EUROPEAN EMERGENCY NUMBER ASSOCIATION

AML FAQ

QUESTIONS

WHAT IS AML AND WHY WAS IT CREATED? 2
IS THE AML TECHNOLOGY STANDARDISED BY ANY STANDARDISATION BODY? 2
WHAT ARE THE SMARTPHONES THAT HAVE AML ENABLED? 2
WHICH COUNTRIES HAVE ENABLED AML? 2
HOW IS AML SAVING LIVES? 3
WHAT IS THE DIFFERENCE BETWEEN AML AND ELS? 3
DOES THE USER HAS ANYTHING TO DOWNLOAD TO USE AML? 3
WHAT IS NEEDED TO DO TO DEPLOY AML? 3
IS AML EXPENSIVE TO DEPLOY? 3
IF I'M IN CONTACT WITH THE OS PROVIDERS, DO I ALSO NEED TO CONTACT HANDSET MANUFACTURERS? 4
ARE THE MOBILE NETWORK OPERATORS INVOLVED IN THE DEPLOYMENT OF AML? 4
WHAT IS THE DIFFERENCE BETWEEN AN SMS AND A DATA SMS 4
IS IT POSSIBLE TO CONFIGURE THE NUMBER TO WHICH THE SMS WILL BE ROUTED? 4
DOES AML ONLY WORK FOR CALLS TO 112? 4
CAN AML ALSO WORK FOR SMS-TO-112 (OR EQUIVALENT)? 4
DOES AML WORK IN THE CASE OF INTERNATIONAL ROAMING? 4
DOES AML WORK IN THE CASE OF NATIONAL ROAMING? 5
DOES AML WORK FOR COMMUNICATIONS FROM SIM-LESS PHONES? 5
IS AML MANDATED BY EU LEGISLATION? 5
IS AML PRIVACY-FRIENDLY? 5

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EUROPEAN EMERGENCY NUMBER ASSOCIATION

WHAT IS AML AND WHY WAS IT CREATED?

AML or Advanced Mobile Location is a technology that helps locating people automatically and accurately when they contact emergency services. The technology was developed in 2014 by British emergency services, together with some mobile network operators and smartphone manufacturers.

AML is activated automatically when an emergency communication is being placed. For the duration of the communication, the smartphone automatically activates its location service and once an accurate position is determined (mostly based on GNSS or Wifi), this information is sent directly to the emergency services via SMS (or Data SMS for Android) or HTTPS. Accuracy of the location information ranges typically from 5 to 50m.

More information about how AML works can be found on www.eena.org/aml.

IS THE AML TECHNOLOGY STANDARDISED BY ANY STANDARDISATION BODY?

The European Telecommunications Standardisation Institute (ETSI)'s special committee on emergency telecommunications (EMTEL) has been working for several years on AML. A technical report was published in March 2016 (see here) and technical specifications were published in December 2019 (see here).

WHAT ARE THE SMARTPHONES THAT HAVE AML ENABLED?

At the moment of writing this document (March 2020), AML is embedded in phones running with Android (version 4.0 /Ice Cream Sandwich and above) and iOS (version 11.3 and above) operating systems. However, the AML functionnality is activated on a country by country basis when the public authorities are technically and operationally ready to receive and use this information.

WHICH COUNTRIES HAVE ENABLED AML?

At the time of writing this document (April 2020), AML is provided to emergency services in the following countries: Austria (not for all emergency numbers; Android only), Belgium, Croatia, Denmark, Estonia, Finland, Germany (most of Public Safety Answering Points (PSAPs)), Iceland, Ireland, Lithuania, Mexico (some PSAPs; Android only), Moldova, Netherlands, New Zealand, Norway, Romania, Slovenia (Android only), Sweden, United Arab Emirates, United Kingdom and the United States (some PSAPs).

A list of countries is maintained and regularly updated on www.eena.org/aml.

EUROPEAN EMERGENCY NUMBER ASSOCIATION

HOW IS AML SAVING LIVES?

By providing instantly accurate location information, AML has already helped rescuers saving many lives in the countries where the technology is deployed. Some success stories can be found on www.eena.org/aml.

WHAT IS THE DIFFERENCE BETWEEN AML AND ELS?

AML is the generic name of the technology, as defined in ETSI's technical specifications TS 103 625. ELS, or Emergency Location Service is Google Android's implementation of AML.

DOES THE USER HAS ANYTHING TO DOWNLOAD TO USE AML?

No, AML is not an app! It is embedded in the smartphone and will work automatically for the phones that are AML-enabled and in the countries where AML is activated.

WHAT IS NEEDED TO DO TO DEPLOY AML?

In order to deploy AML, you need to set up an end-point that will receive the location information. PSAPs of the country should then be connected to the end-point to extract the information.

You also need to get in contact with the different OS providers (Goolge, Apple…) in order to test the end-point and the good functionning of the transmission of the messages and eventually for the final activation.

EENA is helping public authorities in many different countries to deploy AML. For any question, you can contact aml@eena.org.

IS AML EXPENSIVE TO DEPLOY?

AML is a free-to-use technology, meaning that both Google and Apple provide the technology for free. Some minor costs may however occur when setting up the end-point but these costs remain very low.

A cost-benefits analysis conducted under the Help112 project[1] calculated that deploying AML in all smartphones and in all EU Member States would actually result in a benefit of €95 billion in a 10-year period (mostly related to savings in the rescue operations).

IF I'M IN CONTACT WITH THE OS (OPERATING SYSTEMS) PROVIDERS, DO I ALSO NEED TO CONTACT HANDSET MANUFACTURERS?

No, it is sufficient to be in contact with the OS providers.

ARE THE MOBILE NETWORK OPERATORS INVOLVED IN THE DEPLOYMENT OF AML?

The role of Mobile Network Operators is to ensure the correct routing of the AML message from the device to the end point (by (Data)SMS or HTTPS) and zero-rate it.

WHAT IS THE DIFFERENCE BETWEEN AN SMS AND A DATA SMS

A Data SMS is an SMS that is sent in a binary format. The name can be a bit misleading as it does not require a data connection from the mobile.

IS IT POSSIBLE TO CONFIGURE THE NUMBER TO WHICH THE SMS WILL BE ROUTED?

Yes, the AML SMS can be routed to any number, be it 112, another short number or to a long number.

DOES AML ONLY WORK FOR CALLS TO 112?

Not necessarily. AML can work with any emergency number, be it 112 or other numbers. For Android, it is also possible to use AML for several emergency numbers in one country.

CAN AML ALSO WORK FOR SMS-TO-112 (OR EQUIVALENT)?

It is possible to activate ELS (Google's AML) for SMS-to-112 (or other number). In case somebody sends an SMS to emergency services, AML would be activated automatically and another SMS would be automatically sent to the emergency services with accurate location information.

DOES AML WORK IN THE CASE OF INTERNATIONAL ROAMING?

[1] https://eena.org/eu-projects/help-112/

There is a possibility to enable AML for internal roamers using Android phones. This can be done either by using HTTPS as a transmission method or by routing the Data SMS to a number starting by a country code.

DOES AML WORK IN THE CASE OF NATIONAL ROAMING?

No, AML does work at the moment for domestic roamers.

DOES AML WORK FOR COMMUNICATIONS FROM SIM-LESS PHONES?

In most cases, AML does not work for users of SIM-less devices. However, AML might be transmited to the end-point if the location is carried by HTTPS and the device is connected to the Wifi network.

IS AML MANDATED BY EU LEGISLATION?

The European Electronic Communications Code (EECC) makes it mandatory for EU Member States to make use of handset-derived location information to locate emergency communications. This obligation will be in force starting from December 2020.

Regarding the OS, a delegated regulation makes it mandatory for any smartphone sold in the EU single market to provide accurate location information to emergency services starting from March 2022.

More information about EU legislation can be found in EENA's document on 'emergency communications and the EU legislative framework'.

IS AML PRIVACY-FRIENDLY?

AML is activated only when contacting the emergency services and only for the duration of the emergency communication. It cannot be activated remotely by anyone.

The OS and the MNOs only transfer the location data to the emergency services and cannot know the content of the message (containg the location information). Only PSAPs get access to the location information and there are strict rules in each country regarding how and for how long this information is stored.

For users not wanting their location to be sent to the emergency services, there is a possibility to opt out from the service in the settings of the phone.

EUROPEAN EMERGENCY NUMBER ASSOCIATION

More information about AML and compliance with privacy rules can be found in EENA's document on 'GDPR and public safety' and 'emergency communications and the EU legislative framework'.