

**TECHVIEWS****Tools of advanced warfare****Where is the limit?**

BEFORE writing this article, I was having second thoughts as to how relevant this topic would be in the context of Bangladesh. But I was soon brought out of my dilemma by the fact that relevance has nothing to do with people's interest in a certain subject. So here goes this week's Lead News on the Star Tech page, on some of the recent advances of warfare tools the world has seen.

Imagine a scenario where, half a mile outside the enemy-held airport that is on the night's objective, 100 U.S. Special Forces operatives stow their

The relative positions of his squad members are also displayed, as are surrounding buildings and suspected positions of enemy soldiers, updated in nearreal time via radio.

As each soldier and his squad members come within a few hundred meters of the airport buildings, they fan out. The soldiers approach the immediate objective: a structure believed to be, based on the latest intelligence data, the enemy's sleeping quarters. One soldier takes up a position just outside the main door and swings his rifle into the doorway, sur-

adapted the room-size behemoths for ballistics predictions and code breaking. Throughout the Cold War, the U.S. and its allies poured money into IT to improve their weapons. By the time the Berlin Wall came down, radars and other sensors were using computer power to process more target information; missiles relied on embedded processors for guidance and control; and complex algorithms provided fire solutions that let tanks shoot on the move. In fact, computer-controlled avionics (aeronautical electronics) are the only reason the ungainly F-117

niques in the few seconds it took the missiles to reach their targets.

War vehicles have also recently seen a lot of change, with emphasis on aerodynamics, durability, strength and adaptability. However, interestingly enough, cost has always remained a lower priority with exorbitant price tags to these mighty machines.

One of the latest additions to the armoured vehicle fleet of the British Army will be a category of vehicle called the tactical support vehicle (TSV). In October 2008, 400 TSVs were ordered as part of the \$700m protected patrol vehicles package. The new TSVs will be used to accompany patrols, and also to transport supplies such as ammunition and water.

The three types of vehicle include the Wolfhound, a heavy armoured support vehicle to support and supply the new Mastiff with heavy mine protection (force protection), the Husky, a medium armoured truck to carry out support in less threatened areas and the Coyote, a light armoured support vehicle to support the new Jackal 2.

The Wolfhound TSV (heavy) and the Coyote TSV (light) will be produced as one variant, which is a utility flatbed vehicle that will be used to transport combat supplies. The Husky TSV (medium) will be produced as three vari-



parachutes, regroup into squads, and prepare their attack. In the past, these soldiers wouldn't have known where the enemy was or whether they were walking into an ambush--until the shooting started. They would have relied on printed maps with information that was likely to be several hours old when they boarded their C-130 for transport to the objective.

But this unit has advanced technology that gives it a decisive edge. Each soldier is equipped with a helmet-



ants; utility vehicle, ambulance with enhanced protection and command post vehicle.

The Jackal 2 has been designed to a high specification to protect personnel against roadside explosions and mine attack. The vehicle also has a special air-bag suspension system that allows rapid movement of the vehicle across varying terrain.

The vehicle is expected to be used for reconnaissance, rapid assault, fire support and convoy protection. The vehicle will have a range of 800km and will include a 7.62mm general-purpose machine gun (GPMG) and either a .50-calibre heavy machine gun (HMG) or grenade machine gun (GMG) as the main weapon system. The gun ring weapon in this machine has a 360° sweep of fire, much higher coverage than its predecessors.

Although, the key objective of most modern war machines is to minimize the number of personnel casualties by machines doing most of the work, it also means higher precision and hence higher number of people getting killed from the 'enemy side'. With growing concerns and calls for 'world peace' by global leaders, spending on warfare, ironically enough, seems to be on the rise and shows no sign of decline!

stealth fighter can fly. By the time the Gulf War erupted in 1991, U.S. aircraft, ships, and tanks bristled with technology that boosted the performance of their sensors, communications, fire-control systems, and munitions. Greater processing power let weapons systems fuse their own sensor data with off-board intelligence feeds for greater situational awareness. As a result, U.S. forces could engage more distant targets and detect and defeat guided missiles with jammers that cycled through thousands of jamming tech-

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mounted GPS navigation receiver, a small wireless intrasquad voice and data comms system, and a wearable computer linked to an intrasquad LAN. From a flip-down display on his helmet, each soldier can scan the darkness with thermal and night-vision sensors mounted on his M-4 rifle. Each soldier navigates his computer through a track pad mounted beneath his uniform on top of his chest. For navigation and situational awareness, a soldier calls up his position on a map that automatically scrolls as he moves in any direction.

Although this scenario may sound improbable, all this technology exists, with much of it deployed in parts by the US Defence. The development of smaller, faster, and cheaper computers, interface improvements, networks, database access, and improved software algorithms has put computing power in the hands of U.S. infantrymen and women.

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