the Parlay X Application invokes the **getAddressOfTerminal** or **getAddressOfTerminalForGroup** operations of the Geocoding Web Service. The Parlay X gateway gets the geographical coordinates of the terminal from GMLC/MPC and then feeds the retrieved geographical coordinates to addressing server. Finally it obtains the location address.

In the **getTerminalDistanceFromAddress** operation, the subscriber asks for the distance of a terminal from a specific address; the Parlay X Application calls the Geocoding Web Service. The Parlay X gateway gets the geographical coordinates of the address from an addressing server. The Parlay X gateway gets the geographical coordinates of the terminal from GMLC/MPC. Finally it computes the distance between the two sets of geographical coordinates.

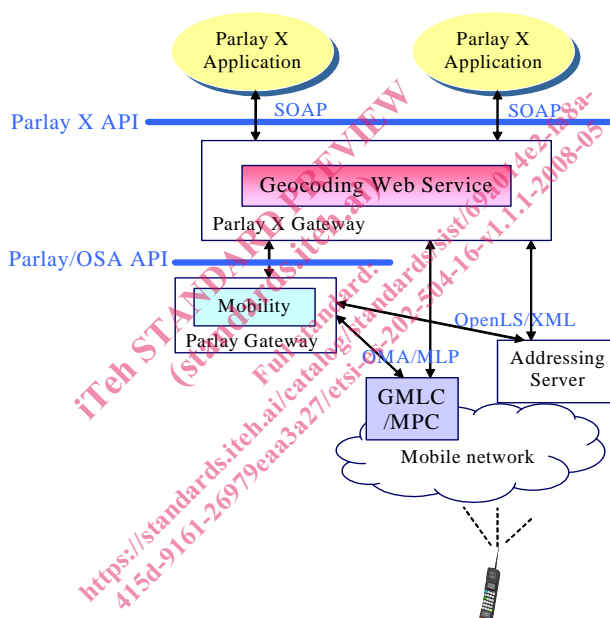


Figure 1: Geocoding Web Service architecture

## 5 Namespaces

The Geocoding interface uses the namespace:

[http://www.csapi.org/wsd/parlayx/geocoding/terminal\\_address/v3\\_1](http://www.csapi.org/wsd/parlayx/geocoding/terminal_address/v3_1)

The data types are defined in the namespace:

[http://www.csapi.org/schema/parlayx/geocoding/v3\\_0](http://www.csapi.org/schema/parlayx/geocoding/v3_0)

The 'xsd' namespace is used in the present document to refer to the XML Schema data types defined in XML Schema [1]. The use of the name 'xsd' is not semantically significant.



## 6 Sequence diagrams

### 6.1 Get address of terminal

Pattern: Request / Response.

For an application to determine the address of terminal device, it provides a terminal number and desired accuracy, and receives the location address for the device requested.

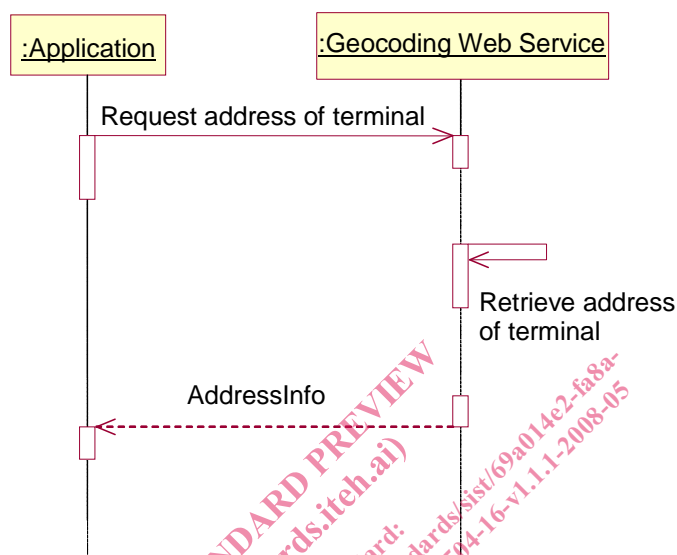


Figure 2: Get address of terminal operation