Advanced Mobile Location

June 2019

AML REPORT CARD

Contents

Foreword

Welcome to the first *AML Report Card*. This document is intended to provide you with all the information you need about how AML is deployed in each country and how it works operationally. The document is organised into 15 sections – each focusing on a country currently making use of AML. In addition, at the end of the document, an annex provides comprehensive tables to easily compare information between the different countries.

Through the publication of this document, EENA aims to make as much information as possible available on the possibilities and impact of implementing AML by indicating how this has been done in other countries. The need for such a document was underlined as a recommendation of the EENA Members Workshop 2017.

The AML Report Card will be published on a yearly basis.

Disclaimer

This document is created by EENA staff members with contributions from emergency services representatives of each country involved. This document does not represent the views of individual members of EENA, or any other parties.

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What is AML?

AML stands for Advanced Mobile Location. It is a technology that is activated when an emergency call is made from a mobile phone. AML enables handset-derived caller location information (GNSS, Wifi…) to be provided to the emergency services without prior action from the caller in distress. Many lives have already been saved in the countries where AML is already deployed.

AML is supported in smartphones that use Android or iOS operating systems (OS). However, the technology is activated by the OS providers (Google and Apple) on a country per country basis once the national authorities are technically and operationally ready to receive such information.

When deploying AML, several configurations are possible:

- The phone numbers for which AML is activated
- The transmission channel: SMS (or Data SMS), HTTPS
- The time delta to receive an SMS
- Sending of location for international roamers calling the emergency services
- Sending of location for people using SMS-to-112 (or equivalent) services

All information about AML can be found at: www.eena.org/aml.

Contact point: aml@eena.org.

Austria

Organisation providing information

Notruf Niederoesterreich

AML COVERAGE IN AUSTRIA

Is AML operational in the whole country?

☑ Yes ☐ No

For which operating systems is AML working in Austria?

☑ Android ☐ iOS

When was AML deployed in Austria?

End of 2016 (during Help112 project)

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

☑ Other: Mountain Rescue, Water Rescue, HEMS

For which emergency numbers is AML activated?

122, 128, 144, 140 and 141

LEGISLATION IN AUSTRIA

What is the legislative framework in Austria to receive AML locations (rules on privacy, emergency caller location...)?

Legal background is changing at the moment.

END-POINT AND TRANSMISSION IN AUSTRIA

How are the AML messages transmitted to the end-point?

- ☐ SMS to a short number
- ☑ SMS to a long number
- ☑ HTTPS

Which organisation maintains the AML end-point?

Notruf Niederoesterreich

What is the time delta defined to receive AML positions?

20 sec.

Are several AML messages sent during the duration of the call?

Only one via SMS and one via HTTPS

How is the location information transmitted from the technical end-point to (other) PSAPs in Austria?

Push / Pull encrypted connections

Are AML positions presented directly in the call-takers' GIS?

- ☑ Yes
- ☐ No

AML EVOLUTIONS IN AUSTRIA

Is AML also activated for roaming (Android ELS only)?

- ☐ Yes
- ☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

- ☐ Yes
- ☑ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

65%

Percentage of AML messages received within 30 seconds?

100% (as far as we know)

Percentage of AML messages received within 15 seconds?

0%

Percentage of AML messages with an accuracy below 100m.?

92.82%

Percentage of AML messages with an accuracy below 50m.?

85.21%

Percentage of locations through GNSS/Wifi/Cell?

Not available

Belgium

Organisation providing information

Ministry of Interior

AML COVERAGE IN BELGIUM

Is AML operational in the whole country?

☑ Yes ☐ No

For which operating systems is AML working in Belgium?

☑ Android ☑ iOS

When was AML deployed in Belgium?

May 2017

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

For which emergency numbers is AML activated?

For Android: 112, 100 (Emergency Medical Services & Fire and Rescue Services), 101 (Police). For Apple: only 112.

LEGISLATION IN BELGIUM

What is the legislative framework in Belgium to receive AML locations (rules on privacy, emergency caller location...)?
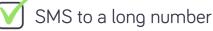
A privacy statement is available on the 112.be website. The Belgium regulator added a statement, explaining the AML service, to be added to the general conditions of all the operators.

END-POINT AND TRANSMISSION IN BELGIUM

How are the AML messages transmitted to the end-point?

- ☑ SMS to a short number
- ☑ SMS to a long number
- ☐ HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

- ☑ Yes
- ☐ No

Which organisation maintains the AML end-point?

Astrid SA/NV

What is the time delta defined to receive AML positions?

20 sec.

Are several AML messages sent during the duration of the call?

Android: At the beginning of the call and an update after 20 seconds,
Apple: after approximately 20 seconds

How is the location information transmitted from the technical end-point to (other) PSAPs in Belgium?

It is stored on a central server, all PSAPs in Belgium have access to that server.

Are AML positions presented directly in the call-takers' GIS?

- [x] Yes
- [ ] No

AML EVOLUTIONS IN BELGIUM

Is AML also activated for roaming (Android ELS only)?

- [ ] Yes
- [x] No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

- [x] Yes
- [ ] No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

Not available

Percentage of AML messages received within 30 seconds?

Not available

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EUROPEAN EMERGENCY NUMBER ASSOCIATION

Percentage of AML messages received within 15 seconds?

Not available

Percentage of AML messages with an accuracy below 100m.?

Not available

Percentage of AML messages with an accuracy below 50m.?

Not available%

Percentage of locations through GNSS/Wifi/Cell?

Not available

OTHER

Companies that helped in deploying AML in Belgium

Nextel
Portalify

Estonia

AML COVERAGE IN ESTONIA

Is AML operational in the whole country?

☑ Yes   ☐ No

For which operating systems is AML working in Estonia?

☑ Android   ☑ iOS

When was AML deployed in Estonia?

July 2016

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services
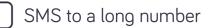
For which emergency numbers is AML activated?

112

END-POINT AND TRANSMISSION IN ESTONIA

How are the AML messages transmitted to the end-point?

☑ SMS to a short number

☐ SMS to a long number

☐ HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

☑ Yes

☐ No

Which organisation maintains the AML end-point?

Emergency Response Centre

What is the time delta defined to receive AML positions?

20 sec.

Are several AML messages sent during the duration of the call?

No

How is the location information transmitted from the technical end-point to (other) PSAPs in Estonia?

Not applicable (PSAP is the technical end-point)

Are AML positions presented directly in the call-takers' GIS?

☑ Yes

☐ No

AML EVOLUTIONS IN ESTONIA

Is AML also activated for roaming (Android ELS only)?

☐ Yes

☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

- ☐ Yes
- ☑ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

Not available

Percentage of AML messages received within 30 seconds?

Not available

Percentage of AML messages received within 15 seconds?

Not available

Percentage of AML messages with an accuracy below 100m.?

Not available

Percentage of AML messages with an accuracy below 50m.?

Not available

Percentage of locations through GNSS/Wifi/Cell?

Not available

OTHER

The companies that helped in deploying AML in Estonia

SMIT
Telia
Elisa
Tele2

Finland

Organisation providing information

Emergency Response Centre Agency

AML COVERAGE IN FINLAND

Is AML operational in the whole country?

☑ Yes   ☐ No

For which operating systems is AML working in Finland?

☑ Android   ☑ iOS

When was AML deployed in Finland?

2017

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

For which emergency numbers is AML activated?

112

LEGISLATION IN FINLAND

What is the legislative framework in Finland to receive AML locations (rules on privacy, emergency caller location...)?

The Act on Electronic Communication Services

END-POINT AND TRANSMISSION IN FINLAND

How are the AML messages transmitted to the end-point?

- [x] SMS to a short number
- [ ] SMS to a long number
- [ ] HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

- [x] Yes
- [ ] No

Which organisation maintains the AML end-point?

ERC Agency

What is the time delta defined to receive AML positions?

Google ELS: 5 sec., Apple AML: 15-20 sec.

Are several AML messages sent during the duration of the call?

Google ELS: Yes, Apple AML: no

How is the location information transmitted from the technical end-point to (other) PSAPs in Finland?

Teleoperators deliver location information from SMSC to dedicated Alerta-service. Location information via dedicated Alerta-service to PSAPs.

Are AML positions presented directly in the call-takers' GIS?

☑ Yes

☐ No

AML EVOLUTIONS IN FINLAND

Is AML also activated for roaming (Android ELS only)?

☐ Yes

☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☑ Yes

☐ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

50%

Percentage of AML messages received within 30 seconds?

Not available (95% within 60 sec.)

Percentage of AML messages received within 15 seconds?

Not available

Percentage of AML messages with an accuracy below 100m.?

88%

Percentage of AML messages with an accuracy below 50m.?

78%

Percentage of locations through GNSS/Wifi/Cell?

Not available

OTHER

Companies that helped in deploying AML in Finland

Digia
Teleoperators: Telia, Elisa and DNA

Using AML: Stories & Experiences

One of the best things is related to addresses that have foreign words in the names. We have a lot of those, because Finland is bilingual. For example, a caller can spell "Eekkerööntie" which can be in Finnish "Eckeröntie", "Ekeröntie" or in Swedish "Eckerövägen", "Ekerövägen". Those roads might be in different parts of Finland, so the possibility for a big mistake exists. Now the system shows the exact location and the spelling of the road on the map, so it saves a lot of time and keeps the call-taker's focus on the call handling.

Iceland

AML COVERAGE IN ICELAND

Is AML operational in the whole country?

☑ Yes   ☐ No

For which operating systems is AML working in Iceland?

☑ Android   ☑ iOS

When was AML deployed in Iceland?

Android: January 2017; Apple: April 2018

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

For which emergency numbers is AML activated?

112

LEGISLATION IN ICELAND

What is the legislative framework in Iceland to receive AML locations (rules on privacy, emergency caller location…)?

No specific rules, just general that a caller to emergency services is obligated to reveal their location and deception is punishable by law. A little technical aid is not considered a violation of anything.

END-POINT AND TRANSMISSION IN ICELAND

How are the AML messages transmitted to the end-point?

- [x] SMS to a short number
- [ ] SMS to a long number
- [ ] HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

- [x] Yes
- [ ] No

Which organisation maintains the AML end-point?

112 Iceland

What is the time delta defined to receive AML positions?

One after 0 sec. and another after 20 sec.

Are several AML messages sent during the duration of the call?

Yes, 2.

How is the location information transmitted from the technical end-point to (other) PSAPs in Iceland?

Not applicable (PSAP is the technical end-point)

Are AML positions presented directly in the call-takers' GIS?

- [x] Yes
- [ ] No

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AML EVOLUTIONS IN ICELAND

Is AML also activated for roaming (Android ELS only)?

☐ Yes
☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☑ Yes
☐ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

The general notion is that AML arrives with most domestic cell phone calls.

Percentage of AML messages received within 30 seconds?

Not available

Percentage of AML messages received within 15 seconds?

Not available

Percentage of AML messages with an accuracy below 100m.?

Not available

Percentage of AML messages with an accuracy below 50m.?

Not available%

Percentage of locations through GNSS/Wifi/Cell?

Not available

Companies that helped in deploying AML in Iceland

The operators: Siminn, Vodafone and Nova
Samsyn (software development)

Using AML: Stories & Experiences

A couple was driving in the West fjords. The passenger (the woman) falls asleep and wakes up when her husband drives the car off the road in an epileptic seizure. She had no idea how far along they were and it had fallen totally dark. They could have been anywhere along close to 100 km of the road, passing through 2 counties and over 2 mountain passes. ELS gave their exact location. (Of course the cell ID did reduce the drama somewhat, but still left open more than 40 km of road).

Ireland

AML COVERAGE IN IRELAND

Is AML operational in the whole country?

☑ Yes ☐ No

For which operating systems is AML working in Ireland?

☑ Android ☑ iOS

When was AML deployed in Ireland?

Summer 2017

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

☑ Other: Coastguard

For which emergency numbers is AML activated?

112, 999

LEGISLATION IN IRELAND

What is the legislative framework in Ireland to receive AML locations (rules on privacy, emergency caller location…)?

Permitted under Data Protection legislation

END-POINT AND TRANSMISSION IN IRELAND

How are the AML messages transmitted to the end-point?

☑ SMS to a short number

☐ SMS to a long number

☐ HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

☑ Yes

☐ No

Which organisation maintains the AML end-point?

Emergency Call Answering Service (ECAS)

What is the time delta defined to receive AML positions?

No criteria has been defined, however AML messages are typically received in between 8 and 10 seconds from the start of the emergency call.

Are several AML messages sent during the duration of the call?

Yes. Android: 4, Apple: 1

How is the location information transmitted from the technical end-point to (other) PSAPs in Ireland?

XML and HTTP interface

Are AML positions presented directly in the call-takers' GIS?

☐ Yes

☑ No

AML EVOLUTIONS IN IRELAND

Is AML also activated for roaming (Android ELS only)?

☐ Yes
☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☐ Yes
☑ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

50%

Percentage of AML messages received within 30 seconds?

100%

Percentage of AML messages received within 15 seconds?

95%

Percentage of AML messages with an accuracy below 100m.?

97%

Percentage of AML messages with an accuracy below 50m.?

85%

Percentage of locations through GNSS/Wifi/Cell?

GNSS: 51%
Wifi: 45%
Cell: 4%

OTHER

Companies that helped in deploying AML in Ireland

Volt Delta International
Púca

Lithuania

Organisation providing information

Emergency Response Centre (ERC)

AML COVERAGE IN LITHUANIA

Is AML operational in the whole country?

☑ Yes ☐ No

For which operating systems is AML working in Lithuania?

☑ Android ☑ iOS

When was AML deployed in country Lithuania?

Android ELS: November 2016, Apple iOS AML: April 2018

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

Note: AML for Emergency Medical Services services supported only via number 112, but not for a direct EMS number.

For which emergency numbers is AML activated?

Alongside with number 112, Android ELS supports the old national emergency numbers for police and fire (101, 011, 102, 022). Apple iOS AML only supports the emergency number 112.

LEGISLATION IN LITHUANIA

What is the legislative framework in Lithuania to receive AML locations (rules on privacy, emergency caller location...)?

Law on Emergency Response Center, ERC's procedures on handling personal data and regulations and documentation of the use of ERC's information system.

END-POINT AND TRANSMISSION IN LITHUANIA

How are the AML messages transmitted to the end-point?

- ☑ SMS to a short number
- ☐ SMS to a long number
- ☐ HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

- ☑ Yes
- ☐ No

Which organisation maintains the AML end-point?

Emergency Response Centre

What is the time delta defined to receive AML positions?

Android ELS: 30 sec., Apple iOS AML - not known, no time delta customisations available per country.

Are several AML messages sent during the duration of the call?

No

How is the location information transmitted from the technical end-point to (other) PSAPs in Lithuania?

Data integrations/web-services

Are AML positions presented directly in the call-takers' GIS?

☑ Yes

☐ No

AML EVOLUTIONS IN LITHUANIA

Is AML also activated for roaming (Android ELS only)?

☐ Yes

☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☑ Yes

☐ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

~45-50%

Percentage of AML messages received within 30 seconds?

~55%

Percentage of AML messages received within 15 seconds?

~12%

Percentage of AML messages with an accuracy below 100m.?

~75%

Percentage of AML messages with an accuracy below 50m.?

~43% below 20m.

Percentage of locations through GNSS/Wifi/Cell?

GNSS: ~32%
WiFi: ~44%
Cell-ID: ~5%
No location: ~19%

OTHER

List the companies that helped in deploying AML in Lithuania

UAB Innoseven Technologies (www.innoseven.lt)

Moldova

Organisation providing information

Public Institution "National Single Service for Emergency Number 112"

AML COVERAGE IN MOLDOVA

Is AML operational in the whole country?

☑ Yes ☐ No

For which operating systems is AML working in Moldova?

☑ Android ☐ iOS

When was AML deployed in Moldova?

15 October 2018

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

For which emergency numbers is AML activated?

112, 901, 902, 903

LEGISLATION IN MOLDOVA

What is the legislative framework in Moldova to receive AML locations (rules on privacy, emergency caller location...)?

- Law no. 174 of 25.07.2014 on the organisation and functioning of the National Single Service for Emergency Number 112;
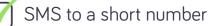- Decision on the approval of the technical, legal and organisational economic conditions concerning the accomplishment of electronic communications to / from the 112 service;
- Decision on the approval of the Technical Conditions for the transmission of information primary location for calls to the 112 emergency number and accessing the 112 Service to subscriber databases providers of electronic communications services;
- Decision on approval of Procedures and Technical Limits for Reducing Abusive Despatch, False alert and Involuntary Calls to the 112 Service.

END-POINT AND TRANSMISSION IN MOLDOVA

How are the AML messages transmitted to the end-point?

- ☑ SMS to a short number
- ☐ SMS to a long number
- ☐ HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

- ☑ Yes
- ☐ No

Which organisation maintains the AML end-point?

Public Institution "National Single Service for Emergency Number 112"
Republic of Moldova

What is the time delta defined to receive AML positions?

One after 10 sec., another one after 30 sec. and then one every 60 sec.

Are several AML messages sent during the duration of the call?

Yes

How is the location information transmitted from the technical end-point to (other) PSAPs in Moldova?

Intergrated in the GIS application

Are AML positions presented directly in the call-takers' GIS?

☑ Yes

☐ No

AML EVOLUTIONS IN MOLDOVA

Is AML also activated for roaming (Android ELS only)?

☐ Yes

☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☑ Yes

☐ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

20%

Percentage of AML messages received within 30 seconds?

27%

Percentage of AML messages received within 15 seconds?

24%

Percentage of AML messages with an accuracy below 100m.?

86%

Percentage of AML messages with an accuracy below 50m.?

80%

Percentage of locations through GNSS/Wifi/Cell?

GNSS: 25%
Wifi: 53%
Cell: 14%

OTHER

Companies that helped in deploying AML in Moldova

Ericsson
Carmenta
MoldTelecom
Orange
Moldcell

The Netherlands

Organisation providing information

Police (Dutch joint operation center)

AML COVERAGE IN THE NETHERLANDS

Is AML operational in the whole country?

☑ Yes ☐ No

For which operating systems is AML working in The Netherlands?

☑ Android ☐ iOS

When was AML deployed in The Netherlands?

March 2019

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

For which emergency numbers is AML activated?

112

LEGISLATION IN THE NETHERLANDS

What is the legislative framework in The Netherlands to receive AML locations (rules on privacy, emergency caller location...)?

Telecommunications law. The Government informs the citizens of The Netherlands about AML on the regular websites about 112

END-POINT AND TRANSMISSION IN THE NETHERLANDS

How are the AML messages transmitted to the end-point?

☑ SMS to a short number

☐ SMS to a long number

☐ HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

☑ Yes

☐ No

Which organisation maintains the AML end-point?

Police

What is the time delta defined to receive AML positions?

First location, 20 seconds and then every 60 seconds

Are several AML messages sent during the duration of the call?

Yes

How is the location information transmitted from the technical end-point to (other) PSAPs in The Netherlands?

A webservice connects the AML information to the call in the PSAPs

Are AML positions presented directly in the call-takers' GIS?

☑ Yes

☐ No

AML EVOLUTIONS IN THE NETHERLANDS

Is AML also activated for roaming (Android ELS only)?

☐ Yes

☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☐ Yes

☑ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

Approximately 40-45%

Percentage of AML messages received within 30 seconds?

No information available

Percentage of AML messages received within 15 seconds?

No information available

Percentage of AML messages with an accuracy below 100m.?

Approximately 91%

Percentage of AML messages with an accuracy below 50m.?

Approximately 86%

Percentage of locations through GNSS/Wifi/Cell?

Approximately:
GNSS:35%
Wifi: 58%
Cell: 6%

OTHER

Companies that helped in deploying AML in The Netherlands

MNO's and MVNO's

New Zealand

Organisation providing information
Ministry of Business, Innovation & Employment

AML COVERAGE IN NEW ZEALAND

Is AML operational in the whole country?

☑ Yes ☐ No

For which operating systems is AML working in New Zealand?

☑ Android ☑ iOS

When was AML deployed in country New Zealand?

May 2017

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

For which emergency numbers is AML activated?

111, 000, 112, 999, 911, 117 - both for voice calls and SMS (Txt to 111)
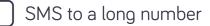
LEGISLATION IN NEW ZEALAND

What is the legislative framework in New Zealand to receive AML locations (rules on privacy, emergency caller location...)?

Specific amendment (No. 5) to the Telecommunications Information Privacy Code 2003. A code is a regulatory instrument under the NZ Privacy Act 1993. The Code sets out the conditions of collection, use, retention and disposal of personal information relating to emergency caller location data, and specifically authorises the collection of this data with the consent of the emergency caller.

END-POINT AND TRANSMISSION IN NEW ZEALAND

How are the AML messages transmitted to the end-point?

- [x] SMS to a short number
- [ ] SMS to a long number
- [ ] HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

- [x] Yes
- [ ] No

Which organisation maintains the AML end-point?

Ministry of Business, Innovation & Employment

What is the time delta defined to receive AML positions?

25 sec.

Are several AML messages sent during the duration of the call?

Not yet, planned for Q2 2019

How is the location information transmitted from the technical end-point to (other) PSAPs in New Zealand?

Emergency call-takers access the end-point - a repository - either via a web page or through a web-service API directly within the CAD system.

Are AML positions presented directly in the call-takers' GIS?

☑ Yes

☐ No

AML EVOLUTIONS IN NEW ZEALAND

Is AML also activated for roaming (Android ELS only)?

☐ Yes

☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☑ Yes

☐ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

75% of all genuine emergency calls

Percentage of AML messages received within 30 seconds?

96.85% (Android: 95.59%, iOS: 98.86%)

Percentage of AML messages received within 15 seconds?

14.55% (Android: 1.05%. iOS: 36.23%) - noting that the time delta is 25seconds

Percentage of AML messages with an accuracy below 100m.?

84.15% (Android: 78.92%, iOS: 92.56%)

Percentage of AML messages with an accuracy below 50m.?

72.12% (Android: 73.93%, iOS: 69.23%)

Percentage of locations through GNSS/Wifi/Cell?
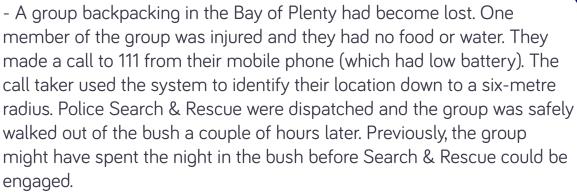
GNSS: 54.18%
WiFi: 31.1%
Cell: 2.85%
No location: 11.87%

OTHER

List the companies that helped in deploying AML in New Zealand

Mobile Network Operators (2degrees, Spark and Vodafone)
Datacom
Office of the Privacy Commission

Using AML: Stories & Experiences

- A group backpacking in the Bay of Plenty had become lost. One member of the group was injured and they had no food or water. They made a call to 111 from their mobile phone (which had low battery). The call taker used the system to identify their location down to a six-metre radius. Police Search & Rescue were dispatched and the group was safely walked out of the bush a couple of hours later. Previously, the group might have spent the night in the bush before Search & Rescue could be engaged.

- Wellington Free Ambulance received a call from a male who had woken up on the side of the road, with no idea where he was or what had happened. The man had a history of seizures, and had been driving from Bulls to Whanganui. The only details he could provide about his location was that he was in a farmland area and that there were no houses or road signs. Wellington Free Ambulance used the system to identify the man's location and to get him the help he needed.

- Wellington Free Ambulance received a call from a female who didn't speak English. While the call taker was arranging an interpreter, the caller hung up. While the call operator was attempting to call the person back, they used the system to identify the location of the caller so that help could be immediately dispatched. The person was in urgent need of medical treatment when the crew arrived. Using the system meant that they were able to get there sooner.

Norway

Organisation providing information

Nkom & Helsedir

AML COVERAGE IN NORWAY

Is AML operational in the whole country?

☑ Yes ☐ No

For which operating systems is AML working in Norway?

☑ Android ☑ iOS

Android for all 3 services. iOS for police service only.

When was AML deployed in country Norway?

2018

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

For which emergency numbers is AML activated?

110, 112, 113

LEGISLATION IN NORWAY

What is the legislative framework in Norway to receive AML locations (rules on privacy, emergency caller location…)?

Ecom regulations § 6-2a: operators shall transfer information on mobile phones location with accuracy as high as possible, but within 50 meter accuracy for at least 80 percent of the emergency calls. Operators can choose their own solutions or a operative system solution.

END-POINT AND TRANSMISSION IN NORWAY

How are the AML messages transmitted to the end-point?

- ☑ SMS to a short number
- ☐ SMS to a long number
- ☐ HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

- ☑ Yes
- ☐ No

Which organisation maintains the AML end-point?

Nasjonal Referansedatabase NRDB (the portabilty database)

What is the time delta defined to receive AML positions?

One after 10 sec., another one after 30 sec.

Are several AML messages sent during the duration of the call?

Yes, 2.

How is the location information transmitted from the technical end-point to (other) PSAPs in Norway?

Through NRDB interface.

Are AML positions presented directly in the call-takers' GIS?

☑ Yes
☐ No

AML EVOLUTIONS IN NORWAY

Is AML also activated for roaming (Android ELS only)?

☐ Yes
☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☑ Yes
☐ No

Note: It is enabled in the phones and in the AML end point, but is not yet displayed in the call takers GIS.

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

50% (60% for Police, 42% for Fire and Health)

Percentage of AML messages received within 30 seconds?

Not available

Percentage of AML messages received within 15 seconds?

Not available

Percentage of AML messages with an accuracy below 100m.?

Not available

Percentage of AML messages with an accuracy below 50m.?

Not available

Percentage of locations through GNSS/Wifi/Cell?

Not available

OTHER

List the companies that helped in deploying AML in Norway

NRDB
Telia
Locus,
National Health Directorate (Hdir)
The Norwegian Directorate for Civil Protection (DSB)
National Police Directorate (POD)
The Norwegian Communications Authority (Nkom)

Slovenia

Organisation providing information

Ministry of Defence, Administration for Civil Protection and Disaster Relief

AML COVERAGE IN SLOVENIA

Is AML operational in the whole country?

☐ Yes ☑ No

Note: AML currently working for three of four mobile operators.

For which operating systems is AML working in Slovenia?

☑ Android ☐ iOS

When was AML deployed in Slovenia?

20 April 2018

For which emergency services is AML working?

☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

Note: All emergency sercices are available in an emergency event with a call to 112. Police have a different number but in emergency cases we redirect just the voice call.

For which emergency numbers is AML activated?

112, 911

LEGISLATION IN SLOVENIA

What is the legislative framework in Slovenia to receive AML locations (rules on privacy, emergency caller location...)?

Operators must send call and caller location to 112.

END-POINT AND TRANSMISSION IN SLOVENIA

How are the AML messages transmitted to the end-point?

- ☑ SMS to a short number
- ☐ SMS to a long number
- ☐ HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

- ☑ Yes
- ☐ No

Which organisation maintains the AML end-point?

Ministry of Defence, Administration for Civil Protection and Disaster Relief

What is the time delta defined to receive AML positions?

One after 0 sec. and another one after 25 sec.

Are several AML messages sent during the duration of the call?

During the duration of the call, in most cases we get one or two AML messages.

How is the location information transmitted from the technical end-point to (other) PSAPs in Slovenia?

Each SMS has an ID code which determinates the region of the SMS sent.
The data from the SMS is then sent to the specific region over a private network.

Are AML positions presented directly in the call-takers' GIS?

☑ Yes

☐ No

AML EVOLUTIONS IN SLOVENIA

Is AML also activated for roaming (Android ELS only)?

☐ Yes

☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☐ Yes

☑ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

21.54% of all 243,977 mobile calls from April 20, 2018, to December 31, 2018

Percentage of AML messages received within 30 seconds?

51.68%

Percentage of AML messages received within 15 seconds?

32.93%

Percentage of AML messages with an accuracy below 100m.?

Not available

Percentage of AML messages with an accuracy below 50m.?

Not available

Percentage of locations through GNSS/Wifi/Cell?

Not available

OTHER

Companies that helped in deploying AML in Slovenia

Ipkom, d.o.o.

Using AML: Stories & Experiences

"AML is an impressive and very useful service" was one of the first comments about AML from one of our operators in PSAP. They cross by many different stories daily, but let's say this one stands out a little. We received a partial eCall. It was only a verbal eCall with the coordinates of a car crash and the name of a car brand. Information about location was not correct. A few seconds later, we received a very precise AML location. After eCall finished the verbal part, the operator tried to establish communication with the person in the car. He was successful, but only after two long minutes. In the meantime, the operator activated all the necessary rescue services. The location was really important in this case, since the accident happened on railway tracks, which means this story could have had a different ending. Luckily, it's a story about a successful combination of AML and eCall.

United Arab Emirates (UAE)

Organisation providing information

Dubai Police HQ

AML COVERAGE IN UAE

Is AML operational in the whole country?

☑ Yes ☐ No

For which operating systems is AML working in UAE?

☑ Android ☐ iOS

Note: IOS still testing

When was AML deployed in UAE?

2017

For which emergency services is AML working?

☐ Emergency Medical Services (EMS)

☑ Police

☐ Fire & Rescue Services

For which emergency numbers is AML activated?

Android: 999, 112, 911, IOS: will only be for 999

LEGISLATION IN UAE

What is the legislative framework in UAE to receive AML locations (rules on privacy, emergency caller location...)?

Legislation on emergency caller location

END-POINT AND TRANSMISSION IN UAE

How are the AML messages transmitted to the end-point?

- ☑ SMS to a short number
- ☐ SMS to a long number
- ☐ HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

- ☑ Yes
- ☐ No

Which organisation maintains the AML end-point?

Dubai Police HQ

What is the time delta defined to receive AML positions?

Between 5 sec. and 12 sec.

Are several AML messages sent during the duration of the call?

2 message from Android, 1 from iOS

How is the location information transmitted from the technical end-point to (other) PSAPs in UAE?

Over the webservice - but this is still under implementation.

Are AML positions presented directly in the call-takers' GIS?

☑ Yes

☐ No

AML EVOLUTIONS IN UAE

Is AML also activated for roaming (Android ELS only)?

☐ Yes

☑ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☑ Yes

☐ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

Not available

Percentage of AML messages received within 30 seconds?

Not available

Percentage of AML messages received within 15 seconds?

Not available

Percentage of AML messages with an accuracy below 100m.?

Not available

Percentage of AML messages with an accuracy below 50m.?

Not available

Percentage of locations through GNSS/Wifi/Cell?

Not available

United Kingdom

Organisation providing information
BT Stage 1 PSAP (BT, plc)

AML COVERAGE IN THE UK

Is AML operational in the whole country?
☑ Yes ☐ No

Note: Stage 1 PSAP covers all the UK. Not all Stage 2 PSAPs yet use AML effectively - most Ambulance and Fire Services do, but only about 30% of Police Forces. Coastguards use AML.

For which operating systems is AML working in the UK?
☑ Android ☑ iOS

When was AML deployed in the UK?
2014 for a small number of handsets (HTC)
Android: June 2016, Apple: April 2018

For which emergency services is AML working?
☑ Emergency Medical Services (EMS)

☑ Police

☑ Fire & Rescue Services

☑ Other: Coastguard

Note: Most Ambulance and Fire Services use AML from Stage 1 PSAP, but only about 30% of Police Forces at present. Coastguard uses AML.

For which emergency numbers is AML activated?

112, 999

LEGISLATION IN THE UK

What is the legislative framework in the UK to receive AML locations (rules on privacy, emergency caller location...)?

Ofcom general conditions
Privacy and Electronic Communications Regulations 2003 (SI 2003/2426)

END-POINT AND TRANSMISSION IN THE UK

How are the AML messages transmitted to the end-point?

- ☑ SMS to a short number
- ☑ SMS to a long number
- ☐ HTTPS

Note: SMS to a long number for overseas roamers on Android handsets

Is the transmission of the AML message free to the caller (message 'zero-rated')?

- ☑ Yes
- ☐ No

Note: Yes for SMS to short numbers, No for SMS to long numbers

Which organisation maintains the AML end-point?

BT Stage 1 PSAP

What is the time delta defined to receive AML positions?

15-20 sec. is the time delay at handset to establish a location. Stage 1 PSAP answers voice calls within 1 second (on average) with average time to receive AML after voice answered being 16 seconds.

Are several AML messages sent during the duration of the call?

No, only one message sent at start of the call.

How is the location information transmitted from the technical end-point to (other) PSAPs in the UK?

Stage 1 PSAP uses a location hub where AML information is temporarily stored for Stage 2 PSAPs to access (using MSISDN) on an existing interface for all 999 location (using private data network connections).

Are AML positions presented directly in the call-takers' GIS?

☑ Yes

☐ No

AML EVOLUTIONS IN THE UK

Is AML also activated for roaming (Android ELS only)?

☑ Yes

☐ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☑ Yes

☐ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

60%

Percentage of AML messages received within 30 seconds?

97% received within 20 seconds

Percentage of AML messages received within 15 seconds?

Not available

Percentage of AML messages with an accuracy below 100m.?

97% (omitting any results with no location)

Percentage of AML messages with an accuracy below 50m.?

74%

Percentage of locations through GNSS/Wifi/Cell?

GNSS: 50%
Wifi: 39%
Cell: 4%
No location: 7%

OTHER

Companies that helped in deploying AML in the UK

EE
HTC
Vodafone
Three
O2
CLX (SMS Aggregation Service)

United States

Information to be included soon.

Annex 1: Tables

Availability of AML

Country	Apple iOS	Google Android
Austria		X
Belgium	X	X
Estonia	X	X
Finland	X	X
Iceland	X	X
Ireland	X	X
Lithuania	X	X
Moldova		X
Netherlands (The)		X
New Zealand	X	X
Norway	X	X
Slovenia		X
United Arab Emirates		X
United Kingdom	X	X

Operational use of AML

Country	EMS	FRS	Police	Other services	Numbers for which ELS is activated
Austria	X	X		Mountain rescue, Water rescue, HEMS	122, 128, 144, 140, 141
Belgium	X	X	X		112, 100, 101
Estonia	X	X	X		112
Finland	X	X	X		112
Iceland	X	X	X		112
Ireland	X	X	X	Coastguard	112, 999
Lithuania	X	X	X		112, 101, 011, 102, 022
Moldova	X	X	X		112, 901, 902, 903
Netherlands (The)	X	X	X		112
New Zealand	X	X	X		111, 000, 112, 999, 911, 117
Norway	X	X	X		110, 112, 113
Slovenia	X	X			112, 911
United Arab Emirates			X		999, 112, 911
United Kingdom	X	X	X	Coastguard	112, 999

Transmission of AML

Country	Transmission channel	Are several AML messages sent during the call?	Time Delta defined for the SMS to be sent
Austria	SMS to a long number HTTPS	One via SMS + One via HTTPS	20 seconds
Belgium	SMS to a short number SMS to a long number	Android: Yes (2) iOS: No	Android: at the beginning of the call and another one after 20 sec. Apple: approx. 20 sec.
Estonia	SMS to a short number	No	20 seconds
Finland	SMS to a short number	Android: Yes (2) iOS: No	Android: 5 seconds Apple: 15-20 seconds
Iceland	SMS to a short number	Yes (2)	0 second and 20 seconds
Ireland	SMS to a short number	Android: Yes (4) Apple: No	Not defined
Lithuania	SMS to a short number	No	Android: 30 seconds Apple: Not defined
Moldova	SMS to a short number	Yes	One after 10 seconds; one after 30 seconds; then every 60 seconds
Netherlands (The)	SMS to a short number	Yes	First location, 20 seconds and then every 60 seconds
New Zealand	SMS to a short number	No (planned for Q2 2019)	25 seconds
Norway	SMS to a short number	Yes (2)	One after 10 seconds; another one after 30 seconds
Slovenia	SMS to a short number	Yes (2)	One after 0 second; another one after 25 seconds
United Arab Emirates	SMS to a short number	Yes (2)	5-12 seconds
United Kingdom	SMS to a short number SMS to a long number (for roamers)	No	15-20 seconds
United States	Info to be included soon	Info to be included soon	Info to be included soon

Other features

Country	AML for roaming (Android ELS only)	AML for Text-to-112, or equivalent (Android ELS only)
Austria		
Belgium		X
Estonia		
Finland		X
Iceland		X
Ireland		
Lithuania		X
Moldova		X
Netherlands (The)		X
New Zealand		X
Norway		X
Slovenia		
United Arab Emirates		X
United Kingdom	X	X

Operational use of AML

Country	Average % calls where a position was received	% AML messages within 30 sec.	% AML messages within 15 sec.	% AML messages with accuracy below 100m.	% AML messages with accuracy below 50m.	Share of locations per positioning method
Austria	65%	100%	0%	Not available	Not available	Not available
Belgium	Not available	Not available	Not available	Not available	Not available	Not available
Estonia	Not available	Not available	Not available	Not available	Not available	Not available
Finland	50%	Not available (95% within 60 seconds)	Not available	88%	78%	Not available
Iceland	Not available	Not available	Not available	Not available	Not available	Not available
Ireland	50%	100%	95%	97%	85%	GNSS : 51% Wifi : 45% Cell : 4%
Lithuania	45/50%	55%	12%	75%	Not available (43% below 20m.)	GNSS : 32% Wifi : 44% Cell : 19%
Moldova	20%	27%	24%	86%	80%	GNSS : 25% Wifi : 53% Cell : 14%
Netherlands (The)	Approx. 40-45%	Not available	Not available	Approx. 91%	Approx. 86%	Approx. GNSS : 35% Wifi : 58% Cell : 6%
New Zealand	75% (of all genuine emergency calls)	96.85%	14.55%	84.15%	71.12%	GNSS: 54,18% Wifi: 53% Cell: 14%
Norway	50%	Not available	Not available	Not available	Not available	Not available
Slovenia	21.54%	51.68%	32.93%	Not available	Not available	Not available
United Arab Emirates	Not available	Not available	Not available	Not available	Not available	Not available
United Kingdom	60%	97% within 20 seconds	Not available	97% (omitting the results with no location)	74%	GNSS : 50% Wifi : 39% Cell : 4% No loc : 7%
United States	Info to be included soon	Info to be included soon	Info to be included soon	Info to be included soon	Info to be included soon	Info to be included soon

Annex 2: Questionnaire

AML COVERAGE IN THE COUNTRY

Is AML operational in the whole country?

☐ Yes ☐ No

If not operational in the whole country, please detail where AML is working / not working

_____

For which operating systems is AML working in the your country?

☐ Android ☐ iOS

When was AML deployed in your country?

_____

For which emergency services is AML working?

☐ Emergency Medical Services (EMS)

☐ Police

☐ Fire & Rescue Services

☐ Other: _____

For which emergency numbers is AML activated?

_____

LEGISLATION

What is the legislative framework to receive AML locations (rules on privacy, emergency caller location...)?

_____

END-POINT AND TRANSMISSION

How are the AML messages transmitted to the end-point?

☐ SMS to a short number

☐ SMS to a long number

☐ HTTPS

Is the transmission of the AML message free to the caller (message 'zero-rated')?

☐ Yes

☐ No

Which organisation maintains the AML end-point?

_____

What is the time delta defined to receive AML positions?

_____

Are several AML messages sent during the duration of the call?

_____

How is the location information transmitted from the technical end-point to (other) PSAPs in your country?

_____

Are AML positions presented directly in the call-takers' GIS?

☐ Yes

☐ No

AML EVOLUTIONS

Is AML also activated for roaming (Android ELS only)?

☐ Yes

☐ No

Is AML also working for SMS-to-112 or equivalent (Android ELS only)?

☐ Yes

☐ No

FIGURES

Average percentage of calls from a mobile phone where an AML position is received?

_____

Percentage of AML messages received within 30 seconds?

_____

Percentage of AML messages received within 15 seconds?

_____

Percentage of AML messages with an accuracy below 100m.?

_____

Percentage of AML messages with an accuracy below 50m.?

_____

Percentage of locations through GNSS/Wifi/Cell?

_____

OTHER

Share some stories that occured recently where a person could be saved thanks to AML

_____

Companies that helped in deploying AML in your country

_____