Monitoring obligations

DataBridge™: Fulfil CSP requirements for communications monitoring
Meeting your obligations flexibly

As terrorists and organised criminals take advantage of cyber space more and more to facilitate their real world crimes, the data transported by Communications Service Providers (CSPs) becomes increasingly valuable to those public authorities charged with detecting crimes and investigating and prosecuting criminals.

CSPs are required by legislation to monitor many types of communications services and deliver lawfully authorised data to Law Enforcement Agencies (LEAs).

In order to facilitate reliable, efficient and lawful monitoring, communication legislation is constantly changing. As a result, CSPs are continually required to fulfil new legal obligations. The requirement tends to be vague and difficult to manage considering the huge amount of data that exists in those networks. It is a real challenge to identify, process and distribute only the requested information to the requesting Law Enforcement Monitoring Facility (LEMF).

BAE Systems provides CSPs with products and solutions that meet changing lawful intercept obligations. We have an extensive global track record within the communications monitoring domain. We know the challenges involved and we know how to handle complex communications networks.

The solution – DataBridge

To meet the ever changing requirements concerned with the Lawful Interception (LI) of IP networks, our DataBridge solution suite is based on a design criterion benefiting all parties with regard to financial investment, time and human resources.

- DataBridge enables CSPs to fulfil their current and future legal obligations for lawful interception
- DataBridge is compliant with worldwide standards for lawful interception including ETSI, ATIS and 3GPP
- DataBridge has a centralised LI mediation system that optimises workflow, saves human resources, money and ensures that only the information required is delivered
- DataBridge is tailored to the network, whenever possible – and not the other way around
- DataBridge is based on features in the network elements, rather than requiring additional components and works with our own probes or other third party probes as required

Finding the relevant information

Considering the huge amount of data that exists in modern CSP networks it is a challenge for the CSP to identify process and distribute only the required information to the Law Enforcement Monitoring Facility (LEMF). This is where you can benefit from our extensive global track record in the realm of communications monitoring. We know the challenges involved and we know how to handle complex communications networks.
Experience and quality

We are a global provider of lawful intercept solutions which enable reliable and efficient monitoring of all types of communication.

We have 30 years experience within the development and production of advanced analysis and monitoring solutions for all types of communications networks. We can help your organisation fulfil all legal obligations in reference to communications monitoring.

Monitoring of IP data

DataBridge complies with worldwide lawful intercept (LI) standards for all voice and data based traffic ranging from carrier-grade VoIP to high-speed broadband, Wi-Fi, 2G/3G/LTE and IP Multimedia System (IMS) networks. Calls and signalling information can be acquired in the network through active interception utilising existing network equipment with LI capabilities, or passive probes whenever active LI capabilities are neither present nor desired.

The utilisation of existing infrastructure and network elements for LI compliance enables a simplified and cost efficient deployment. DataBridge supports provisioning and mediation of data for all major network vendors such as:

- Cisco
- Juniper
- Huawei
- Ericsson
- Samsung
- Nokia Solutions & Networks (NSN)
- GENBAND
- Acme Packet (Oracle)
- Alcatel-Lucent plus many more

We also have a comprehensive range of probes from tactical to full core network solutions which allow all network configurations and requirements to be met.

DataBridge can acquire data and signalling information from the same network element in case both voice or data traffic and signalling data transmits to the same devices (for example session border controllers). In case voice or data traffic and signalling information does not traverse the same elements DataBridge can also acquire signalling and voice traffic from different elements including signalling from soft switches and voice or data content from routers and switches. The intercept access point (IAP) may change dynamically depending on services provisioned by the user which could include call forwarding to an off-net destination. DataBridge supports complex call and data scenarios and automatically determines the correct intercept access point in real-time.
**DataBridge features**

- Supports and is deployed in carrier-grade networks, NGN, 2G/3G/LTE and IMS
- High performance with up to 5 Gbps mediation throughput
- Support for worldwide LI standards for handover of voice and data
- Wide support for network element vendors for active LI
- Support for complex call scenarios
- Automatic determination of correct intercept access points depending on signalling information

DataBridge integrates directly with LI capable network elements and automatically provisions the relevant network elements to acquire signalling and voice and IP data.
Management, mediation and handover

DataBridge Mediator is the core of the DataBridge concept. It is the central component for management, control and configuration of the entire system. DataBridge Mediator performs LI mediation and handover of product to the requesting Law Enforcement Monitoring Facility (LEMF).

User-friendly interface

DataBridge Director provides an intuitive and user-friendly interface for all system operations. The application simplifies day-to-day tasks as well as maintenance, initial setup and configuration and also brings together all data in a single centralised system for automated and converged distribution.

Centralised system

DataBridge Mediator allows for configuration of the various inputs: routers, switches, DataBridge probes, or third party equipment.

Management of network elements, target setup, distribution to the correct monitoring facilities, integrated audit, and optional billing of services is done via DataBridge.

Mediation and handover

Data mediation and handover are vital features of LI. DataBridge Mediator verifies the received data according to warrant information, converts the data into a standard output format, as required by the individual LEA and subsequently distributes the data to the LEMF.

All processing is performed in real time and the handover from DataBridge Mediator to the LEMFs is compliant with ETSI, CALEA and other standards, as required.

Acquisition and mediation

Based on identification headers assigned during the acquisition phase, DataBridge Mediator determines which LEMF should receive what data. In case data has to be delivered to multiple LEMFs, the data is replicated without delay in the forwarding process. Note that it is also possible to deliver the same data in different output formats, both streaming and file-based.
DataBridge probe

In the event existing network equipment cannot provide the required LI functionality, the system may be further augmented with probes. These probes passively interface to various line types, covering both WAN and LAN connections. Based on user-defined criteria, the DataBridge probes acquire the requested data. Following acquisition, data is forwarded to the DataBridge Mediator, which in turn distributes the required information to the authorized receiving LEMF.

High performance acquisition

The main task of the DataBridge probe is to interface to various communication lines used to transport all traffic. Furthermore, the unit processes data and communication protocols (the protocol stack) to a point where data filtering can be performed. Output is forwarded to the DataBridge Mediator system, which in turn distributes the required information to the correct recipients. The output can either be in filtered form, or presented as raw intercepted traffic, depending on the requirements. All management of the DataBridge probe units is done via DataBridge Mediator.

Continuous development

The DataBridge probe is currently available for the following line types:

- STM1-16/OC3-48
- Ethernet 10/100/1000/10G

To satisfy our customers' requirements and the challenges they face, we are committed to continuously developing DataBridge units, as new communication lines become available within the public networks.
Future requirements
Valuable partnerships

Through our partnerships with leading manufacturers of network equipment such as Cisco, Juniper, Huawei, Ericsson, Samsung, Nokia Solutions & Networks (NSN), GENBAND, Acme Packet (Oracle), Alcatel-Lucent we ensure seamless integration between a CSP's existing network elements and DataBridge Mediator.

This limits investment and ensures easy implementation of the DataBridge products in the networks. Thus, customers do not need to upgrade existing network equipment to comply with legal requirements.

Cost effective solution

CSPs can save significant resources by utilising our solutions. The flexibility of our solutions ensures that future CSP needs are met. Our solutions are cost effective, as new units interact with existing units and are designed to integrate with any future products.

Intelligent acquisition

For existing equipment, our concept provides central management and mediation as the DataBridge Mediator subsystem is designed to set up target data on both DataBridge and third party equipment. Our acquisition units are highly intelligent, network independent, easy-to-install, and user friendly. The result is a straightforward technical implementation of our solutions in the network.

Law Enforcement Monitoring Facility (LEMF)

As an additional part of the overall solution, we develop and supply complete LEMFs that include tools for meeting the challenges of extensive IP monitoring. Our LEMF platform is made in an open format, giving our customers the best of our expertise. Although the DataBridge concept can be used with any kind of LEMF, as delivery of data from the DataBridge Mediator is in a standardised format, we recommend taking advantage of our extensive knowledge and decades of experience in data processing, storage, and presentation.

Project implementation

In the ever-evolving industry of communications our goal is to fulfil the requirements of our customers by solving their real needs. This is accomplished by delivering advanced, flexible, and user-friendly solutions.

Keeping you updated

When you choose to work with us the relationship is long term. We provide outstanding support and service to ensure that systems are constantly updated to meet your LI needs now and in the future.
Service level agreement

We understand the need for high-quality support and maintenance, to ensure optimal system performance and compatibility with the latest technology. Consequently, we offer flexible Service Level Agreements adapted to the specific needs of each customer. Elements can be added or omitted from the package, as needed.

However, to ensure optimum performance of the equipment we always recommend:

- Support hotline service with access to technical experts 24/7
- Software updates of products
- On-site support engineer when requested
- E-mail support service

User friendly design

The flexible and user-friendly design of the DataBridge products, based on industry standard components, enables our customers to perform a significant level of self-support. Onsite spares can be added to the Service Level Agreement, for immediate replacement of damaged or faulty system components.

Training courses

Regular training courses ensure the highest level of competence for staff operating the DataBridge products. Our academy provides training courses that can be added to the Service Level Agreement. Training courses are offered on various levels, e.g. System Management and Administration, System Maintenance and System Operation.

Databridge is the monitoring solution of choice allowing you to meet your obligations effectively and efficiently.
We are BAE Systems

We help nations, governments and businesses around the world defend themselves against cyber crime, reduce their risk in the connected world, comply with regulation, and transform their operations.

We do this using our unique set of solutions, systems, experience and processes - often collecting and analysing huge volumes of data. These, combined with our cyber special forces - some of the most skilled people in the world, enable us to defend against cyber attacks, fraud and financial crime, enable intelligence-led policing and solve complex data problems.

We employ over 4,000 people across 18 countries in the Americas, APAC, UK and EMEA.