



Institute of Defence and Strategic Studies



Future Systems Directorate

RÉVOLUTIONNAIRE 2/2006

The Foremost Inter-Disciplinary Defence E-Bulletin

突破 *Revolucionario* *Revolutionary* *Merevolusikan* *Revolutionär* *Kraantikari*

2 February 2006

Contemporary Conflict

- Hamas Steps Into a Complex Landscape
- Peace-Enabling Force Could Enhance Security of a Palestinian State

Defence Industry

- Expanding Private Military Sector Faces Structural Change and Scrutiny
- Israel Considers V-22 Acquisition
- Most Military Reservists See Income Rise When Called to Active Duty

Defence Technology

- Airborne Surveillance Emerges as Key in Fight Against IEDs
- New Threats Encourage AEW&C Growth
- Radar Tags Tell Friend From Foe
- Non-Lethal Kits Go to Combat Troopers
- Interoperability in a Small Package
- Truck Crews Test Anti-Sniper Acoustic Sensors

Energy Security

- Bush, Resetting Agenda, Says US Must Cut Reliance on Oil
- Russia, Uzbekistan Sign Oil and Gas Agreement
- New Friendships and Petropuzzles
- Power Games

Military Operations

- Effects Based Operations (EBO) in Urban Combat
- Situational Assessment (SA) in Urban Combat

Nuclear Proliferation

- US in U-turn over Nuclear Reprocessing
- How to Spot States making Secret Plutonium
- In the Shadow of Iran's Nuclear Threat

CONTEMPORARY CONFLICT

[Hamas Steps Into a Complex Landscape](#)

The Boston Globe – 24 January 2006

There is more uncertainty than clarity surrounding this week's Palestinian elections, though this much is plain: Hamas, the Islamist movement designated a terrorist organization by the United States and considered a mortal enemy by Israel, will be joining the legislature. Its entrance is unlikely to be quiet. Riding an unprecedented wave of popularity and having outperformed expectations in recent municipal elections, it is on pace to capture a sizable portion of votes and, perhaps, find a seat at the Cabinet table.

[Peace-Enabling Force Could Enhance Security of a Palestinian State](#)

RAND Corporation – 31 January 2006

If a Palestinian state is created, an international peace-enabling force led by the United States and ideally organized through NATO could play an important role in enhancing the security of both Israel and Palestine, a RAND Corporation study issued today concludes. The report proposes that if both Israel and Palestine agree, an international peace-enabling force should be deployed along Palestine's borders with Egypt, Jordan and Israel after adoption of a peace agreement. The force would help monitor and patrol border crossings and checkpoints, supervise further moves to reinforce Israeli-Palestinian peace, and engage in other duties agreed to by all parties to help the new Palestinian state succeed and live side-by-side in peace with Israel. The peace-enabling force should be composed of roughly 2,500 to 7,000 troops at a cost estimated to range from \$550 million to \$1.5 billion annually, the study says.

DEFENCE INDUSTRY

[Expanding Private Military Sector Faces Structural Change and Scrutiny](#)

Janes Intelligence Review – 16 January 2006

Few would have predicted the impact that the situation in Iraq since 2003 and, to some extent, Afghanistan since 2001, would have on the development of the private military and security industry. This has manifested itself not only in public debate over the role and accountability of companies operating in the sector - which itself is central to the industry's future - but equally in the evolution of most of its constituent companies individually, in terms of the services they offer, their ownership

[Israel Considers V-22 Acquisition](#)

Janes Defence Weekly – 25 January 2006

The Israel Air Force (IAF) is seriously considering procurement of Bell/ Boeing V-22 Osprey multimission tiltrotor aircraft, defence sources have told JDW. The IAF is preparing to issue a request for information in the coming months and is sending its Chief of Air Directorate for Helicopters, Brigadier General 'Tamir', to fly the aircraft in the US. Offering a range greater than 1,000 km and a speed of 275 kt - much faster than most helicopters - the V-22 is being considered by the IAF for special forces missions as well as search and rescue. "It could provide new dimensions to IAF capabilities, especially now that Israel is facing a distant developing threat from Iran," an industry source told JDW. "With the V-22's air-to-air refuelling capability, the range could even be further extended, providing the IAF with new deterrent capabilities." However, its unit cost, estimated at USD70 million, might impede such a procurement. "The Osprey is indeed an expensive platform, but it could relieve the IAF from the need to upgrade all of its Hercules and Sea Stallion fleet and [allow it to] decommission some of them," said the industry source.

[Most Military Reservists See Income Rise When Called to Active Duty](#)

RAND Corporation –25 January 2006

Most U.S. military reservists called to active duty in 2003 have seen their earnings rise, contradicting the perception that reservists generally lose income when called to service, according to a [RAND Corporation study](#) issued today. A review of pay records among a sample of reservists called to active duty found that 72 percent experienced pay increases, with the income boost averaging 25 percent over what they earned when not serving on active duty. The income increase averaged about \$10,000 per year.

DEFENCE TECHNOLOGY

[Airborne Surveillance Emerges as Key in Fight Against IEDs](#)

Janes Defence Weekly –23 January 2006

Persistent, long-term airborne surveillance is emerging as a key capability in the fight against remotely controlled improvised explosive devices (IEDs) in Iraq and Afghanistan. In the search for technological solutions to the problem of how to find and disable IEDs, US planners have realised the benefits of analysing Ground Moving Target Indicator (GMTI) data to reveal patterns of activity. At the Defence IQ Combat Identification 2006 conference in London on 18 January, US Air Force Colonel Michael Graham outlined the role of the service's E-8 Joint Surveillance Target Attack Radar System (Joint STARS) aircraft in counter- asymmetric warfare operations.

[New Threats Encourage AEW&C Growth](#)

Janes International Defence Review –1 February 2006

More and more countries are looking at the acquisition of airborne early warning and control (AEW&C) systems, driven by an emerging threat from ballistic and cruise missiles, by the increasing use of aircraft for illegal activities such as drug smuggling, and by the proven value of AEW&C as a force multiplier. At the same time, new systems and solutions are emerging to deal with the threat of stealthy or low-observable (LO) targets. Two US programmes use two proven approaches to improving the counter-LO performance of an airborne radar. One of these selects a lower frequency than the microwave bands where most airborne radars operate. This makes many forms of radar-absorbent material useless and can also counter LO shaping. The E-2 Hawkeye has always used an ultra-high frequency (UHF) radar, and this feature, carried over into the new Advanced Hawkeye Radar for the new E-2D, is expected to allow this system to protect the fleet from LO threats.

[Radar Tags Tell Friend From Foe](#)

New Scientist- 1 November 2005

The US army has successfully tested a radar tag that could allow aircraft to easily identify their own ground vehicles, helping to prevent "friendly fire" incidents. The Athena Radar-Responsive Tag is about the size of a cigarette packet, and can be attached to tanks, trucks and other ground vehicles. When the radar from an airplane hits it, the device transmits back its own radar signal that identifies it as a friendly vehicle. The device is similar in principal to the Identification Friend or Foe (IFF) systems that already allow military ships and aircraft to identify one another. But to be useful for ground vehicles, the tags have to be small and affordable.

[Non-Lethal Kits Go to Combat Troopers](#)

National Defense Magazine – February 2006

Troops in Iraq and Afghanistan have just received non-lethal crowd-control sets that were assembled by the project manager for close combat systems at Picatinny Arsenal, N.J. The 68 sets are designed for use by a 30-member platoon. Among the items provided are non-lethal grenades, tire spikes, a vehicle-arresting barrier, face shields, shin guards, body shields, and voice amplification and high-intensity lighting devices.

[Interoperability in a Small Package](#)

National Defense Magazine – February 2006

A palm-sized ultra-high very-high frequency radio for military, security, and first-responder users has just been developed by Tadiran Communications, of Petach Tikva, Israel. The military-grade systems provide reliable communications for squad or team use and offer connectivity to far-flung networks.

[Truck Crews Test Anti-Sniper Acoustic Sensors](#)

National Defense Magazine – February 2006

To help defend U.S. soldiers in Iraq from sniper attacks, the Army will be testing a prototype acoustic sensor that will be installed in a weapon-mounted Humvee truck. Acoustic sensors detect, locate, and classify gunfire by sound. A Humvee — equipped with a weapon system that is remotely operated from inside the truck — will detect a sniper by the sound of the gunfire and target the weapon in the direction of the enemy shooter.

ENERGY SECURITY

[Bush, Resetting Agenda, Says U.S. Must Cut Reliance on Oil](#)

The New York Times -31 January 2006

President Bush offered the nation a modest menu of energy, health and education proposals and warned against the "false comfort of isolationism" on Tuesday in a State of the Union address that sought to reassert his control over the nation's agenda heading into a pivotal midterm election campaign. In one of his most striking declarations, Mr. Bush said "America is addicted to oil" and set a goal of replacing 75 percent of the nation's Mideast oil imports by 2025 with ethanol and other energy sources.

[Russia, Ubezkistan Sign Oil and Gas Agreement](#)

RIA Novosti - 25 January 2006

Russia and Uzbekistan signed several preliminary agreements to develop oil and natural gas deposits in the Central Asian republic at an economic summit in St. Petersburg Wednesday. Russian energy giant Gazprom and Uzbek officials signed a document, stipulating basic principles of a bilateral product-sharing agreement that the sides are expected to sign in the second half of 2006. The document was signed in the presence of the leaders of the Eurasian Economic Community (Eurasec), an economic club of former Soviet republics formed in 2000. The organization took on Uzbekistan as a new member Wednesday. The other Eurasec members are Russia, Belarus, Kazakhstan, and Tajikistan.

New Friendships and Petropuzzles

The Economist -26 January 2006

“CHINA is one of the most important markets for oil, and Saudi oil is one of the most important sources of energy for China.” So declared Saud al-Faisal, Saudi Arabia's foreign minister, as his country's leader, King Abdullah, began an Asian tour this week by meeting China's president, Hu Jintao. Though America is Saudi Arabia's biggest customer and oldest friend, the king's choice for his first official trip outside the Middle East perhaps ought to be no surprise. China is, after all, proving to be an unquenchable customer in the world oil market. A recent global survey across 15 countries revealed that the most desired features in a future mobile device was a long-life battery. Two-thirds of mobile and personal digital assistant owners said two days' active battery life was vital. The report said that poor battery life on mobile devices was one of the main reasons people did not play more games, music and video on their devices more often.

Power Games

The Economist - 5 January 2006

FOR a man such as Vladimir Putin, who calls the collapse of the loathsome Soviet Union the greatest geopolitical catastrophe of the 20th century, using Russia's energy riches to pamper or punish its former vassals according to whim must seem like a natural thing to do. But the decision of Russia's president this week to cut off gas supplies to Ukraine over a price dispute, on the very day he became president of the G8 rich-nations group, was a shock nonetheless. And although Russia resumed supplies after only two days, following an outcry from the wider world, it sent shivers far beyond eastern Europe. Is the “oil weapon” of the 1970s—the withholding of energy for political ends—coming back in a new guise?

MILITARY OPERATIONS

Effects Based Operations (EBO) in Urban Combat

Defence Update –Issue 01(2006)

Because the use of heavy weapons is restricted in urban environments, the employment of Effects Based Operations (EBO) has become more desirable for many operations. EBO provides commanders with a methodology, and planning and prediction tools to assess the effects of different types of operations, including employment of forceful activities by lethal weapons of all types.

Situational Assessment (SA) in Urban Combat

Defence Update – Issue 01(2006)

Planning and preparation of military operations in urban terrain can benefit from modern 3D modeling tools. These tools assist planners in evaluating various options, assessing advantages and risks, and producing tactical decision aids that improve situational awareness for the warfighters and commanders.

NUCLEAR PROLIFERATION

US in U-turn over Nuclear Reprocessing

New Scientist – 4 February 2006

EVEN as it campaigns against Iran's nuclear programme, the Bush administration seems ready to overturn a 30-year domestic ban on reprocessing spent nuclear fuel. It also wants to reprocess spent fuel from other countries, arguing that the US is a safer place to keep extracted plutonium. Reports last week indicated that the US Department of Energy is proposing the use of a new technology known as UREX. Developed by the Argonne National Laboratory in Illinois, the procedure can reprocess spent fuel and produce a mix of plutonium and uranium, which can be used to fuel reactors.

How to Spot States Making Secret Plutonium

New Scientist – 27 January 2006

"IRAN is not frightened by the threat of any country and it will continue the path of production of nuclear energy." With those words from president Mahmoud Ahmadinejad, Iran's engineers ripped off the seals on their uranium-enrichment equipment and fired up the Natanz plant in central Iran. The move came in defiance of the governments of the European Union and the US, which fear that Iran will use the findings of its research to produce material to make a nuclear bomb. But the issue of nuclear proliferation goes much wider than Iran. The number of nuclear reactors around the world is set to rise as nations look for ways to cut their greenhouse gas emissions, and all reactors can potentially be used to make plutonium for nuclear weapons. Because of this possibility, it might be useful for countries to be able to monitor each other to make sure weapons-grade plutonium is not being made on the sly.

In the Shadow of Iran's Nuclear Threat

The Christian Science Monitor – 2 February 2006

With Thursday's commencement of another International Atomic Energy Agency meeting to discuss Iran's nuclear pursuits, it is time to take a realistic look at the potential threat. At best, a nuclear armed Iran would undo the delicate balance of

power in the Middle East. At worst, it could start a global Armageddon. The solutions being offered range from military action to continued negotiations and granting of more concessions. But the possibility of a nuclear armed Iran is some way off. The director of the Defense Intelligence Agency, Vice Admiral Lowell Jacoby, testified in February 2005 that Iran is unlikely to have the ability to build a nuclear weapon before "early in the next decade."