

Some Reflections

on Tactical Simulation through the Assessment of Distributed Simulation Experimentation

The appropriation work on new pieces of equipment participating in information-valuated combat is strengthening the idea that CIS training is more and more linked with simulation.

The 1st Régiment étranger de cavalerie, **first armored battalion to be equipped with the full battalion level CIS “SIR/SIT”¹ chain**, experimented a Command Post training disposition by distributed simulation based on Esther² system - allowing dialogue between JANUS and SIRs. This **exercise namely SYRUS** occurred simultaneously on Orange and Saumur sites from 13 to 15 February 2006. The purpose was **to allow a battalion CP to be trained thanks to JANUS system without leaving its barracks.**

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The reports

The first assessment of this experimentation is satisfactory for several reasons. First, the concept of technical architecture between center JANUS of Saumur and the CP of 1st REC, located in Orange, appeared to be relevant and allowed the various playing command levels to dialogue although distant from more than 700 km. Then, the exercise preparation revealed few constraints for the battalion, excepted the CIS setting-up part. It was adequately included in a particularly dense schedule of activities. Finally, **SYRUS** allowed **learning related to technical, tactical and organization issues** to be drawn. In the short term, these should make available a distributed simulation system responding to the needs of tactical command structures in respect of training.

The exercise sequencing underwent however **some difficulties in its execution** in relation to choices of the geographical distribution of players, especially for combat support. The main technical difficulty being identified lies in the fact that the present system does not integrate all functions provided by SIT and only privileges command levels from those of basic tactical units.

Lessons learned

An exercise of distributed simulation should enable a digitized battalion CP to operate nominally in its voice and data distribution communications either upstream (brigade) or downstream (companies and platoons). It clearly appears that simulation should adapt to the operation of various “SIR” and “SIT” systems



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as well as procedures applicable in units which use them. It is then a prior requirement in the concept of an exercise of distributed simulation. It is also true that training under simulation should be as realistic as possible especially regarding procedures. The main difficulty lies then for the **short and mid term in the parallel evolution of various “SIR” and “SIT” software versions with systems of simulation or systems interfacing simulation and CIS equipping forces.**

The tactical aspect was not the main feature of this technical experimentation. Technique should however progressively leave way for **a balance between tactics and procedures** contributing then directly to training the playing CP. Without expecting simulation to replace reality, the overall disposition consistency should be safeguarded. In this respect, some questions shall find an answer. Where should platoon leaders level response cells be located - with company commanders or in JANUS center? An identical question is raised for positioning combat support to be selected in this kind of exercise, either with playing CP to enable a true combined-arms dialogue or oppositely in JANUS center. In the same way, how to integrate in this kind of distributed simulation exercise the logistic component so present in current commitments?

A part of the answers lies within the decision which could be made to privilege the **proximity of a JANUS center with the playing battalion** (EAI³ or EAA⁴ with 1st REC for instance). This would be better than a branch rationale reducing distances to locate some cells coming from playing battalion to JANUS center.

Perspectives

Perspectives enabled by digitization are numerous and affect several undissociable components of the tactical domain (command, combined-arms dialogue, logistics, etc.). In addition, simulation became one of the training

modes which are quasi-privileged for units then reducing costs and getting partly rid of technical availability issues.

It seems then possible to outline **two major trends** that the future should confirm.

On the one hand, **a synergy is obvious between digitization and simulation.** SYRUS demonstrated feasibility offering real opportunities in terms of training. Tools are still to be made reliable to allow dialogue from JANUS to “SIR”.

At Battalion task force (“GTIA”) level, it seems that a bridge ROMULUS/ “SIT” is the unavoidable tool to allow a Commanding Officer to train basic tactical units CPs. This solution, lighter as it can be directly implemented within a battalion, would allow training of levels 5, 6 and 7. Implementation within battalions of a ROMULUS V5 version would facilitate in the short term such exercises realization, as a straight forward continuation of those already performed in integrating exercise control-simulation and CPs deployment on the ground.

On the other hand, **a synergy is promising in the area of combined arms cooperation** down to the lowest echelons. In the domain of employment during crisis and conflicts where the Army could be committed, it appears that the “maneuvering” element is frequently self-sufficient and even isolated. This element will be more frequently a platoon rather than a “GTIA”. It should then be capable to integrate combined arms or joint effects.

1 SIR, système d'information régimentaire (Battalion level Information System), is equipping CPs of the Commanding Officer (level 4) and company Commanders (Captains) (level 5). SIT, système d'information terminal (final information system) is equipping the vehicles of the combat units (AMX10RCs and VBLs) i.e. (Level 6 platoon leader and level 7 squad and vehicle commander), the captain holds one too.

2 Esther - Environnement synthétique de théâtre pour l'entraînement des PC: Operational Theater Virtual Environment for CP Training.

3 Infantry School.

4 Field Artillery School.

It is then important to look for solutions developing integrated command tools and

simulation tools which take early consideration of evolutions in the employment of

other branches. In this respect, efforts shall be focused on company and platoon levels.
