

Command & Control Application

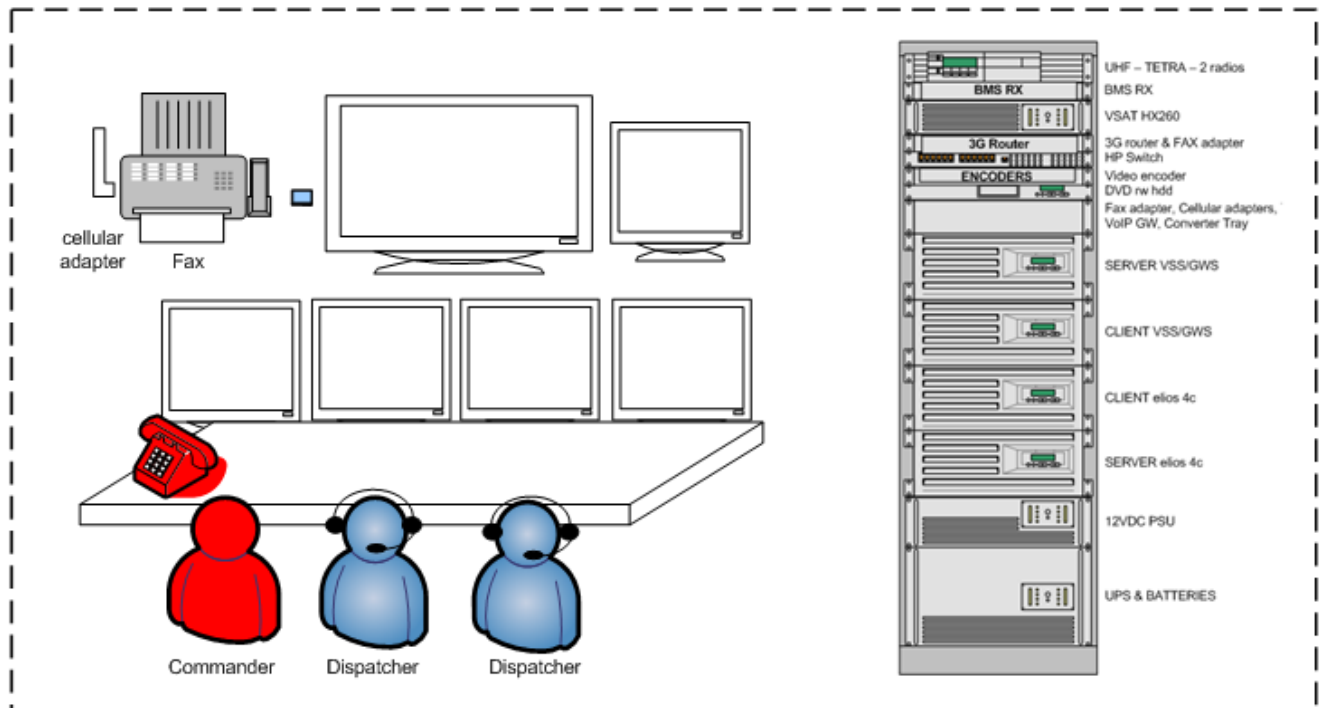
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1. Command & Control Application (GIS mapping, Video, Voice, Event Management)

Elios Command & Control system is a flexible yet customer oriented application that offers a broad range of services to supports forces and operators managing ongoing events.

Decision-makers, using this system, are able to rapidly access, understand and react to any event, alert or mission request generated On-Site in real time.



Elios provides the following Modules:

- Real time GIS mapping
- GPS positioning
- Communication over IP (VoIP, RoIP)
- Video Monitoring Module (Is not provided in the project)
- Event management
- Voice Video and Data recording
- Reports, History and debriefing

1.1 GIS Mapping, GPS positioning

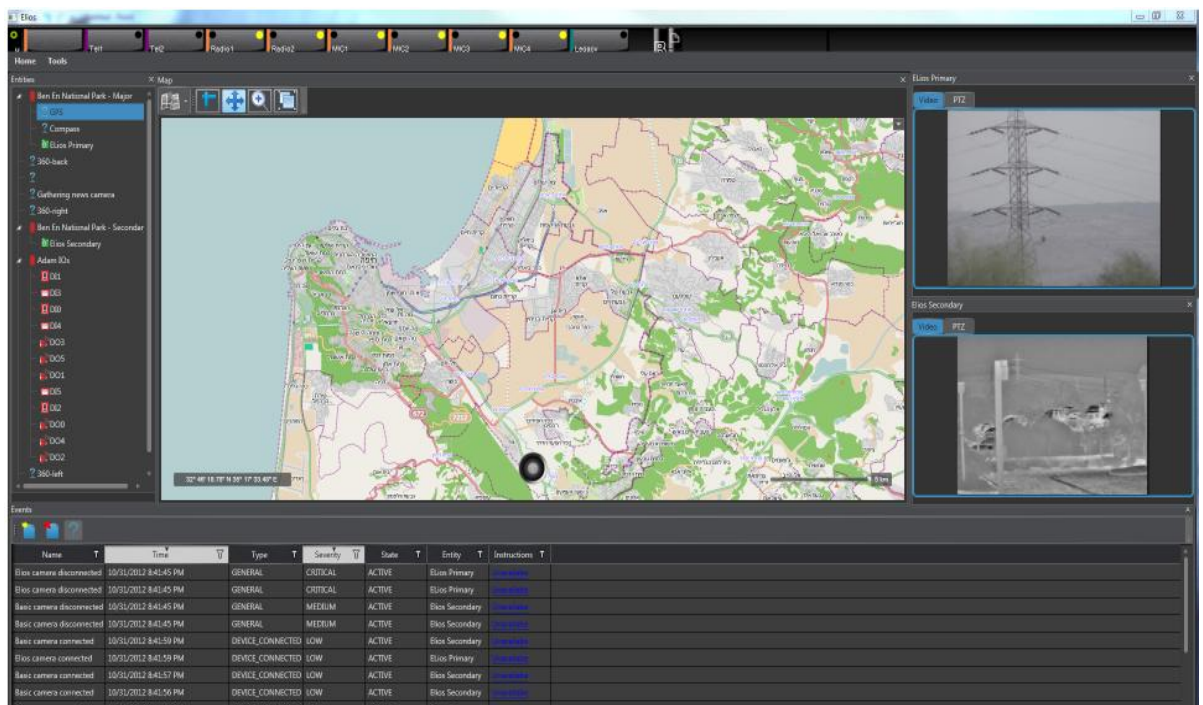
This platform is the basis of a complete solution which allows customizing features and services both from local or remote administrators.

The viewer can monitor / display and manage all ongoing activities on top of a map. All the defined Moving / Non Moving units are displayed on the GIS Map.

The application enables the viewer to show in real time the location of the relevant field forces associated to the event, personnel or mobile assets, in fact the GIS module is enabling the following capabilities:

- Real time GPS based positioning (vehicle and personnel)
- Observation cameras FOV (Field Of View)
- Control and manage field elements from the GIS map
- Geo-fencing, Polygons.
- Panic button
- Trail Tracking
- Information layers, POIs (Points Of Interest)
- Integration to video engine
- Adaptable to changes and easily configurable

Command & Control application



1.2 Vocal Communication over IP

Elios C2 enable easy yet efficient Voice over IP communication with Head quarter and field forces over radio, telephone, intercom and cellular. The operator access all MCP communication system directly from Elios C2 command & Control system using an headset and software tool bar..



The MCP equipped with several means of communication systems in order to provide parallel multi user communication, redundancy and out of coverage communication
Some of the systems are:

- **Radio over IP** - UHF or VHF, SSB HF & Tetra network system
- **Cellular over IP** – Socialized cellular extensions
- **Cellular backhauling** – 2G, 3G, 3.5G, 4G. all data / voice / video gathered in MCP is relayed over high capacity aggregated cellular link to headquarter
- **VSAT** – Enabling the operator to access any broadband application over satellite. and enjoy reliable, secure and high-speed IP based data communication with head quarter, usualy used whenever MCP is posted where cellular coverage is not available

1.3 Event Management module

Alarms / Alerts are generated whenever there is an unexpected change on one of the system devices. Each alarm "creates" an event in the command & control system and according to preset definitions, which determine the ways to handle each event, a SOP (Set of Procedures) will guide the personnel step by step how to manage this event and what are the actions that need to be done.

All alerts are generated according to customer definition and requirements

- Alert Management Tables – On User Interface – In Real Time
- Sensor Setting Parameter (Digital & Analog, Dry contacts) for Alert Notification
- Pop-Up Alert window
- Automatic Color definition by Alert Type
- Visual & Audio Alarm in Operational Center
- On-line E-Mail & SMS notification upon alert
- Geo-fencing Alerts
- Hierarchical Information layers (Traffic lights, public buildings, etc')
- Role based decision support and SOP's
- Content Analysis of Video
- Vehicle Emergency (Distress) Alert (Driver)

Event Management Screen

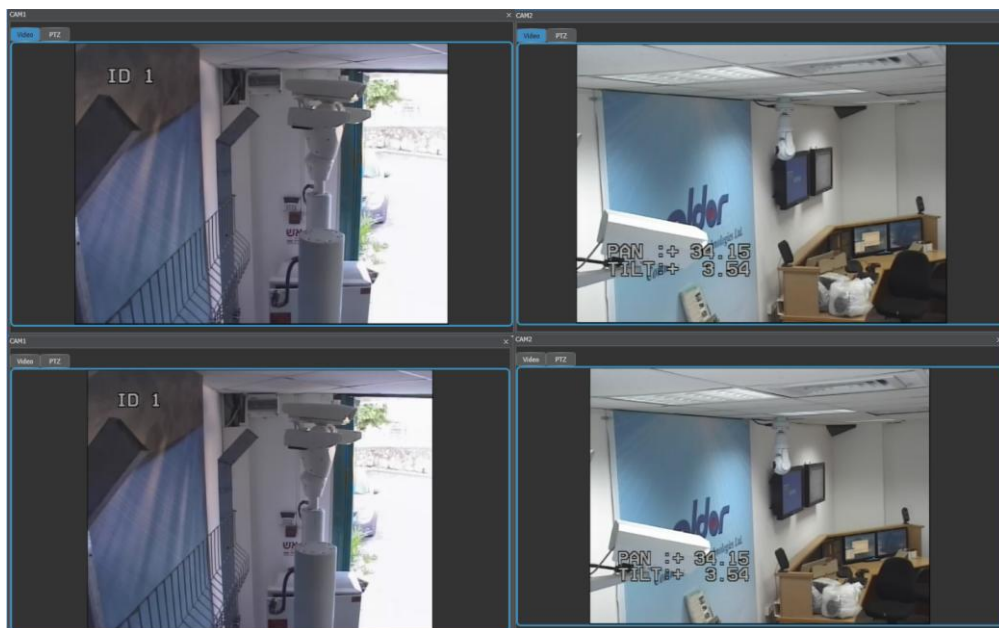
Name	Time	Type	Severity	State	Entity	Instructic
ADAM input 1 Change	7/14/2012 6:42:37 AM	ADAM_INPUT_CHANGE	MEDIUM	ACTIVE	None	
ADAM input 2 Normal	7/13/2012 9:35:08 AM	ADAM_INPUT_NORMAL	HIGH	ACTIVE	None	
ADAM input 2 Normal	7/13/2012 7:14:35 AM	ADAM_INPUT_NORMAL	HIGH	ACTIVE	None	
ADAM input 1 Change	7/14/2012 1:02:16 AM	ADAM_INPUT_CHANGE	MEDIUM	ACTIVE	None	
ADAM input 1 Change	7/12/2012 6:07:02 PM	ADAM_INPUT_CHANGE	MEDIUM	ACTIVE	None	
ADAM input 1 Normal	7/12/2012 6:09:08 PM	ADAM_INPUT_NORMAL	HIGH	ACTIVE	None	
ADAM output 1 change	7/12/2012 6:11:03 PM	ADAM_INPUT_CHANGE	MEDIUM	ACTIVE	AD_OUT01	
ADAM output 1 normal	7/12/2012 6:08:49 PM	ADAM_INPUT_NORMAL	MEDIUM	ACTIVE	AD_OUT01	
ADAM output 1 normal	7/13/2012 7:14:35 AM	ADAM_INPUT_NORMAL	MEDIUM	ACTIVE	AD_OUT01	
ADAM output 1 normal	7/12/2012 6:10:51 PM	ADAM_INPUT_NORMAL	MEDIUM	ACTIVE	AD_OUT01	

1.4 Video Monitoring Module (Is not required in this project)

The Video Monitoring module is employed to accommodate for diversified Video Surveillance requirements. The extended viewing capability offered by the Video Monitoring module is assigned to a single operator environment or shared between several operators.

Several operators, depending on their user rights, control this common display environment. Typically, a Video Matrix displays areas that require extended viewing periods such as entrances and sterile zones. Having this visual data shared between several operators leads to more effective monitoring and shorter response time.

Video Wall



The system will include a video bundle that enables the viewer to display the chosen video channels on the Elios video screen.

The video control screen will enable the operator to:

- Analog/Digital interface to present video from on or multiple sources
- Choose what specific channels to view.
- Floating windows to each camera
- Moving camera control PTZF including the ability to stir:
 - Presets
 - Presets Patrol
 - Camera Sequence
- Virtual Matrix
- Gamepad / Joystick to control the camera and the computer
- Content Analysis
- Correlation with GIS mapping