



Command and Control System ELS/GEOFIS

Command and Control Integrated Solutions

Building Technologies

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Introducing ELS/GEOFIS



ELS/GEOFIS is an Electronic Incident Logging System used for call-taking, dispatching and administration of resources in routine and high intensity security operations. It consists of two major parts: ELS and GEOFIS.

ELS is designed for operational use by professional organizations employing mobile resources, such as Police, Fire Departments, Rescue Services, Emergency services etc. A Client Server Architecture design, ELS features an object oriented graphical user interface in which data management, versions administration, interfaces and a number of other functions are organized based on an ORACLE database.

ELS integrates all typical call center equipment, such as telephone, radio, recording devices, detection equipment, video monitoring, alarm systems etc, into a comprehensive, operationally effective command and control system. The only additional office equipment ELS users need are a mouse and a keyboard.

The second major component of the ELS/GEOFIS system is the Geographic Emergency Operation Forces Information System (GEOFIS). Integrated with ELS, GEOFIS empowers operational users to visualize all information related to an ongoing incident graphically. Incorporating map material (digital raster and vector data, scanned paper documents) and relational address data, GEOFIS displays incident location and surroundings on a graphical screen at the push of a button.

Integrated Command and Control

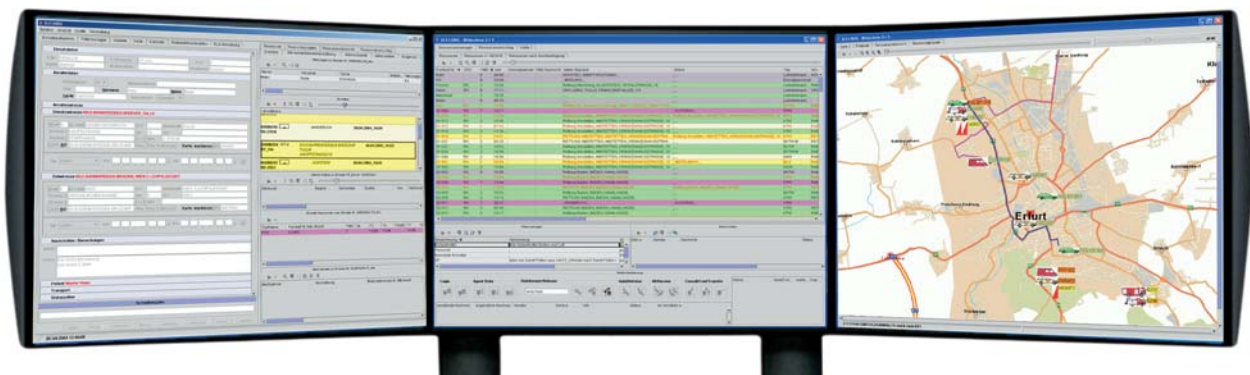


The ELS/GEOFIS platform forms a reliable and efficient software basis for integrated command and control. ELS/GEOFIS is an invaluable tool that can greatly enhance the routine and high-intensity operations of a wide range of users:

- Public safety and security agencies, such as police, fire departments, rescue services, emergency services
- Call centers (Corporate, Residential, Emergency, etc)
- Critical infrastructure security operations
- Telematics users
- Alarm management centers

ELS/GEOFIS merges all the functional requirements of an Integrated Command and Operations Center by providing:

- Data sharing to individual users across the entire system, thus preventing the creation of isolated "information islands" within a comprehensive security solution
- Optimized efficiency and support for the operating staff with reliable and easily accessible information and recording tools
- Improved coordination and information flow between involved parties
- Optimized use of existing infrastructure and resources



Capturing Event Data



In ELS/GEOFIS, event data are captured in configurable masks. Once an incoming call is placed, a caller's address information is automatically entered in the caller data mask (depending on the available phone system). The exact location is automatically visualized on the appropriate map. It is also possible to select a position from the map as the event location.

Multiple data layers like region, city, city district, area and street name are also provided and can be selected via lists. Based on the street address, surrounding objects and adjacent intersections are automatically provided. The system also displays all freeway and country road intersections, on- and off-ramps, rest areas, etc. When an address is identified, ELS/GEOFIS fills out all the appropriate fields.

The system also identifies potential duplicate calls by displaying incidents reported in close proximity to the incoming call location. If the incoming call reports an incident already registered, the user can associate the call with the existing incident. Otherwise a new incident record is created and further actions set forth.

A freely configurable structured query script supports the call taker with predefined questions and answers, which are simultaneously available in several languages. All incoming information and answers concerning an incident are logged and lead to additional questions. The aim is to instigate relevant keywords and accumulate all necessary information concerning the reported incident. The PROQA application from Priority Dispatch is fully integrated for supplementing data entry in ELS/GEOFIS.

A large number of user-friendly functions such as copy callout, copy address, standing order, return transport or onward transport facilitate routine tasks for the call taker.



CTI Integration

All telephone functions are effected through the object-oriented ELS/GEOFIS user interface. ELS/GEOFIS is fully integrated with the reliable Siemens PABX HiPath 4000 and its respective Automatic Call distribution Platform (HiPath ProCenter).

Any regular or emergency call is processed through ELS/GEOFIS. Even before the call is answered, the system displays the caller's number, the number called and the service the call should be directed to- if the system covers multiple emergency or service numbers. All typical telephony functions such as putting a call on hold, toggling between calls, consultation hold, conference calls, etc. are available via the intuitive user interface.

The ELS/GEOFIS embedded Integrated Agent Control automatically registers agents when logging onto the system. Agents can change status by simply clicking "Available" or "Processing". They can also view how many other agents working on the same tasks are logged on, the number of available agents, and the number of calls waiting in queue.

The Automatic Number and Location Identification (ANLI) system application not only identifies callers from their phone number, but also pinpoints their current location, subsequently verified via the ELS/GEOFIS address management system. The system also identifies and reports the caller's category, e.g. eye-witness, incident participant, security agent, hospital administrator etc. Based on caller identification, the ELS/GEOFIS Automatic Call Distribution (ACD) application forwards the call to the proper operator, automatically displaying the right callout as soon as the designated operator starts processing that call.



Conducting Operations



ELS/GEOFIS supports operations by automatically generated alarm and action plans. ELS/GEOFIS offers among others:

- Resource proposals
- Alarm sequences
- Checklists
- Content tool link
- Maps
- Graphic vector data overlay
- Object plans
- Video image streaming
- Structured Call assistance
- Easy access to supporting databases

These plans are generated and adapted dynamically by ELS/GEOFIS in order to guide the operator. The plans depend on:

- Verified time and date
- Location provided
- Event type
- Structured query answers

In the case of several responses being offered, a priority control system automatically determines the most suitable response.

Throughout the duration of the incident, users have at their disposal all of the above information. Additionally, ELS/GEOFIS also offers valuable information for on-site agents that can be transferred to an external workplace, a mobile terminal, or an alarm printer.



Resource Module

An integral part of the ELS/GEOFIS Command and Control application is its fully configurable Resource Module that enables users to plan and identify resource availability and manage the allocation of resources (be they vehicles, air assets, or maritime resources) to specific incidents.

The Resource Module covers every aspect of resource fleet management: vehicle equipment information, crew qualifications and specialties, optimum routes for each type of resource, particular information regarding each resource type (for example, pre-flight preparation time and cloud heights for helicopters), approximate times of arrival to an incident area, etc. The route server calculates the distance between resource and incident location based on the resource type and the route selected.

Resource status and availability are also displayed. Allocation of resources is determined according to incident type and its importance in relation to other on-going incidents.



Resource proposals based on rotation optimize asset workload and general administration of all resources belonging to a particular organization. A comprehensive record of activities and past usage for every asset is within easy access of the Resource Management Module users. Maintenance planning and future asset availability is thus simplified and easily conducted.

The ELS/GEOFIS Resource Module is a comprehensive and simple asset management tool with strong reporting capabilities and a plethora of filters enabling qualified users to exercise effective overall control of registered resources.



Responding to Alerts



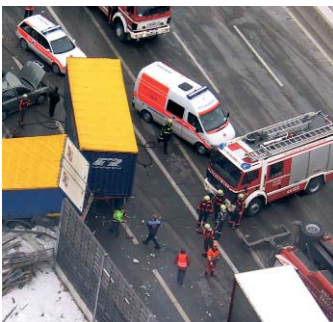
ELS/GEOFIS supports a wide variety of alert mechanisms, such as:

- GPRS
- SMS
- TETRA, SDS
- Telephone
- Voice announcements
- Alarm printers
- Freely programmable controllers for public address systems, building services, security alarms, etc.
- CarPC (ELS/GEOFIS mobile)
- Analog radio
- Public safety announcements with radio data transmission

Every resource (vehicle or personnel) can be assigned one or more alert availability statuses. In the event of

an alert, ELS/GEOFIS, taking into consideration the nature of the incident, its location, the time constraints this imposes, and other factors, identifies the closest resource available. It is also possible for several alert routes to be simultaneously activated for one or more resources. Alerts can vary depending on the time of day, and can also be predefined for any given time intervals.

Technical acknowledgments are received asynchronously and automatically displayed for the dispatcher. A 'watchdog' background process identifies any missing acknowledgments from personnel and notifies the dispatcher accordingly.



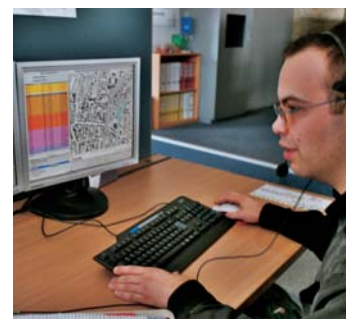
ELS/GEOFIS and TETRA



ELS/GEOFIS offers extensive operational capabilities when coupled with TETRA. All TETRA groups incorporated into the network can easily be selected for listening, speaking, or monitoring purposes. With the use of reliable controlling measures, all necessary TETRA groups are automatically switched to listen or speak, with the dispatcher applying only the PTT button. Depending on the proposed resources set forth by ELS/GEOFIS, the system directs dispatchers to contact the right TETRA-phones swiftly and securely.

All TETRA phones can be reached via an individual call. They can also be searched in the ELS/GEOFIS database according to the organization they belong to. The complete TETRA-signaling is visualized and recorded in ELS/GEOFIS, while the current participants in the different TETRA groups are represented by name, thus allowing dispatchers to identify individual speakers immediately.

Furthermore, ELS/GEOFIS has the capability to configure various status inputs and trigger corresponding responses. Free or pre-configured SDS messages can also be sent.



Alarm Device Module



ELS/GEOFIS provides a wide variety of functions supporting the management of detectors and alarm systems (fire detection systems, residential emergency call systems, telematics etc.). Each detector can be associated with an unlimited number of responses which, depending on the situation, are then offered to the dispatcher as options.

Detectors can be arranged hierarchically in groups (interface, system, detector group, line and / or single detectors). ELS/GEOFIS also displays graphical references, such as access routes, attack routes, installation locations or object layouts. Besides various security, fire, smoke and intrusion detectors operating on a 24/7 basis, ELS/GEOFIS also supports detectors with time-controlled arming/disarming features. Voice intercoms (such as elevator intercoms for example) can also be integrated with existing detectors.

The ELS/GEOFIS system not only receives alarm signals via the detector interface, but can also perform normal function checks for all integrated detectors, facilitating their periodic maintenance.

Telematic messages transmitting the location of the call and any vehicle diagnostic data are likewise supported.



Content Management and Form Generator



Content Management

With the help of a dedicated content tool, ELS/GEOFIS users have the necessary means of managing many information sources, such as:

- URLs on the internet and intranet
- Files in formats such as Word, PDF, Excel, etc
- External applications such as transaction management, statistical reports, etc
- Image data and files

Using the ELS/GEOFIS search engine, the following search methods are provided:

- Keyword search
- Full-text search
- Category search
- Geographical search
- Time-based search

Frequently Asked Questions (FAQs) can also be defined for each entry. Recurring questions can therefore be automatically generated and displayed as a FAQ list. When performing updates, the administrator is further aided by various information such as expiration dates, time limits, and content owner.

Form Generator

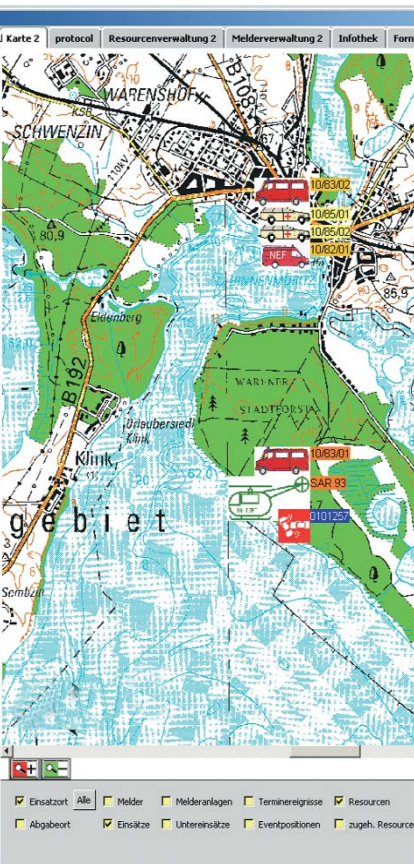
ELS/GEOFIS integration with Office allows users to generate printable Word, Excel and HTML documents from all list and box contents.

ELS/GEOFIS provides a form generator for configuring the transfer of data and form layouts. Fully integrated in the Office process chain, ELS/GEOFIS allows users to generate statistics, callout reports or media releases at the push of a button.

Alarm prints and data for alerts via SMS or SDS can also be configured with the use of the ELS/GEOFIS forms generator.



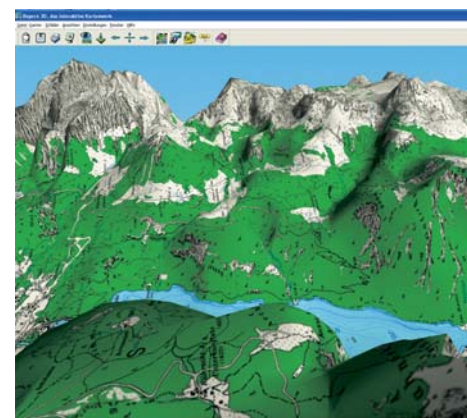
Graphics Data Management



ELS/GEOFIS enables users to show bitmap, vector-based and hybrid data. Thus, data supplied by regional or city surveyor's offices or digital bitmap data (e.g. available from various map publishers) can be easily incorporated. In fact, a wide variety of bitmap data can be combined into seamless maps with an unlimited number of scale levels. Complete sets of maps as well as individual building layouts and images can thus be intelligently organized. With a hybrid display, any number of vector data layers can be overlaid on the bitmap data and individually displayed or hidden. 3D data can also be used.

Besides static maps, ELS/GEOFIS generates dynamic layers that illustrate a number of incident related information, such as current callouts and their locations, incident escalation phases, responding specialist units, and other parameters. For instance, in case of a traffic accident, the system displays the positions of the resources on the map as well as their routes to the target location. In case of a toxic fire, the resulting smoulder will be illustrated on the map.

Vector data layers –added to the raster data- can overlap or fade in or out with hybrid visualization. ELS/GEOFIS processes different coordinate systems as well as a wide variety of vector formats. Dispatchers are therefore able to direct not only land but also air assets by identifying flight obstacles, utility lines, fire hydrant maps, etc. This feature is automatically supported by the actions module so that data for access and attack routes, landmarks, etc. can be stored.



Mobile and Internet / Intranet applications



ELS/GEOFIS Mobile

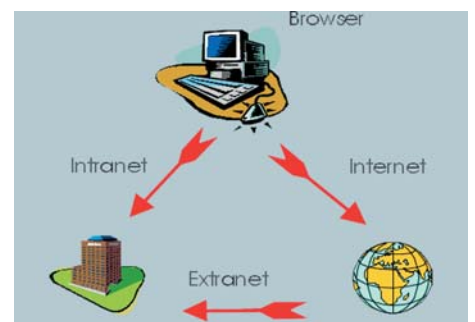
Upon customer requirement, ELS/GEOFIS may contain a mobile component (either vehicle-based or man-portable) that enables data transmission and reception of all incident-related information, such as incident location, available routes, GPS coordinates, etc. It may also enable users to conduct on-site incident reporting electronically, thereby assuring situational awareness for both on-site agents and dispatchers. The amount of paperwork is substantially reduced at the same time.

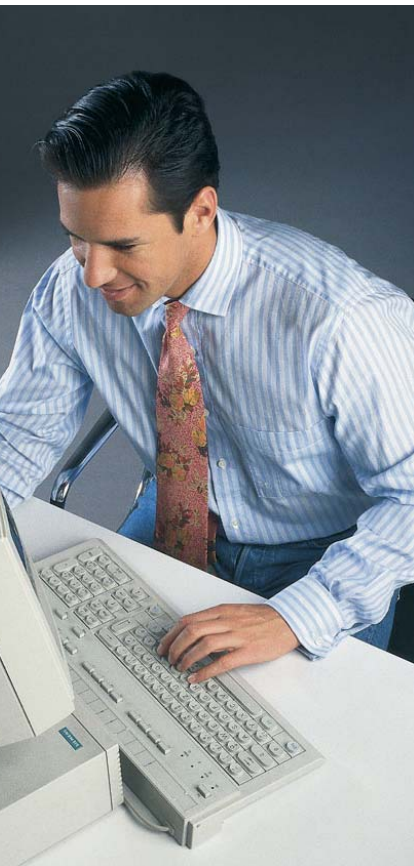
Transfer of such data between mobile assets and integrated command and operation centers is achieved with the use of GPRS, TETRA, or even WAN / LAN networks.

ELS/GEOFIS Internet / Intranet

Since ELS/GEOFIS is a Java-based system, all functions can also be used via web and application servers. SSL encryption ensures data security and provides all participants access to every incident related information, status reports, and updates. Apart from standard roles like call taker, dispatcher and administrator, ELS/GEOFIS may also support user groups for the following areas of responsibility:

- Supervisor
- Overview of remote guards and stations
- Billing
- Driver registration
- Operations documentation for specialized personnel, such as doctors and paramedics
- Ordering parties such as hospitals for patient transports
- Land, Maritime, and Air asset operations
- Service providers such as roadside assistance or maintenance service providers
- Access from adjacent Emergency Command Centers





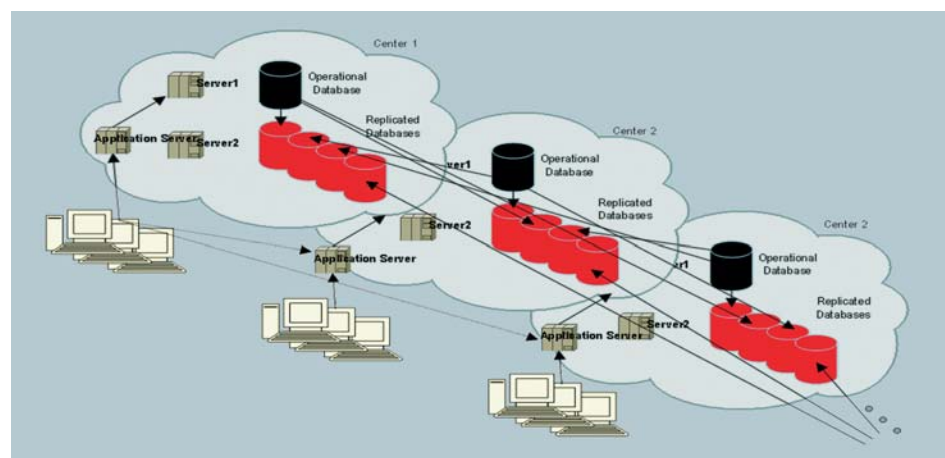
Multiple Command and Control Centers

ELS/GEOFIS becomes even more valuable when applied in integrated security solutions consisting of multiple Command and Operations Centers. Featuring multiple back-up databases located at more than one command center, ELS/GEOFIS provides users with the capability to:

- Transfer, at any given moment, operational control of certain incidents to other command centers
- Transfer of operational resource control to different command centers

- Joint incident resolution and resource management with other command centers
- Transfer of the entire scope of action of a particular command center to another

The inherent redundancy of the ELS/GEOFIS renders it ideal for large scale integrated security solutions consisting of more than one command and operations center.



The 'View Info' Tool and Accounting



ViewInfo Tool

ELS/GEOFIS comes with an 'View Info' Tool used for customizing the 'look and feel' of the Graphical User Interface and Relational Database model of the Electronic Incident Logging System. ViewInfo Tool capabilities render seemingly cumbersome adjustments and modifications fast and easy:

- Every adaptation can be easily designed, tested, and developed by the Tool user
- The versions management of ViewInfo Tool allows users to switch between different versions

- The system Administrator as well as any other department or external companies are able to develop further functions
- Changes are easily effected
- Users can perform testing of new changes with the System remaining operational

'View Info' Tool is a database-driven application capable of creating further applications, which in turn can handle relational, graphic, and user interface data in a uniform-object-oriented fashion.

Accounting

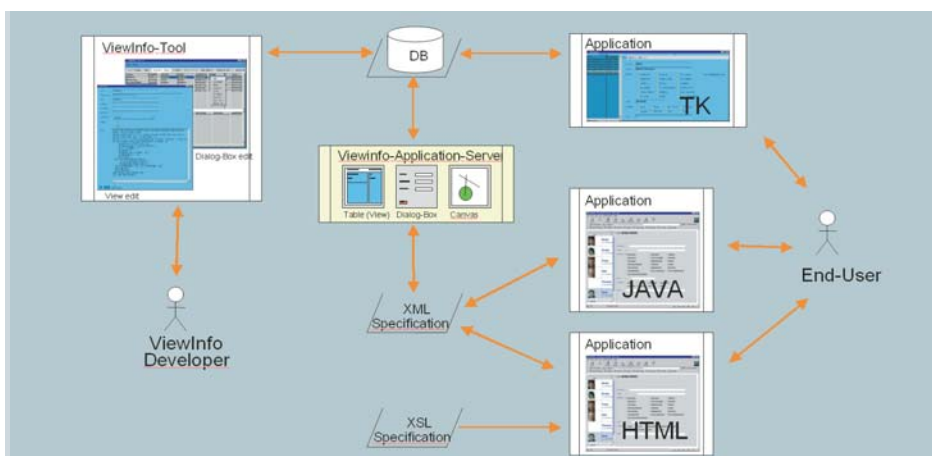
ELS/GEOFIS has a highly efficient accounting system for storing numerous charge rates. The accounting system can compute rates on the basis of price per-unit, mileage rates, flat fees, special fees, waiting time, etc.

Cost allocation takes place by assigning each charge rate to a different cost object. Charge rates are not manually entered; using a general cost calculation chart as reference, the accounting system generates the corresponding rates.

Charging for emergency medical services is based on the following criteria:

- Type of transport
- Route
- Flat fees, if applicable
- Distance covered
- Tariff validity period
- Specific Cost per Unit Prices

The ELS/GEOFIS accounting system generates Individual or collective invoices and billing schemes in a standard format.



We have so much more to tell you!

For more information on ELS/GEOFIS, please visit our website:

www.siemens.gr/ccs

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