### **SERVICES PROVIDED**

### Smooth and professional deployment

With its growing experience, Amesys has mastered the art of implementation of intelligence system. Our team of professional expert will help you from the design of the architecture to the installation of the global system and even through a full-range of "on-site" training for your operators and administrators.

### **Technical and operational training**

Amesys will guide you and teach you from the basis of network protocols to the latest method of cryptography to train the persons that will be in charge of the system. We dispose of a full range of training on GSM, Microwave links, IP network or Satellite communications so that you can master this type of subjects and be more efficient with the system.

### **Start-up support**

Amesys can provide technical start-up support based on engineers specialized in Intelligence solutions who can be on-site to help you during the first months with the system.

### Follow network protocol upgrades

Amesys helps government organizations and law enforcement agencies to remain up-to-date on very changing network protocols like Instant Messenger or Web-mails.

### Follow voice codec modifications

With specialized voice engineers, Amesys is able to provide to its customer frequent upgrades of free and proprietary voice codec.



### Headquarters

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**AMESYS INTELLIGENCE SOLUTIONS** 



CRITICAL SYSTEM ARCHITECT

















**Amesys** core business is to develop electronic hardware and software solutions targeted for specific high-technology markets. In order to address those markets, Amesys has structured its sales organization in four Strategic Business Units:

- Energy and Industry
- Defence, Telecom and Aerospace
- Transportation and Supply Chain
- Network and Security

Our mission is to thoroughly master all types of technologies and combine them to build customers' solutions:

- Analog and microwave frequency electronics
- High speed digital electronics
- Secure and rugged on-board technologies
- Real time data processing
- Distributed data processing: n-tier architecture, data base,
- Signal processing
- Radio communications
- Process control, automation and supervision
- Security software, biometry and cryptography

Oui

## Business



Major customers in the defence market find in **Amesys** the level of innovation, expertise and security they need. Our Assets:

- Strong experience in signal processing, modulation, telecom protocols, demodulation
- Specialized processors know-how, FPGA, Digital Signal Processors,...
- Hands-on radio and microwave frequencies knowledge (up to 60 GHz)
- Complete SATCOM solutions
- Insurance of maintaining its products operational in the long run, thanks to its obsolescence management, make-over programs...

**Amesys** developed an entire range of intelligence products answering to the needs of either government agencies or law enforcement agencies. With a wide range of captors, the solutions by **Amesys** are clearly designed to fulfil the increasing need of intelligence against new terrorist or criminal threats.





**EAGLE** core technology by **Amesys** is designed to help Law Enforcement Agencies and Intelligence organizations to reduce crime levels, to protect from terrorist threats and to identify new incoming security dangers.

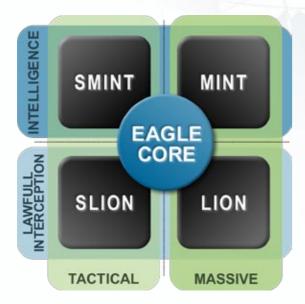
Products and solutions based on **EAGLE** are built to cover the entire range of intelligence issues spanning from interception to processing, analysis and distribution of information to the operators. **Amesys** proposes the widest range of interception solutions as well for Lawful Interception issues as for Intelligence systems or even government agencies. Based on **EAGLE** core, you will build up an entire analysis solution, which answers all the needs of tactical or strategic intelligence.



# Concept

**Amesys** has the capacity to handle any kind of information coming from many different sources in a unique datacenter. With **EAGLE** core technology, operators can analyze communications and cross-reference each other for the most accurate surveillance.

- Build a real intelligence strategy: Regroup all the intercepted data in one single datacenter, which gives a clear view of the different activities of your targets. Amesys helps you dig in this digital tsunami with advanced technical modules and specific intelligence processes.
- Bypass all technical complexity: End-users interact with the huge amount of data stored in the system through a friendly graphical interface. The entire technical complexity is hidden. The EAGLE end-users are investigators and not network engineers.
- Enhance protocol classification: Thank's to it's advanced technology of protocol analysis,
   EAGLE solutions are the most accurate products for content classification. This technology has been developed and integrated for many of sources: IP network, PSTN, GSM...
- Offers a wide range of additional smart modules: Enhances the productivity of your monitoring center with graphical representations of communications (social network), advanced search engine, semantic analysis, topic spotting, automatic transcription, geo-localization, etc...

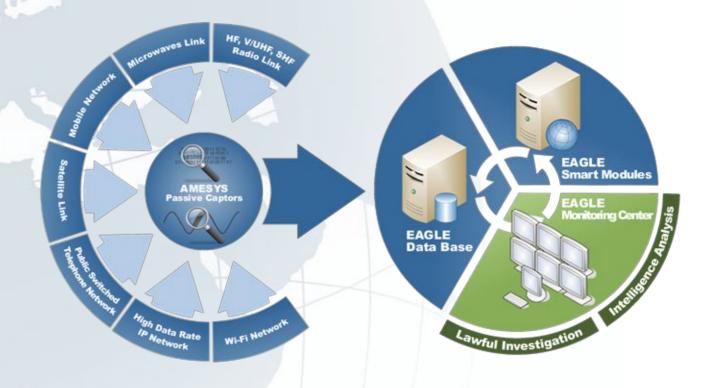


Amesys answers to the two types of needs in intelligence systems: strategic or tactical.

### **INTELLIGENCE PROCESS CONFIGURATION**

The EAGLE Interception System breaks down in four distinct parts:

- The probe capturing the traffic: Totally passive probes can be plugged on any type of support to increase the operational coverage of the intelligence system.
- The Data Center for classification and storage: Entirely scalable hardware built on clusters of multi-core processors improves the analysis and classification capacity of the entire system.
- The Monitoring Center: easy-to-use graphical user interface enhances operational workflow and helps operators to increase the effectiveness and the relevance of the intelligence production process.
- The smart analysis tools: State-of-the-art smart modules increase the effectiveness of incoming interceptions classification, including traffic analysis, speaker identification, voice translation, transcription etc.



Concept



### **FLEXIBLE AND SCALABLE ARCHITECTURE**

**Amesys** Intelligence Products are designed to help you to keep pace with changing operational needs. All the parts of the Intelligence Life Cycle are sized and designed to fit exactly your needs and can be upgraded according to the growth of your communication networks.

**EAGLE** is a fully scalable solution that can be interfaced with existing solutions to obtain the best intelligence system. **EAGLE** is a solution suitable for tactical and nationwide needs.

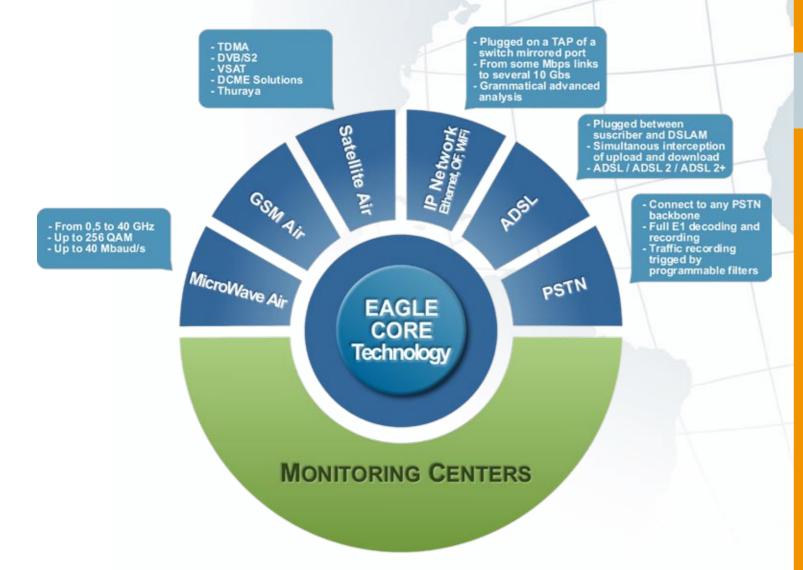
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### **THE CAPTORS**

**EAGLE** is a unified system that centralises information coming from various means transmission. Depending on the medium, **Amesys** provides different types of probes. The common main characteristic is that all these probes remain passive, invisible and unreachable for any intruders.



# Captors



### THE PROCESS

While processing a folder an operator listens, to the voice calls, reads the interception intercepts, make the transcription and writes the intelligence note to the authority. He has a very simple screen and the necessary know-how is very limited.

This example is the main screen for a specific folder, showing **all the intercepted communications;** one can select the type of interception he's interested in by clicking the adequate tab at the top of the main screen, i.e. if VoIP is chosen, only the VoIP sessions will be shown. It is possible to make a search in each tab or in all the tabs simultaneously; once the search is done a new tab will be automatically created, allowing the operator to work on it or to do another level of search



### Process

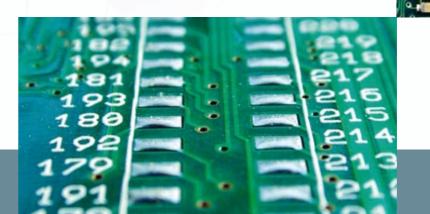
(search on a search result).



This screen is the standard screen for an intercepted text message conversation between suspects.

It is possible to access any information contained in the protocol (in the form of Call Data Records - CDR), access all the attached documents (MMS/SMS on GSM networks or email/chat on IP Networks), perform key word spotting on those ones, and even extract interesting data from the content itself (the system will extract automatically any e-mail address or telephone number from the content).



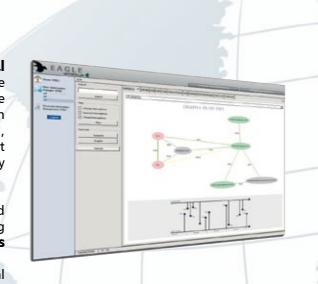


### **THE PROCESS**

Once a folder has been processed, a **graphical representation of the social group** can be displayed, helping the operators to etablish the social networks of suspects. This representation is automatically generated and updated, and allows the user to access the different interceptions by clicking on a link between any of the suspects.

This social network representation is displayed in addition to a timeline representing chronologically the communications between suspects.

You can also choose to represent the social network during only a specific period of time.





## Process

If you choose to dispose of the geo-localization option, you will be able to access to the position of your suspects during its communication.

This geo-localization can be either based on IP address or on GSM localization.

The position of your suspects will be given by GPS coordinates and represented on a map in the graphical interface.

The system is also capable to accept filter based on geographic position. With this type of filters, you will be able to focus on a specific zone and have all the communication of the specified zone.







### **THE PROCESS**

In order to enhance the productivity of the operators and investigators, Amesys includes in its solution a smart module that realizes **automatic voice transcription.** The result of the transcription is indexed in the global search engine. The research by keywords will help you classify the huge amount of incoming voice conversation.

This module constitutes the first level of classification for voice interception. Facing the increasing number of voice communications at the scale of a nation, human operators are not any more capable of analysing these data. The automatic transcription can be combined



with a module of **speaker recognition.** You will define a bunch of suspected people of whose voice is known. Afterwards, the system will automatically recognize them amongst all the others. This can also be used as an alarm trigger.



### Process

The language presented in the table below are available today in advanced smart modules by **Amesys:** (in bold, the languages already integrated, the other are in progress)

Arabic Egyptian	Arabic
Chinese	Chinese, Mandarin Taiwan
Czech	Croatian
English American, non-Southern	Dutch; Netherlands
English	English American, Southern
Finnish	Farsi
French	French Canadian
Greek	German
Hungarian	Hindi
Italian	Indonesian
Japanese	Japanese
Norwegian	Korean
Portuguese	Polish
Russian	Romanian
Slovenian	Serbian
Spanish Caribbean	Spanish Non-Caribbean
Swedish	Spanish
Thai	Tamil
Chinese, Mandarin Mainland	Turkish
	Vietnamese

#### **TACTICAL vs MASSIVE**

With the tactical system, Amesys provides you with all the advantages of the Core Technology of **EAGLE** in a transportable rugged computer.

#### Main characteristics:

- Pluggable directly on IP network with appropriate TAP
- Can be combined with ADSL or WiFi or Satellite sensors.
- Can analyze the content of network capture files (pcap files)
- Storage designed to record days of traffic
- Able to analyze up to 10 Mbps full-duplex of incoming traffic in real time.
- Able to analyze E1 based link with specific captor.
- Ideal for operators or investigations that need a close surveillance of your suspects.
- Possibility to have multiple operators working on the same central device through highly secured connection.



## vs Massive

The massive system is designed to answer to the need of interception and surveillance on a scale of nation. The central database is able to aggregate information coming from different type of sensors and also to be connected to external database to cross reference information.

Completely and easily connectable to existing system, the massive products designed by **Amesys** are the best answers to your needs.



### Main characteristics:

- Capacity to analyze nationwide data flow in real-time.
- Designed to aggregate all sources of information.
- Storage Area Network (SAN) designed to fit your needs from some terabytes to tens of petabytes.
- Built on unique state-of-the-art technological modules.
- Display all information to the investigators in the easiest way. Ergonomic graphical user interface.
- No technical network skills required for investigators.
- Real-time alarm rising with possibility to get this alarm on a GSM for example.
- System built on the "need to know" concept.
- Partitioning of information.
- All entering information can be time-stamped and digitally signed by the system to be used as legal proof.
- According to your needs, you can add smart modules in order to enhance your intelligence productivity.

### LAWFUL INTERCEPTION VS INTELLIGENCE

For Law Enforcement Agencies (LEA), **Amesys** designed a special range of products to fulfil the specific needs of this type of organisation in terms of interception and surveillance.

With a central database able to agglomerate different sources of data, the investigators have access to valuable information concerning the activity of their suspects.

The graphical user interface has been based on all concepts inherent to Lawful Interceptions.

- Creation of investigation files for each interception containing the name
  of the investigator, the details of the suspect, the phone numbers (fixed line and GSM),
  the IP address, the name of the judge ...
- Possibility to exploit the system remotely with secured network.
- Creation of a local active directory for each investigation.
- Creation of a global active directory regrouping all the information of the different investigation and their origin.
- Automatic or assisted transcription of audio communication
- Control and classification of the minutes.
- Creation of suspect files (picture, addresses, phone numbers, ...)
- **Graphical analysis** of all traffic of the watched person with possibility to correlate with graphs of other investigations.
- Integrated multi-criteria search engine. Possibility to execute all type of researches: by date, by time, by phone number, by names, by mail address, by keywords, by geographical localization ...
- Exportation of the content (tables, directory ...) to standard formats (Excel ...).
- Compliant with lawful interception regulations and standards such as ETSI and CALEA.

### Lawful Interception

# vs Intelligence

The **EAGLE** core technology is the cornerstone of Intelligence system for government agencies. The solutions built by **Amesys** will deliver great benefits: productivity, intelligence gathering process, operational coverage, cutting-edge technological modules...

The Intelligence solutions designed by **Amesys** are built on an extensive knowledge of the intelligence world. They are conceived to fit perfectly the need of governmental agencies.

- Classification of incoming information in prioritized folders: general search for global analysis and open case for known targets.
- Setting up of four-level architecture for the monitoring centers: analyst, linguist, supervisor and system operator.
- Partitioning of information. System built on the "need to know" concept.
- Combined with state-of-the-art technological intelligent modules: automatic audio transcription, automatic translation, semantic analysis, topic spotting, geo-localization ...
- Capacity to analyse nation-wide data flow in real time.
- Storage Area Network designed for exploitation of information.
   Can be upgraded with archiving storage space.
- Completely scalable architecture easily adaptable to growing needs.
- System entirely mastered by the end-user.
- Ergonomic graphical user interface.

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