

Integrated Intelligence System - Data Gathering and Intelligence



INTEGRATED INTELLIGENCE SYSTEM DATA GATHERING AND INTELLIGENCE

The Integrated Intelligence System is the Selex ES solution that supports Intelligence activities for national security, through the integrated processing and correlation of heterogeneous information from different sources.

Primary fields of application for Intelligence activities are Homeland Security, Counterterrorism, Counternarcotics, Financial frauds and Illegal traffics. In particular, Law Enforcement and Crime Prevention activities contrast weapons and drug smuggling, organized crime, terrorism, financial frauds and outlaw groups.

Information management is at the very heart of all intelligence activities, since a large amount of different information has to be processed in order to derive alarms, as results from complex data collection, correlation and analysis tasks.

Currently, the Intelligence Community uses several intelligence sources:

Open Source Intelligence (OSINT) that includes widely available data and information:

- Media: newspapers, magazines, radio, television, and computer-based information
- Public data such as government reports, budgets, legislative and public debates
- Conferences, symposia, professional associations, academic papers
- Gray literature, such as reports, working papers, market surveys.

Signals Intelligence (SIGINT) that includes broadcast communications systems such as radios, radars and other electronic systems:

- Communications intelligence, based on the analysis of the source and content of message traffic
- Electronic intelligence based on electronic transmissions, including telemetry or radar transmitters
- Imagery Intelligence dealing with satellite images and aerial photography.

THE SOLUTION

The complex scenario of intelligence sources demands for a sophisticated data management and processing. Within this context Selex ES has developed the Integrated Intelligence solution, a flexible support to Intelligence Agencies and Investigative/Forensic Police Departments in different environmental situations.

The Integrated Intelligence System is a decision support system able to operate on heterogeneous sources and to correlate data following predefined rules tailored on the type of analysis and organisations. All collected data is managed and organised to be transformed into finished intelligent information. The terms analysis, production and processing are used in “connecting the dots” to create an Intelligence mosaic.

Main functions include:

- Monitoring of heterogeneous data sources
- Massive tracking of phone calls and internet activities
- Selective monitoring of voice conversation, web surfing and e-mails
- Data mining and analysis of structures and non structured databases
- Efficient archiving of huge amount of data
- Accurate searching to pinpoint and extract the relevant information
- Visualization and analysis of extracted information
- Data forwarding.

The Integrated Intelligence System is based on a Strategic Analytical Repository for Tracking Knowledge, which implies high storage capability to collect and maintain huge amount of data, from heterogeneous sources, with the capability to elaborate and correlate information.

The system provides early warnings for potentially dangerous situations as well as alarm generation for critical situations.

Data Analysis can be performed off line, for investigative purposes and crime prevention activities, or in real time in case of phone communication and internet activities monitoring (web, mail, chat forum etc.).

Scenario data is also stored and can be retrieved and used for forensic activities. The System is protected against any threat thanks to an approach that guarantees information security.



ALARMS COORDINATION

DATA GATHERING

DATA RETRIEVAL

DATA STORAGE

ANALYSIS & INVESTIGATION

INFORMATION SECURITY ASSURANCE

THE SYSTEM

The Integrated Intelligence System is based on a modular service platform where ad-hoc modules are plugged in according to customers' needs: types of data collected, data elaboration, communication network interfaces and geolocalization. The data processing platform depends on the quantity of data to be acquired and stored.

The Data Processing Chain includes:

- Data Collection: acquisition of all data representing an event in digital form
- Data Storage: archiving of basic events in a standard and easily searchable way
- Data Retrieval: data access from different sources through a powerful search engine
- Analysis & Investigation: real time and off line identification of links and hidden meanings, to raise alarms or provide evidence in investigation activities
- Alarms Coordination: coordination and management of resources in case of alarms.

The system is protected by a security architecture and relies on a communication network to transmit information. The system network employs state of the art security architecture and devices (HW and SW), based on secure communications and crypto algorithms, tailored on customers' needs.

In the processing chain, data is acquired from heterogeneous sensors geographically distributed on the territory; it is normalized, encrypted, indexed and then stored in a secure centralized location. Then it can be accessed for retrieval and information processing.

Analysis can be performed manually for investigative purposes or automatically for crime prevention. The system can be geographically distributed by deploying National, Regional and Local centres to control specific geographic areas.

A secure data communication link ensures communication with the hierarchically higher Centre which has a wider situation awareness capability due to the visibility over a greater number of local centres.

The system allows sensitive information to be kept reserved and disclosed only to authorized personnel, since information is more strategic and synthetised. The system also includes a fully redundant modular configuration ranging from the National Centre duplication to secure data storage backup solutions.

KEY POINTS

Based on a system of systems approach, the Integrated Intelligence System can be considered a flexible solution, suitable for any kind of organization, operational framework and legislation, featuring the following major points:

- High performance analysis results in critical scenarios in terms of accuracy and response time, thanks to the statistical and semantic search
- Seamless integration of structured and unstructured information sources, e.g. audio, video, web
- Flexible data organization and processing according to ad hoc rules
- Friendly results presentation and geolocalisation with
- powerful visualization tools
- Suitable for national and international activities, with a wide variety of languages
- Enhanced situation awareness capabilities, due to the real time access to external and third parties information sources
- Cyber Security and Information Assurance capability, thanks to the Integrated Cyber Shield™ solution realized by Selex ES.



