# DELINFOS®

## C4ISTAR

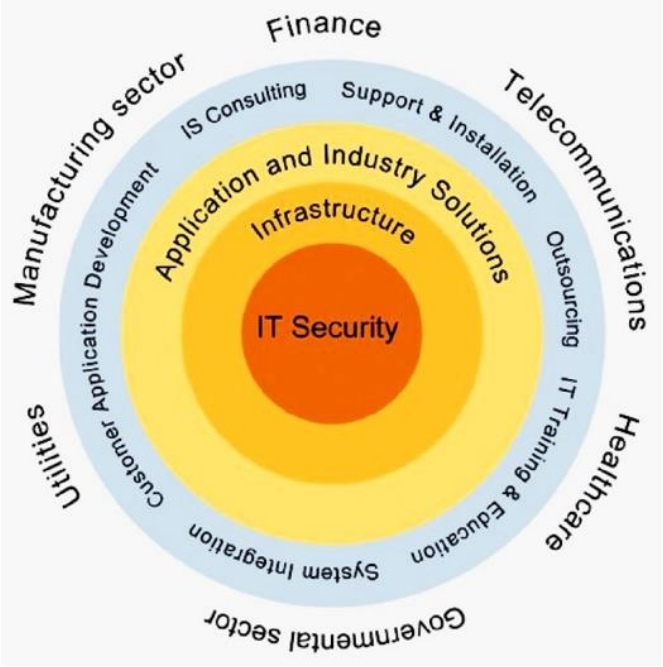
zweiss@delinfo.cz
www.delinfo.cz

# ICZ Group – Key Data

- Complex ICT solutions provider
- High ranking system integrator
- Company established in 1997
- Company HQs in Prague
- Activities: Czech Republic
  Europe, Asia, Africa
- ~550 employees

# ICZ Group – Product & Services Portfolio

- **IT Security**
- **IT Infrastructure**
- **Sector-Related Applications**
  - Government and Public Solutions
  - Healthcare Solutions
  - Content Management Systems
  - Manufacturing and Logistics
  - Transport Solutions
  - Telecommunications & Utilities
  - Finance & Banking
  - **Defence Solutions - DELINFO**
- **IT Consulting & Analysis**
- **System Integration**



# ICZ projects/products for MoD

- **INFRASTRUCTURE**
  - Reach Back Operation room for JCBRN COE in Vyškov
  - Backend network and server technology Cisco, Webex, Jabber including videoconference unit Cisco TelePresence, work stations

# ICZ projects/products for MoD

- **HEALTHCARE**
  - Drug chain and mobile electronic nursing documentation at Central Military Hospital in Prague
    - Increase patient safety, reduction drug, medical material and treatment costs,
    - Effective documentation workflow

# ICZ projects/products for MoD

- **SECURITY**
  - IS RUPS - certified information system for processing classified information up to „RESTRICTED“ - pilot project
    - Thin client PC
    - Virtualization technology by CITRIX and Vmware
    - Integrated certified IP encryption as a network card - LANPCS-RG2

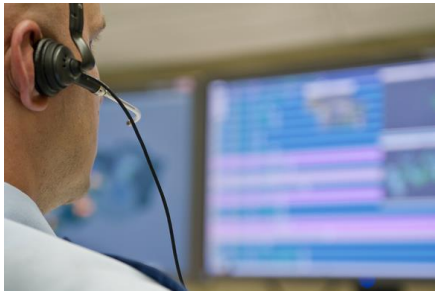
# ICZ projects/products for MoD

- **DEFENCE - DELINFO**
  - Ground Force Tactical C2 System ICZ DELINFOS®
    - Deployed and operated by units
    - Staff, vehicle, dismounted soldier
    - NATO interoperability features

  - Virtual Simulations Training
    - Project for Simulation & Trainer Cente
    - Based on Virtual Battlespace 3

# ICZ projects/products for MoD

- **DEFENCE - ALES**
  - Air Traffic Control and Management Systems LETVIS and SEKTOR-VS
  - Operated within the Czech Air Force
    - Efficient control of airspace
    - Reliable conflict detection
    - Improved interoperability
    - Alerts and warnings
    - Multi-sensor data fusion
    - Airspace management



# ICZ/DELINFO

## - the strong partner of Czech Army in NATO

- NATO Working Groups – on behalf Czech Army

  - **STAFF** – Multilateral Interoperability program – Stanag 5525, Federated Mission Networking, CIAV Workshop Service Leads
  - **BMS/Platform** – FFT CaP - Friendly Force tracking Capability Packadge, Stanag 5527, COS 599905
  - **Dismounted Soldier** – NAAG LCG DSS, Stanag 4677

# Company milestones

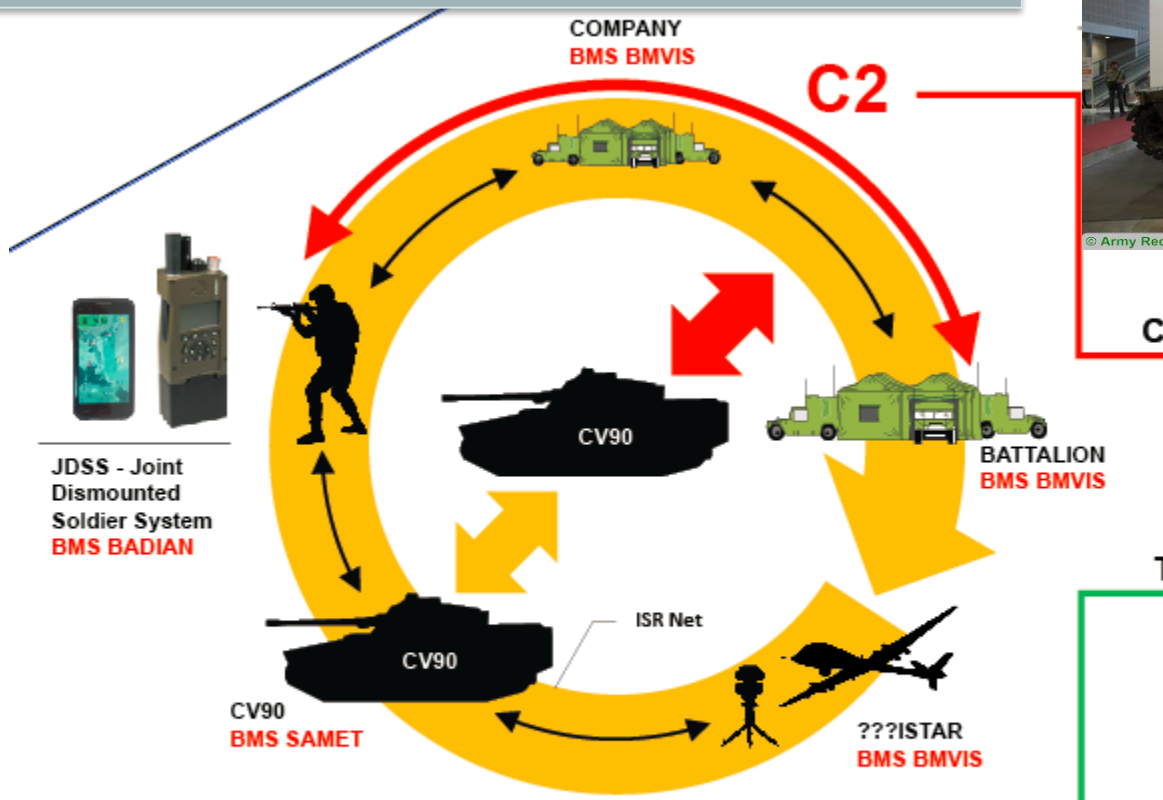
- 1993 - company starts, training execution
- 2000 - first C2 system presentation abroad - Combined Endeavour
- 2003 - participation in military fair IDET
- 2004 - participation in international exercise Combined Endeavour
- 2007 - participation in MIP testing in Greding (Germany)
- 2008 - member of ICZ Group
- 2008/2009 - participation in international exercise CWID
- 2013 – the first participation in international exercise CWIX
- 2014 – first DELINFOS – MIP 3.1 instalation
- 2015 – full instalation in Czech Army

- 2017 – IDET – C4ISTAR - concept for armoured vehicule – BAE/HAGGLUNDS
- 2017 – DSEI London – future battle station in armoured vehicule
- 2018 – C4ISTAR „MARTIN" – GRAND PRIX of IDEB 2018

2019 – Awarded by „GOLD IDET" of IDET 2019

2020 - 2022 – COVID 19 – DELIQ – Monitoring COVID Teams

# International Defence and Security Technologies Fair – IDET 2017

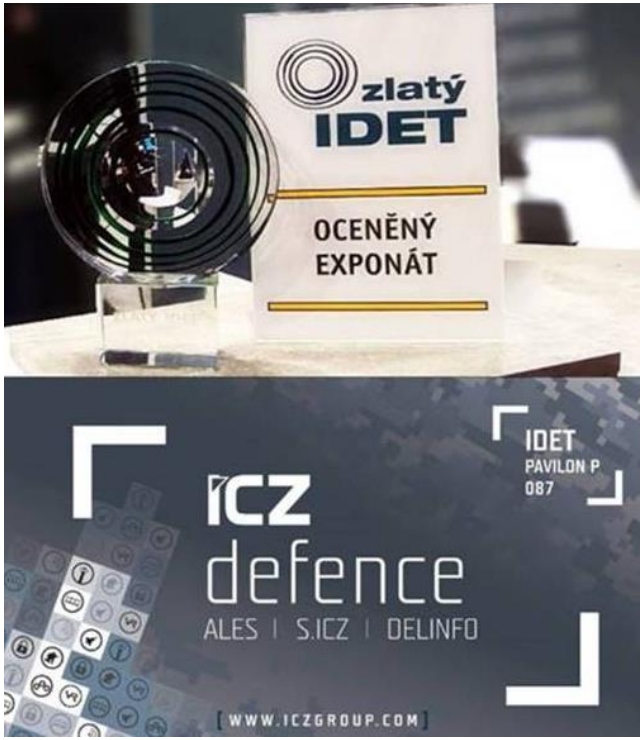




# DSEI London – BAE - September 2017

# International Defence and Security Technologies Fair – IDEB 2018

## C4ISTAR System „MARTIN“ – GRAND PRIX of IDEB 2018

# International Defence and Security Technologies Fair – IDET 2019





**The mutual integration of Land and Air operational picture**

# MOD CZE Confirmation

A500X01ACRWI

**Ministry of Defence of the Czech Republic**
**Industrial Cooperation and Organisation Management Division**
Tychonova 1, Praha 6, 160 01 data box hjyaavk

Prague, November 21, 2016

**Contractor Acknowledgement**

To whom it may concern,

this is to acknowledge that the Czech company DELINFO, spol. s.r.o. has been a long-term reliable contractor to the Ministry of Defence of the Czech Republic. DELINFO, spol. s.r.o. delivers software to our national Ground Force Command and Control System, which also includes selected NATO interoperability capabilities.

Tomáš Kuchta
Deputy Minister of Defence

# ICZ DELINFOS Ground Force Command and Control

**Supporting NATO concepts & standards:**

MIP 3.1 - Multilateral Interoperability Programme

NFFI - NATO Friendly Force Identification

NVG - NATO Vector Graphics

SOA - Service Oriented Architecture

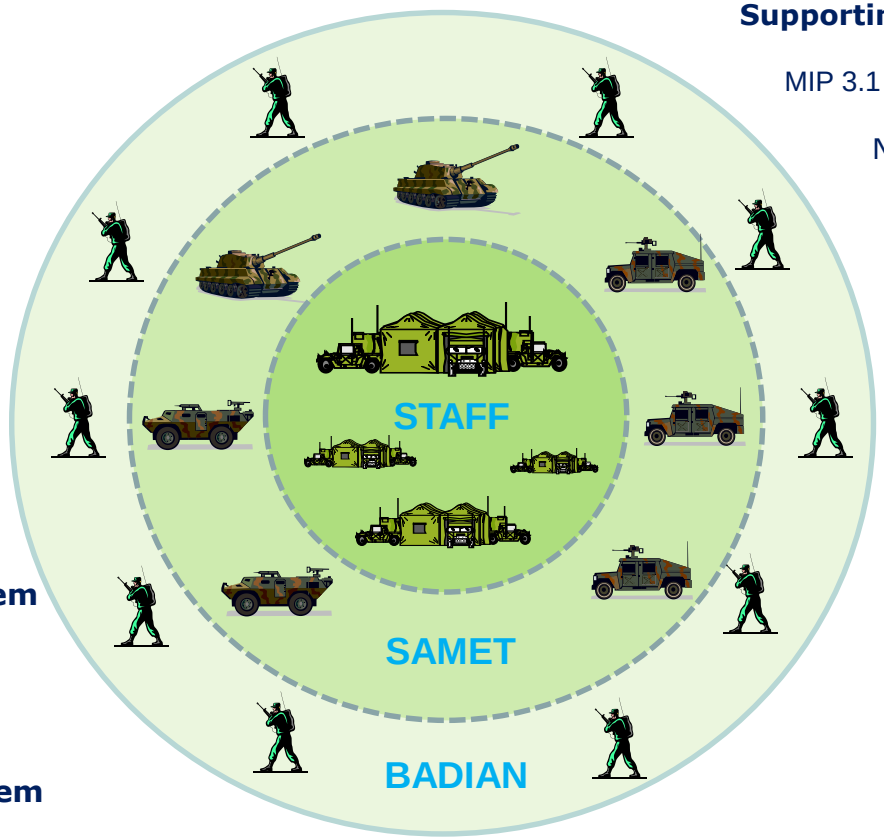
FMN – Federated Mission Networking

C4ISTAR – Command, Control, Communication, Computers, Intelligence, Surveillance, Reconnaissance

**STAFF C2 System**

**SAMET**
**Battle Management System**

**BADIAN**
**Dismounted Soldier System**




One system, seamless solution.

# ICZ/DELINFO

## - the strong partner of Czech Army in NATO

**LIVEX** - LIVE EXERCISE = including troops

ALLIED SPIRIT 2015
STEADFAST COBALT 2015, 2017, 2017
SLOVAK SHIELD 2016
STRONG SWORD 2015, 2016
VITAL SWORD 2017
COMMON TENNACITY 2018
YELLOW CROSS 2017, 2018 (CBRN EXE)
SCREENER 2018 (ISR Units EXE)
CZECH LION 2019

**CAX** = Computer Assisted Exercise

CWIX 2013-2020 (Coalition Warrior Interoperability Exercise)
CIAV 2016-2019 (Coalition Interoperability Asistence and Validation

Certificate

in Interop

**Date:**
02-13 December 2013

**C2IS systems:**
Canada - Land Command S
Czech Republic - GFTCCIS
Germany - Army CCIS (FIS
Great Britain - SitaWare He
Netherlands - ISIS 4.5 SR0
Poland - SWD C3IS Jasmin
USA - CPOF v10.0.4/DDS 1

**Location:**
WTD 81
Kalvarienberg, 91171 Gre
Germany

**MIP Tests:**
MIP System Level Test 3 Ba

**MIP Team:**
Koen Vancraeynest
*Test Controller*
Peter Angel
*Deputy Test Controller*
Peter Harmsen
*Data Manager/Test Case Manager*

Certificate of Successful P

in Interoperability

**Date:**
13-23 April 2015

**Participating C2IS Systems:**
Canada - Land Command Support System (
Czech Republic - DELINFOS_CZE (GFTCCIS v
Norway - NORCCIS v.7.4.4
Netherlands - ELIAS
Poland - SWD C3IS Jasmine
Turkey – TACCIS (Altay DEM v.4)
USA - CPOF v13.0.4/DDS 1.7.1P2

**Location:**
WTD 81
Kalvarienberg, 91171 Greding
Germany

**MIP Tests:**
MIP System Level Test 3 Baseline 3.1

**Nedim Birol Yürüten**
**IPT-3 Chairman**

Greding, 11th SEPTEMBER 2018

*Certificate of Successful Participation in Interoperability Tests*

**Date:**
10-21 September 2018

**Participating C2IS Systems:**
CAN - Land Command Support System (LCSS) v2.7.1.4 - Battleview
CZE - DELINFOS_CZE (DOLPHIN)
EU - EUCOM
NDL – ELIAS
NDL - SITAWARE
TUR – DOOB
USA – ACIS/CPOF
USA - SITAWARE

**Location:**
WTD 81
Kalvarienberg, 91171 Greding
Germany

**MIP Tests:**
MIP System Level Test 3 Baseline 3.1

**IPT-3 Chairman**

# JOINT DISMOUNTED SOLDIER SYSTEM

## BADIAN

BATTLE DIGITAL ASSISTANT as the tool of Dismounted Soldier System.

EFFECTIVE DATA PREPARATION, PROCESSING, SHARING AND DISTRIBUTION WITHIN THE TACTICAL UNITS AND DISMOUNTED SOLDIER.

The subsystem of ICZ DELINFOS® is focused on simple and user friendly aplication for dismounted soldier.

It covers basic tactical activies of dismounted soldier as well as simple interface to other sensors and devices operated during mission.

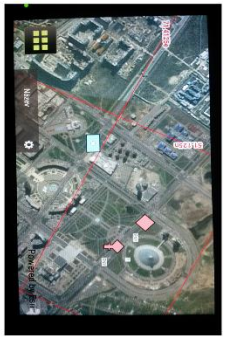
### OPERATIONAL DESCRIPTION

BADIAN is part of Situational Awareness System and Battle Management System. The core services are based on Joint Dismounted Soldier System Data Model (JDSS DM), which allows to exchange data seamlessly between lover and higher level without loosing time and valuable information.

### OPERATIONAL CAPABILIIES

BADIAN is interoperable within ICZ DELINFOS®. Due to implementation of JDSS DM fully supports platforms and individual soldiers.

BADIAN provides basic information of the battlefield, in terms of friend and enemy unit position, tactical overlays, communication means, integration of wearable sensors.



### FEATURES

- HW platform: Smartphone/tablet
- OS Android
- Satellite/Radio Communication according to customer needs
- Map Orientation
- ISR integration platform
- Blue Force Tracking
- Signals, Messages, Chat
- Tactical Situation, Targets, Fire range
- Remote Control Unit
- Support STANAG 4677 – JDSS DM
- Wearable Sensor integration
- Connectivity to the vehicle

### BENEFITS – OPTICAL/RADIO VISIBILITY

BADIAN can display not only position but also optical and radio visibility for better mission planning; e.g. the best location for observation post or communication node.

### BENEFITS – FIRE RANGE

To find the fire position is now much easier than before. Due to this application fire range of the weapons can be displayed and also, if known, fire range of enemy.

### BENEFITS – TACTICAL LAYERS

In BADIAN it is easy to draw tactical symbols and share it with other soldiers.

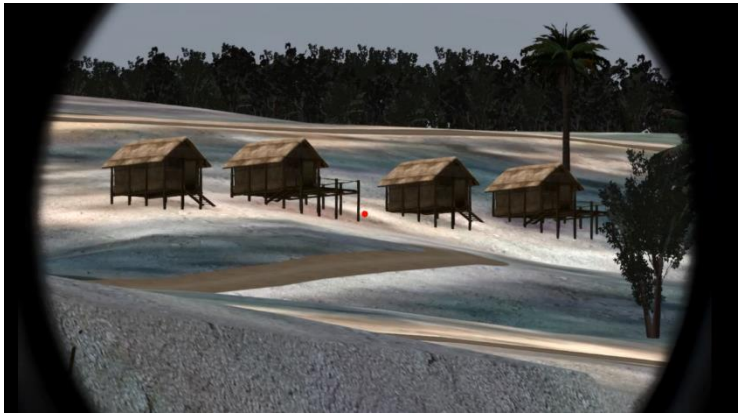
Also tactical layers from superior including the mission can be received. This layers can be changed and distributed to the subordinates.

### BENEFITS – REMOTE CONTROL UNIT

RCU is represented by SmartWatch.

It provides basic functionality of BADIAN to be displayed at the SmartWatch and it allows to control BADIAN as well.

# BADIAN + SAMET + DOLPHIN = C4ISTAR



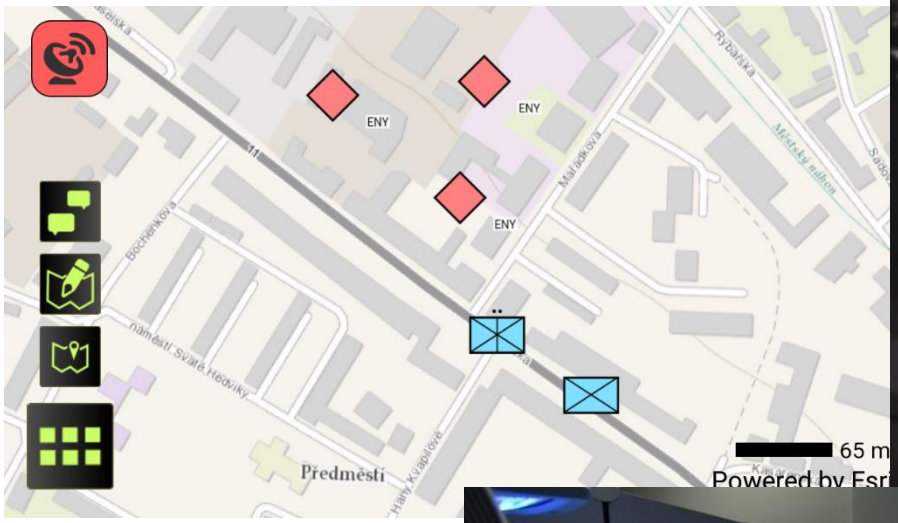

224°
33U XQ 16485 47911
160m
2153 °
147.4 m
DEFINE TARGET


ENY
ENY
168 m
Powered by Esri

# Battle Mannagement System

## - SAMET


# C4ISTAR - DOLPHIN





# BATTLE MANAGEMENT SYSTEM

## SAMET

Situational Awareness And Message Terminal as the tool of Battle Management System.

EFFECTIVE DATA PREPARATION, PROCESSING, SHARING AND DISTRIBUTION WITHIN THE TACTICAL UNITS AND PLATFORMS.

The subsystem of ICZ DELINFOS® focused on maximal automation of the Situational Awareness

generation, simplified operation, which allows information exchange on tactical level.

### OPERATIONAL DESCRIPTION

SAMET as a part of Battle Management System is the basic tool for exchange of information among platforms and superior unit. The core capability of SAMET is force tracking information, predefined messages and signals.

### OPERATIONAL CAPABILIIES

SAMET is fully interoperable within ICZ DELINFOS®. Due to implementation of Joint Dismounted Soldier System Data Model (JDSS DM) fully supports platforms and individual soldiers.

Another feature is integration of Artillery, Reconnaissance, Medical or CBRN sensors as a part of ISR processes.
VETRONICS can be also implemented to display vehicle, weapon or sensor diagnostic information.This solution has been realised in battle platforms of the Czech Army units.


### FEATURES

- HW platform – tablet/laptop
- OS Windows, LINUX optional
- text and position messages exchange
- C4ISTAR integration platform
- VETRONICS integration
- Augmented Reality
- Satellite/Radio Communication according to customer needs
- Blue Force Tracking
- Signals, Messages, Chat
- Tactical overlay exchange
- Targets Aquisition
- Sensor integration

### BENEFITS - AUGMENTED REALITY

SAMET is able to combine real view with tactical layer. This kind of Augmented Reality significantly helps to keep Situational Awareness on battlefield.

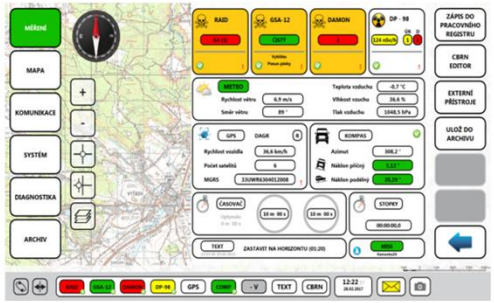
### BENEFITS - VETRONICS

SAMET is able to display information from Command and Control system, Vehicle Information System as well as information from Weapon Station or Sensor.

### BENEFITS – SENSOR INTEGRATION

SAMET integrates wide range of sensors, starting from Artillery, through reconnaissance up to CBRN sensors.

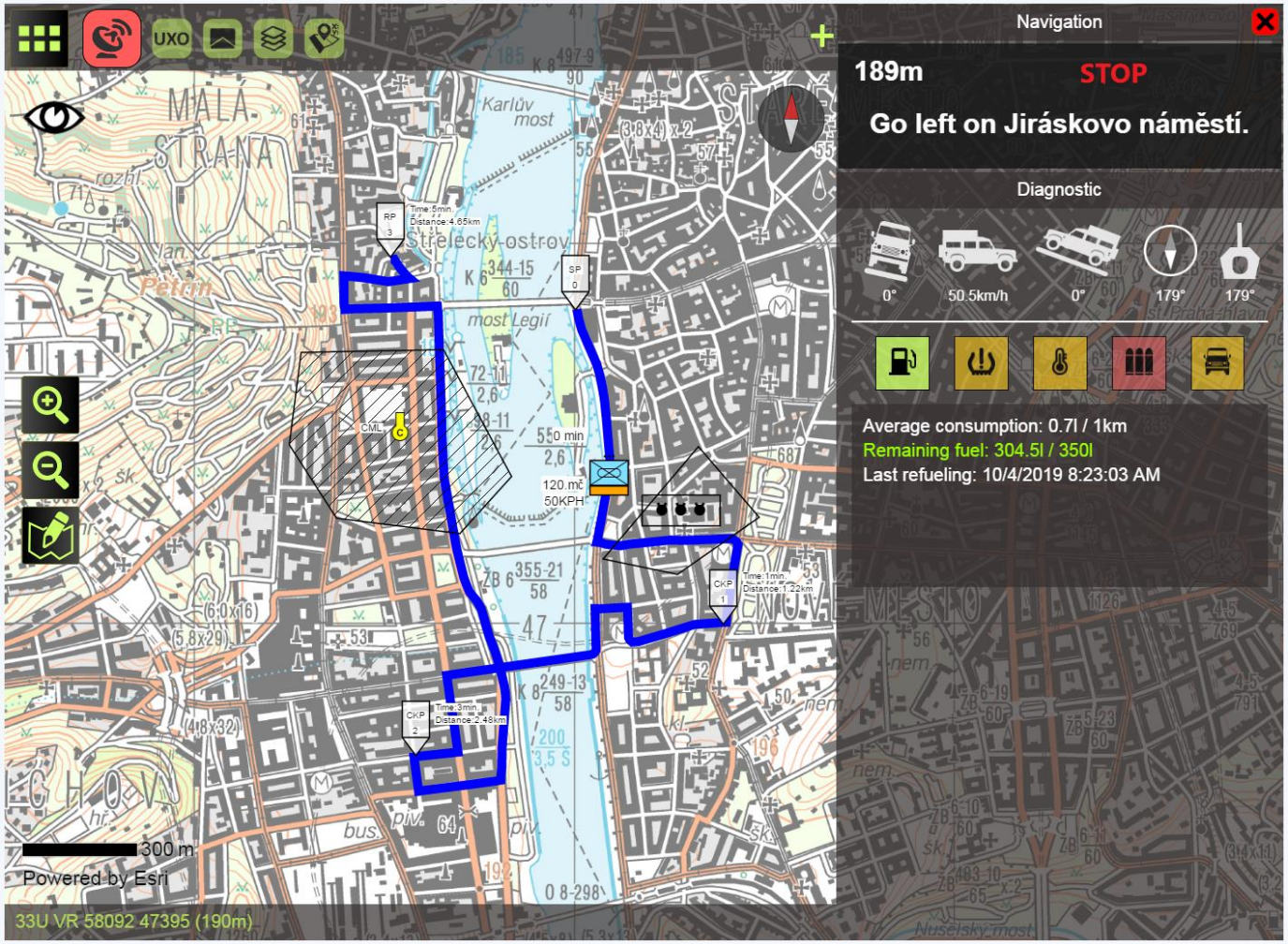
SAMET is able to integrate sensors from different manufactures as it was realised in the Czech Army platforms.

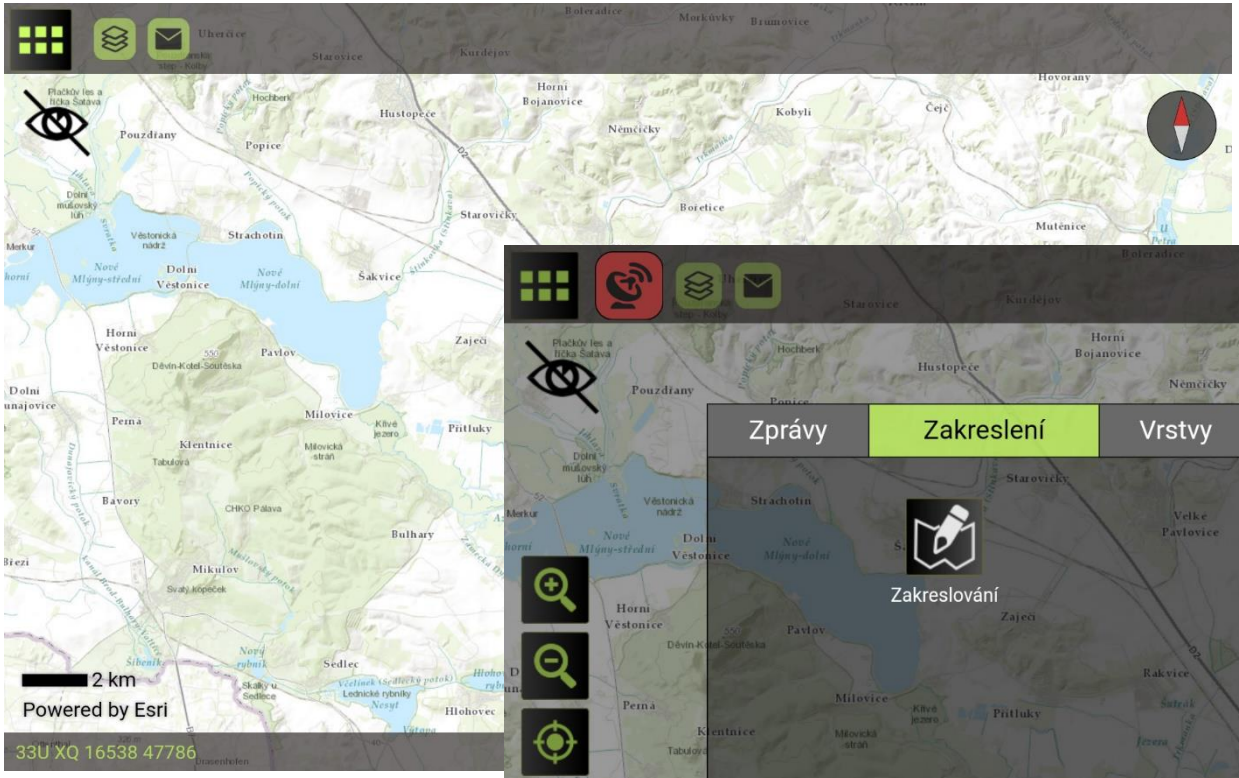


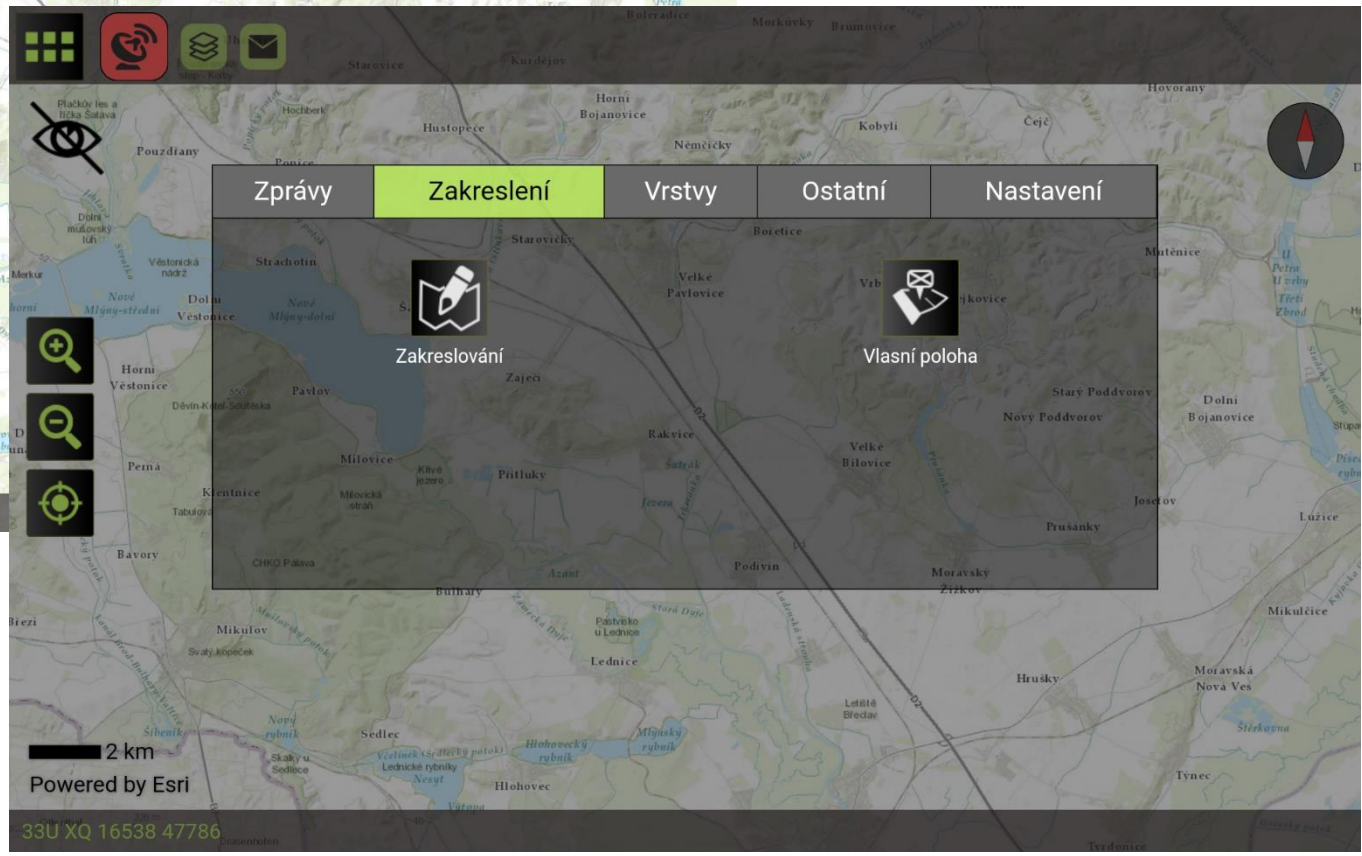
# Diagnostic:

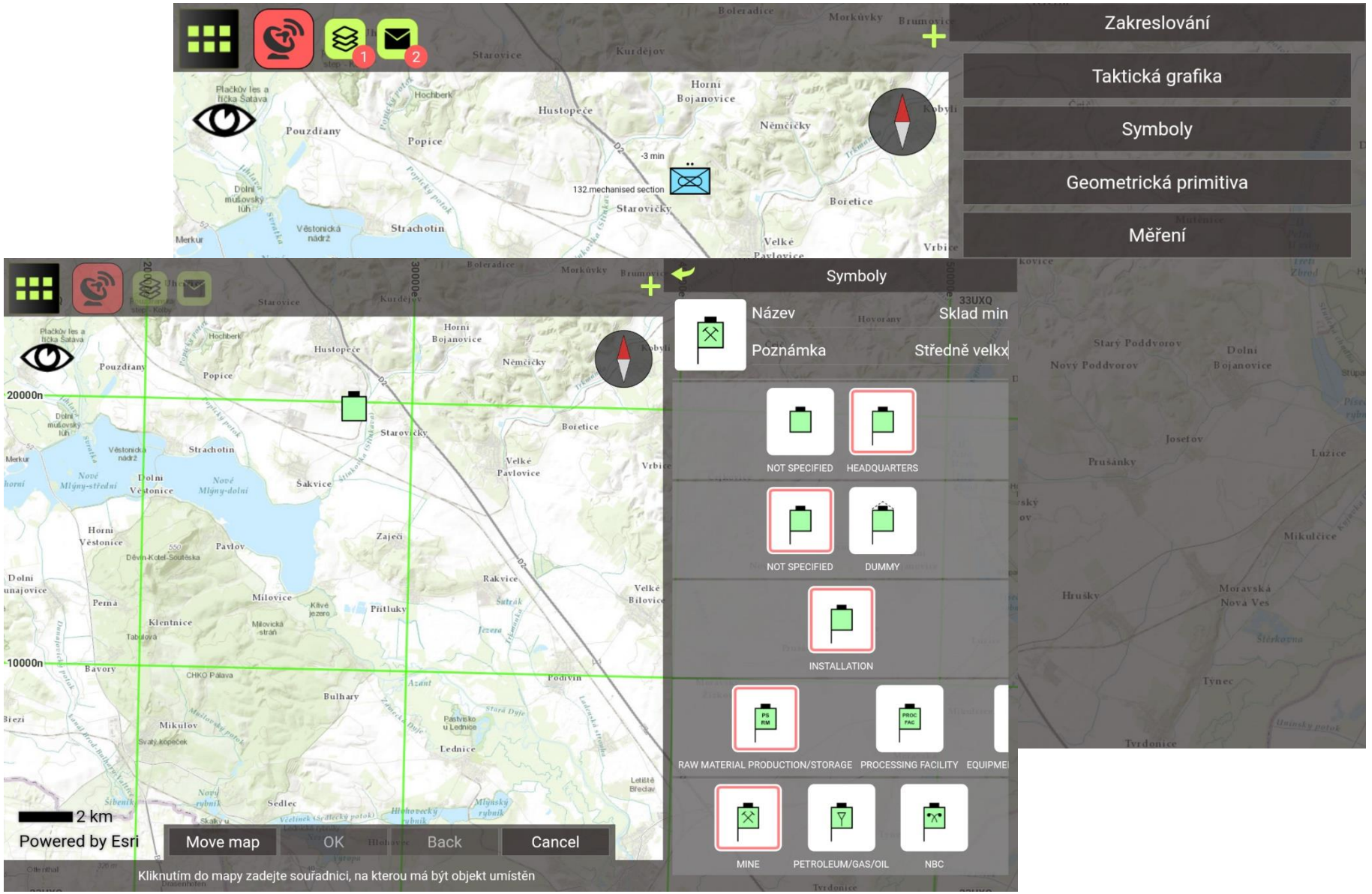

BMS
33UXQ2052173264
416m
36km/h
-4,48°
19,74°
304°
SENSORS
MAP
METEO
DIAGNOSTICS
DIAGNOSTICS
front lights : OK
side lights : OK
sensors : OK
battery : 27V OK
range roads (km) : 83
range terrain (km) : 41
average consumption (l) : 23,1
last refueling : 23/03/2018 15:21
remaining fuel (l) : 18
remaining fuel (hrs) : 0,25
N
W
E
S
+
-

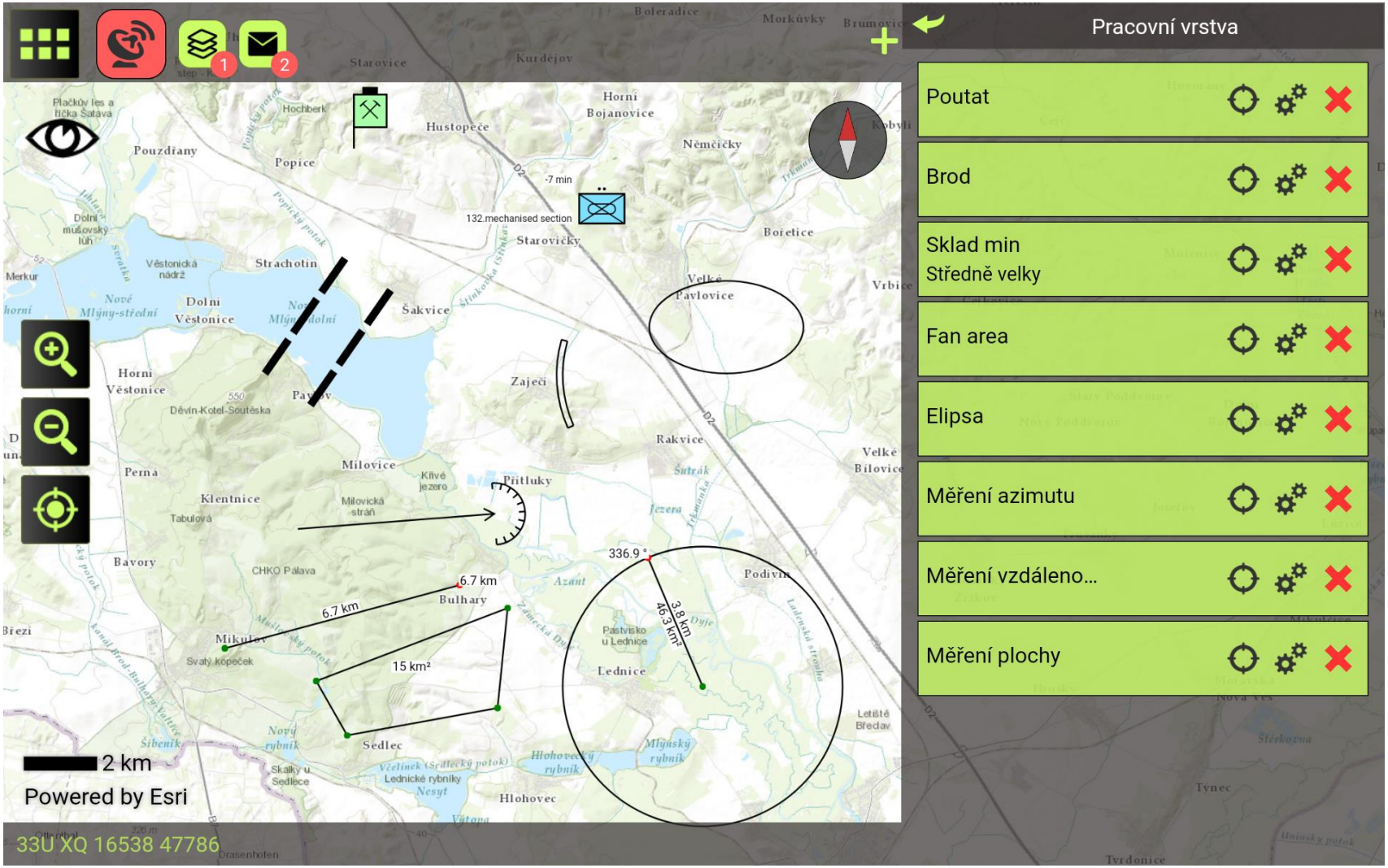
# Diagnostic + Navigation:




2 km
Powered by Esri
33U XQ 16538 47786


Zprávy
Zakreslení
Vrstvy
Ostatní
Nastavení
Zakreslování
Vlasní poloha
2 km
Powered by Esri
33U XQ 16538 47786

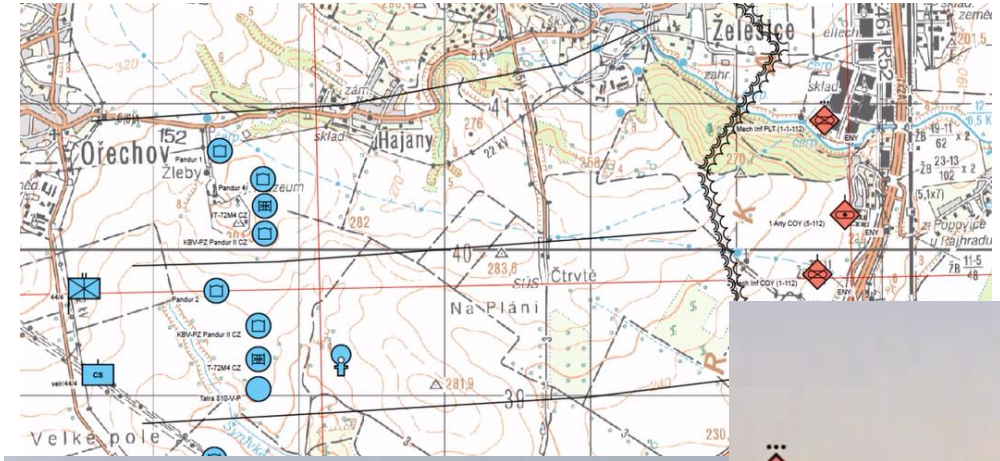

Zakreslování
Taktická grafika
Symboly
Geometrická primitiva
Měření
Symboly
Název
Sklad min
Poznámka
Středně velkx
NOT SPECIFIED
HEADQUARTERS
NOT SPECIFIED
DUMMY
INSTALLATION
RAW MATERIAL PRODUCTION/STORAGE
PROCESSING FACILITY
MINE
PETROLEUM/GAS/OIL
NBC
-3 min
132.mechanised section
2 km
Powered by Esri
Move map
OK
Back
Cancel
Kliknutím do mapy zadejte souřadnici, na kterou má být objekt umístěn

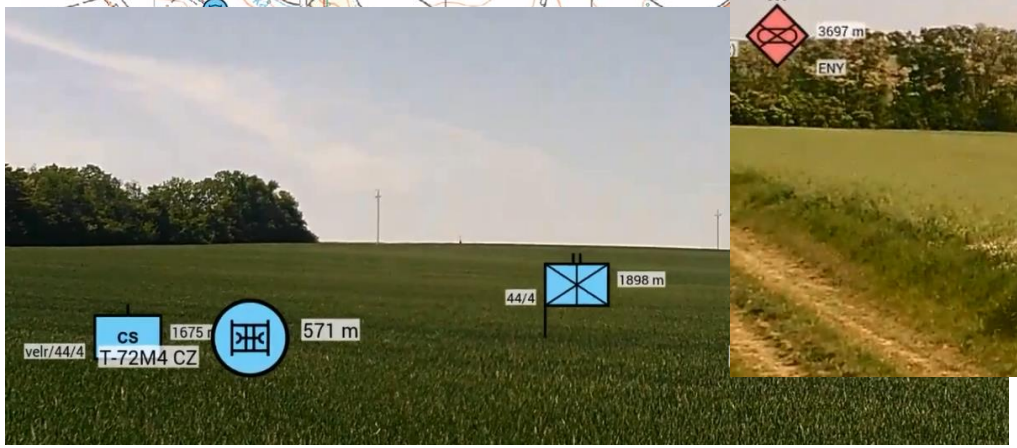

Pracovní vrstva
Poutat
Brod
Sklad min
Středně velky
Fan area
Elipsa
Měření azimutu
Měření vzdáleno...
Měření plochy
132.mechanised section
-7 min
336.9 °
6.7 km
6.7 km
15 km²
3.8 km
46.3 km²
2 km
Powered by Esri
33U XQ 16538 47786

# Diagnostic + Navigation – Real Instalation:

# Diagnostic + Navigation – Real Instalation:

# Augmented Reality in Real use :




# NGVA/MILVA

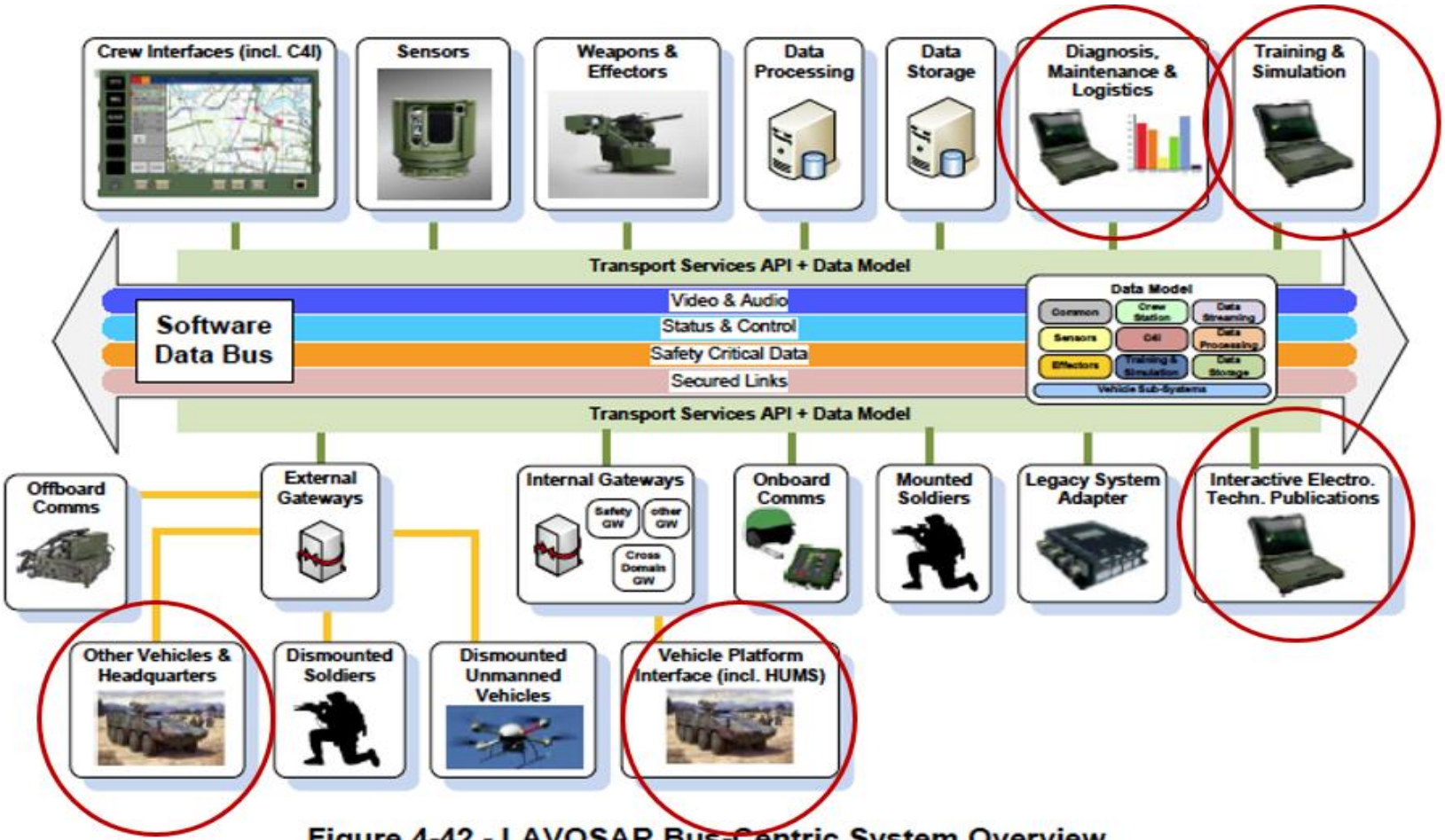



Figure 4-42 - LAVOSAR Bus-Centric System Overview

# SENSOR INTEGRATION to JDSS and BMS

## D-NVGS

Application DELINFOS Night Vision Goggles Sensors as a part of
Dismounted Soldier System

EFFECTIVE DATA PREPARATION, PROCESSING, SHARING AND DISTRIBUTION WITHIN THE TACTICAL UNITS AND PLATFORMS.

The integration of sensors and devices to Dismounted Soldier System is necessary requirement for nowadays soldiers. DELINFO works together with worldwide companies on this integration.

### OPERATIONAL DESCRIPTION

The application D-NVGS was developed in cooperation with STEINER Defence and tailored to its product AN/PVS-21 Low Profile NVG.
This application is dedicated for BADIAN as the part of ICZ DELINFOS®.

### FEATURES

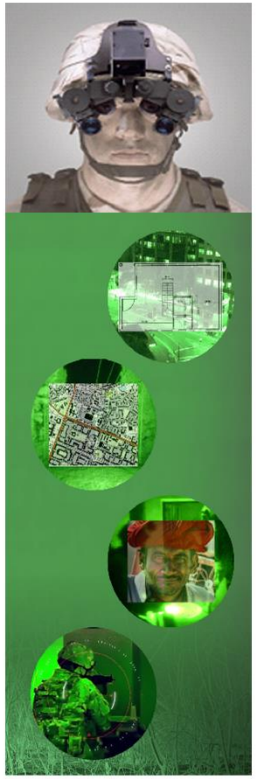
- Smartphone/ Android OS,
- Exchange of text and position messages
- C4ISTAR integration
- Send pre-defined signals and receive/send an tactical overlay
- Radio Communication
- Map Orientation
- Blue Force Tracking

### OPERATIONAL CAPABILITIES

The AN/PVS-21 Low Profile Night Vision Goggle has been designed for aggressive special operations capability in air, water, and land environments. D-NVGS, as a part of BADIAN extends capability of AN/PVS-21 to device, which can support soldier in the battlefield with information as tactical layer, floor layout, photos, live view etc. The type of information can be chosen by Remote control Unit - Smart Watch.

### BENEFITS – REMOTE CONTROL UNIT

RCU is represented by SmartWatch.
It provides basic functionality of BADIAN to be displayed at the SmartWatch and it allows to control NVG and BADIAN as well.



## D-ACUS

Application DELINFOS Acoustic Sensors – D - ACUS as a part of
Battle Management System

EFFECTIVE DATA PREPARATION, PROCESSING, SHARING AND DISTRIBUTION WITHIN THE TACTICAL UNITS AND PLATFORMS.

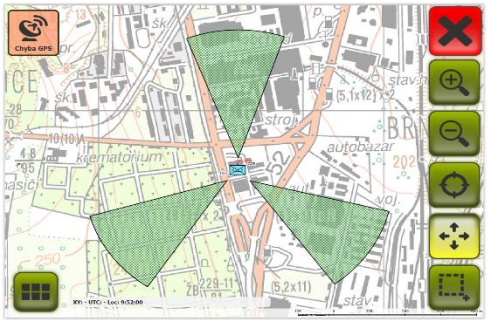
The integration of sensors and devices to Dismounted Soldier System is necessary requirements for nowadays soldiers. DELINFO spol. s r.o. work together with worldwide companies in this integration.

### OPERATIONAL DESCRIPTION

The application D-A
CUS was developed in cooperation with METRAVIB-ACOEM Group. These products are widely used for force protection of own forces. They use sophisticated solution on indication of enemy fire including its identification.D-ACUS integrates outcomes taken from METRAVIB application to ICZ DELINFOS® represented by its application – SAMET or BADIAN.

### OPERATIONAL CAPABILITIES

Taking a graphical visualisation from PILAR system to SAMET or BADIAN helps crew in platforms or vehicles to quickly react to enemy fire.
This graphical visualisation can be exported as tactical layer to the command post or headquarter to be shared in Common Operational Picture or can be used as one of C4ISTAR sources.




### FEATURES

- Smartphone/ Android OS
- Exchange of text and position messages
- C4ISTAR integration
- Send pre-defined signals and receive/send an tactical overlay
- Radio Communication
- Map Orientation
- Blue Force Tracking

# SENSOR INTEGRATION to JDSS and BMS

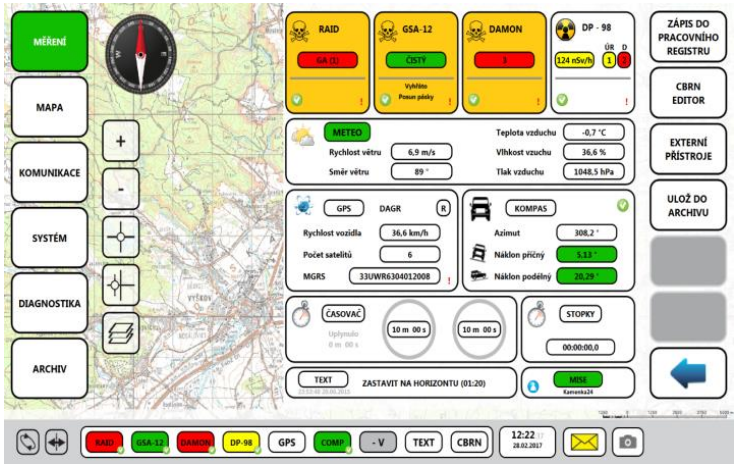
## CBRN reconnaissance vehicle

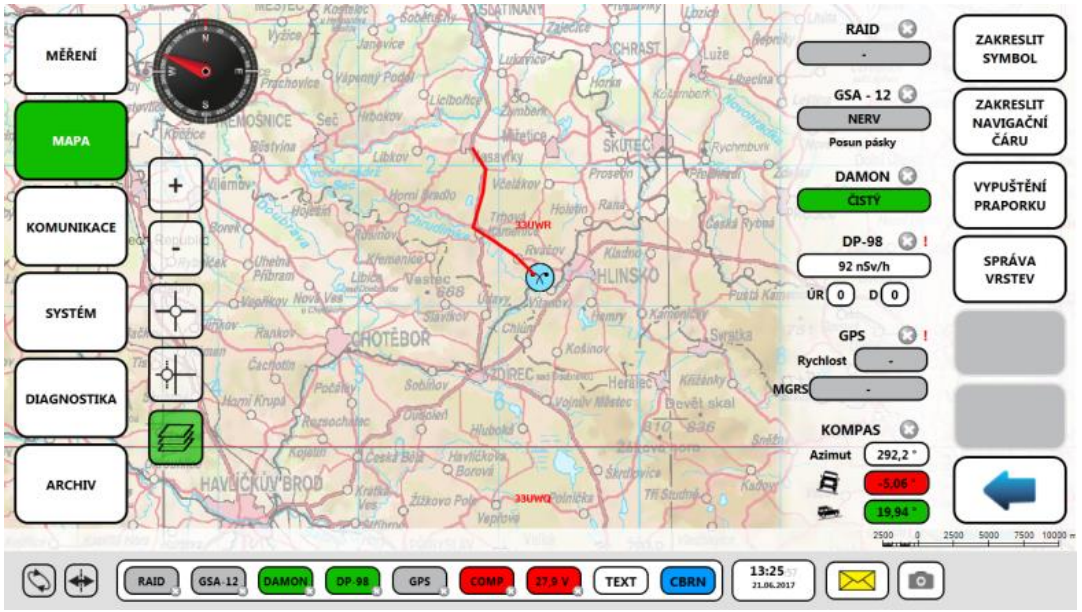
Chemical, biological, radiological and nuclear (CBRN) reconnaissance is very important task of CBRN unit of the Czech Army. CBRN reconnaissance system can quickly determine the presence of nuclear, biological and chemical contamination on the ground and in the air via its sensors.

The integration of sensors to this vehicle has been done by **DELINFO, a member of ICZ group** In cooperation with VVU. Our task was not only sensor integration but also integration of CBRN reconnaissance results to the Command and Control System and also to C4ISTAR.

**[KEY ABILITIES]**

- The adaptability of sensors and applications
- The wide support of existing CBRN sensors
- The possibility to extend number of sensors
- It is part of Battle Management System
- The connectivity to C4ISTAR
- CBRN messages are automatically generated



# SENSOR INTEGRATION to JDSS and BMS

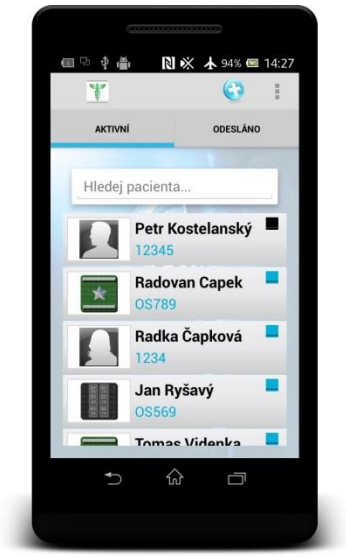
## Patient Transfer (PATRA) – medical support

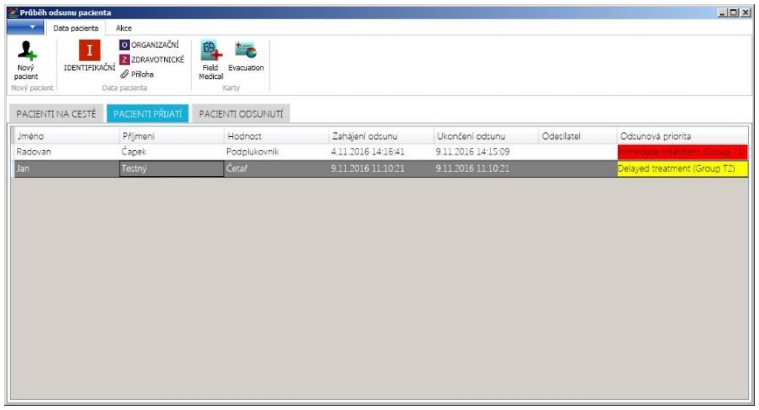
The collection of personal medical data, their evaluation and storage, the monitoring of life functions is the core of medical support in the field. **DELINFO, a member of ICZ group** In cooperation with URC Systems.has participated in a team activity that created the application PATRA, which executes such a task.

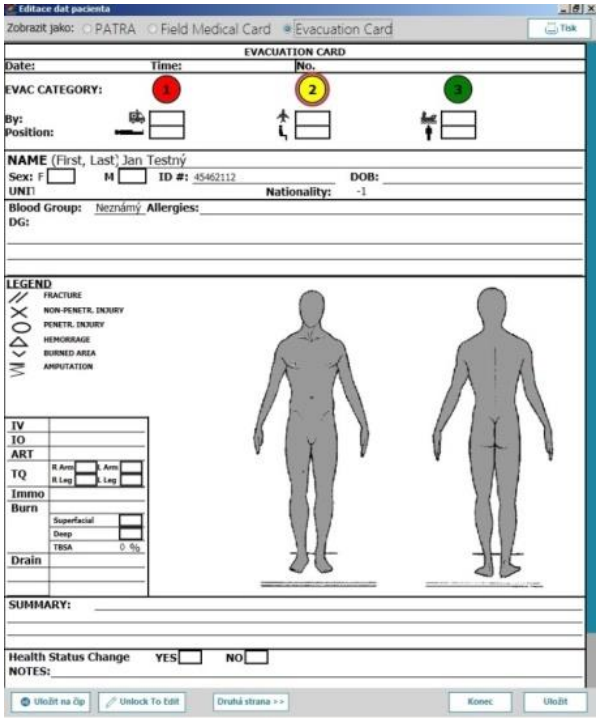
The application PATRA works in OS Android and communicates with desktop application in Windows.

**[KEY ABILITIES]**

- The electronic personal medical information badge (NFC Chip)
- The real-time monitoring of a soldier medical information (heart rate, temperature, blood pressure, blood saturation level)
- The collection of medical data and their evaluation via Android application in the field
- Data transfer to the Command and Command System - Field Hospital
- The support of NATO Field Medical Card



# STAFF C4ISTAR System

## DOLPHIN

### Decision Making Support at the Staff level

EFFECTIVE DATA PREPARATION, PROCESSING, SHARING AND DISTRIBUTION WITHIN THE COMMAND POSTS OR AMONG THEM

The subsystem of ICZ DELINFOS® dedicated to support command and control on the workstations within the LAN on the command posts of the Ground Force units.

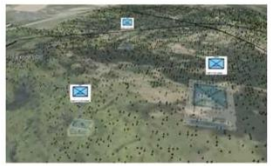
### OPERATIONAL DESCRIPTION

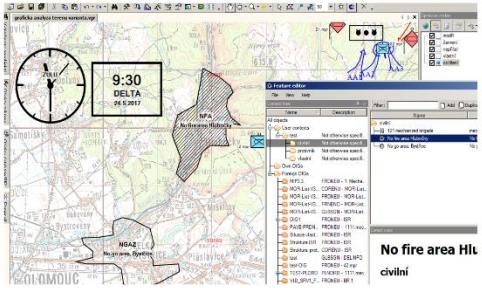
DOLPHIN is a Tool for Decision Making Support which helps all branches in Land Forces to plan, control and command mission. DOLPHIN is developed according to Military Decision Making Process (MDMP).

### OPERATIONAL CAPABILITIES

DOLPHIN is the system which is fully interoperable in both directions – vertical and horizontal – in chain of Data are shared in one interoperable database, which is based on JC3IEDM (STANAG 5525). This database can be extented according to national specification as well.

It can be also characterized as the system, which helps staff to keep overview of running missions through particular recognised pictures and also to continue in planning future missions.



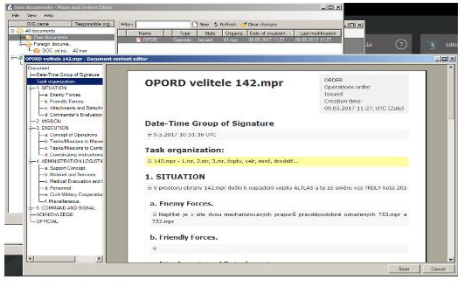



### FEATURES

- Tools for Decision Making Support
- Artillery, CBRN, Inteligence, Engeneering, CIS, Medical and other applications
- Information Exchange/Sharing
- C4ISTAR capability support
- MDMP
- Interoperability Solutions via MIP 3.1, NVG, NFFI, ADEM, JREAP, ADatP-3
- Alert management
- Chat, Messaging
- Situational Awareness
- Fielded and tested within the Czech and Slovak Army

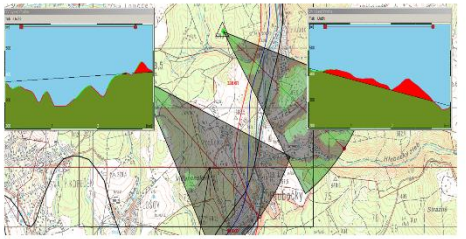
### BENEFITS - PLANS AND ORDERS

DOLPHIN uses predefined Operational Information Group (OIG) for battlefield information exchange. For example the distribution of Plans and Orders facilitates staff work in national and in international environment as well.




### BENEFITS - APPLICATIONS

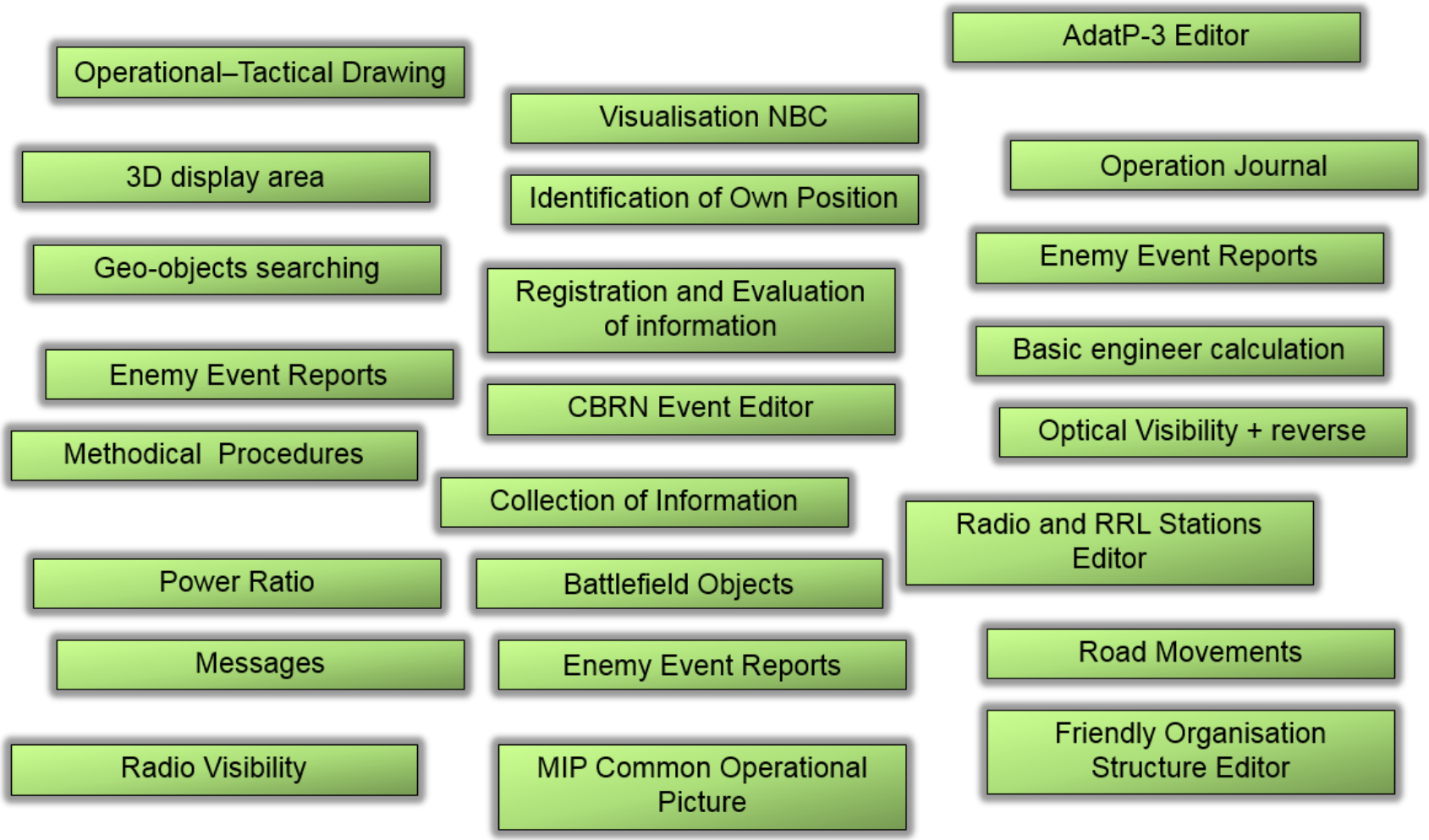
DOLPHIN consists of several applications, which help staff to plan operation as well as control it. Typical examples are NBC visualisation, Optical and Radio visibility, 3D--display arena, Power ratio calculation, Operation Journal, overview of Battlefield Objects etc.

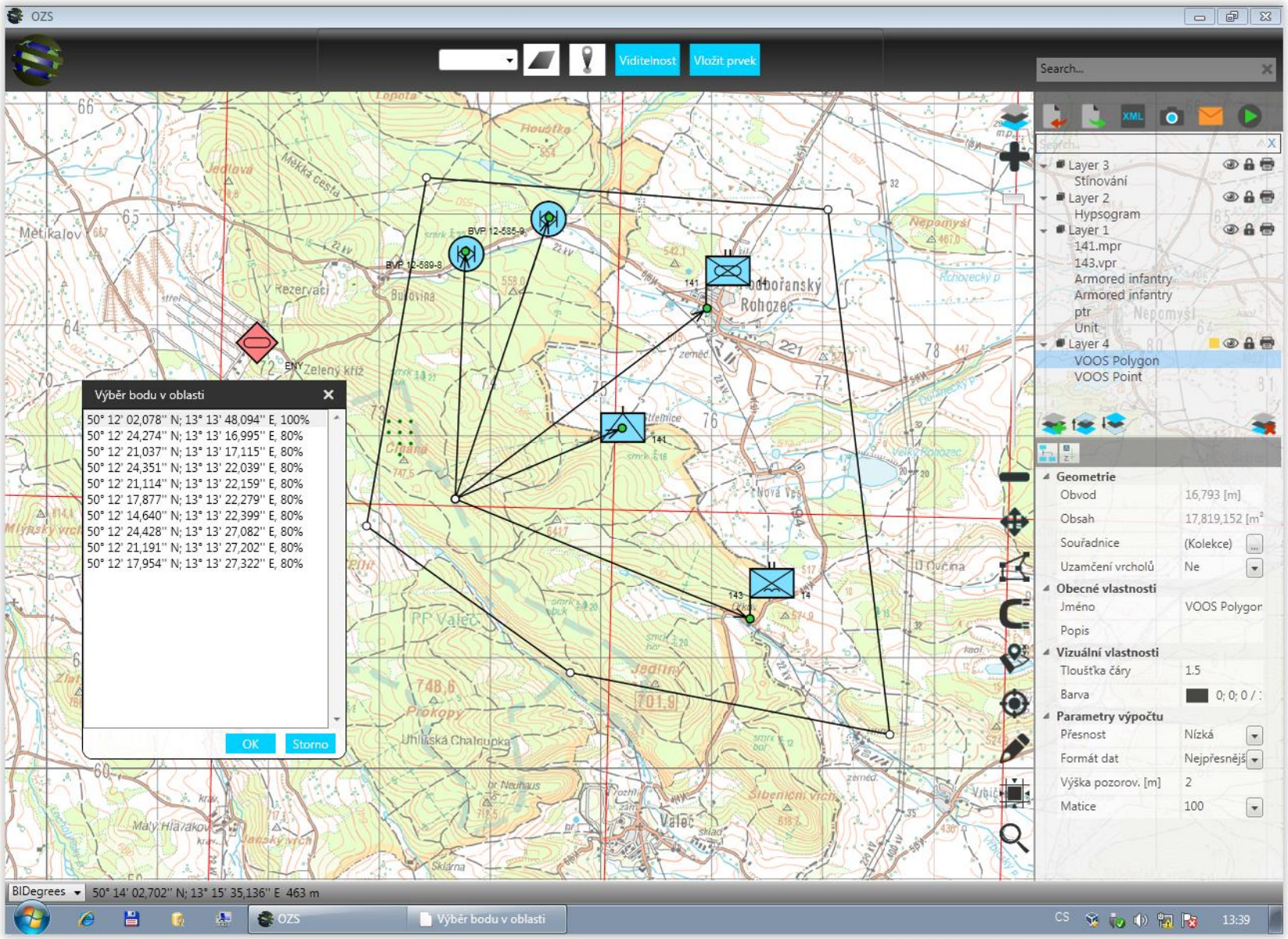


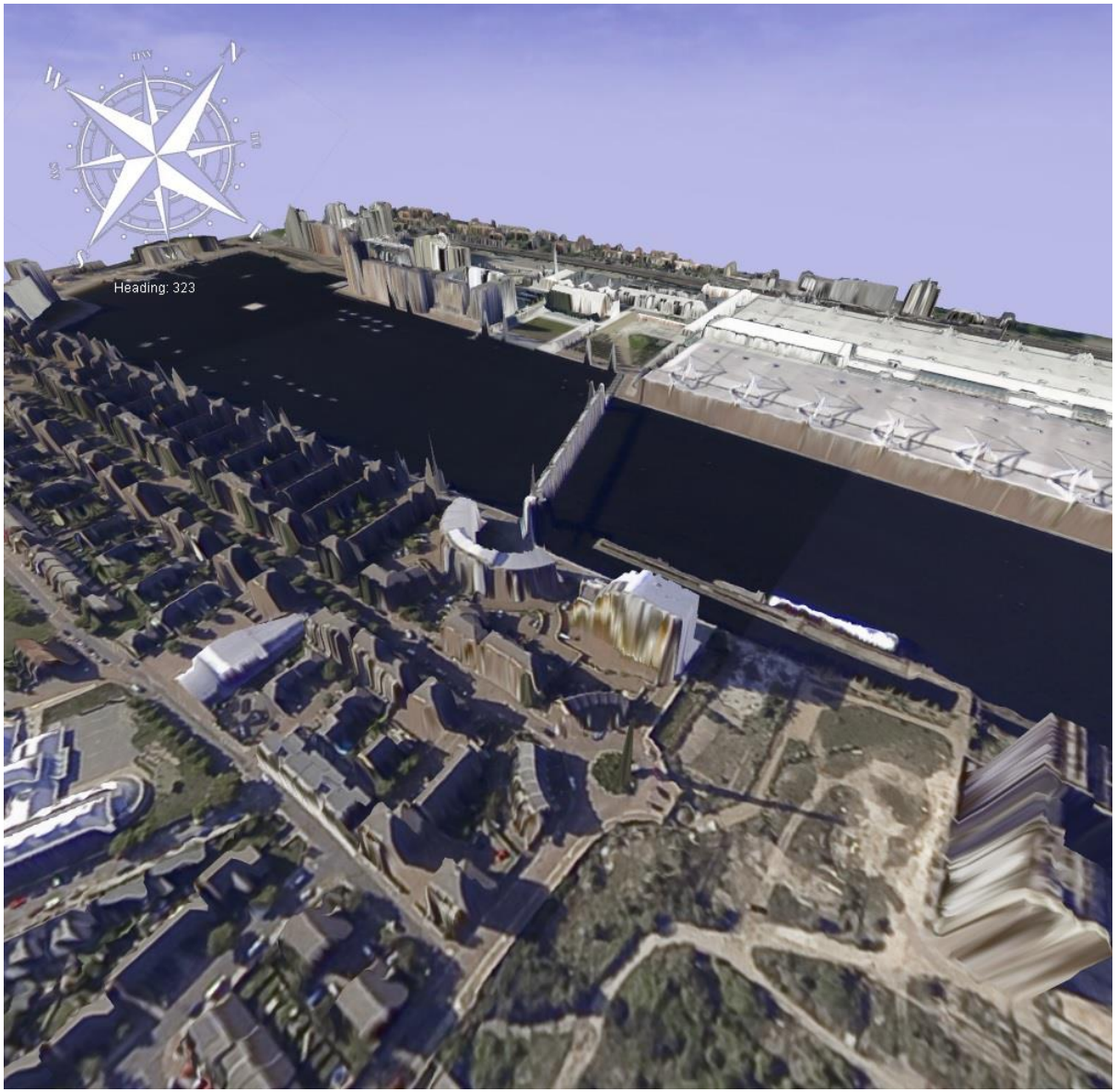
### BENEFITS – COMMON OPERATIONAL PICTURE (COP) CAPABILITY

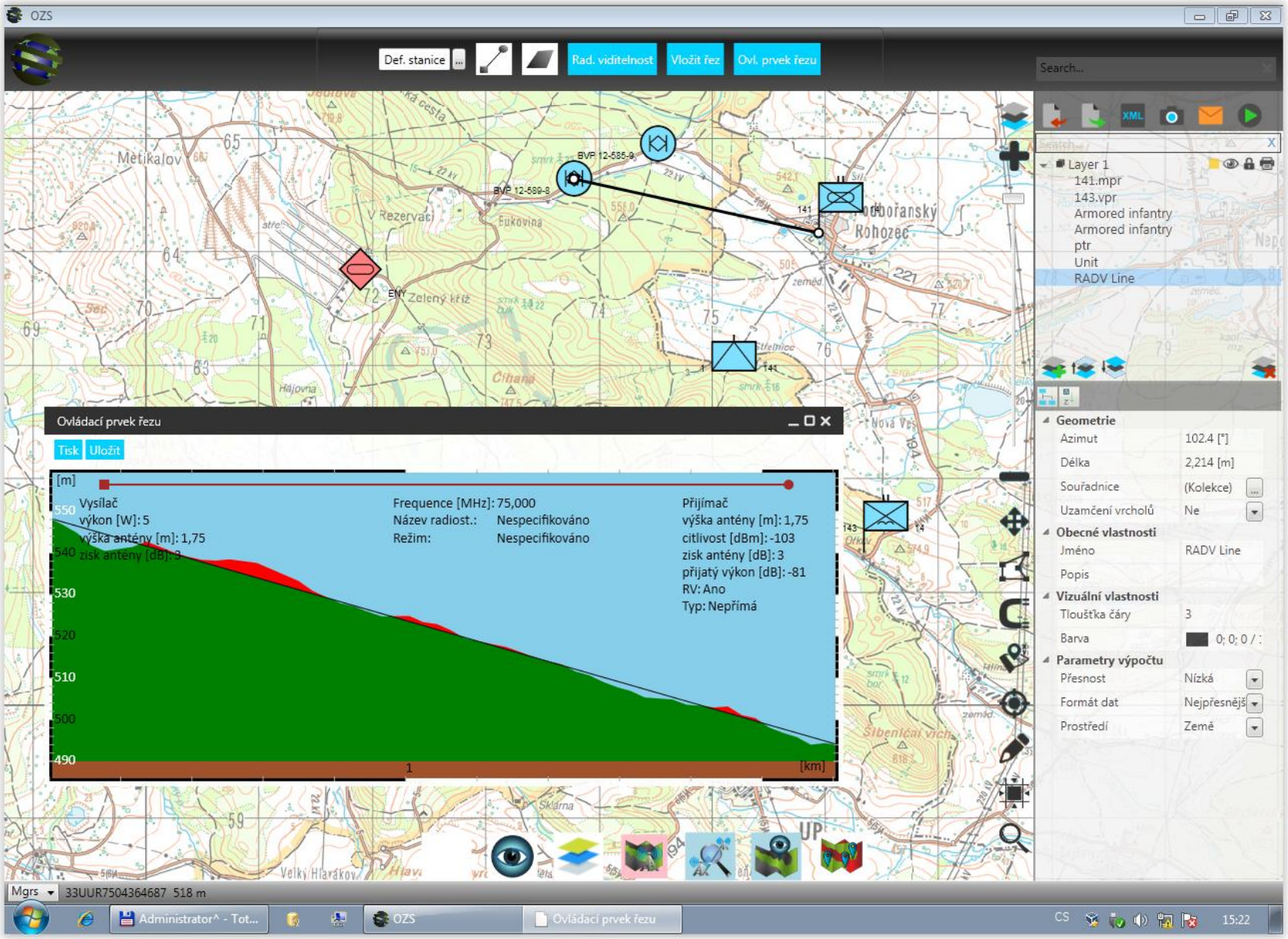
DOLPHIN integrates and creates the separated recognised pictures as:

Recognised Air Picture
Recognised Ground Picture
Recognised Inteligence Picture
Recognised Engineer Picture
Recognised Enviromental Picture


AdatP-3 Editor
Operational–Tactical Drawing
Visualisation NBC
Operation Journal
3D display area
Identification of Own Position
Enemy Event Reports
Geo-objects searching
Registration and Evaluation of information
Basic engineer calculation
Enemy Event Reports
CBRN Event Editor
Optical Visibility + reverse
Methodical Procedures
Collection of Information
Radio and RRL Stations Editor
Power Ratio
Battlefield Objects
Road Movements
Messages
Enemy Event Reports
Friendly Organisation Structure Editor
Radio Visibility
MIP Common Operational Picture
.....
.....
.....
.....


OZS
Viditelnost
Vložit prvek
Search...
Výběr bodu v oblasti
50° 12' 02,078'' N; 13° 13' 48,094'' E, 100%
50° 12' 24,274'' N; 13° 13' 16,995'' E, 80%
50° 12' 21,037'' N; 13° 13' 17,115'' E, 80%
50° 12' 24,351'' N; 13° 13' 22,039'' E, 80%
50° 12' 21,114'' N; 13° 13' 22,159'' E, 80%
50° 12' 17,877'' N; 13° 13' 22,279'' E, 80%
50° 12' 14,640'' N; 13° 13' 22,399'' E, 80%
50° 12' 24,428'' N; 13° 13' 27,082'' E, 80%
50° 12' 21,191'' N; 13° 13' 27,202'' E, 80%
50° 12' 17,954'' N; 13° 13' 27,322'' E, 80%
OK
Storno
Layer 3
Stínování
Layer 2
Hypsogram
Layer 1
141.mpr
143.vpr
Armored infantry
Armored infantry
ptr
Unit
Layer 4
VOOS Polygon
VOOS Point
Geometrie
Obvod 16,793 [m]
Obsah 17,819,152 [m²]
Souřadnice (Kolekce)
Uzamčení vrcholů Ne
Obecné vlastnosti
Jméno VOOS Polygon
Popis
Vizuální vlastnosti
Tloušťka čáry 1.5
Barva 0; 0; 0 / :
Parametry výpočtu
Přesnost Nízká
Formát dat Nejpřesnější
Výška pozorov. [m] 2
Matice 100
BVP 12-589-9
BVP 12-589-8
ENY Zelený kříž
Obořanský Rohozec
Velký Rohozec
Nová Ves
Jedlina
Prokopy
Uhlířská Chaloupka
Valeč
Mětikalov
BIDegrees
50° 14' 02,702'' N; 13° 15' 35,136'' E 463 m
OZS
Výběr bodu v oblasti
CS
13:39


Heading: 323


OZS
Def. stanice
Rad. viditelnost
Vložit řez
Ovl. prvek řezu
Search...
Layer 1
141.mpr
143.vpr
Armored infantry
Armored infantry ptr
Unit
RADV Line
Ovládací prvek řezu
Tisk
Uložit
[m]
Vysílač
výkon [W]: 5
výška antény [m]: 1,75
zisk antény [dB]: 3
Frequence [MHz]: 75,000
Název radiost.: Nespecifikováno
Režim: Nespecifikováno
Přijímač
výška antény [m]: 1,75
citlivost [dBm]: -103
zisk antény [dB]: 3
přijatý výkon [dB]: -81
RV: Ano
Typ: Nepřímá
550
540
530
520
510
500
490
1
[km]
Geometrie
Azimut 102.4 [°]
Délka 2,214 [m]
Souřadnice (Kolekce)
Uzamčení vrcholů Ne
Obecné vlastnosti
Jméno RADV Line
Popis
Vizuální vlastnosti
Tloušťka čáry 3
Barva 0; 0; 0 / :
Parametry výpočtu
Přesnost Nízká
Formát dat Nejpřesnějš
Prostředí Země
Mgrs
33UUR7504364687 518 m
Administrator^ - Tot...
OZS
Ovládací prvek řezu
CS
15:22


Menu
Lock Objects
LRS
Barrett
M82A1

# TRAINING of all Command and Control levels

## D-TELA

DELINFOS Tactical Electronic Layer as a part of
Staff System

EFFECTIVE DATA PREPARATION, PROCESSING, SHARING AND DISTRIBUTION WITHIN THE TACTICAL UNITS AND STAFFS.

D-TELA is basic tool for Commanders to explain their orders to subordinates. This device combines Command and Control System DELINFOS® and projector to create a „bird view" of the situation on the battlefield.

**OPERATIONAL CAPABILITIES**

The main advantage of this device is its adaptability to planning process. The parts of Military Decision Making Process (MDMP) can be easily displayed and clarify to other members of the staff.

**OPERATIONAL DESCRIPTION**

D-TELA consists of folding table, 3D projector, computer and DELINFOS® System. The information are coming from the system to the projector, there are displayed on table and with the application „DRAW" can be setup a new task to the unit.


**FEATURES**

- Windows OS,
- data flow between C2 system and display device
- .pdf, .bmp format

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639 00 Brno Štýřice
CZECH REPUBLIC

Phone: +420 222 272 111
Email: delinfo@delinfo.cz

www.iczgroup.com
www.delinfo.cz

## D-TACSIM

DELINFOS - Tactical Simulator as the part of
Staff System

EFFECTIVE DATA PREPARATION, PROCESSING, SHARING AND DISTRIBUTION WITHIN THE TACTICAL UNITS AND HEADQUATERS.

The system D-TACSIM combine Command and Control System DELINFOS® and Virtual Battle Space (VBS3) to one connected enviroment where tactical units can be trained.The part of this system was created within a development project, supported by MOD as contracting authority in the years 2013-2015 (Tactical training in small units).

**OPERATIONAL DESCRIPTION**

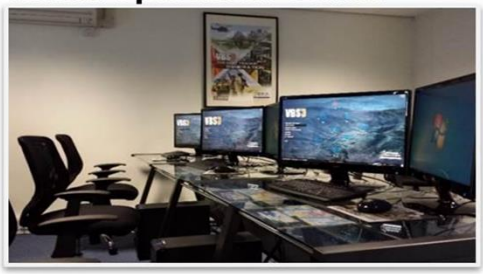
The combination of VBS3 and DELINFOS can be installed in classroom in barracs and better train soldiers and staff in high sophisticated envirment. DELINFO can setup all necessary equipment (PC, routers, cabeling) to smoothly run this system in customer side.

**OPERATIONAL CAPABILITIES**

The ability to prepare terrain for scenario in 3D as realistic as possible based on the available data of a particular terrain wherever in the world.

Application in use:
- TerraVista for simulator VBS, SAFs, OTB, JCATS
- VISITOR for VBS
- PRESAGIS

### Small operation center



**FEATURES**

- Own development within VBS3 (Virtual Battle Space) from Bohemia Interactive Simulations Company (BIS AUS)
- Skilled personnel
- Licenses to do our own development within VBS3 (scripting, fusion, terrain generation)
- Map Orientation
- Blue Force Tracking
- Signals, Messages, Chat
- Tactical Situation

# DELINFOS_CZ

## Tactical communications

- Different communication protocols are implemented in particular on the BMVIS/SAMET part (e.g. DICOM RF 13xx, 20xx; Harris AN/PRC 117, AN/PRC 152, 7800; Thales 148 MBITR/JEMM), GSM phone (LTE,4G), Sattelite phone – Irridum, Inmarsat, BGAN…


# The simulation scenarios for tactical training of the Czech Armed Forces

# The virtual simulation VBS3

- The project „Tactical training in small units“ (2013-2015)
- Own development within VBS3 (Virtual Battle Space) from Bohemia Interactive Simulations Company (BIS AUS)

Bohemia Interactive Simulations

Bohemia Interactive Simulations

# VBS3 in use

**3D googles**

**Classroom for more students**

**Small operation center**


**The unique vehicle**

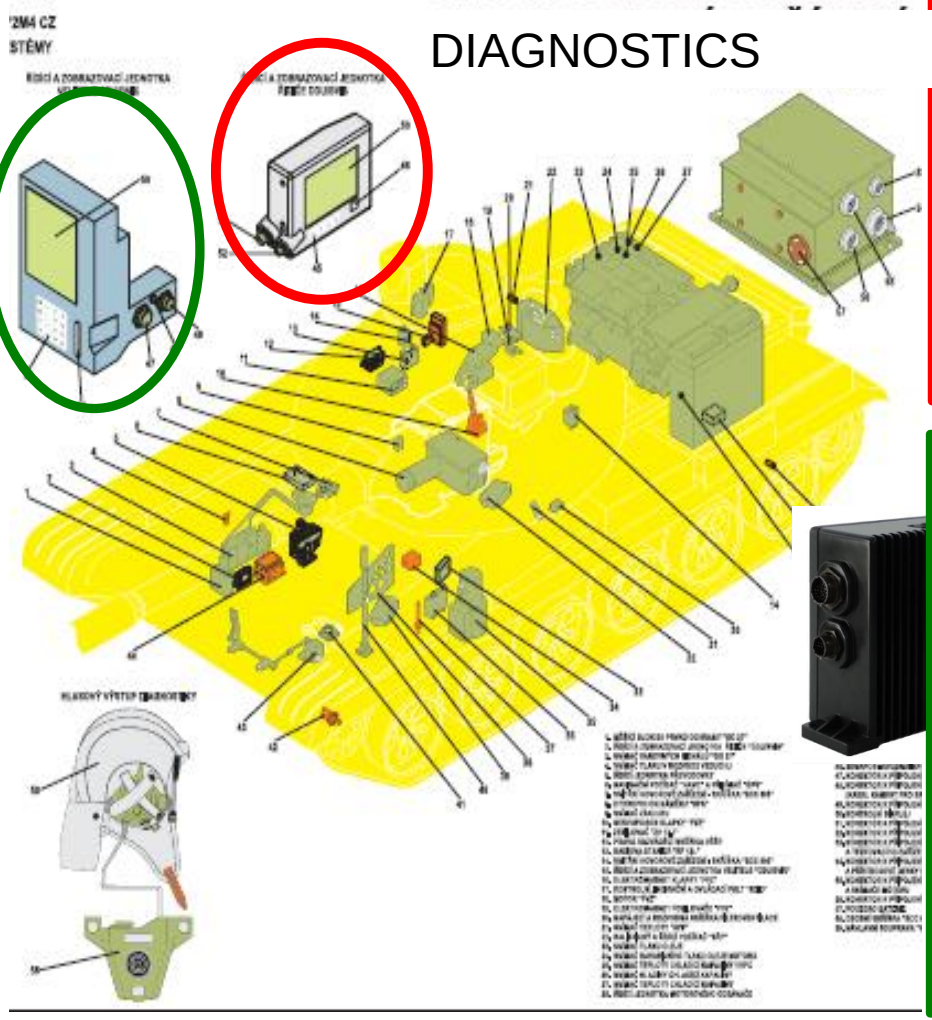
# DELINFO as C4ISTAR Integrator

# MESIT


Technological step forward
System solutions for the modernization the means of command and control of mechanized and tank units.
Replace outdated technology for the current and field-proven means.
— Easy to replace
The same demands on spatial location
(REMOVE – INSERT)
— Simple and intuitive controls
– SELECT – CONFIRM)


System solution Assembly TRINCIS
TRansceiver - INtercom - Combat Information System
TRINCIS
Transceiver
Intercom
Combat
Information
System
(Human Machine Interface)
mesit
MESIT

# VOP s.p.


DIAGNOSTICS


DIAGNOSTICS
SENSORS
MAP
METEO
DIAGNOSTICS


Oblíbené značky
Friendly
Enemy
Neutral
Unknown
Stmívací polohy
Zobrazení trasy
Zobrazit body trasy
Zobrazit směr pohybu
Průměrná rychlost
30 (km/h)
Přidat bod trasy

# Military Technical Institut

## Sensor Integration to BMS

# OPTOKON


OPTOKON HW FOR C2/C4 ISR
OPTOKON - your key supplier for C4 ISR command and control centers

# LMCP-28H Mobile computing platform

LMCP is mobile computing system that entangles the connection and management of additional digital audio, video and data signals
Modular system contains Server board and Managed L2 switch with PoE

**LMCP-28H-C:** Variant with cisco Embedded Services switch ESS 3300. The ESS 3300 runs Cisco's enterprise-grade IOS XE

- **Intel® Xeon®** processor D-1528
- 9 MB, 6-Core, 12 Threads 1.9 GHz
- System memory up to **128 GB DDR4** 2133 MHz

## Solid State Drives

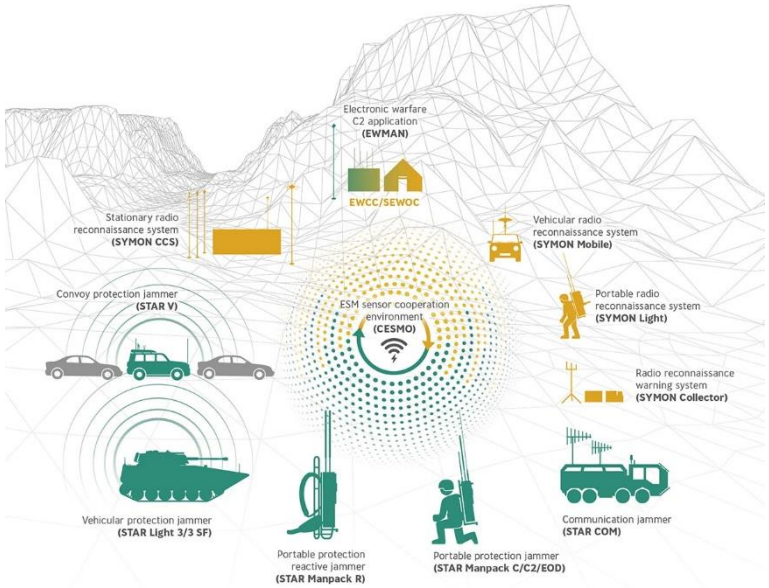
- 1x M.2 NVMe PCI-E 3.0 x4, up to 512 GB
- Dual removable 2.5” SATA SSD up to **2x 2 TB**
- RAID1**, erase able** – optional Secure Package

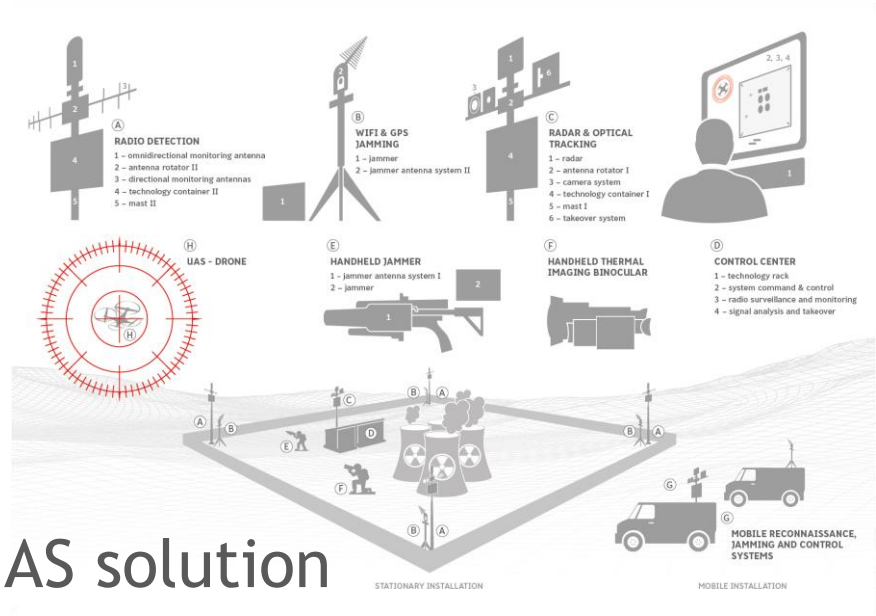
## Input / Output

- **5x routed 1 GbE**, Linux-based router solutions supports RIP v1, v2 and OSPF v2
- 8x USB 2.0 and 1x USB 3.0
- 8x serial RS232
- CAN bus, High-speed CAN transceiver
- Video VGA port

# URC Systems

## EWIS Electronic warfare integrated solution




## ANDROMEDA Counter UAS solution

BAE SYSTEMS

HÄGGLUNDS

GENERAL DYNAMICS
Land Systems

SAMI
الشركة السعودية للصناعات العسكرية
Saudi Arabian Military Industries

KONGSBERG

HARRIS

METRAVIB
Defence

THALES