Simulation: a Training Tool for CPs

The increasing number of armed conflicts caused by the current international political instability, the apparition of new actors, of new threats and new risks associated to the development of international compromises intended to maintain peace, caused a definite need for maintaining our armed forces in a permanent readiness status as well as the obligation to **maintain the training level of our units and staffs at the highest possible level of preparedness** in order to enable them to keep a maximum level of efficiency in the accomplishment of their current missions and engagements, within the framework of multinational alliances or coalitions operations.
Simulation is the most important tool supporting the training of the staffs when they are constituted into command posts (CPs).

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Simulation

Within the Spanish army, it is the Army staff which is responsible for simulation, and the training directorate of the Army training and doctrine command which is in charge of the simulation organization and general management. The sub-directorate for education, training and evaluation is in charge of research, management, administration and monitoring of the simulation assets and methods.

Several factors made simulation and CP training necessary:

- The extent and diversity of the missions to be achieved and the multiplicity of the types of theaters of operations;
- The high cost of equipment and related means;
- The communication and information systems' increasing complexity;
- The difficulties linked to deploying in the open field (LIVEX) to implement CPs' SOPs;
- The impossibility to recreate "live" the real situations that would correspond to the received mission;
- The reduction of the possibilities to use training areas due to environmental restrictions;
- The difficulty to implement staff SOPs.

In response to these factors, **simulation** presents the **following advantages:**

- It facilitates training and reduces learning time;
- It improves experience acquisition, as well as the evaluation and lessons learned processes;
- It reduces the preparation costs by eliminating the risks and increasing forces efficiency and security.

However, the principal advantage lies in the **provision of an easy to use framework** into which situations and environment are reproduced, which makes it possible to apply, practice and materialize, as well as to correct the standards and procedures.

Armée de terre espagnole

Command Posts training

In order to train the CPs, the Spanish Army uses a "constructive" type of simulation. Thanks to teams of programmers and data processing specialists, that type of simulation provides an opportunity to graphically digitize different models representing units, weapons systems, teams and terrain.

The use of and the importance given to constructive simulation are fully justified since they allow:

- To put together and coordinate the actions of all CP's components;
- To integrate all combat functions;
- To practice and execute the tactical and logistical maneuver framework and to actually execute that maneuver;

- To make real time decisions, to conduct an after action analysis of the exercise development and draw lessons out of this analysis;
- To realize dual action exercises;
- To provide flexibility in the choice of axis of progression;
- To reduce costs thanks to a minimum use of personnel and means;
- To use all the terrain since there is no restriction for deployments, fires and obstacles;
- To make available and employ units that would otherwise be difficult to actually implement such as air force, helicopters and air defense units;
- To materialize the effects of support means that are difficult to use in open terrain such as engineers or reinforcing fire support from higher echelon;
- To facilitate the training objectives succession.

In Spain, **two major simulation systems** are currently in use: the **CASIOPEA** family of systems and the **ENEAS** systems.

- **CASIOPEA**

SIMBAD
- Designed to train Battalion or Battalion task force CPs.
- Employed unit level: company.
- Version 2.0 currently under development.
- Planned fielding starting in January 2007.
- Location: "San Gregorio" National Training Center at Zaragoza and at the Toledo Infantry academy.

SIACOM
- Designed to train brigade and brigade task forces (AGT[1]).
- Employed unit level: battalion.
- Version 4.5 currently under development.
- Location: "San Gregorio" National Training Center with a detached element at the Army war college (Zaragoza) and at Canaris Islands Command (Santa Cruz de Tenerife).

SIMCOP
- Designed to train division or brigade CPs.
- Employed unit level: brigade.
- Currently under development.
- Planned location: Army war college (Madrid).

- **ENEAS**
- Designed to train Battalion task force CPs.
- Employed unit level: company.
- Currently in use, but should be replaced by SIMBAD.
- Location: Toledo Infantry academy.

The conduct of exercises

"CPX/CAX" exercises provide an opportunity to train HQs to plan and conduct operations as well as to carry out after actions reviews which enable the commander and staff to command, control and monitor operations.
During the planning phase, the operation and its execution are designed and the various OPORDERS are drafted. During the execution phase, the planned operation is executed. Critical lessons are then identified out of the analysis of the exercise in order to improve the overall training.

The exercises implementation conditions,
- Facilitate the action of the higher echelon unit which represents both the exercise direction and the OPFOR animation;
- Provide an opportunity to establish and materialize the organization and relationships of the various elements that constitute the CP;
- Provide an opportunity to use own command and communication means;
- Provide an opportunity to introduce weather and moral factors which have an impact on the players' actions;
- Give the possibility to interrupt, repeat or modify the course of the exercise during its execution;
- Provide an opportunity to conduct "hot wash" analysis at the end of the exercise.

However, the most significant advantage of these exercises is **to be able to program the simulator for the realization of real missions.** This provides a unique opportunity to detect, identify and correct possible planning errors or to fill planning or execution gaps while contributing thus to units' protection and security.
All brigades' units, regiments and battalions must annually carry out a CPX/CAX training exercise.

1 Agrupación Táctica.

The future: an advanced constructive simulation

Because of the importance given to the use of constructive simulation means for CP preparedness training, **significant efforts are being carried out to improve the training quality with new projects and studies** such as:

- The development of **simulation means adapted to asymmetric conflicts requirements** or to the presence of "non combatant" elements;
- **The replacement of the current ENEAS training simulator by SIMBAD**, which will increase the number of tools and functionalities available;
- **The linkage of SIACOM and SIMBAD** simulators to offer a possibility to train both brigade and battalion task force CPs in the same location;
- **The implementation of simulated "smart OPFOR units"** which will react automatically to the various situations;
- **The improvement of the urban combat** simulator which is the only constructive simulator designed to train company level units.