**Commercial Off-the-Shelf Wargame: A Potential Military Education Tool**

A wargaming battle lab (WG BL) started recently, looking to identify the benefits commercial off-the-shelf wargames may offer as a professional military education tool.

The concept itself is not new – historically the New Zealand Army has used TACOps software to officer cadets and junior officers for use on work or home computers, allowing the doctrine and concepts taught on command and staff courses to be practised, rehearsed and trialled in a simulated environment. TACOps itself was basic, having been designed in 1994, and consisted largely of icons moving on a simplified map and engaging other icons. Visibility and weapon effects were simulated, but despite the simplistic nature of the software, TACOps was used successfully by a range of militaries, including the New Zealand Army, the Australian Army and the United States Marine Corps.

**The BL Concept**

The WG BL is intended for personal use outside work on home computers. This is deliberate – it is felt that “after hours” use will make wargaming more accessible to the intended audience, and will allow for greater experimentation than a work-based system. Avoiding experimentation on home computers. This is deliberate – it is felt that Army and the United States Marine Corps.

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**Wargaming**

“Wargaming helps decision makers to plan beyond H-Hour. This allows courses of action to be compared and contingencies to be identified ahead of time. Wargaming and red teaming will need to be more deeply institutionalised in the future land force, to support operational success.”

*From Future Land Operating Concept 2015: Integrated Land Missions*

**Benefits of Wargaming**

Wargames are not able to replace or even replicate formal training or physical field exercises. They can, however, reinforce teaching and provide a framework for experimentation. Above all, wargaming allows a commander to practice decision making – and receive feedback on his or her decisions – thousands of times, increasing their level and range of experiences in certain areas.

Commercial off-the-shelf (COTS) wargaming software in particular provides a range of options and benefits that can be leveraged as a PME tool to support formal Army training and education. COTS wargaming software offers the following benefits:

- **Accessibility.** Tactical scenarios are easily available to anyone with a basic personal computer, allowing frequent and self-paced access to a range of scenarios. This enables self-teaching, allowing progression and the shifting of focus at one’s own pace.

- **Repetition.** While narrow in experience and artificial in nature, software allows a commander to wargame the same scenario multiple times, with or without variable elements. This allows for the accumulation of experience in certain areas, which cannot be replicated in a field exercise.

- **Access to capabilities.** Commanders can be exposed to a range of expensive, high-end capabilities, such as offensive support, close air support, remote and autonomous systems (such as UAVs) and Main Battle Tanks, which they are rarely exposed to in training.

- **Rapid, tangible feedback and arbitration.** Software provides clear, neutral arbitration on engagements and tactical tasks, and as a result can provide rapid and tangible feedback on planning and decision making.

- **Platform for innovation and experimentation.** The nature of wargaming software encourages repeat attempts and frequent restarts against a common scenario with rapid feedback loops, allowing individualised experimentation without the consequences or pressure inherent to other Army training activities, such as course TWEIs or unit exercises. Learning and training outside the classroom engenders and encourages greater creativity in developing tactical decision making and experimenting with less conventional options and approaches.

In addition, COTS wargaming software can help mitigate existing capability gaps and training shortfalls:

- **Weapons Effects Demonstrations.** Weapon Effects Demonstrations used to be conducted regularly, involving verbal briefs on contemporary weapon systems, followed by a demonstration of their firing against pre-determined targets. However, they are becoming increasingly less feasible, given the nature of many weapon systems, and competing pressure, outputs and tempo of operations results in fewer personnel being exposed to these demonstrations regularly. COTS wargaming software provides some ability to mitigate this lack of exposure to weapons effects demonstrations, using the simulated environment as a platform for personnel to experiment with the effects of various weapons systems. While not a substitute for physically observing weapon systems and their effects in action, being exposed to the systems in a simulated environment does “bring to life” in other ways the various employment considerations, constraints and strengths of military capabilities, especially when the simulated environment incorporates specific capabilities as part of the combined arms battle.

- **Exposure to combined arms capabilities.** The ability to participate in a combined-arms environment, and experiencing and being exposed to all capabilities in the modern land force, is increasingly difficult given the trend to increasingly dispersed manoeuvres. As with weapons effects demonstrations, wargaming software allows commanders the opportunity to observe, assess and experiment with a wide range of simulated combined-arms tactics and capabilities that they would otherwise not be exposed to in routine training.

**WG BL Software – Combat Mission: Black Sea (CMBS)**

The software selected is a commercially available item sold by the US company Battlefront. The Combat Mission series of wargames has previously been used by the US Army, Australian Army and Canadian Army in various capacities.

The version of Combat Mission selected for trial in the WG BL, CMBS, incorporates modern US Army and Russian equipment in a fictional Ukrainian war scenario. Black Sea is available for Windows and Apple OS with minimal system requirements – ie, a laptop less than five years old should be able to run it. It should be noted that the fictional scenario is purely a vehicle for experimentation and education, and the inclusion of US, Russian and Ukrainian forces is Battlefront’s decision to piece together a modern warfare scenario and does not reflect any NZ Army policy or position.

CMBS incorporates all elements of small-unit combined arms warfare in a contemporary environment, including close-air support, RAS, active-protection systems on armour, networked force considerations, mounted/dismounted manoeuvre, morale and suppression, offensive support, and ammunition consumption. It is marked by its reliance on being a “soft” simulation, whereas wargaming spectrum, but remains a commercial product designed to be accessible to the general market, and as a result is designed around a reasonably intuitive interface, inclusive of options for both individual (maneuver) and collective (command) wargaming. CMBS has limitations, which include the lack of mission command-style orders, and unbalanced commercial scenarios that do not reflect the NZ military. Black Sea seems to be strongest when used to simulate offensive operations, with the CMBS artificial intelligence and scenario system best suited to allowing the human player to attack and the computer to defend.

**How to get involved**

About 100 software licences have already been distributed, with about 50 remaining. If you want to participate and have not already been invited to do so through your chain of command, please contact 2LT Campbell Smith.