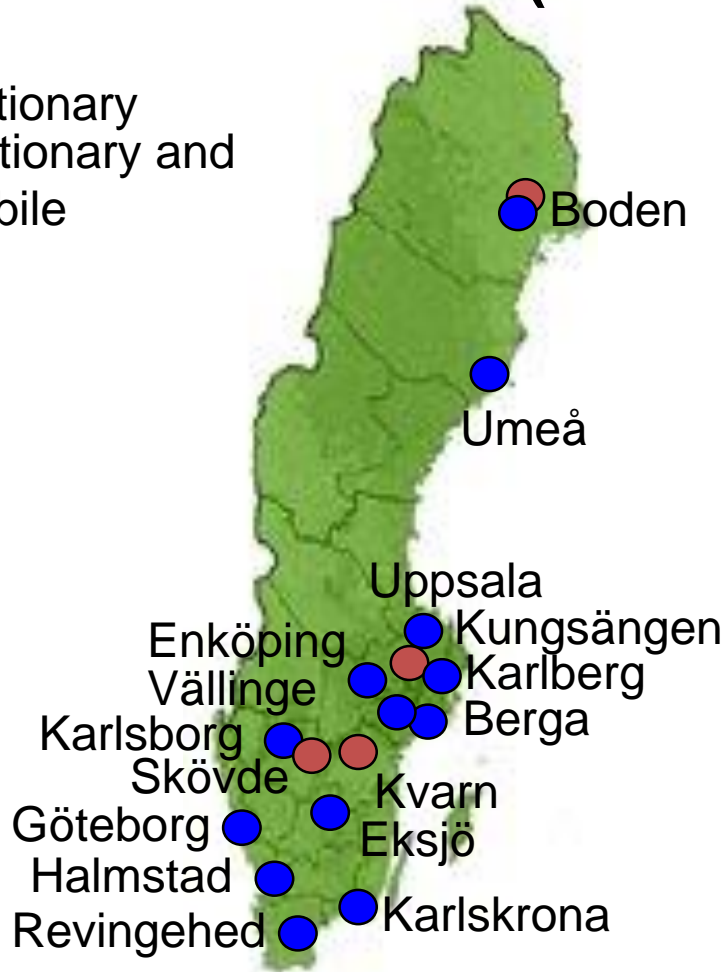# SWAF VBS3

FÖRSVARSMAKTEN

01010011 01110100 01110010 01101001 01110011 01101001 01010000 01000001

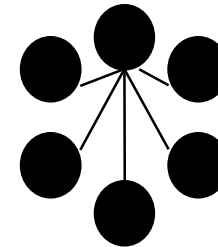# StrisimPC

Locations with VBS3 (some 700 student seats)

🔵 Stationary
🔴 Stationary and mobile

Boden

Umeå

Uppsala
Kungsängen
Enköping
Vällinge
Karlberg
Berga
Karlsborg
Skövde
Kvarn
Göteborg
Eksjö
Halmstad
Revingehed
Karlskrona

Locale network StriSimPC

National network
(under construction)

- **administration**
- **exercise**
- **maintenance**

What can we train?

- Training missions
  - Only one participant in the exercise
  - A lot of different smaller training tasks – basic soldier training, basic skill training
  - These exercises can be very specialized to fulfill a certain purpose. Can be conducted without an instructor.

- Network scenarios
  - Exercises with 2 or up to 44 participants at one site.
  - Training of different tasks from 2 soldiers through squad, platoon, cadre of company and in some cases also battalion level.
  - Can train a big variation of scenarios.
  - Lots of interaction and communication.
  - Possibility for manned enemy that thinks for it self or AI enemy.

- Common case and discussion
  - The simulation is only used to look at and the training audience does not use the simulator themselves. The simulation is used to show events and situations for discussion. A common decision is made and some orders given and admin plays this until a new discussion/ decisions point occurs.

- Network exercise between remote sites (common network not operational yet)
  - Train units together with recourses that are hard to get hold of otherwise due to travel costs (helicopter pilots, warfighter pilots, Forward observers)
  - Possibility for remote supporting units to get some experience of combat technique and communications (engineer units, CBRN units ….)

Simulation to support different training needs

- **Medic training**
  - Advanced medical simulation – squad/platoon medics, examination and treatment in combat, medevac
- **HumInt**
  - Intelligence report from AI or instructor
- **Cadre platoon/company**
  - Command Structures
  - Logistic report
- **Combat support**
  - Salvage by winch
  - Tow by wire/bar
  - Repair of vehicles
  - Resupply ammo, fuel, repair parts
- **Special situations**
  - Conversation system to build custom training scenarios (ex Fordonsigenkänningstest 1 Ryska stridsfordon)
- **Comms by talk, radio and forms**
  - Simulate all needed radio nets. Listen and evaluate at After Action Review (AAR).
  - Send forms as with our data reporting module (PC Dart) and evaluate at AAR.

Possible topics to discus?

- How to get the units to train more
- How to maintain the stock of simulator instructors
- How to have a rather constant maintenance by money and contracts
- How to be able to maintain the functionality in software systems over the years

Components

- Virtual Battlespace 3 (VBS3)
  - Simulation program as a first-person game
  - Advanced instructor functions to build scenarios and conduct exercises and perform AAR
  - Very large model library of vehicles, weapons and other objects
  - Common software in the western world = lives and are updated
  - Can be used also outside of StrisimPC due to Enterprise license (Research Agency, MoD experiments)
- FiresFST for VBS3
  - Forward observer training
  - CAS training
- Maintenance contract
- Simulation Provider contract
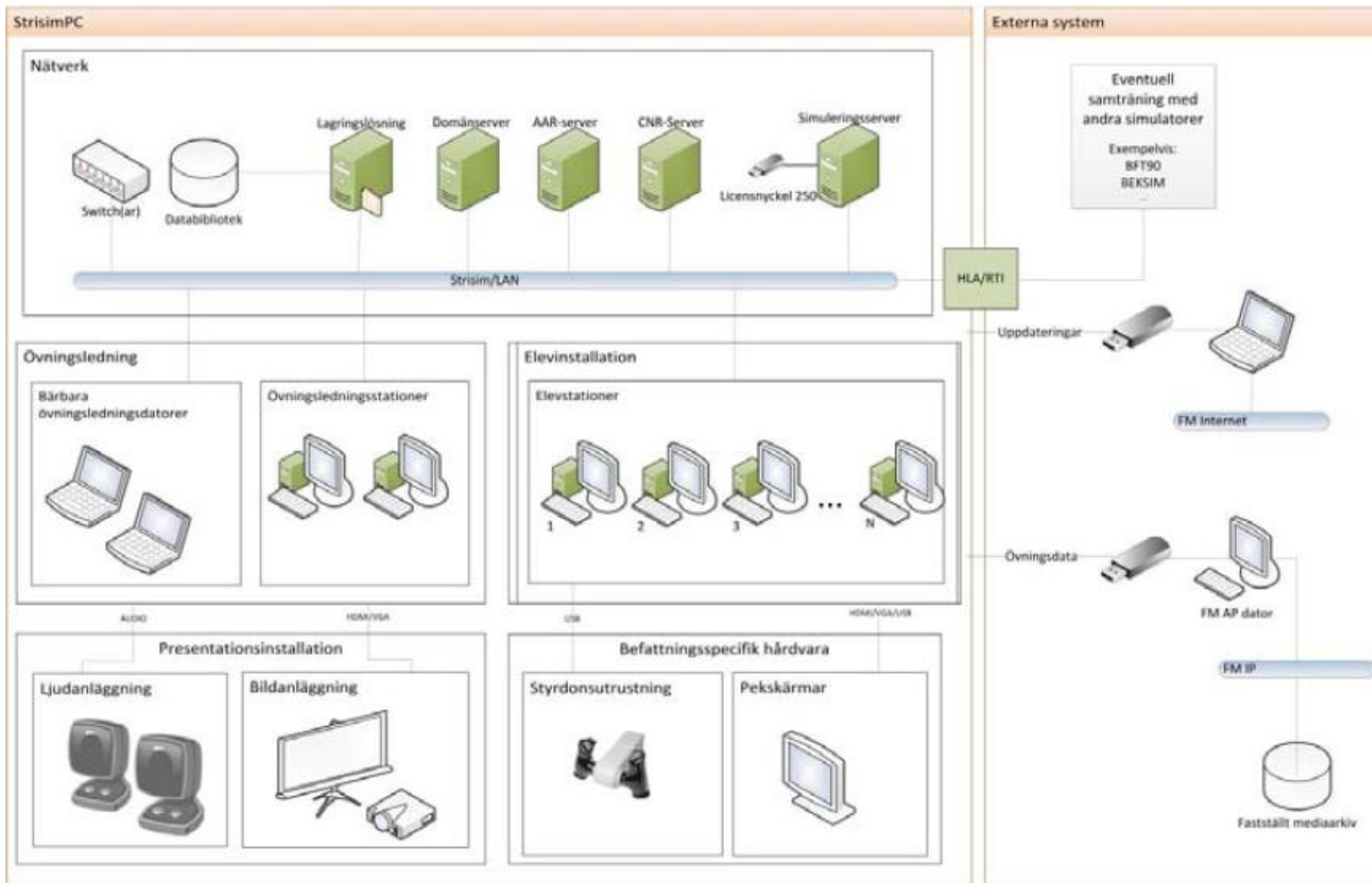- High fidelity terrain
  - Chernarus

Maintenance of StrisimPC

- In use since 2015-03-01
  - Usage at least 5 years probably 10.
  - Update of some hardware within 5 years.
- Bought separately, system intgration by MoD and LWC, no main contractor
- LWC partly responsible for technical details and configuration
  - New system version 2 time per year
- LWC responsible for common exercise library
  - Instructors should be able to easily perform training of units with minimal preparations, reuse of good scenarios
- Create simulated terrain
  - SWAF has 5 persons that can create terrains for VBS, software in VBS3 package
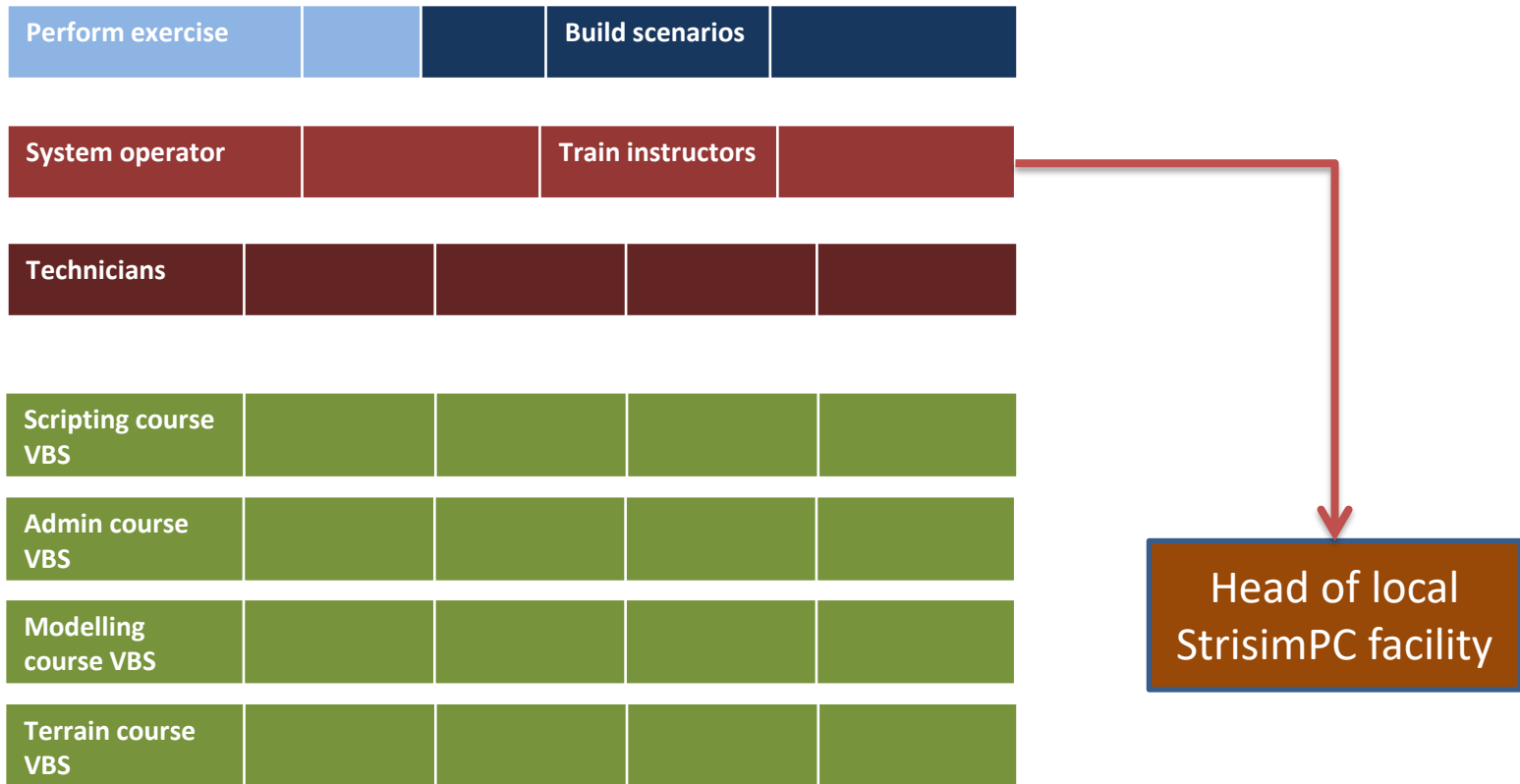- All model development bought from BiSim for to always work with latest version of VBS

StrisimPC/Stationär – fysisk arkitektur

Train instructors for StrisimPC

Perform exercise		Build scenarios	

System operator		Train instructors	

Technicians				

Scripting course VBS				
Admin course VBS				
Modelling course VBS				
Terrain course VBS				

Head of local StrisimPC facility

Further development of StrisimPC/VBS

- During 2016-2017 threw Simulation Provider contract with Bohemia Interactive Simulations:
  - Training capacity for forward observers and CAS with Swedish methods (replace older simulator)
  - Training capacity for CV 9040 (replace the older simulator)
  - Training capacity for Remote Weapon Station (instead of buying expensive from weapon contractor)
  - More vehicle and ship models
- Windows 10 to facilitate good usage of modern touch screens
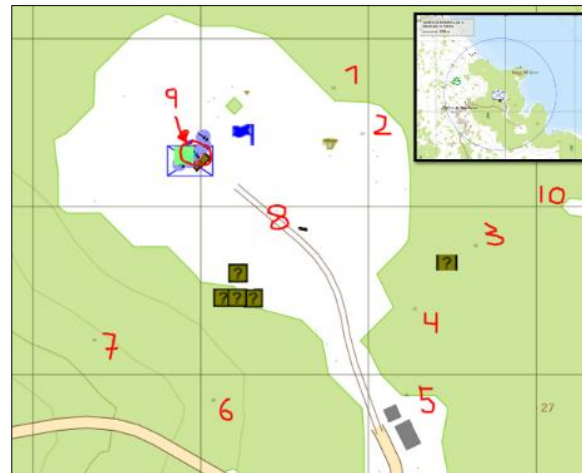- More Geo specific Swedish terrains

Example of Single Mission

1. Overview of Swedish vehicles weapons in VBS (Förevisa svenska fordon vapen utr i VBS)

2. Rifle soldier in squad firing position (131 Eldexercis UPM)

3. Vehicle recognition Russian vehicles (152 Fordonsigenkänningstest 1 Ryska stridsfordon)

4. Squad attack in platoon frame (136 Skgrp ta tg med understöd 1 sm)

5. Company dismounted attack Cadre (196 KompCh anfall avsuttet skyttekomp Ta Rasman 1)

6. Recon squad use of artillery support (171 Eldobservatörsträning 1 tillämpa)

Single mission 131 Single soldier in squad battle position Ranging points

- Trainee is a soldier in a rifle squad in combat position
- Squad leader gives ranging points with recorded voice commands
- 10 moving enemies is shown one at a time at random position, running towards the trainee.
- Squad leader gives target commands and fire commands by voice
- Trainee fires and kills the enemy
- Trainee gets feedback of time from command to fire and used ammo
- When all 10 enemies are killed feedback is shown of all times to fire and all rounds used per target and mean time to fire, then exercise is terminated.

dead tree | wreck | ruin
stone | house

deadtree_left_sk_eld.ogg | deadtree_sk_eld.ogg | house_sk_eld.ogg
ruin_right_sk_eld.ogg | ruin_sk_eld.ogg | stone_sk_eld.ogg
stone_sk_eld_old.ogg | upm_1skgrp.ogg | wreck_sk_eld.ogg

Skytt 1 nedkämpad
Tid till skott = 23 sekunder
Tid till nedkämpad = 23 sekunder

Övningen är slut
10 fiender har visats

Fi	Till skott	Mellan skott
1	23	23
2	59	59
3	22	22
4	12	13
5	17	22
6	8	14
7	15	16
8	7	28
9	9	9
10	13	13

Medeltid till skott var 19 S

Övningen avslutas

Exercise name 131_Eldex_UPM_ver5.Sara.pbo

Single mission
Train recognition of Russian combat vehicles

- Train to recognize Russian combat vehicles and know their most important properties.

- All vehicles can be entered.

- No vehicles can drive or shoot

- The scenario only contains open information.

- The scenario is available in Swedish and English, easily translated mainly in stringtable


Get close to the vehicle you would like to know more about.
When you get close information about the vehicle is shown. You cam also get in the vehilce.

2S19 is a Russian Self-propelled howitzer with a crew of 5.
It has a 152 mm barrel and max firing range of approximately 30 km.
Secondary armament is a 12.7 mm MG.

Exercise name fordigenkanning_trana1_v2.Sara.pbo

Single mission Test of recognizing Russian vehicles

- Purpose: Learning test of to recognize Russian vehicles
- Trainee is at an observation position and has a pair of binoculars.
- A Russian vehicle drives into the field of view in front of the trainee and halts.
- The trainee chooses type of vehicle and name of vehicle in VBS conversation system.
- Feedback is given as wrong answer or right answer with vehicle info
- When the exercise is done feedback is given on how many points for correct answer the trainee got.
- Rather easy to translate to your language

Observe
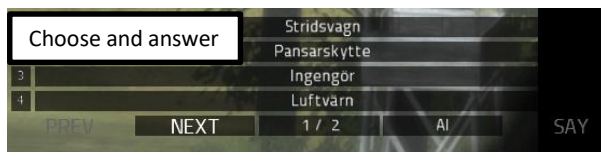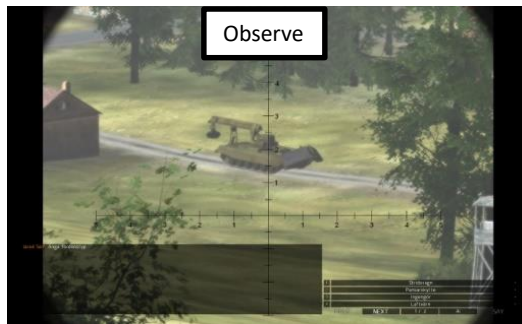
Feedback on correct answer

Rätt svarat, du fick 1 poäng och har totalt 6 poäng.

Fordonsinfo: IMR-2 är en rysk ingenjörspansarbandvagn med 2 mans besättning.
IMR-2 används tex för att röja väg. Den har ett kraftigt chaktblad och en lyftkran som kan lyft 2 ton. Närskyddsbeväpningen består av en 12.7 mm ksp.

Fortsätt med nästa fordon.

Feedback on wrong answer

Du svarade fel. Du fick inget poäng för detta fordon.

Fortsätt med nästa fordon.

Choose and answer

| Stridsvagn |
| Pansarskytte |
| Ingengör |
| Luftvärn |

PREV   NEXT   1 / 2   AI   SAY

| 1 | IMR-2 |
| 2 | MTU-72 |

PREV   NEXT   1 / 1   AI   SAY

Exercise name fordigenkanning_ryska_strf_test1_v1.Sara.pbo

Single mission
Rifle squad attacking with within platoon with support

- Rifle squad seize terrain in village, winter and with fire support from platoon
- Purpose to train understanding of coordination of fire and movement of a platoon and the need for support from battalion artillery
- Squad leader of 1.riflesquad FA is manned
- Platoon leader and fire controller gives orders with voice commands and in side chat step by step
- Squad leader FA attacks on order and reports by user actions
- Fire support is predefined in scenario. Trainee can order fire by user actions and via VBS form Call for fire.
- FA attacks the village with fire support from EA and GA and also ZG. Thereafter FA defends position while EA and GA attacks on each flank. Thereafter FA attacks and seizes middle part of the village. Finally the enemy counter attacks and FA uses direct and indirect fire to defend the position.
- The scenario is rather automated. The exercise ends when all enemies are killed or neutralized.
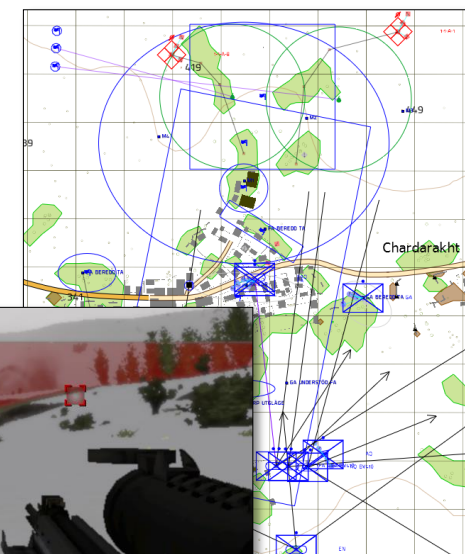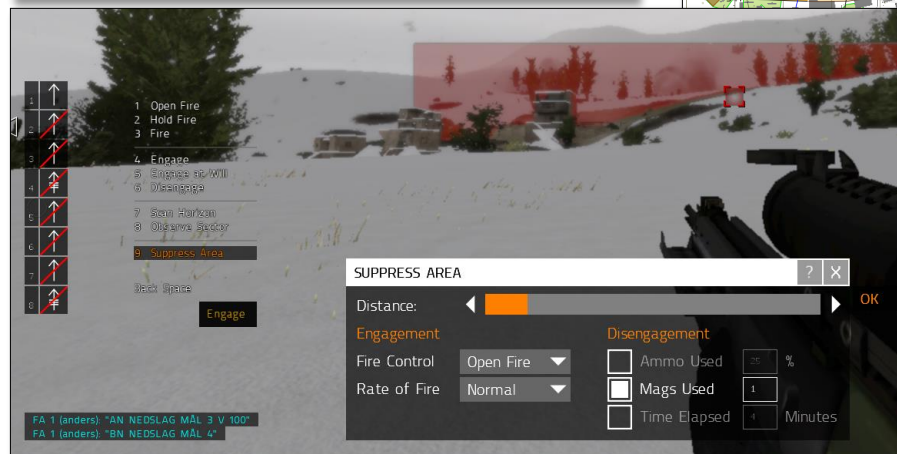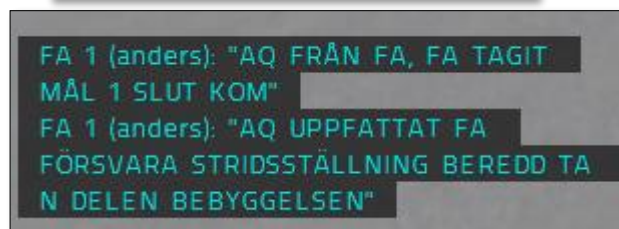
Exercise name skgrp_ta_med ust_1_sm_v2.map_takistan13km.pbo

Single mission
Company commanders conduct of attack dismounted rifle company

- Purpose: As company commander think about tactics and coordination of maneuvering and usage of indirect fire
- Dismounted rifle company positioned for attack AQ, BQ, CD and support DQ (with vehicles), mission seize RASMAN (terrain Takistan)
- Support from indirect fire and UAV
- Only Company commander is manned, gives order to platoons in map. Trainee can view and control UAV.
- Commander can by radio order 3 prepared fire missions and order more by VBS form Call for fire.
- Enemy defends RASMAN with platoon.
- When blue side has seized north west part of RASMAN and most enemies are neutralized a short feedback is given and the exercise ends.

Exercise name kompch_sm_anfall_avsuttet_ta_rasman_1.map_takistan13km.pbo

Single mission Use of artillery support

- Purpose: Think indirect fire

- Recce platoon KJ defends and squad leader GK (trainee) leads indirect fire as fire observer.

- Enemy is advancing and takes positions in front of the trainee. The trainee can see the enemy in the terrain and in the map.

- The trainee position is on high ground and has good observation. He has binoculars, compass, GPS, watch, laser designator, IR binocular, no ammo, but fire permit via battalion artillery officer (VJ35) with mortars and howitzers (AJ, AB, ZG, ZF).

- Trainee orders fire by VBS form several times until the enemies are killed.

- When all enemies are killed or after 60 minutes the exercise ends.

- Good training for thinking indirect fire, order fire and correct fire by different methods.

- Feedback from formal errors on filling form for call for fire is given immediately.

Call for fire

From	GK
To Bat	VJ
Sub address	VJ35
Method	New call
	Adjust fire
	Cease fire
Zone	24S
Grid	VJ
Coord for target	02808240
Obs dir mils	0100
-Left +Right m	0
Length + - m	0
Ammo/Unit	12 cm Mortar HE PD
Method of Fire	Fire shock
	Round per gun
	Single rounds
Number	1
Time to splash	30

Transmit

Company commander giving of orders

- Common view of situation
- Evaluation of situation, discussions
- Start of scenario and a new situation occurs, subordinates reporting
- Giving of orders, each trainee recording their order
- Evaluation of orders and decisions
- Playing of scenario from decided solution
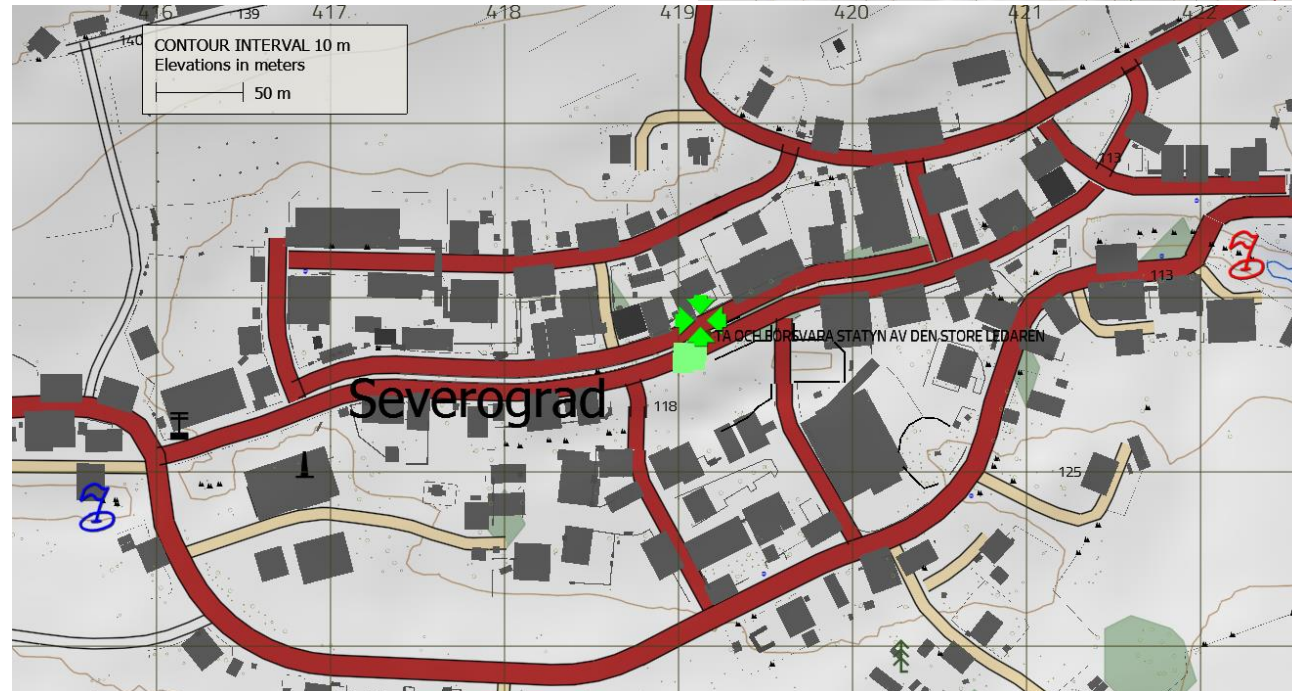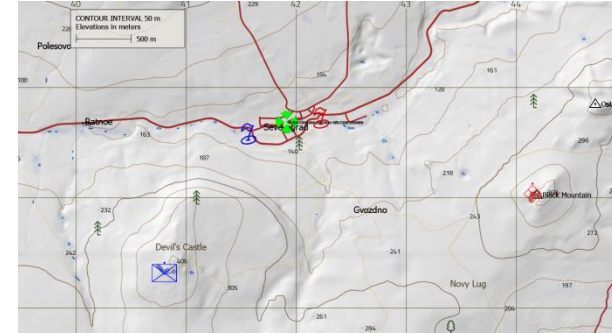- Discussion of result

195_mss_ordertran_mekskkomp_2016_framgang1.lg_skjutfalt_v4.pbo

Example of Network Scenario

321 Grupp ta och försvara SEVEROGRAD till fots bemannad motståndare

1. Input color_number_last name (Cyan7_Smith)
2. Click on the role you should have
3. Listen to your squad leader
4. Seize and defend the statue of the great leader

First person view

FATIGUE

LEGS | ARMS | BODY | HEAD

Fatigue and wounds

Mouse wheel
Choose with Enter
or mouse wheel
down

Squad leader menu
Choose with F2, F3 etc.

Weapon M22 Binoculars
Weapon Vector 21 LRF
Weapon Flare Pistol
Weapon on back
Dress State options

Radio channel

Safety on = Empty
Safety off= Red
One → Single shot
Several → Automatic

Radio Channel
BLÅ
Direct Talk

AK5C - SEMI
30   6
BALL

Walk and watch

1. Headset on, microphone on left side
2. When in first person, look straight ahead and press F12
3. Numpad enter → Third person view
4. Walk with WASD
5. Run with WASD and also push Left Shift
6. Turn your body with mouse sideways
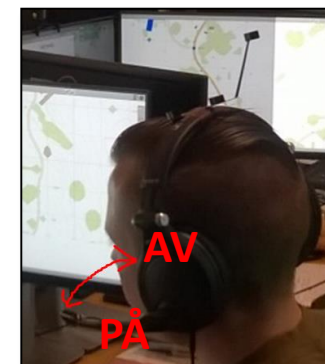
Standing/ firing

1. Ly down Z, Kneeling X, Stand up C

2. Optics V

3. Reload R

4. Safety on/of

5. Fire with left mouse button

LAND WARFARE CENTRE

Sending radio

1. Previous channel
2. Next channel
3. Radio on/of
4. Send → Push to talk
5. View of channel
6. Normally radio is of – use direct talk

Think Push Talk

5. View of channel

4. Send → Push to talk

6. Radio on

6. Radio of

1. Previous channel

2. Next channel

3. Radio on/of

VBS Radio as user

1. Windows button for Quick Menu

USER RADIO SETTINGS

CHANNELS   MIC SETTINGS   CLOSE

Edit Enabled Channels:

Enabled	Channel
OFF	01 PlutL
OFF	02 Plutres
ON	10 KompL
OFF	11 Kompres
OFF	20 BatL
OFF	21BatLres
OFF	22 Bat U
OFF	23 Bat UH
ON	90 Övnled
ON	Group
ON	Vehicle
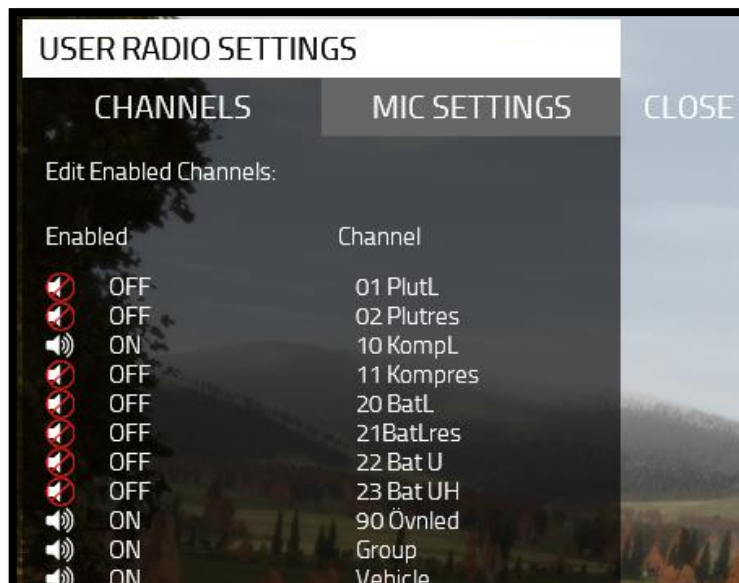
2. Radio User settings activate/ deactivate radio channels

Ra of

Radio Not Transm
10 KompL
Direct Talk

Not sending

Radio Channel
10 KompL
Direct Talk

Sending

Radio Channel
10 KompL
Direct Talk

Using vehicles

1. Get close press U
2. Choose seat (green free, yellow AI, red player)
3. Get out U choose direction or HH
4. If hatch Z up/down
5. Driver:
   1. Steer with WASD
   2. Increase speed with left Shift (hold down)
   3. Headlights on/off L
   4. Convoy lights on/off K
   5. Brake X
6. Gunner
   1. Aim with mouse
   2. Optics V
   3. Toggle sight N
   4. Togle ammo and fire mode Space bar
   5. Laser F
   6. Firing Left mouse button
   7. Reload R
7. Commander
   1. Open hatch Z/C
   2. Turned out use binoculars B
   3. Map M

Fordonsstatus Strf 9040B
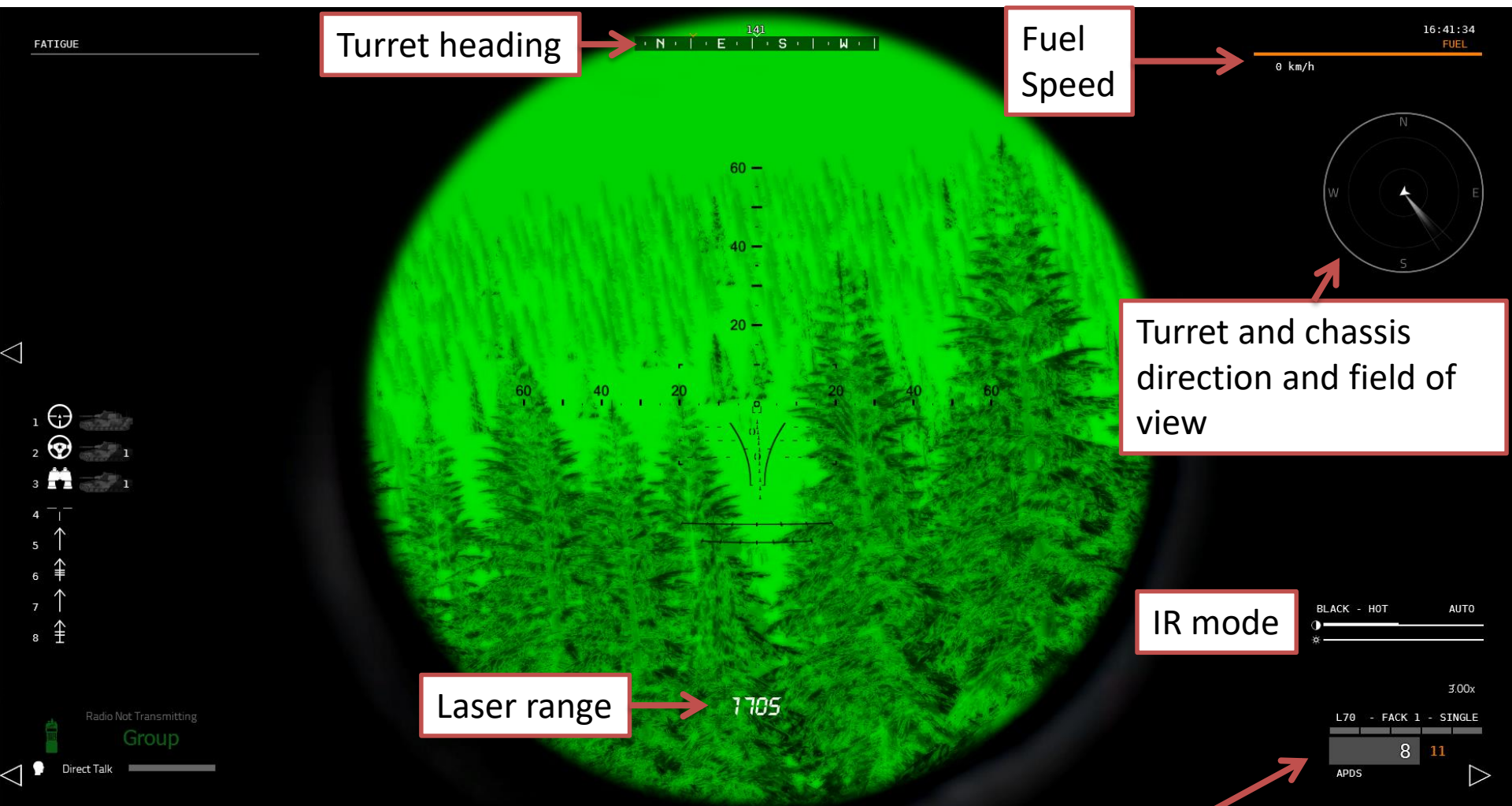
Turret heading

Fuel
Speed

Turret and chassis direction and field of view

IR mode

Laser range

Chosen ammo, firing mode and safety