



**SLOVENSKI STANDARD**  
**SIST-TS ETSI/TS 102 164 V1.1.1:2005**  
**01-januar-2005**

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**Storitve in protokoli za napredna omrežja (SPAN) – Lokacijski protokoli v nuji**

Services and Protocols for Advanced Networks (SPAN); Emergency Location Protocols

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# ETSI TS 102 164 V1.1.1 (2003-04)

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*Technical Specification*

## **Service and Protocols for Advanced Networks (SPAN); Emergency Location Protocols**

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## Reference

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## Keywords

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location, mobile, protocol**ETSI**

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## Foreword

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

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## 1 Scope

The present document specifies the protocol that is used by the Local Emergency Operator to obtain the location information that is registered on the Mobile Operator Location Server.

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## 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] EPSG geodesy parameters Version 6.3, February 2002.

NOTE: <http://www.epsg.org/>.

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## 3 Abbreviations(standards.iteh.ai)

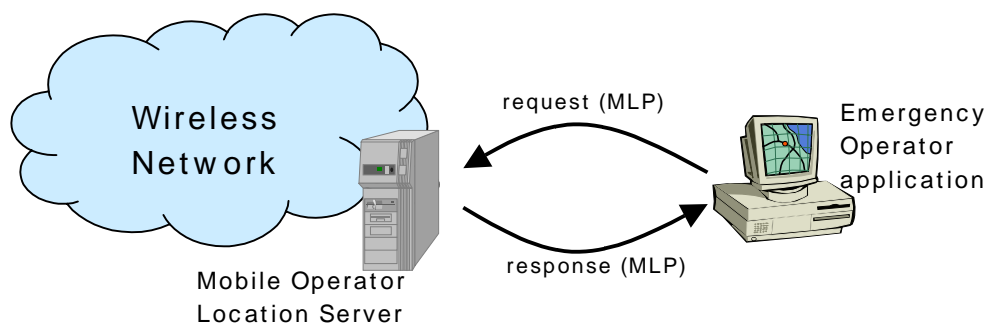
For the purposes of the present document, the following abbreviations apply:

APSG	Americas Petroleum Survey Group
EMTEL	EMergency TELEcommunication services
EPSG	European Petroleum Survey Group
ISO	International Standards Organization
LCS	Local Contact Service
LIF	Location Interoperability Forum
MLP	Mobile Location Protocol
POSC	Petrotechnical Open Software Corporation
QOP	Quality Of Position

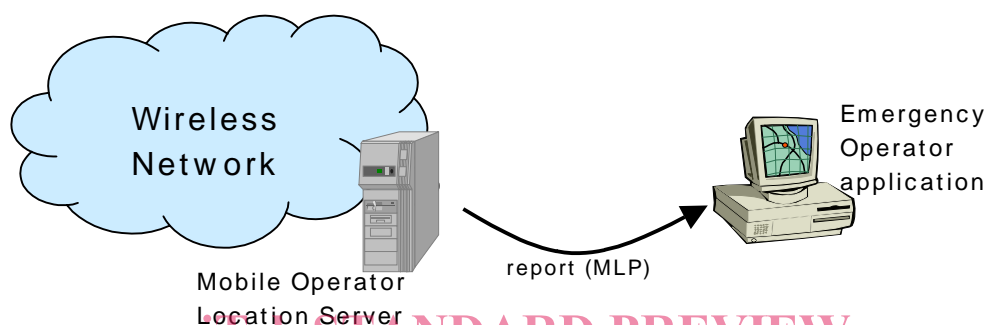
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## 4 MLP Lite 112

A subset of the Location Interoperability Forum (LIF) Mobile Location Protocol (MLP) Version 3.0.0 (6 June 2002) sufficient for mobile operators and emergency number service operators to implement an initial service where the emergency number operator can request the location of a phone from the mobile operator and receive either a valid response or an error response in reply.



It is anticipated that after initial implementation, some Mobile Operators will implement the functionality to initiate a position fix on the origination of a call to 112 by the user and push the resulting location information to the Emergency Operator



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Please see full LIF specification at <http://www.openmobilealliance.org/tech/lif> for further details and information.

Note that in this implementation of the LIF MLP protocol:

- ALL compulsory LIF elements are compulsory.
- Some optional LIF elements are compulsory.

## 5 Name and address data

The LIF MLP standard does not include Name and Address type fields but does include an extension mechanism to allow additional elements to be added.

A Name and Address extension is included in this specification to enable fixed line operators to adopt the same protocol as mobile operators to provide location information to emergency services:

- Potential data sources to populate these fields include:
  - installation address for fixed lines phones;
  - addresses "reverse geocoded" from latitude, longitude position of mobile handset;
  - location of pico cells within buildings.

Note that the referenced extension (and therefore the structure and elements within this extension) could be different for different countries, different operators and different emergency services.

I.e. if required the name and address fields and field formats could be defined differently to suit different countries, different operators or different emergency services.



## 6 Emergency Location Immediate service (LIF defined service)

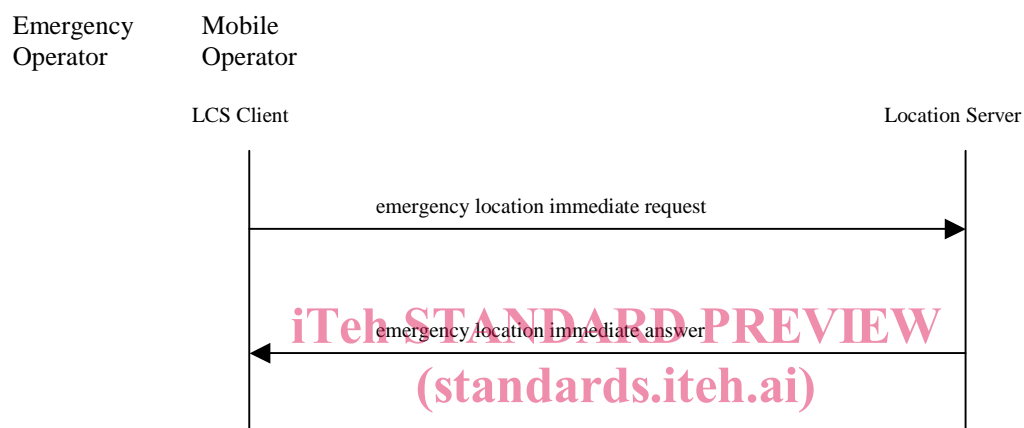
The emergency location immediate service is used by the Emergency Operator to retrieve the position of a mobile subscriber that has initiated an emergency call from the Mobile Operator.

The response to the service is required immediately.

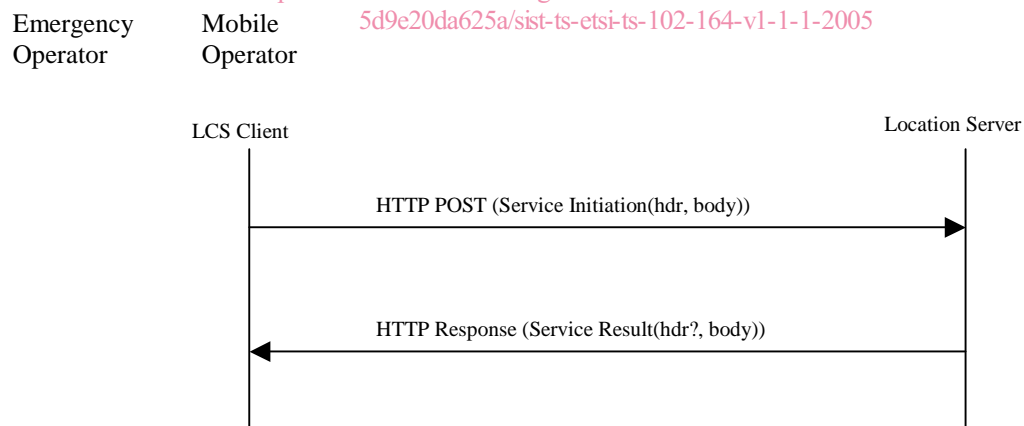
The service consists of the following messages:

- Emergency Location Immediate Request.
- Emergency Location Immediate Answer.

The following message flow encapsulates this service:



Request and Answer implemented as: [SIST-TS ETSI/TS 102 164 V1.1.1:2005](https://standards.iteh.ai/catalog/standards/sist/8a8eb41e-dee8-4d55-bb14-5d9e20da625a/sist-ts-etsi-ts-102-164-v1-1-1-2005)  
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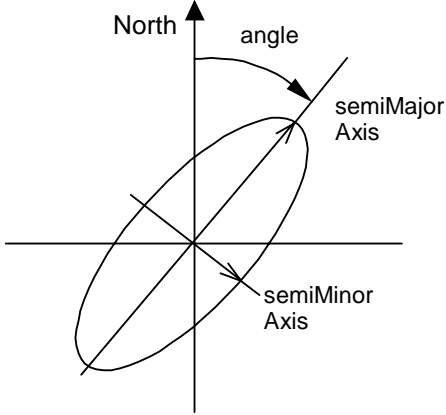


## 6.1 Emergency Location Immediate request (subset of LIF defined request)

XML Code	Notes
<?xml version="1.0" ?>	
<!DOCTYPE svc_init SYSTEM "MLP_SVC_INIT_300.DTD">	
<svc_init ver="3.0.0">	Service initiation for MLP Version 3.0.0
<hdr ver="3.0.0">	Header for MLP Version 3.0.0
<client>	Who is requesting this location fix
<id>aaaa...a</id>	Emergency operator registered user name for login
<pwd>aaaa...a</pwd>	Emergency operator password for login
</client>	
</hdr>	
<eme_lir ver="3.0.0">	Emergency Location Immediate Request for MLP Version 3.0.0
<msids>	Identifier of device to be located
<msid type="MSISDN">ccpppppppppp</msid>	Identifier is a MSISDN formatted as Country Code + Phone Number (GSM/3GPP should conform to TS 123 003)
</msids>	
</eme_lir>	
</svc_init>	

## 6.2 Emergency Location Immediate answer - Valid response (subset of LIF defined response)

XML Code	Notes
<?xml version="1.0" ?>	
<!DOCTYPE svc_init SYSTEM "MLP_SVC_RESULT_300.DTD" [	
<!ENTITY % extension SYSTEM "http://www.oftel.gov.uk/UK999_MLP_address_extension.dtd">	Utilize the LIF extension mechanism to point to the DTD defining the National Regulatory Organization Name and Address extension
%extension;	
]>	
<svc_result ver="3.0.0">	Service result for MLP Version 3.0.0
<eme_lia ver="3.0.0">	Emergency Location Immediate Answer for MLP Version 3.0.0
<Caller_Location>	Name and address data elements as defined by the referenced DTD above
<CustomerName>aaaaa...a</CustomerName>	Registered Customer Name
<Line1>aaaaa.a</Line_1>	Address of current location
<Line2>aaaaa.a</Line_2>	Notes -
<Line3>aaaaa.a</Line_3>	All elements could be defined as optional
etc	Elements could be defined differently
etc>	This is only an example of how to include additional fields
<Line6>aaaaa.a</Line_n>	
<PostCode>aaaaa....a</PostCode>	Post Code
</Caller_Location>	
<eme_pos>	Position answer
<msid type="MSISDN">ccpppppppppp</msid>	Position is for this MSISDN (formatted as Country Code + Phone Number) (GSM/3GPP should conform to TS 123 003)
<pd>	Position description
<time utc_off="±hhmm">yyyymmddhhmmss</time>	Local Date and Time of phone when position was measured.

XML Code	Notes
<shape>	Shape of uncertainty area
<EllipticalArea>	<p data-bbox="767 248 925 277">It is an ellipse!</p>  <p data-bbox="767 725 1362 779">Note that circle can be described by making semiMajor axis = semiMinor axis</p> <p data-bbox="767 806 1385 862">Default WGS84 Coordinate Reference System is defined by LIF to be 4326 by the EPSG authority. (see clause 12)</p>
<coord>	Coordinate of the centre of the ellipse
<X>add.ddd</X>	Latitude in decimal degrees prefixed with N or S
<Y>add.ddd</Y>	Longitude in decimal degrees prefixed with E or W
</coord>	
<angle>nnn.nn</angle>	Angle in degrees of rotation of the ellipse measured clockwise from north
<semiMajor>nnnnn</semiMajor>	Length of semiMajor axis in metres
<semiMinor>nnnnn</semiMinor>	Length of semiMinor axis in metres
<angularUnit>aaaaaa</angularUnit>	Unit for <angle> (Required LIF parameter but default unit is degrees!)
<distanceUnit>nnnnn</distanceUnit>	Optional - default unit is meter
</ EllipticalArea >	
</shape>	
<alt>±nnn</alt>	Optional - Altitude of phone if available (in respect to coordinate ellipsoid NOT actual height)
<speed>nnnn</speed>	Optional - speed in meters/sec if available
<direction>nnnn</direction>	Optional - Direction phone is moving if available
<lev_conf>nnn</lev_conf>	LIF optional but required by 112service - Indicates the probability as a percentage that the phone is located within the position area defined
</pd>	
</eme_pos>	
</eme_lia>	
</svc_result>	