
Lawful Intercept Applications

Product deployment note



Lawful interception

The obligation placed upon network operators to provide law enforcement

agencies with intercepted communications information continues to provide opportunities for telephony solution developers.

With most nations requiring such support for the purposes of analysis and evidence, the need for appropriate interception in fixed, mobile and next generation networks has never been more acute. Fears over, fraud, hacking, denial of service attacks and, in particular, the ever present threat from globalized terrorism, have fuelled that need. Technology provides the key to lawful interception (LI).

Lawful interception

Market opportunity

Interception takes place via a food chain that involves legislation and standards, the courts, network operators, telcos, equipment suppliers, enabling technology vendors such as Aculab, and law enforcement agencies (LEAs). Naturally, it involves counter terrorism agencies - the NSA, CSE, DGSI, FSB, MI5, and others.

The opportunity for developers lies in producing cost-effective solutions to meet national, international and legal demands for reliable information, and support all common network interfaces and standards-based LI needs.

Legal framework

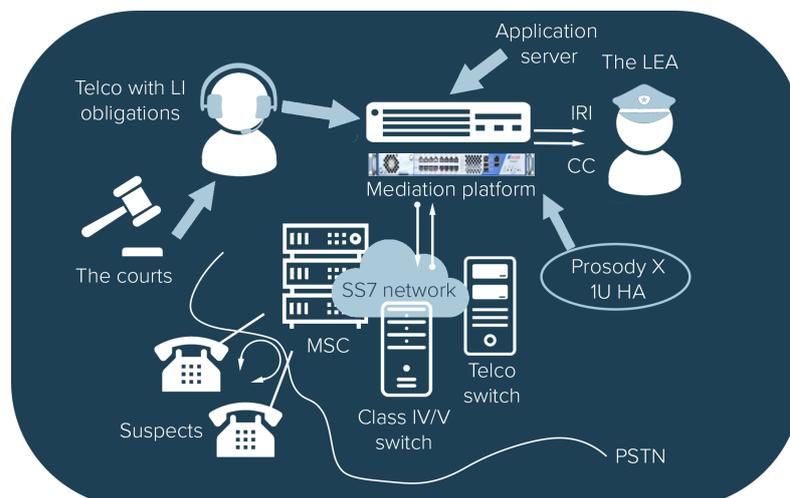
The Global Lawful Interception Industry Forum lists the differing legal requirements of individual countries relating to lawful interception. For example, in the United Kingdom the law is known as the Regulation of Investigatory Powers Act (RIPA), in the United States there is the Communications Assistance for Law Enforcement Act (CALEA), and in the Commonwealth of Independent States (CIS) countries, there is the System of Operative Investigative Activities (SORM). These acts and powers provide a statutory framework for network operator LI assistance to LEAs in providing evidence and information analysis.

Technology requirements

The effectiveness of LI depends on the use of technology, Aculab's Prosody X provides a competitive advantage to its customers in the LI market space. Essential mediation system functions enabled include:

- Real-time collection of interception related information (IRI), or call data (CD)
- Real-time capture of content of communication (CC)
- Real-time recording of retained data (RD) for future analysis on behalf of an LEA
- Formatting information to match the requirements of regulatory bodies
- Delivering IRI/CD and CC, to an LEA, via standards specified interfaces
- Conformance to standards such as ETSI ES 201 671 and J-STD-025B

Lawful intercept solutions



Lawful interception

The following real world use cases for Prosody X 1U HA can be implemented simulatenously with a single unit.

Use case #1 - interception related information

Aculab's SS7 signalling monitor API can be used with the Prosody X platform acting as an 'input adapter' or 'SS7 probe'. Where a non-intrusive monitoring method is employed, the configuration can be implemented in any SS7 network for 'ISUP sniffing' i.e., the interception and resultant capture of call handling messages, and e.g., the calling and called party's phone numbers, all of which is the essence of IRI/CD. The API presents the SS7 signalling message parameters to the LI application for the interpretation and analysis, The delivery of IRI to the LEA can be achieved via a data connection; the handover interface (HI).

Use case #2 - content of communication

Using the collected IRI to trigger the capture of targeted, real-time voice conversations (two-party calls or multi-party conferences), acting under appropriate jurisdiction and warrant, results in the desired CC being replicated and delivered to the LEA, That is done via as ISDN channel from the mediation platform as retained data (RD) for further analysis, such as, for example, key work spotting using automatic speech recognition.

Use case #3 - CC gateway

Where the mediation platform is entirely IP-based and, therefore, lacking an ISDN interface, the prosody X platform can be deployed as a SIP gateway. Using Aculab's APIs, a gateway application can be created, readily interworking ISDN links from a telco or service provider with a SIP-based mediation platform. With such a gateway, real-time CC can be delivered to the LEA, despite the bother of otherwise incompatible network types.

About Aculab

Aculab is an innovative company that offers deployment proven technology for any telecoms related application. Its enabling technology serves the evolving needs of automated and interactive systems, whether on-premise, data centre hosted, or cloud-based.

Over 1000 customers in more than 80 countries worldwide, including developers, integrators, and solutions and service providers, have adopted Aculab's technology for a wide variety of business critical services and solutions.

Aculab offers development APIs for voice, data, fax and SMS, on hardware, software and cloud-based platforms, giving a choice between capital investment and cost-effective, 'pay as you go' alternatives.

For more information

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