# Esgraf 5.1 graphical user interface and configuration server

# Esgraf 5.1

ESGRAF is a common graphic user interface to the Esmi access control, intruder alarm and fire alarm systems, Esmi DVMS recorders and ENDURA video management systems to control their elements and groups. With the help of the graphics the place of the alarming element is perceived from the subsystem immediately into site plan and at the same time an alarm-specific instruction is obtained

# **Configuration server**

Main idea for design Esgraf configuration server was make it easier to update and maintain big systems. Configuration server is independent program that runs as windows service and takes care of all Esgraf site plans and databases, all this information are delivered to Esgraf clients through TCP/IP network. Configuration server helps also system backup; backup can be done every time during system update.

Esgraf 5.1 can still work as standalone version installed in normal workstation. Also old configurations can be uploaded to configuration server.

Esgraf 5.1 supports Configuration server 1.3.

## **Operating environment**

Esgraf is a 32-bit application utilizing Win32 API; it runs on Windows Vista, Windows 7&8 and Windows 2008/2012 server system or compatible. The application uses TCP/IP and other system services these operating systems provide.

Configuration server can be used in same kind of Windows operating systems as Esgraf itself and it can be installed where ever in the same local area network. Configuration server is Windows service that runs all the time.

Computer for Esgraf installation should be, at least, modern power workstation.

## Databases

Esgraf can still use local databases on the workstation in that case everything will be placed into workstation disk.

If Configuration server is used all databases and site plans are saved to the configuration server. Esgraf client workstations fetch all information needed from configuration server through TCP/IP network and make local copy of it.

# Connections

Esgraf can connect to as many as 64 separate Esmikko servers simultaneously. Esmikko, as an integrated system, provides event and alarm information from Esmi's access control, burglar alarm and fire alarm systems. Esmi DVMS provides stored material into workstation hard disk or removable media.





# Esmikko – Esmi DVMS/ENDURA integration

With Esmikko – Esmi DVMS integration can Esmikko events start functions and operations inside Esmi DVMS and/or ENDURA.

Esmi – Integration Agent is a service connecting Esmikko servers and DVMS servers. Agent monitors events on servers and according to configured rules start activities in DVMS/ENDURA systems. Whit this rules access, intruder or fire event can start alarm recording, select monitor or pre position etc.

## Esmi DVMS/ENDURA – Esgraf integration

Esgraf can connect maximum of 63 DVMS servers or ENDURA systems.

Stored (only from DVMS) and live images can be seen on the Esgraf display coming from each camera. Camera controls and image adjustments are also



possible via Esgraf as well as saving (DVMS) stored material into workstation hard disk or removable media

## **User interfaces**

The user interface is modern, fully graphical and window-based. Site plans and the elements on them are designed in object-oriented fashion. The mouse can be used to access all of the features. Elements and the site plans can be navigated among easily in many ways, which allows using large site plan hierarchies.

The size of the window hierarchy is virtually unlimited, although available Windows resources set some kind of limit. The site plans are arranged into a tree-like hierarchy. From the main level of the system, "the root picture", one can move into the hierarchy by clicking the links (sort of hypertext links). Great depth and size of the site plan hierarchy makes it possible to use a hierarchy that suits everyone's needs. Elements and links are displayed on the site plans as text or graphical objects, whichever the user opts for.

# **Detectors and elements**

Elements are objects on site plans. They show their state in real time. State changes are reflected in color or image changes. Monitoring state is also indicated (not monitored, monitored, bypassed or disabled). By clicking on an element a control window is shown. These windows provide more information and functions for the user. Control windows are also real time. By clicking the element with the right mouse button, a menu containing most frequently needed actions is shown.



The elements are downloaded from the systems that Esgraf is connected to. All elements not already placed onto site plans are places onto a list from which the user can drag and drop them into place. Camera elements and camera pre-positions are also fetched from DVMS/ENDURA via communication links. So they work as normal elements with drag and drop functionality.

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1000 instruction texts can be defined, each a maximum of 500 characters. An instruction text can be associated with every element. This text is shown to the user when an alarm occurs.

# Agent (DVMS/ENDURA) control rules

There are condition part and action part in control rules.

Condition part specifies which events will trigger the action specified in action part. Conditions can be events using Esmikko addresses or names that are monitored.

Also a weekly calendar can be specified when these rules apply.

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Action part in Agent defines the actions that are taken when conditions are met. Actions can be simultaneous controlling DVMS servers with parameters like:

- Start recording via camera x
- Pre-recording camera x
- Resolution in recording
- Picture rate
- Recording time
- Pre-position
- Output relay control

# Alarms

Alarms are indicated by a sound and as red, blinking elements and links. An alarm is visible through the hierarchy; if an element is deep in the hierarchy; all links leading to the corresponding site plan are set to alarm state. The element is found by following these alarming links. All alarming elements appear on the alarm list window, from which they can be selected or fetched. The latest alarming element is accessible by a single click of a button on the toolbar



Every alarming element is placed onto an alarm list, the newest alarm at the top. The user selects an alarm by clicking on an item on the alarm list. This fetches the site plan of the alarming element and shows the instruction chosen for the element. The selected alarming element is indicated by a wave-like animation on the site plan. Alarms can be acknowledged in many ways.

Every alarm event is logged. Alarm is acknowledged by the user or by another user on a different workstation these actions are logged into an ODBC database and/or plain file log.

Important objects like main doors or lobby area detectors can be placed in control windows, control windows are always available, not depending selected site plan.



A line printer can be used to get a hard copy of the alarms and other events. The site plan on which the alarm occurred can be printed on a Windows compatible printer.

Alarm classes can be defined and associated with elements. These classes are collections of functions, which are executed automatically when the element goes into alarm state. Alarm class functions include automatic printing of site plans and printing on the line printer, sending SMTP email to a designated recipient like Esgraf SMS Gateway. Esgraf SMS Gateway is windows service. Esgraf SMS gateway receives mails from Esgraf converts these to text strings and forward them to normal GMS-modem. All alarm classes could have different mail and SMS alarm receivers.

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# Esmikko doors

Doors can be opened or closed from the door elements.

Access events from them are inserted to an event list displaying who, when and where is in the premises. Groups can be opened, closed and bypassed or disabled.

# Alarm loops

Loop states can be controlled (enabled or disabled) and alarms can be acknowledged. Loop groups can be controlled from a group element using disarm and arm commands.

## **Fire detectors**

Esmi's fire detection systems provide events and many different alarms like pre-alarm, fire alarm, service alarm and detector fault alarm, to Esmikko server, which routes them to Esgraf. Alarms can be silenced and acknowledged. Also system alarms not associated with an address are displayed.

## Cameras

Cameras have control windows that look like a normal camera control panel. Pan, tilt and zoom can be controlled with mouse or Windows joystick directly from Esgraf. A fixed camera can have a software zoom feature. Pre-positions and route programs can be activated. Alarms coming from the systems are displayed on the event list.



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## Users and user rights

Many users can be defined, and each of them can be assigned suitable rights. Using the application requires correct user ID and a password. User information is stored into Esmikko server and can be managed from any Esgraf workstation. Functions available for the user can be restricted on user ID and workstation levels. Per-element rights can restrict user access even more, so the user only has rights for the necessary objects.

Esgraf 5 gives ability to create user groups and assign suitable rights for each user group.

Esgraf 5 has also **system rights**, 3 level access to site plans no access, view access and full access. Meaning that, in the same Esgraf, view could be different depending who is logged in to the program.



#### Licenses

Esgraf 5 has new licensing. Both ECS and standalone Esgraf is using the same type of license. In the license only 3 values are counted: number of access/intruder/fire elements, number of installed

cameras and how many Esgraf workstations can be

used simultaneously (if this value is 1 license is for standalone installation). Esgraf is also working without license, in this case Esgraf is full functional with 10 access/intruder/fire elements and 2 cameras.

#### A monthly log is created for alarm events. Every log event contains information about the user and the actions taken. The logs come in two flavors, ODBC database (Access and SQL Server type logs) and plain file logs.

#### Esgraf configuration server

Esgraf 4 and newer versions are supporting configuration server, Esgraf 5 needs ECS version 1.2. Configuration server is Windows service that could be installed where ever in the same local area network where Esgraf 5 is running. Configuration server can maintain several systems, all systems have own forder in configuration server. Configuration server can take care e.g. following:

- Licensing is in the configuration server and it is centralized (only one license includes):
  - Max Access/Intruder/Fire elements
  - o Max Camera elements
  - Max simultaneous client connections(Esgraf workstations)
- Server saves all databases, all site plans and deliver them through TCP/IP network to Esgraf workstations
- Workstation and user dependent data supported
- Gives new "Edit Mode" , only one user at the time can enter to edit mode
- Existing Esgraf systems can be uploaded to the configuration server

Product	Code	Description
ESGRAF5 BASIC PACKAGE	FFS08784360	Esgraf 5 GUI, DVD package
ESGRAF5 ESMIKKO ELEMENT	FFS08784361	Esgraf5 license for access/intruder/fire element
ESGRAF5 CAMERA ELEMENT	FFS08784362	Esgraf5 license for camera element
ESGRAF5 ADD ON CLIENT	FFS08784363	Esgraf5 additional workstation license
ESGRAF5 UPDATE	FFS08784365	Esgraf5 update from earlier version
ESGRAF5 STANDALONE FULL LICENSE	FFS08784366	Esgraf5 Standalone without limitations
ESGRAF5 ECS FULL LICENSE	FFS08784367	Esgraf5 ECS without limitations
ESMI DRV AGENT	FFS08784330GB	Esmi DRV Agent program with 1+1 Esmikko/DVMS connection
ESGRAF SMS GATEWAY	FFS08784311	Esgraf SMS service program