“Battle Eye System” (BES)

Battle Eye System is a state of the art GIS based battlefield management and fire control system. Positioned on a C2 (command and control) level, BES enhances the soldier’s understanding of the surroundings by providing a clear digital picture of the battlefield.

Common operational picture (COP) include correlated blue force tracked friendly situation, neighbouring unknown, friendly and neutral situation, correlated and uncorrelated enemy picture, along with tactical graphics, statuses of units, and support for fire control. All this is presented on a digital map with NATO standardized 2525B symbology.

With its robust and modular architecture built around a high performance GIS Engine, the Battle Eye System delivers all tactical data to the screen of the soldier. It offers a wide range of connectivity to various data networks, improves the command and control process and enhances situational awareness. It helps gather and share information and integrates several navigation, weapon and sensor systems. BES features a battle-proven intuitive touchscreen user interface designed to be used in vehicles moving over rough terrain.

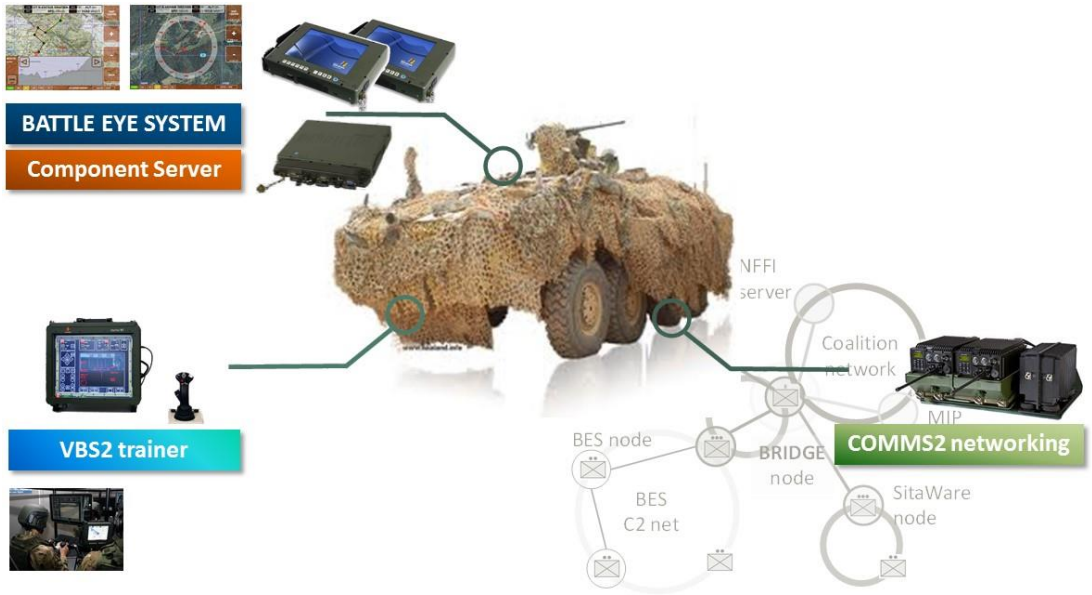
Features highlight

Situational Awareness	**Weapons and Sensors**
State of the art, fast, GIS engine	Inertial navigation sensors support
Touch Screen interface	Dedicated, shared or radio GPS
Terrain LOS analysis	Backup, Ad-Hoc GPS support
MGRS/DMS/UTM grid display and conversions	Elbit OWRCS weapon station support
2525B Symbology	Kongsberg 151 Protector support
Full tactical graphics support	Hand Held LRF support
Visual cue on combat readiness of units	CBRN sensor suite
Navigation and Track recording	LIRD laser detection and triangulation
Configurable ORBAT display and declutter	ROVER or other sensor video
Communications	**Messaging**

Radio type and make in depended Radio IP network MESHNET and MANET ASYNC radio with P2P or software MANET Optimized for low bandwidth VHF/HF links Automatic on the fly CNR reconfiguration User installable encryption User installable protocols (ACP142)	Standard formatted messaging Orders with delivery and wilco reports (ACK) Reports with delivery acknowledges Free text messages User configurable templates Tactical Chat ALERT high priority messages
Interoperability NFFI IP1 and IP2 protocol support Can act as a NFFI gateway or Hub MIP connectivity aDatP-3 formatted messaging Open API toward 3rd party systems Interconnectable on a single unit level	**Logistics** No installation needed, runs from USB Role based user interface and access Mass deployment over network Modular architecture (JTAC, CBRN addons) User configurable interface look & feel Zero configuration emergency mode

BES System Architecture

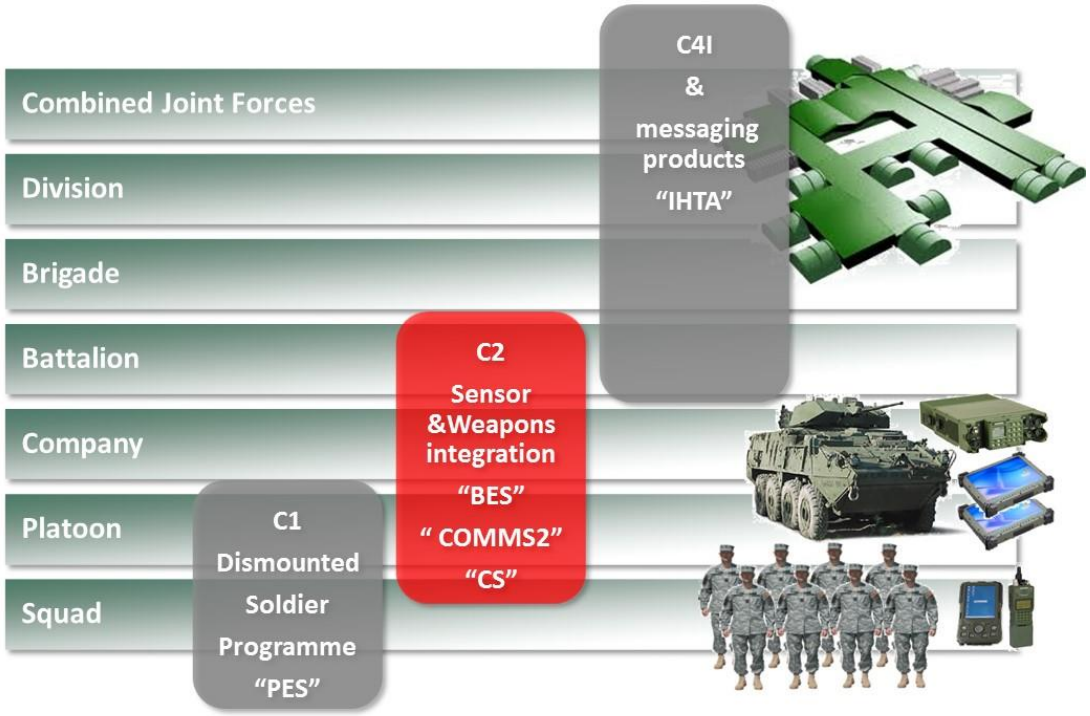
Battle Eye System is not a monolithic application. It can be configured to customer needs, delivering unprecedented flexibility, adaptability, and integration.



Battle Eye System (BES) is a totally modular application, which separates GUI from GIS and business logic. Task specific modules can be added or removed without the need to recompile the core product. BES relies on Component Server for sensor & weapons integration, on COMMS2 for tactical data communications and on VBS2/3 simulation engine for integrated trainings.

BES position in C4I schema

BES is a member of Milsistemika C4I suite. It is aimed toward execution level, and relies on IHTA (Intelligent HQ Assistant) for planning, and seamlessly integrate with PES (Personal Eye System) used by the dismounted troops or JTACS.



Integration and connectivity

It is best suited for the C2 mobile segment deployments in all types of vehicles used at Battalion level and down to the individual soldier. It perfectly complements our C1 segment Dismounted Soldier Programme solution. BES also offers seamless integration with the C4I segment and supports bi-directional data exchange with IHTA (“Intelligent HQ Tactical Assistant”), our own C4I level software or other C4I systems.

Core element of Battle Eye System interoperability suite, is a connectivity gateway. Interconnecting different C4I systems into one seamless coalition command and control system. Modular architecture shares the same design principles with other MIL products thus ensuring maximum expandability and connectivity. All filtering and data transformation is configuration based minimizing the need for frequent software upgrades. Currently supported protocols:

1. NFFI (NATO friendly Force Information), enabling fast exchange of large volumes of BFT data between national C2 or C4I network and coalition NFFI servers, minimizing the danger of blue-on-blue incidents.
2. MIP (Multilateral Interoperability Protocol) C2IEDM/JC3 database gateway, enabling interoperability with “MIP nations”, without the need for in house or custom development of additional MIP protocol connectors.
3. 3rd Party C4I/C2 software can be easily integrated into a common network using BRIDGE extendable plugins.

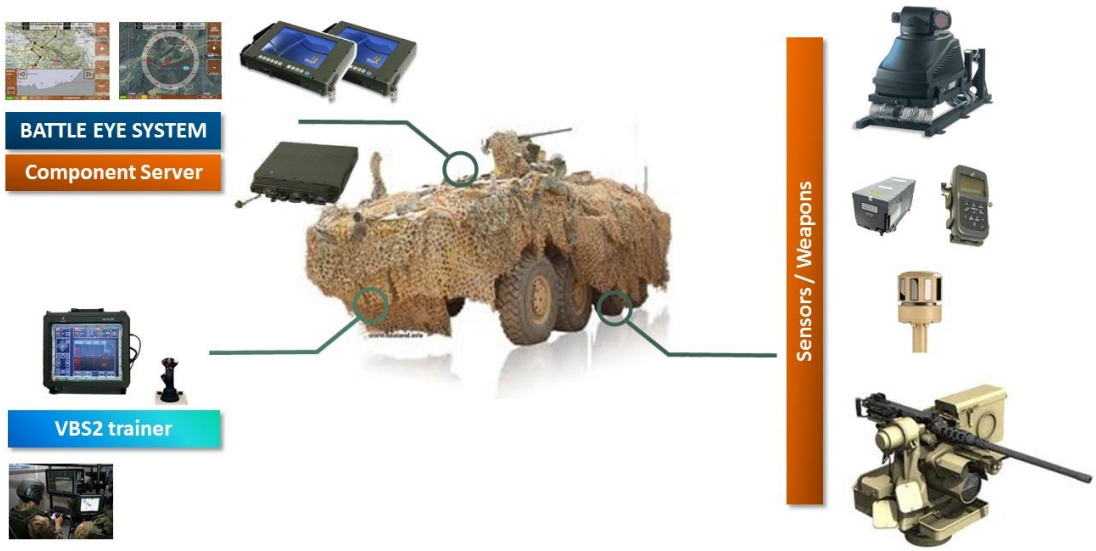
Sensors, Weapons, and other hardware support

Developed as a software only product, Battle Eye System is not tied to a specific hardware platform or a specific radio type. Instead, Battle Eye System relies on a driver based hardware abstraction layer for connectivity. This completely separates the business part (GIS and GUI) of the system from the communications, sensors and weapons. Such modular architecture afford users greater flexibility and lowers total cost of ownership, as a change in hardware configuration is not reflected throughout the system.

CS – Component Server (Sensors & Weapons)

Sensor & Weapons integration interface

It is an advanced server that integrates various military vehicle information, and communication systems. The integration server communicates with different systems by using various standards throughout the internal vehicle network or through serial connections. It serves relevant data to personnel inside the vehicle. It also can expose CNR specific integrated Blue Force Tracking data to user applications.



Every sensor, device or weapon system is connected to a Component server via specific device driver. Component server then exposes common API towards Battlefield Management system.

This architecture ensures total modularity, and eliminates the need to re-test the complete systems every time the configuration is changed. It also shield the Battlefield Management developers from device specific protocols.

COMMS2: Combat net radio integration suite

A hardware abstraction layer providing connectivity among different military communication equipment and networks. It acts as a software driver for different Combat Network Radios (CNR), offering reliable and unreliable communication services over radio networks and supporting a multitude of radio modem devices. A fixed, standardized, well documented socket-like programming

interface is open towards the client with ability to send and receive messages with the corresponding transmission status notifications.