

Appendix for NG112_Interfaces_V3.0

NG112; Reference test cases 1.0

VoiceServiceProvider (VSP), PublicSafetyAnsweringPoint (PSAP)

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1 Intro

This document describes the NG112 reference test cases for Voice Service Providers (VSP) and Public Safety Answering Points (PSAP). The tests can be carried out on the referenced LIS and LIS proxy. The test cases are used to check the successful implementation at the VSP and PSAP.

1.1 Management summary

With the OFCOM Regulation 2021 the NG112 emergency communication according to ETSI ES 203 178 will be introduced in Switzerland. Contrary to the standard, the ANP are not regulated and do not have their own Location Information Server (LIS).

In consequence the Voice Service Providers (VSP) have to send the network-based and the device-based location of emergency calls with the HELD protocol over the interface <ic> into the Swiss central LIS from Swisscom (Schweiz) AG.

The VSPs have to route the emergency call to the responsible Public Safety Answering Point (PSAP) and send information (PAI, Geolocation, ...) about the stored location to LIS within the SIP-INVITE.

The PSAP receives the emergency call. Inside the SIP-INVITE (PAI, Geolocation, Call-info) the PSAP will find the information for requesting the location information with HELD over the interface <im> at the LIS-Proxy.

The suppliers of VSPs and PSAPs have to implement the new HELD interfaces for communication with LIS or LIS-Proxy and need to test it. For this purpose, predefined test cases were recorded at the reference LIS (test server). The input and output are unambiguously defined and allow the functionalities at VSP and PSAP to be tested. Only HELD and the interfaces <ic> and <im> is in the scope of these test cases. SIP and SIP-INVITE are not in scope. The data in the test cases are artificial and only for functional verification.

[For any other service regression testing other than covered in this document we refer to existing documents of suppliers, vendors, operators, integrators and providers.](#)

For the sake of readability, the test response data documented below primarily show the location-related part of the concerning response. The response contains additional fields (XML tags) which are not documented in detail, for instance DataProviderString (example value "Swisscom (Schweiz) AG") or ProviderID (example value "22801"). Of course, these fields need to be processed correctly as well.

1.2 Goal of the document

This document describes the reference test cases for LIS, LIS-Proxy, HELD and the interfaces <ic> and <im>.

[This document does not cover conveyance of location information and references in the SIP protocol.](#)

1.3 Intended audience

- Voice Service Provider
- PSAPs
- Suppliers/Vendors of VSP and PSAP

Useful knowledge:

- Computer system and Internet
- Basics of emergency call handling
- Basics of protocols such as HTTP, HELD, PIDF-LO, XML

1.4 Referenced documents

No.	Name of document	Description
[1]	ETSI ES 203 178	Functional architecture to support European requirements on emergency caller location determination and transport
[2]	ETSI TS 103 479	Core elements for network independent access to emergency services
[3]	NG112_Interfaces_V3.0.pdf	Description of used protocol at interfaces <ic> and <im> see https://swisscom.com/emergencylocalization
[4]	NG112-CH_XSD-3.0.zip	XML schema definition of <ic> and <im> see https://swisscom.com/emergencylocalization

Tabelle 1: Referenced documents

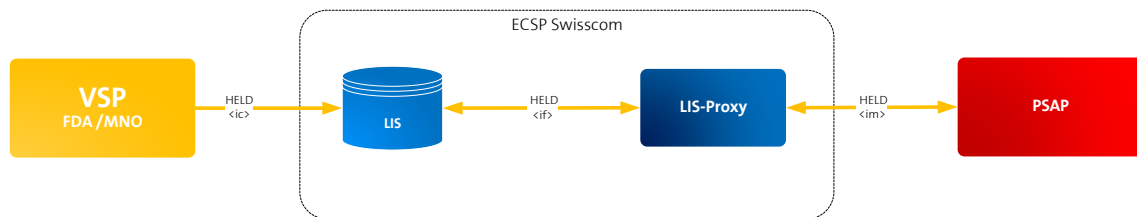
1.5 Glossary

Term	Definition
AML	Advanced Mobile Location is a function within the Apple iOS and corresponds to ELS
EGID	Federal building identifier
ELS	Emergency Location Service for Android, corresponds to AML
ETSI	European Telecommunications Standards Institute
GNSS	Global Navigation Satellite System
LbyR	Location By Reference, refers to the conveyance of a URL in the SIP INVITE, which points to location information in an LIS, e.g. https://lis.swisscom.com/iig4riubr4wbv
LIS	Location Information Server, components in an access network that determine the location (coordinates, address) of a user of the access network.
LIS-Proxy	Central Location Information Server in a country that obtains information from localised LISs and can store information itself.
MSD	Minimum Set of Data for an eCall
OFCOM	Federal Office of Communications. Approves the regulations for telephony in Switzerland.
PAI	P-Asserted-Identity, SIP header field, see RFC3325
PIDF-LO	Presence Information Date Format Location Object – a Presence-based GEOPRIV Location Object Format (XML)
PSAP	Public Safety Answering Point – call center for emergency services, emergency response center
UA	User Agent (SIP endpoint); often (for 3GPP) also referred to as UE, User Equipment.
UE	User Equipment
URI	Uniform Ressource Identifier
VSP	Voice Service Provider

Tabelle 2: Glossary

2 Test and reference Infrastructure

For testing purpose, dedicated test equipment (test LIS and test LIS-Proxy) is available. On the LIS there are pre-defined test cases for PSAP and VSP implemented for validating functionality. The predefined test cases can be called up via the interfaces <ic> and <im>.



Picture 1: Testinfrastructure

To reach the test infrastructure of LIS and LIS proxy, the following URL can be used

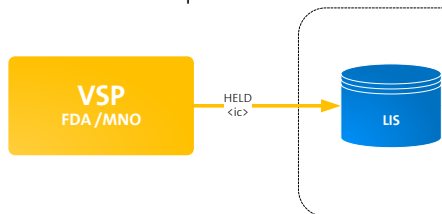
For the interface <ic> use the URL <https://ref-lis.sosservice.ch:8443>

For the interface <im> use the URL <https://ref-lisproxy.sosservice.ch:8443>

For access and questions please Contact: <mailto:ApplicationManagement.E112@swisscom.com>

3 Test cases VSP over interface <ic>

Test cases can be sent over the interface <ic> to the Swiss LIS <https://ref-lis.sosservice.ch:8443> with a HTTP POST and the HELD-Request.



The interface description NG112_Schnittstellen_3.0_EN.pdf and the NG112_XSD_3.0.zip can be found at <https://swisscom.com/emergencylocalization>.

The reference test case is based on the examples out of the NG112_XSD_3.0.zip. If the existing examples are used, please change the User Part (number) of the SIP-URI, see role below!

When the HELD-Request (reference test case or your own request) is sent to the LIS, you will get a HELD-Response. If the request is valid, you will get a LocationURI like "LISResponse-LocationURI.xml" of the examples. If the request is not valid you will get an error like "LISError.xml" of the examples.

Please do not use the numbers (user part of SIP-URI) of the PSAP-Testcases in chapter 4! User Part (number) of SIP-URI WireLine test cases from +41590000001 to +41590000049 and WireLess test cases from +41790000001 to +41790000099

3.1 VSP: Netbased location

3.1.1 WireLess

"LISRequest-WireLess-Geodetic-Ellipses.xml" is the example of WireLess netbased location described with ellipses. "LISRequest-WireLess-Geodetic-Polygons.xml" is the example of WireLess netbased location described with polygons.

3.1.2 WireLine

"LISRequest-WireLine-Civic.xml" is the example of WireLine netbased location described with address.

3.1.3 Wifi Calling

"LISRequest-WireLess-VoWiFi-IPLoc.xml" is the example of WireLine netbased location of wifi calling about IP described with address. "LISRequest-WireLess-VoWiFi-LastCell.xml" is the example of WireLess netbased location of wifi calling about last Cell described with ellipses.

3.2 VSP: Devicebased location

3.2.1 eCall

"LISRequest-eCall-MSDXML.xml" is the example of Device based location of eCall described as MSD.

3.2.2 AML@SMS

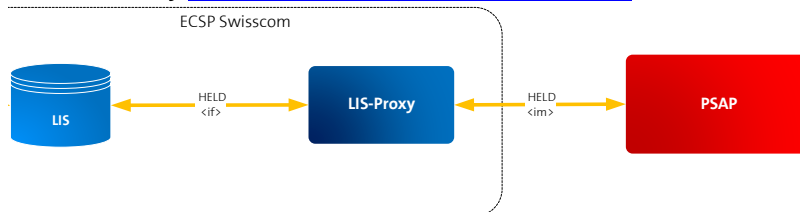
"LISRequest-AML@SMS.xml" is the example of Device based location of AML@SMS described as Circle with a point and confidence.

3.2.3 AML@SIP

"LISRequest-AML@SIP.xml" is the example of Device based location of AML@SMS described as GNSS position, means circle with a point confidence, speed and direction (heading).

4 Test cases PSAP over interface <im>

You can get the follow reference test cases over the interface <im> for the Swiss LIS-Proxy <https://ref-lisproxy.sosservice.ch:8443> with a HTTP POST and the HELD-Request.



You have two possibilities to request a case, with the **LocationURI** or with the **SIP-URI**.

```

POST /location HTTP/1.1
Host: ref-lisproxy.sosservice.ch:8443
Content-Type: application/held+xml;charset=utf-8
Content-Length: 234
X-Correlation-ID: afc3d814-83c0-4cc8-a693-c80305f9a008
<?xml version="1.0" encoding="UTF-8"?>
<locationRequest
  xmlns="urn:ietf:params:xml:ns:geopriv:held">
  <locationURI>https://lis.sosservice.ch:8443/location/abcde12345678</locationURI>
</locationRequest>
  
```

```

POST /location HTTP/1.1
Host: ref-lisproxy.sosservice.ch:8443
Content-Type: application/held+xml;charset=utf-8
Content-Length: 257
X-Correlation-ID: afc3d814-83c0-4cc8-a693-c80305f9a008
<?xml version="1.0" encoding="UTF-8"?>
<locationRequest
  xmlns="urn:ietf:params:xml:ns:geopriv:held"
  xmlns:id="urn:ietf:params:xml:ns:geopriv:held:id">
  <id:device>
    <id:uri>sip:+41790000000@example.com</id:uri>
  </id:device>
</locationRequest>
  
```

The interface description NG112_Schnittstellen_3.0_EN.pdf and the NG112_XSD_3.0.zip you will find at <https://swisscom.com/emergencylocalization>.

4.1 PSAP: Netbased location only

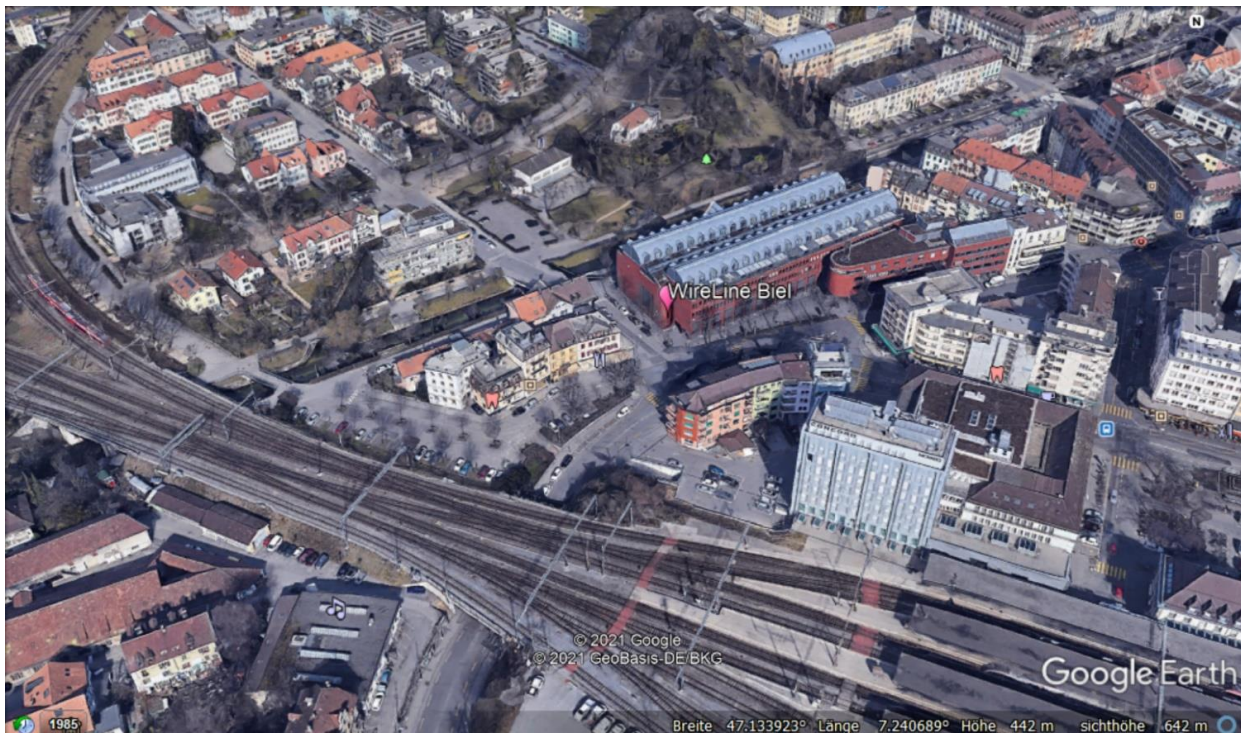
In chapter 4.1 there are test cases with netbased locations only.

4.1.1 WireLine, Fixnet, Wifi-Calling (IP-localization)

These are WireLine, Fixnet, Wifi-Calling test cases which are localized at an address in Switzerland. The PSAP get as result an address with the coordinate and can show the point with the address data.

The address data can be street name, street number, place, postcode **OR** house name, place, postcode.

4.1.1.1 Biel



Swisscom (Schweiz) AG
 Aarbergstrasse 107
 2501 Biel BE

SIP-URI: +41590000001@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/53894995-25ef-407b-aa6d-9f296205cae3>

Description	Tag	Content
Street name	ca:RD	Aarbergstrasse
Building number	ca:HNO	107
Place	ca:A3	Biel
Post code	ca:PC	2501
EGID (federal building identifier)	ca:ADDCODE	EGID:3042153
Latitude Longitude (decimal degree)	gml:pos	47.134251 7.240872

4.1.1.2 Lausanne



Swisscom (Schweiz) AG
Place Saint François 15
1003 Lausanne

SIP-URI: +41590000002@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/a74371a1-37e4-4dde-8862-fadf0d070a5b>

Description	Tag	Content
Street name	ca:RD	Place Saint François
Building number	ca:HNO	15
Place	ca:A3	Lausanne
Post code	ca:PC	1003
EGID (federal building identifier)	ca:ADDCODE	EGID:2119553
Latitude Longitude (decimal degree)	gml:pos	46.519339 6.63284

4.1.1.3 Bellinzona



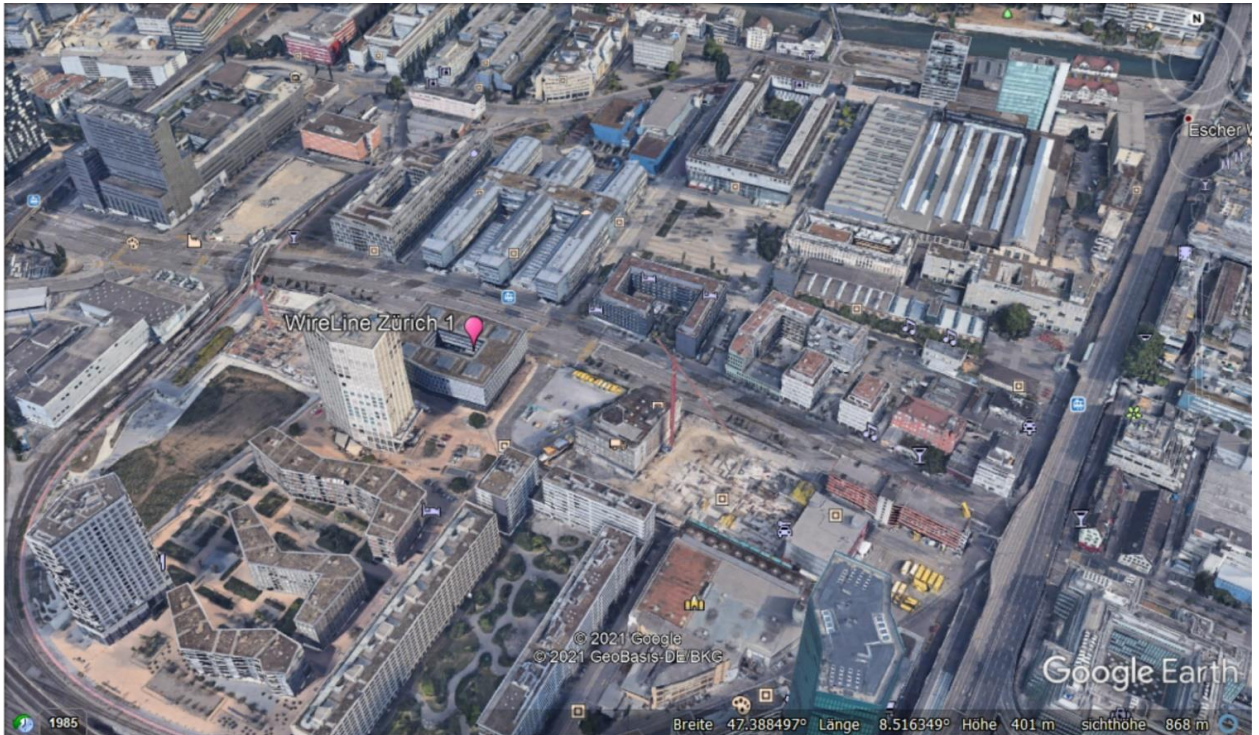
Swisscom (Schweiz) AG
 Via dei Gaggini 3
 6500 Bellinzona

SIP-URI: +41590000003@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/79d4f5c8-4414-4b43-ad7c-b1308f391b45>

Description	Tag	Content
Street name	ca:RD	Via dei Gaggini
Building number	ca:HNO	3
Place	ca:A3	Bellinzona
Post code	ca:PC	6500
EGID (federal building identifier)	ca:ADDCODE	EGID:400007346
Latitude Longitude (decimal degree)	gml:pos	46.190814 9.014078

4.1.1.4 Zürich



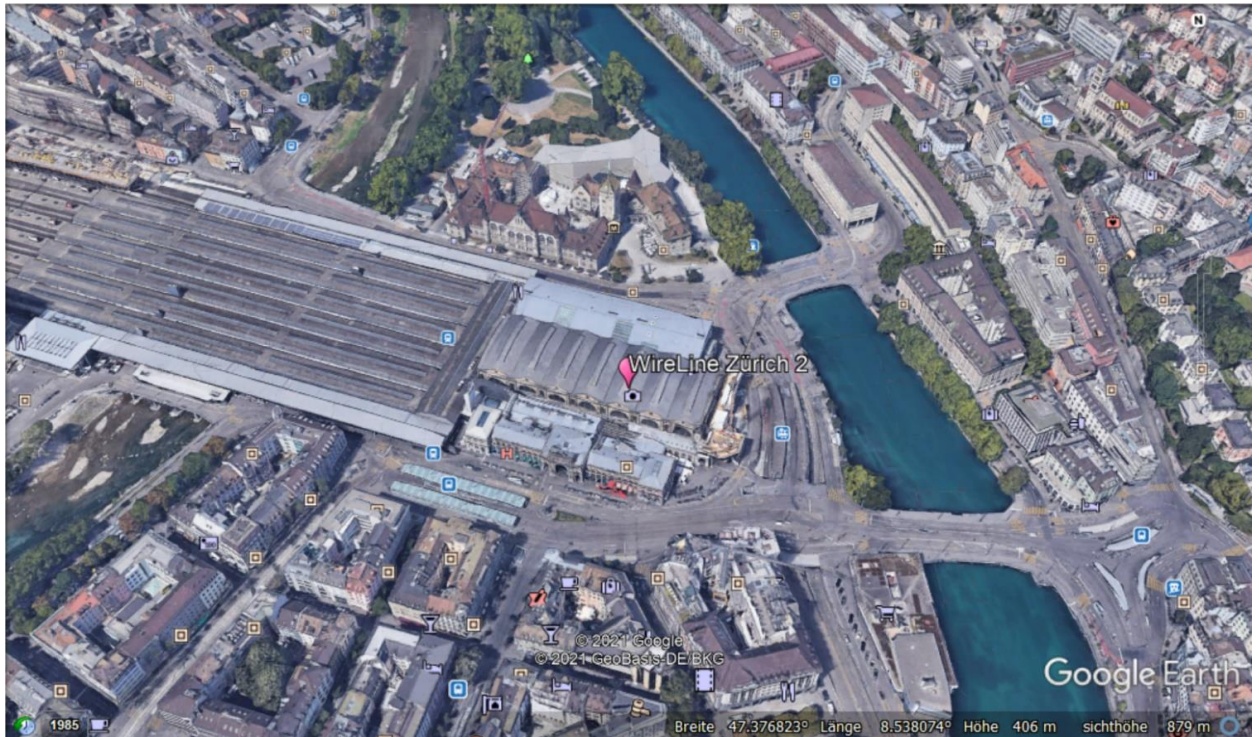
Swisscom (Schweiz) AG
 Pfingstweidstrasse 51
 8005 Zürich

SIP-URI: +41590000004@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/ee76f703-cdbc-4224-816a-e4258a7d5e87>

Description	Tag	Content
Street name	ca:RD	Pfingstweidstrasse
Building number	ca:HNO	51
Place	ca:A3	Zürich
Post code	ca:PC	8005
EGID (federal building identifier)	ca:ADDCODE	EGID:302030120
Latitude Longitude (decimal degree)	gml:pos	47.388693 8.51507

4.1.1.5 Zürich Housename



HB Zürich
Bahnhofhalle
8001 Zürich

SIP-URI: +41590000005@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/7085e6d0-fcdf-4641-85d5-41c5b4a71a19>

Description	Tag	Content
Place	ca:A3	Zürich
Street name	ca:RD	"empty"
Building number	ca:HNO	"empty"
Name	ca:NAM	"empty"
Building name	ca:BLD	Bahnhofhalle
Post code	ca:PC	8001
EGID (federal building identifier)	ca:ADDCODE	"empty"
Latitude Longitude (decimal degree)	gml:pos	47.377831 8.540591

4.1.2 WireLess, Wifi-Calling (LastCell Polygon)

This are WireLess, Wifi-Calling (LastCell) test cases which are localized at a mobile cell in Switzerland. The PSAP gets as result ellipses **OR** polygons.

4.1.2.1 Biel

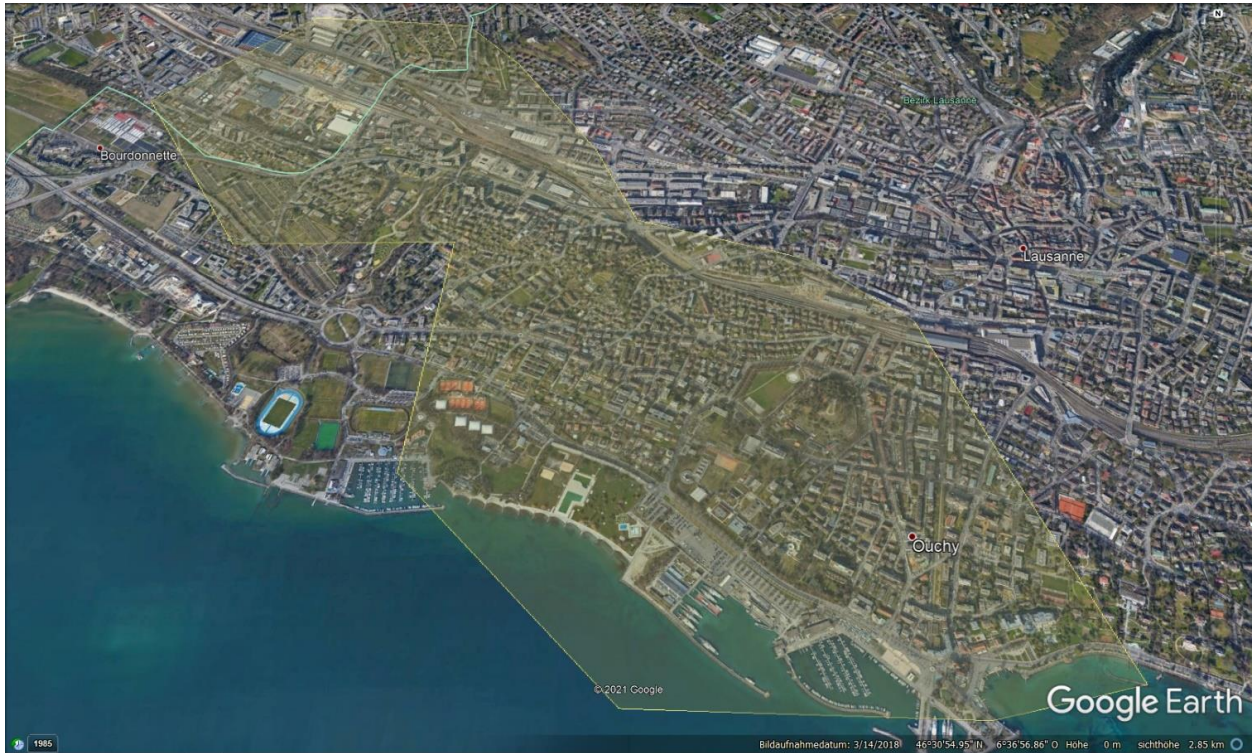


SIP-URI: [+41790000001@example.swisscom.com](tel:+41790000001@example.swisscom.com)

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/e89a5597-1007-4c63-93ca-5296df7bf1a6>

Description	Tag	Content
Polygon 1 (decimal degree)	gml:pos	47.115221 7.242613
	gml:pos	47.133664 7.263712
	gml:pos	47.138183 7.213512
	gml:pos	47.115221 7.242613
Polygon 2 (decimal degree)	gml:pos	47.128034 7.26192
	gml:pos	47.115187 7.242875
	gml:pos	47.126266 7.274204
	gml:pos	47.128034 7.26192

4.1.2.2 Lausanne



SIP-URI: +41790000002@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/ead98603-0fca-440b-b4e0-2db6251571af>

Description	Tag	Content
Polygon 1 (decimal degree)	gml:pos	46.517286 6.62812
	gml:pos	46.519706 6.62379
	gml:pos	46.521307 6.616209
	gml:pos	46.524445 6.61425
	gml:pos	46.52878 6.610114
	gml:pos	46.530867 6.607267
	gml:pos	46.531312 6.599095
	gml:pos	46.526823 6.591802
	gml:pos	46.520315 6.597852
	gml:pos	46.520406 6.60789
	gml:pos	46.512185 6.60672
	gml:pos	46.505823 6.615453
	gml:pos	46.505526 6.628241
	gml:pos	46.506388 6.633892
gml:pos	46.517286 6.62812	

4.1.2.3 Bellinzona



SIP-URI: +41790000003@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/3b465400-17f2-45b7-904a-5d3fc7f9b8d>

Description	Tag	Content
Polygon 1 (decimal degree)	<code>gml:pos</code>	46.18107 9.008192
	<code>gml:pos</code>	46.187279 9.014879
	<code>gml:pos</code>	46.194355 9.017477
	<code>gml:pos</code>	46.196027 9.014951
	<code>gml:pos</code>	46.198297 9.012214
	<code>gml:pos</code>	46.198382 9.010306
	<code>gml:pos</code>	46.19834 9.008609
	<code>gml:pos</code>	46.198211 9.007174
	<code>gml:pos</code>	46.19665 9.006271
	<code>gml:pos</code>	46.194678 9.005207
	<code>gml:pos</code>	46.193793 9.003443
	<code>gml:pos</code>	46.193158 9.001568
	<code>gml:pos</code>	46.191174 8.997829
	<code>gml:pos</code>	46.189325 8.996379
<code>gml:pos</code>	46.18107 9.008192	
Polygon 2 (decimal degree)	<code>gml:pos</code>	46.171703 9.031191
	<code>gml:pos</code>	46.173087 9.031706
	<code>gml:pos</code>	46.172947 9.027975
	<code>gml:pos</code>	46.171675 9.028592
	<code>gml:pos</code>	46.171703 9.031191

4.1.2.4 Zürich



SIP-URI: +41790000004@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/119be819-b8f1-4b72-bbf9-6f17483aca2c>

Description	Tag	Content
Polygon 1 (decimal degree)	gml:pos	47.4071 8.608636
	gml:pos	47.407934 8.605704
	gml:pos	47.409064 8.600477
	gml:pos	47.410316 8.595008
	gml:pos	47.411297 8.588563
	gml:pos	47.412094 8.58102
	gml:pos	47.412497 8.574717
	gml:pos	47.412091 8.56869
	gml:pos	47.410994 8.562344
	gml:pos	47.409148 8.55675
	gml:pos	47.406536 8.55116
	gml:pos	47.402757 8.545367
	gml:pos	47.399311 8.541577
	gml:pos	47.395568 8.539148
	gml:pos	47.389693 8.536989
	gml:pos	47.384486 8.535683
	gml:pos	47.378617 8.534628
	gml:pos	47.372155 8.534584
	gml:pos	47.362389 8.536698
	gml:pos	47.362167 8.541306
gml:pos	47.362043 8.548989	
gml:pos	47.365724 8.548109	

gml:pos	47.369028 8.547616
gml:pos	47.372457 8.547342
gml:pos	47.37614 8.54712
gml:pos	47.379227 8.547018
gml:pos	47.382679 8.546999
gml:pos	47.389307 8.547049
gml:pos	47.392645 8.547927
gml:pos	47.396386 8.54898
gml:pos	47.399551 8.550847
gml:pos	47.402084 8.552453
gml:pos	47.404307 8.55543
gml:pos	47.406265 8.560243
gml:pos	47.407642 8.565063
gml:pos	47.408581 8.572172
gml:pos	47.408867 8.577394
gml:pos	47.408868 8.581984
gml:pos	47.407741 8.58762
gml:pos	47.407095 8.592558
gml:pos	47.406004 8.597999
gml:pos	47.403886 8.60596
gml:pos	47.4071 8.608636

4.2 PSAP: Devicebased location only

In chapter 4.2 test cases only with devicebased locations for AML and eCall and the specific data are described. AML specific location data like GNSS. Min. with a point, a circle around the point and a confidence. Max. you get additional the height (heading) and/or speed and/or direction (orientation).

eCall specific location data are a point in milliarcseconds and the last two points in different of the current point. The direction where the vehicle was driving, the number of occupants, the type of vehicle, which energy is used and some other information.

4.2.1 AML

AML specific location data like GNSS. Min. with a point, a circle around the point and a confidence. Max. you get additional information like the heading (device is moving to) and/or orientation (direction where device is looking to) and/or speed.

4.2.1.1 Biel



SIP-URI: +41790000005@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/c386431a-469d-4e36-9b20-4e2684aca5ee>

AML

Description	Tag	Content
Circle (m)	gs:radius	14
Confidence (%)	conf:confidence	95
Orientation (degree)	dyn:orientation	-3 10.9
Speed (m/s)	dyn:speed	0
Heading (degree)	dyn:heading	35
Latitude Longitude (decimal degree)	gml:pos	47.126412 7.231534

4.2.1.2 Lausanne



SIP-URI: [+41790000006@example.swisscom.com](tel:+41790000006)

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/135c5cc0-c045-477a-a3a0-ca5cc47f0289>

AML

Description	Tag	Content
Circle (m)	gs:radius	500
Confidence (%)	conf:confidence	70
Latitude Longitude (decimal degree)	gml:pos	46.506305 6.626064

4.2.1.3 Bellinzona



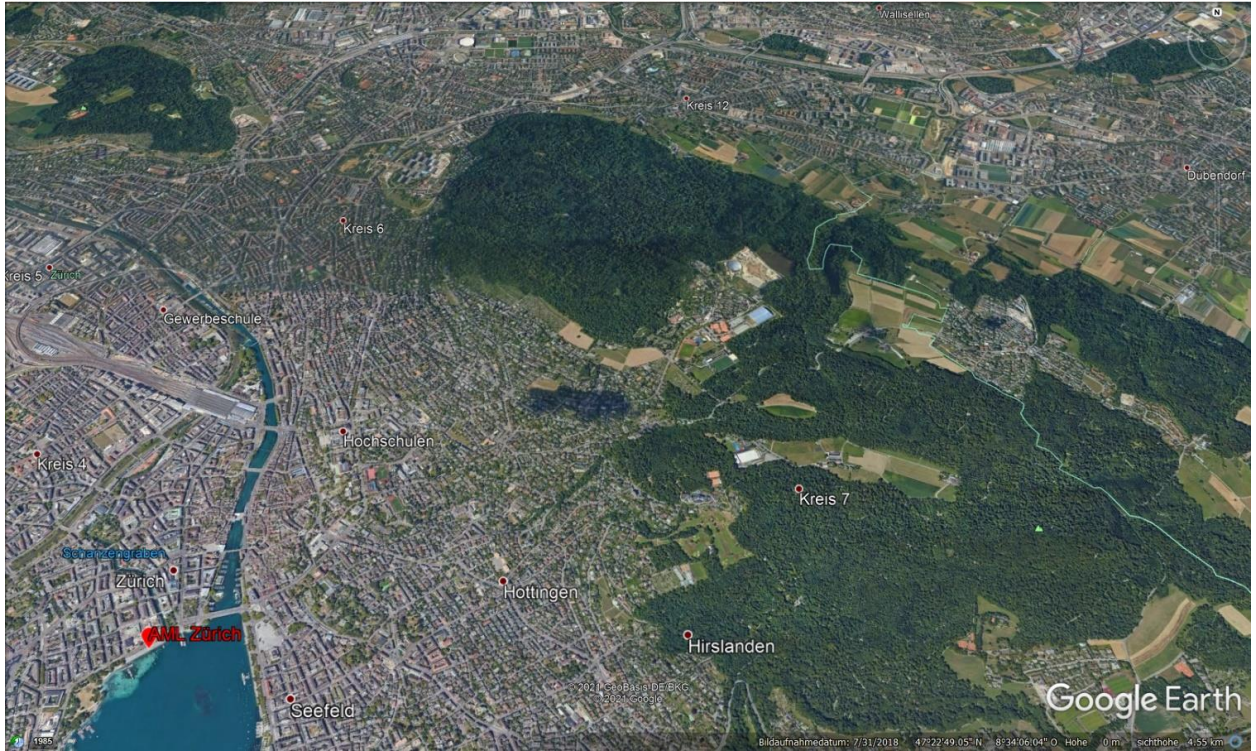
SIP-URI: [+41790000007@example.swisscom.com](tel:+41790000007)

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/a89a486c-21a8-4319-bee0-074050f01344>

AML

Description	Tag	Content
Circle (m)	gs:radius	30
Confidence (%)	conf:confidence	95
Latitude Longitude (decimal degree)	gml:pos	46.194774 9.01088
Speed (m/s)	dyn:speed	0
Heading (degree)	dyn:heading	30

4.2.1.4 Zürich



SIP-URI: [+41790000008@example.swisscom.com](tel:+41790000008)

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/8ec16a68-06ef-49f9-89b9-a6eebf4c19e0>

AML

Description	Tag	Content
Circle (m)	gs:radius	1300
Confidence (%)	conf:confidence	55
Latitude Longitude (decimal degree)	gml:pos	47.365127 8.539108
Speed (m/s)	dyn:speed	13.88
Heading (degree)	dyn:heading	200

4.2.2 eCall

eCall specific location data are a point in milliarseconds and the last two points in different of the current point. The direction where the vehicle was driving, the number of occupants, the type vehicle, which energy is used and some other information's.

4.2.2.1 Biel



SIP-URI: [+41790000009@example.swisscom.com](tel:+41790000009)

Call-Info/LocationURI: <https://ref-lis.sosservice.ch:8443/location/725f9851-4bc1-4f03-a703-f8e768b3ade4>

MSD

Description	Tag	Content
Latitude (milliarcsec) in degrees 47.122809	oss:positionLatitude	169642120
Longitude (milliarcsec) in degrees 7.263338	oss:positionLongitude	26148020
messageIdentifier	oss:messageIdentifier	1
automaticActivation	oss:automaticActivation	oss:true
testCall	oss:testCall	oss:false
positionCanBeTrusted	oss:positionCanBeTrusted	oss:true
vehicleType	oss:vehicleType	oss:passengerVehicleCategoryM1
Wmi Tesla	oss:isowmi	5YJ
Vds Model 3	oss:isovds	3E7EB1
visModelyear 2019	oss:isovisModelyear	K
visSeqPlant	oss:isovisSeqPlant	F207584
vehiclePropulsion-StorageType	oss:electricEnergyStorage	oss:true
Timestamp Unix time 31.12.2021 23:59:00	oss:timestamp	1640995140 (fixed time)



vehicleDirection (2° * 80 => 160°)	oss:vehicleDirection	80
N1 latitudeDelta	oss:latitudeDelta	-10
N1 longitudeDelta	oss:longitudeDelta	-200
N2 latitudeDelta	oss:latitudeDelta	-10
N2 longitudeDelta	oss:longitudeDelta	-200
numberOfOccupants	oss:numberOfOccupants	2

4.2.2.2 Lausanne



SIP-URI: [+41790000010@example.swisscom.com](tel:+41790000010)

Call-Info/LocationURI: <https://ref-lis.sosservice.ch:8443/location/ae8735b2-14bb-49fe-9a88-9ea5c50ff46b>

MSD

Description	Tag	Content
Latitude (milliarcsec) in degrees 46.528134	oss:positionLatitude	167501290
Longitude(milliarcsec) in degrees 6.604013	oss:positionLongitude	23774450
messageIdentifier	oss:messageIdentifier	2
automaticActivation	oss:automaticActivation	oss:true
testCall	oss:testCall	oss:false
positionCanBeTrusted	oss:positionCanBeTrusted	oss:true
vehicleType	oss:vehicleType	oss: heavyDutyVehiclesCategoryN2
Wmi Volvo Truck	oss:isowmi	YV2
vds	oss:isovds	H2B4C3
visModelyear 2020	oss:isovisModelyear	L
visSeqPlant	oss:isovisSeqPlant	A350630
vehiclePropulsion- StorageType	oss:hydrogenStorage	oss:true
Timestamp Unix time 31.12.2021 23:59:00	oss:timestamp	1640995140 (fixed time)

vehicleDirection (2° * 37 => 74°)	oss:vehicleDirection	37
N1 latitudeDelta	oss:latitudeDelta	-10
N1 longitudeDelta	oss:longitudeDelta	-200
N2 latitudeDelta	oss:latitudeDelta	-10
N2 longitudeDelta	oss:longitudeDelta	-200
numberOfOccupants	oss:numberOfOccupants	2

4.2.2.3 Bellinzona



SIP-URI: [+41790000011@example.swisscom.com](tel:+41790000011)

Call-Info/LocationURI: <https://ref-lis.sosservice.ch:8443/location/0d312639-bd71-43d3-b439-68fe11a02b4e>

MSD

Description	Tag	Content
Latitude (milliarcsec) in degrees 46.172129	oss:positionLatitude	166219674
Longitude (milliarcsec) in degrees 9.030330	oss:positionLongitude	32509190
messageIdentifier	oss:messageIdentifier	3
automaticActivation	oss:automaticActivation	oss:false
testCall	oss:testCall	oss:false
positionCanBeTrusted	oss:positionCanBeTrusted	oss:false
vehicleType Harley Davidson	oss:vehicleType	oss: motorcyclesCategoryL2e
Wmi Trike	oss:isowmi	1HD
vds	oss:isovds	1MAF10
visModelyear 2021	oss:isovisModelyear	M
visSeqPlant	oss:isovisSeqPlant	B853747
vehiclePropulsion-StorageType	oss: gasolineTankPresent	oss:true

Timestamp	oss:timestamp	1640995140 (fixed time)
Unix time 31.12.2021 23:59:00		
vehicleDirection (2° * 160 => 320°)	oss:vehicleDirection	160
N1 latitudeDelta	oss:latitudeDelta	511
N1 longitudeDelta	oss:longitudeDelta	511
N2 latitudeDelta	oss:latitudeDelta	-512
N2 longitudeDelta	oss:longitudeDelta	-512
numberOfOccupants	oss:numberOfOccupants	1

4.2.2.4 Zürich



SIP-URI: [+41790000012@example.swisscom.com](tel:+41790000012)

Call-Info/LocationURI: <https://ref-lis.sosservice.ch:8443/location/07e6302f-92e6-49fe-9422-49138ca94ada>

MSD

Description	Tag	Content
Latitude (milliarcsec) in degrees 47.407584	oss:positionLatitude	170667310
Longitude (milliarcsec) in degrees 8.593644	oss:positionLongitude	30937120
messageldentifier	oss:messageldentifier	4
automaticActivation	oss:automaticActivation	oss:false
testCall	oss:testCall	oss:false
positionCanBeTrusted	oss:positionCanBeTrusted	oss:false
vehicleType	oss:vehicleType	oss: agriVehiclesCategoryR
wmi New Holland	oss:isowmi	HAC
vds T6	oss:isovds	T6175T
visModelyear 2020	oss:isovisModelyear	L
visSeqPlant	oss:isovisSeqPlant	EG97622
vehiclePropulsion- StorageType	oss: compressedNaturalGas	oss:true
timestamp Unix time 31.12.2021 23:59:00	oss:timestamp	1640995140 (fixed time)

vehicleDirection (2° * 45 => 90°)	oss:vehicleDirection	45
N1 latitudeDelta	oss:latitudeDelta	-512
N1 longitudeDelta	oss:longitudeDelta	511
N2 latitudeDelta	oss:latitudeDelta	-512
N2 longitudeDelta	oss:longitudeDelta	511
numberOfOccupants	oss:numberOfOccupants	1

4.3 PSAP: Netbased and Devicebased location

In chapter 4.3 are test cases with a combination of netbased and devicebased locations. In chapter 4.3.1 and 4.3.3 the device based location is within the netbased location. In chapter 4.3.2 the device based location is outside the netbased location.

4.3.1 Wireless Polygon with AML inside

4.3.1.1 Biel



SIP-URI: [+41790000013@example.swisscom.com](tel:+41790000013@example.swisscom.com)

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/33e137ba-a28f-4d60-9b04-7a43279cfce0>

Netbased polygon see 4.1.2.1

AML position see 4.2.1.1

4.3.1.2 Lausanne



SIP-URI: +41790000014@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/f9e7c5a3-8a10-45a0-8b31-c2bfa9cb0480>

Netbased polygon see 4.1.2.2

AML position see 4.2.1.2

4.3.1.3 Bellinzona



SIP-URI: +41790000015@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/a6f665ce-5b8c-4995-87c9-80e139c487fa>

Netbased polygon see 4.1.2.3

AML position see 4.2.1.3

4.3.1.4 Zürich



SIP-URI: +41790000016@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/52d72d6e-ff12-448b-9f05-9960bb70dd23>

Netbased polygon see 4.1.2.4

AML position see 4.2.1.4

4.3.2 Wireless Ellipsis with AML outside

4.3.2.1 Biel



SIP-URI: +41790000017@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/3abb52a2-95ec-432f-b0fa-213e7dd06d5c>

AML position see 4.2.1.1

Wireless Ellipsis

Description	Tag	Content
Latitude Longitude	gml:pos	47.132994 7.264240
Orientation	gs:orientation uom	160
SemiMajorAxis	gs:semiMajorAxis uom	515
SemiMinorAxis	SemiMinorAxis	314

4.3.2.2 Lausanne



SIP-URI: +41790000018@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/56fbd507-0f7b-47c2-8739-31d160800722>

AML position see 4.2.1.2

Wireless Ellipsis

Description	Tag	Content
Latitude Longitude	gml:pos	46.517442 6.621837
Orientation	gs:orientation uom	96
SemiMajorAxis	gs:semiMajorAxis uom	306
SemiMinorAxis	SemiMinorAxis	443.5

4.3.2.3 Bellinzona



SIP-URI: +41790000019@example.swisscom.com

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/e093df80-51c3-4f41-a63a-671fa1af7fdc>

AML position see 4.2.1.3

Wireless Ellipsis

Description	Tag	Content
Latitude Longitude	gml:pos	46.186789 9.008510
Orientation	gs:orientation uom	30.36
SemiMajorAxis	gs:semiMajorAxis uom	461
SemiMinorAxis	SemiMinorAxis	326.5

4.3.2.4 Zürich



SIP-URI: [+41790000020@example.swisscom.com](tel:+41790000020)

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/bdd74fe7-7a65-42b4-b3d9-4aa9d2a73d35>

AML position see 4.2.1.4

Wireless Ellipsis 1

Description	Tag	Content
Latitude Longitude	gml:pos	47.376012 8.540544
Orientation	gs:orientation uom	171.97
SemiMajorAxis	gs:semiMajorAxis uom	902.5
SemiMinorAxis	SemiMinorAxis	383

Wireless Ellipsis 2

Description	Tag	Content
Latitude Longitude	gml:pos	47.390655 8.542415
Orientation	gs:orientation uom	7.1
SemiMajorAxis	gs:semiMajorAxis uom	976.5
SemiMinorAxis	SemiMinorAxis	383

Wireless Ellipsis 3

Description	Tag	Content
Latitude Longitude	gml:pos	47.401928 8.549077



Orientation	gs:orientation uom	27.7
SemiMajorAxis	gs:semiMajorAxis uom	685.5
SemiMinorAxis	SemiMinorAxis	238

4.3.3 Wireless Polygon with eCall inside

4.3.3.1 Biel



SIP-URI: [+41790000021@example.swisscom.com](tel:+41790000021@example.swisscom.com)

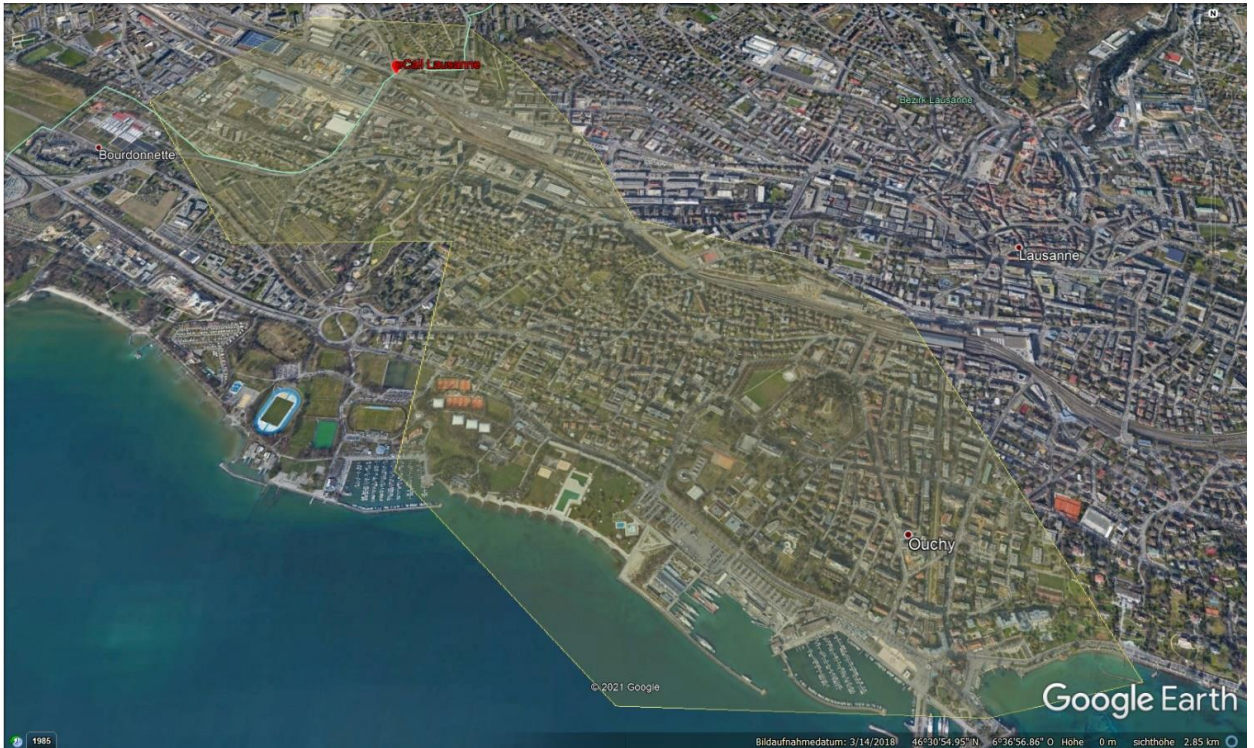
Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/32a7f7cf-890f-4d3a-b0f8-a7b898f2a017>

Netbased polygon see 4.1.2.1

eCall position see 4.2.2.1

Note: eCall timestamp = Wireline timestamp + 30 seconds

4.3.3.2 Lausanne



SIP-URI: [+41790000022@example.swisscom.com](tel:+41790000022)

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/445ed969-fc81-4758-bb59-58db1d337a4b>

Netbased polygon see 4.1.2.2

eCall position see 4.2.2.2

Note: eCall timestamp = Wireline timestamp + 30 seconds

4.3.3.3 Bellinzona



SIP-URI: [+41790000023@example.swisscom.com](tel:+41790000023)

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/8b0a6001-4fbb-4b4a-9ff8-ef6b715adbd9>

Netbased polygon see 4.1.2.3

eCall position see 4.2.2.3

Note: eCall timestamp = Wireline timestamp + 30 seconds

4.3.3.4 Zürich



SIP-URI: [+41790000024@example.swisscom.com](tel:+41790000024)

Geolocation/LocationURI: <https://ref-lis.sosservice.ch:8443/location/f8ae6aea-9db5-4493-b81e-dc7186bda655>

Netbased polygon see 4.1.2.4

eCall position see 4.2.2.4

Note: eCall timestamp = Wireline timestamp + 30 seconds