The battlefield representation in the SCORPION battle

Land Forces Doctrine Review

Colonel Guillaume BENQUET

Published on 24/06/2019

Tactique générale

Do we sufficiently remember the impact that the simple introduction of radio on the battlefield equipment could have had on the leaders who wanted to seize it? By comparison, is there a clear awareness of the potential for change that the creation of info-enhanced units tomorrow could represent?

In reality, the tools promised by the SCORPION programme should make it possible to go far beyond simple capability gains.

In substance, networking combatants and sharing between them of unprecedented tactical knowledge has everything to positively modify the judgement of tactical leaders at all levels and, it is to be hoped, their action. In this approach, the representation of the battlefield plays a decisive role. From its accuracy, if it is possible, from the consideration of all its dimensions and the very nature of its actors, the success sought will largely result.

Above all, it is necessary to be aware of what will be involved for tactical commanders if they and their subordinates share knowledge of their common tactical situation. Secondly, it is important to consider what it will mean for smaller tactical levels to expand their combat to new dimensions. Finally, it is necessary to consider the foreseeable consequences for units in contact with the transition from collective to collaborative combat.

1- Taking advantage of the lifting of the fog on the MAI

Thanks to automated position feedback and permanent data exchange between combatants, the MAI tactical situation will become clearer to combat leaders down to platoon and section leader level. This renewed vision of the engagement space will have several implications.

The increased visibility of the tactical situation will be accessible and exploitable from the outset, via the ergonomic interface of the SCORPION Combat Information System (SIC-S). Immediately, through geolocation, everyone in the unit will know the exact position of their friends at all times. The Anglo-Saxons call it Blue Force tracking, BFT. But SIC-S will offer much more. For example, the software includes a mapping tool that shows inter-visibility sectors on demand. With this application, the leader can evaluate the coherence of his device, or locate the best observation positions in the field. This tool should help to lift the fog that covers the unknown terrain, to make it a little more legible and therefore usable.

Above all, SIC-S will ensure the technical feedback of the multiple sensors integrated in the devices. This crucial information will provide tactical leaders with precise knowledge of the operational status of combat systems, or even consumption in all areas. These functionalities will finally give leaders an updated vision of their combat potential, shedding new light on their thoughts and decisions. This information should also enable them to usefully anticipate the supply needs of their subordinates. Further on, this feedback could pave the way for predictive logistics and maintenance, for example.

However, the new angle is not so much that leaders will be better informed, but that their subordinates will have a view of the general tactical situation almost as accurate as their own. This reciprocal knowledge will be a reality from the Joint Battle Group Commander (JBGCOM) to the Section Commander/Platoon Commander (SDC/PDC). This prospect therefore opens the door to new tactical possibilities, which will encourage subsidiarity and initiative. A better knowledge and understanding of the tactical situation will indeed encourage subsidiarity between subordinate and leader, thus preserving his control and anticipation responsibilities.

Initiative-taking should also be encouraged, as the subordinate who is aware of his leader's intention, up to N+2, will finally have sufficient understanding to identify and seize opportunities without delay. The tactical agility expected of SCORPION units will depend to a large extent on exploiting the opportunities offered by this unique battlefield illumination. Its potential in terms of subsidiarity and initiative will have to be further enhanced as SCORPION enables units to fight simultaneously in new dimensions.

2- Fighting in 5 dimensions

Modern high-intensity combat could take the smallest tactical levels into universes that were largely ignored before the brigade level. To win the decision in these conditions, SCORPION gives forces the ability to fight effectively in this new battlefield, now extended to 5 dimensions.

The appearance and rapid spread of small flying drones, both friendly and enemy, is compounded by the use of TAVD ammunition on both sides.[1] to densify and thus make a contact 3D more complex, constituting with classical 3D a full-fledged battle space. Mini, micro and nanodrones are already equipped with increased intelligence and even aggression capabilities. SCORPION units will necessarily have to fight in this highly competitive space. In practice, it is undoubtedly from the platoon or platoon level onwards that they will have to design their manoeuvre in this dimension and, more than anything else, integrate it into that of the higher level. The quality of the information shared, as mentioned above, will help to achieve the essential deconfliction between flying objects (aircraft) and UAVs and guided munitions.

On another level, the added value of the SCORPION units will be largely due to the

performance of the data links. This reality, combined with the probable increase in the length of the links between units, suggests the consolidation of communications manoeuvres, starting at the level of the Joint Battle Group (JBGTI). SCORPION networks will also need to be protected as they are developed and extended. The programme's specific architecture, which distributes information between systems rather than converging it at a single point, is part of the answer.

But in a contested electromagnetic environment, it is certain that the operation of SCORPION transmissions will have to be designed and conducted as skillfully as physical fields.

Finally, cyber defence is the ultimate dimension of the SCORPION battle, and it is becoming more and more important every year. In fact, the communicating on-board electronics of the SCORPION engines and the multiplicity of data exchanges between the associated combatants make it a fully-fledged object for cyber defence. For the time being, this issue is still being addressed on a defensive level, relying on the encryption of exchanges and the deployment of closed networks. Nevertheless, defence against the actions of electronic warfare, including intrusions, locations or the jamming of data flows, will be a concern of the leaders engaged in combat, starting at the level of the SGTIA. The area of engagement of SCORPION units will therefore be extended in 3 additional dimensions. Achieving victory in this complex space will rely on the resilience and performance of the joint maneuver.

3- Moving from collective combat to collaborative combat

In the SCORPION battlefield, each function taking part in the battle will have an equivalent view of the battlefield. As a result, it will become much easier for each of them to anticipate with relevance the contribution to be made to the common battle, or to apply the necessary effects at the best moment. Here, the technical added value should lead SCORPION units to modify their relationship to the action.

In classic, collective joint combat, support and reinforcements contribute to increasing the effects of the integrating function. In collaborative combat, the integrating function must, from the level of the SGTIA, supervise the combination of support and reinforcements to produce an original effect, superior to the previous one. The integrating function reserves its action for the application of its specific, unique effects. For their part, benefiting from the information shared by the unit, the concurrent functions have the means to anticipate their commitment. They have to assume an increased role, capable of producing this superior common effect. This collaborative combat will be more decentralised and accelerated, as we have seen above. It will be encouraged almost mechanically by its new environment. For, pressed by the pace of the manoeuvre, potentially watched over by information overload, the joint commander will likely have no choice but to rely heavily on well-informed subordinates and perhaps limit his conduct to a veto command. In doing so, he will, however, be able to accompany and even reinforce the acceleration of decision-making by focusing his attention on the time ahead, i.e., anticipating.

In order to get leaders to conceive and then lead the battle on this significantly modified battlefield, the training of tactical leaders will certainly have to be improved.In order to bring leaders to design and then lead the battle on this significantly modified battlefield, the training of tactical leaders will certainly have to evolve in order to give them both the ability to make the best use of the global information they will benefit from in contact and the capacity to prolong their leader's action in a relevant manner. The higher echelon will shift its attention to the control of action.

It is also more than likely that the heads of SGTIA, for example, will need to have a more thorough knowledge of the use and effects of the various operational functions; especially those of contact combat.

Conclusion

To fight well, it is obviously essential to have as accurate a vision as possible of one's battlefield and therefore of one's enemy.

Knowledge shared via SCORPION combat systems should lift some of the fog that covers friends. However, while the battlefield will be a little less opaque from this point of view, SIC-S, like no other system, will not be able to reliably track the detected enemy, let alone anticipate its action with certainty. This part of the fog of war is therefore likely to remain quite thick.

This uncertainty about the enemy in contact will require tactical leaders to learn to look up from the screens, to put their thinking and conduct to the test in the real world. For it is there that the one to be defeated will evolve. To hope to emerge victorious from these confrontations, which will take place in more dimensions, networked combat, collaborative combat, will certainly be the first of the skills to be mastered.

With the deployment of the SIC-S in the French Army from 2020, units will be able to collaborate without delay in the development of SCORPION tactics. Collectively, it is a matter of fulfilling an ambition: to create a natural continuity between remote warfare, that of screens, UAVs and TAVD, and that of contact combat, which sees the enemy directly and will continue to go as far as hand-to-hand combat.

---

1 Shooting Beyond Direct Views . Curved Shot Guided Ammunition .

Title : Colonel Guillaume BENQUET

Author (s) : Colonel Guillaume BENQUET

Release date 24/06/2019