



# Coming Down From a High

Financial crises, drawdowns and public perceptions are shaping military budgets, but there are bright spots. Chuck Weirauch and Walter F Ullrich report.

**I**n both the United States and Europe, militaries are facing the realities of changing military and economic environments.

Operational deployments are scheduled for drawdown, and national budgets are continuing to react to financial crises. While there is some encouraging news for the industry in North America, the forecast is not so fair in Europe

## US Military

As the drawdown of forces from Iraq continues, the military is taking a hard look at ways to reduce operating costs and the military acquisition process is being subjected to increasing scrutiny. Training equipment and services vendors attending the 2010 Training & Simulation Industry Symposium (TSIS) in Orlando June 9-10, however, did receive some encouragement from US military training organizations about future business prospects in spite of the anticipated Department of Defense (DoD) budget

cuts. As well, agencies discussed their immediate procurement plans; selected opportunities presented at TSIS are shown in the accompanying table.

The Army's Program Executive Office for Simulation Training and Instrumentation (PEO STRI) projected an upward trend in funded annual contract dollars over the next few years from over \$3.5 billion in fiscal year 2011 to just shy of \$6 billion in FY 2017.

New Naval Air Warfare Center Training Systems Division (NAWCTSD) Commander Captain Bill "Roto" Reuter pointed out that the Chief of Naval Operations Vision 2010 considers simulation as the key to energy strategy, cost reduction and environmental focus.

Stephen Cricchi, Director of the Naval Air Systems Command (NAVAIR) Integrated Systems Evaluation, Experimentation and Test Department (ISEET) noted that in the face of increasing operational costs, the Navy will be decreasing actual flight training time and maximiz-

*Above*

*The PEO STRI Medical Simulation Training Centers (MSTCs) contract, with total funding of \$215m, calls for 17 more MSTCs.*

*Image credit: US ARmy/Ft. Carson MSTC.*

ing the use of simulation training. "What this means", he pointed out, "is that simulation requirements are changing for training and readiness requirements, which puts your industry in an exciting position from a training systems and acquisition perspective."

Several presenters, including keynote speaker Major General Mark Graham, Deputy Chief of Staff for the Army Forces Command (FORSCOM) drew attention to the force drawdown that will double the number of units that will be back in the US by 2012. That will increase the need for expanded Home Station training and improved training capabilities at Combat Training Centers (CTCs), they explained.

Graham cited the use of LVC gaming in the Integrated training Environment as one solution to the need for more Home Station training.

Gregg Knapp, Executive Director for the US Joint Forces Command (USJFCOM)'s Joint Warfighting Center and Joint Training Directorate told the TSIS audience to expect a shift from more of the "big systems-type trainers" to more of the "mental stimulation" type that will allow military leaders to become more adaptable. This shift will call for changes in the acquisition process, he noted.

## **NAWCTSD**

According to Captain Reuter, NAWCTSD had 325 projects in hand in FY 2010, with a total of \$863 million in FY 2010 contractual funding.

Robert Seltzer, Deputy Director of the NAWCTSD Research and Technology Program Office, outlined the five key focus areas of NAWCTSD R&D contractual work: human performance modeling and assessment; distributed LVC synthetic training; virtual environments and training technologies; tactical decision support for command and control and (new) human social, cultural and behavioral modeling.

John Freeman, Director of NAWCTSD Surface and Expeditionary Warfare Programs, told the audience that NAWCTSD has just been named as the Littoral Combat Ship (LCS) Training System Executive Agent by the Navy. The LCS work will involve the development of curricula, courseware, interactive multimedia instruction, trainers and simulators and an immersive virtual operations and maintenance training capability. NAWCTSD announced \$10.3 million in LCS training support contracts at the TSIS. The Orlando Navy training command has also been tasked to develop a Full Mission Bridge (FMB) trainer for the next generation DDG 1000 Zumwalt class advanced destroyer.

## **PEO STRI**

In a recorded message, PEO STRI Program Executive Officer James Blake told TSIS attendees to expect "some decrease" in agency supplemental funds for the acquisition of training products, but that it is "not all gloom and doom, however." He said that PEO STRI expects to see some non-traditional sources of funds coming from the organization's customers, particularly from the system program managers. Simulation and training remain a priority for the Army, he emphasized, and that his agency is the service's lead for such products. The expectation of non-traditional funding would seem to be the key element in PEO STRI's projected continual growth during the next few years.

PEO STRI Strategic Integrator Scott Pulford provided an overview of the organization's forecast for 2015 and its updated Vision and Strategic Objectives. He reported that the agency foresees the expanded use of gaming technologies, a greater demand for joint, intergovernmental and multinational training to support full spectrum operations and more training content with less emphasis on major platforms. These solutions will perform in the new Integrated Training Environment (ITE), he added. Part of the 2015 goals are to become the preferred material developer and sustainer for all Army TADSS (training aids, devices, simulators and simulations) and to be recognized as the material developer of and the Center of Excellence for Joint Medical Simulation.

"There is a tremendous amount of emphasis and expectation on how gaming is going to replace a large chunk of the

curriculum in the institutional Army," Pulford said. "The LVC Integrated Architecture is about to be awarded - a program of record that is our first effort to integrate across these three training domains. Becoming a Joint Center of Excellence for Medical Simulation, with ties to the University of Central Florida's Medical School, is a great opportunity to expand our Medical Simulation Training Centers to include training for doctors and nurses at the hospital level. Overall, there is a tremendous amount of growth that we see on the horizon in terms of doing training enablers and systems support for our sister PMs and PEOs."

The PEO STRI Medical Simulation Training Centers (MSTCs) contract announced at the 2010 TSIS is a major one, with total funding of \$215 million. The contract calls for 17 more MSTCs in addition to the 17 already established and the potential for foreign military sales of the systems. The draft RFP is scheduled to be released in the first quarter of fiscal year 2011, with a contract award in August 2011.

Rob Miller, Associate Chief Systems engineer for Constructive Simulations provided the TSIS audience with a list of what PEO STRI considers to be some of its technology challenges and asked for industry support in helping in to resolve them. Included on his list were improved visualization strategies; human intelligence collection operations modeling; automated feature extraction from satellite and lidar imagery, intelligent role player and operator assistant technologies; avatar support for human intelligence interrogation; processing unstructured human language in a tactical environment; immersive technologies and adaptive behavior targets.

### Air Force

According to Pasquale Gambatese, Deputy Director of the Air Force Training Systems Product Group, the Air Force's Distributed Mission Operation (DMO) network training capability is now required to be incorporated into all aircraft training system upgrades and recompetes contracts. This includes the C-17, C-5 and KC-135 training systems. Such further development and expansion of the DMO system is a critical opportunity for the Warfighter, he said. While several of the major Air Force contracts are for continuations of training pro-



grams for older aircraft platforms, the impact of the new Global Hawk Weapon System Trainer contract "will be huge," Gambatese said. This training system will also have to be DMO capable as well.

But the biggest Air Force news is the announcement of a new ten-year Training System Acquisition & Support (TSAS) with a ceiling of \$15 billion to replace the current one. The TSAS will be the contract vehicle of choice for the Training System Product Group. An RFI was released in January of this year, with the acquisition strategy due in April 2011. An RFP is scheduled to be released in September 2011, with a contract award in August 2012. The primary contact for the new TSAS contract is Kristi Forino (kristi.forino@wpafb.af.mil).

### Europe

The outlook for Europe's defence industries does not appear overly promising these days. Although the defence sector emerged from the global economic crisis last year relatively unscathed, the unprecedented cuts European governments are all planning in order to evade the consequences of the 2010 Euro crisis will severely affect the sector. Defence, which isn't exactly popular in Europe, is seen to provide considerable savings potential. Across the board, national MoDs are calling for a shifting, stretching, reduction or cancelling of programmes. These cuts will not be limited to the major programmes such as Eurofighter or naval frigates. Everything is under review. What is the way out for industry? At the Eurosatory defence fair the French Defence Minister Hervé Morin suggested

*Above*

*The platform of Finmeccanica's and EADS Defence & Security's joint proposal for AEJPT will be the Aermacchi M-346.*

*Image credit: Aermacchi.*

that to survive the budget cuts, the European industry should step up its pursuit of collective research and development and create industrial consortia across Europe.

That is exactly what EDA, the European Defence Agency, has done. Since July 2004, EDA has been preparing the field for more European collaboration. EDA thus provides opportunities for industrial restructuring and progress towards the continental-scale demand and market which industry needs. Various EDA activities involve training and education.

The continued pressure on defence budgets is accentuating the need to find more efficient ways of providing capability to the forces. EDA has recognised that defence co-operation is a highly complex and challenging business that cannot happen effectively without a large population of key actors with the skills, common understanding and values to work in co-operative programmes. Back in 2007 the National Armaments Directors therefore directed the Agency to focus in particular on education in European armaments acquisitions. The result is the European Armaments Co-operation (EAC) Framework, a set of skills, understanding and values across eight defined knowledge areas. Against this backdrop, the EDA is establishing

with the participating Member States a database of training and education currently available for international students and is developing options for an internet-based distance-learning package. This intelligent approach will then result in a Europe-wide common understanding of and approach to armaments co-operation that will benefit all, including industry.

There are two significant projects that are leveraging this strategy of cooperation: AEJPT and UCATT.

### AEJPT

The aim of the Advanced European Jet Pilot Training System (AEJPT) project is to develop a common Integrated Training System (ITS) to train future fighter pilots. Current programme participants include Austria, Belgium, Finland, France, Greece, Italy, Portugal, Spain and Sweden; Germany and Switzerland are observers. For many years the programme was simply plodding along. In February 2009, the AEJPT was adopted by EDA; it is currently in a pre-contract phase. In May 2010, the AEJPT Policy Group (PG) decided, amongst other things, that the AEJPT will be based on

a mix of jet and turbo prop aeroplanes, with two bases in the south of Europe and one deployment base in the north. The business model calls for medium- to high-level outsourcing.

The competition model provides for EU-limited distribution with a maximum of five competitors. EDA has released a Request for Information (RFI) to the industry on behalf of the contributing Member States. This information will be used as the basis for a Request for Proposals scheduled for October 2011 that will cover development and production. Bidders' selection is scheduled for July 2012; the contract will be awarded in 2014. The initial operational capability is scheduled for 2017, and, finally, the AEJPT should achieve full operational capability in 2020.

### UCATT

In September 2010, under the mandate of the NATO Modelling and Simulation Group (NMSG), the UCATT Task Group will conduct a technical interoperability demonstration that has all the potential to redefine live training in built-up areas. UCATT stands for Urban Com-

bat Advanced Training Technology. The event will show live training systems interoperability between various technologies and vendors. It will include small arms, combat vehicles, anti-tank weapons, indoor and outdoor tracking, shoot through walls, exercise conduct and evaluation. Soldiers from the Netherlands, Germany, Sweden and Switzerland will participate on behalf of NATO and PfP Nations.

First technical implementations of the UCATT concept will be provided by UCATT's industry partners Cubic, NSC, RDE, RUAG, SAAB and Tenetec. If UCATT's vision of unclassified, interoperable, multi-national, industry-independent urban training technology architecture becomes a reality, armies from different countries could more easily train together. When obstacles set by proprietary hardware and interfaces disappear, industry can compete on a much larger scale. Markets that were completely closed will be open to any company, because purchasers are no longer married for life to their original providers. And that will make it a win-win situation for all parties. **ms&t**

## TSIS Contract Opportunities

Contract	Value	RFP	Award	Contact
<b>NAWCTSD</b>				
AV-8B Maintenance Trainers	\$9M	4Q/13	2Q/14	orlo_businesssupportteam@navy.mil
AV-8B Tech Refresh	\$11M	4Q/13	2Q/15	orlo_businesssupportteam@navy.mil
UH-1Y/AH-1Z FTDs	\$108M	Aug/10	Jun/11	orlo_businesssupportteam@navy.mil
USMC ATS Training Systems Mgt.	\$80M	4Q/10	3Q/11	orlo_businesssupportteam@navy.mil
Marine Common Aircrew Trainer	\$18M	3Q/11	2Q/12	orlo_businesssupportteam@navy.mil
T45C Trainer Technology Refresh	\$35M	TBD	TBD	orlo_businesssupportteam@navy.mil
Aviation Survival Training (ejection seats)	\$942K	4Q/10	3Q/11	NAWCTSD Aviation 407-380-8110
Aviation Survival Training (helicopter hoist)	\$1.6M	3Q/10	2Q/11	NAWCTSD Aviation 407-380-8110
Tower Simulator Device	\$20M	3Q/11	1Q/12	NAWCTSD Aviation 407-380-8110
HC-144A Operational Flight Trainer	\$22M	4Q/10	2Q/11	NAWCTSD Aviation 407-380-8110
Instructional Systems Dev. MH/CH-53D/E	\$4.5M	2Q/11	4Q/11	NAWCTSD Aviation 407-380-8110
Instructional Systems Dev. F-18 Schools	\$7M	3Q/11	2Q/12	NAWCTSD Aviation 407-380-8110
Instructional Systems Dev. Navy helicopters	\$6.7M	3Q/11	2Q/12	NAWCTSD Aviation 407-380-8110
CISLANT Contractor Instruction Services	\$33M	1Q/11	3Q/11	NAWCTSD Aviation 407-380-8110
CISPAC contractor Instruction Services	\$33M	4Q/10	2Q/11	NAWCTSD Aviation 407-380-8110
CNATRA Contractor Ops, Maintenance	\$20M	2Q/11	4Q/11	NAWCTSD Aviation 407-380-8110
Command Aircraft Crew Training UC-12	\$10M	Aug/10	3Q/11	NAWCTSD Aviation 407-380-8110
Command Aircraft Crew Training T-39	\$800K	Jul/10	3Q/11	NAWCTSD Aviation 407-380-8110
Command Aircraft Crew Training C-20A/D	\$2.2M	Aug/10	2Q/11	NAWCTSD Aviation 407-380-8110
Command Aircraft Crew Training C-40A	\$3.5M	May/10	2Q/11	NAWCTSD Aviation 407-380-8110
Submarine COMS	\$20M	2Q/11	4Q/11	NAWCTSD Undersea 407-380-4160
SUBSKILLSNET new software, hardware	\$5M	1Q/11	4Q/11	NAWCTSD Undersea 407-380-4160
Trainer Mods Submarine Learning Centers	TBD	4Q/11	2Q/12	NAWCTSD Undersea 407-380-4160
Human Performance Modeling R&D	\$7M	1Q/11	2Q/11	NAWCTSD R&T Office 407-380-4631
Fire Fighting/ Damage Control FFT	\$3.5M	2Q/11	3Q/11	NAWCTSD Surface 407-380-4029
DDG-51 Machinery Control System Trainer	\$2M	TBD	TBD	NAWCTSD Surface 407-380-4029 >>

11G2A CIWS Maintenance Trainer	\$800K	3Q/10	4Q/10	NAWCTSD Surface 407-380-4029
Littoral Combat Ship (LCS) Trainers	\$2.7M	3Q/10	4Q/10	NAWCTSD Surface 407-380-4029
LCS Readiness Control Officer Simulations	\$1.5M	1Q/11	2Q/11	NAWCTSD Surface 407-380-4029
LCS Virtual Maintenance Performance Aid	\$2M	2Q/11	3Q/11	NAWCTSD Surface 407-380-4029
Landing Craft Air Cushion Training	\$750K	2Q/11	3Q/11	NAWCTSD Surface 407-380-4029
Navigation, Seamanship and Shiphandling	\$43M	1Q/11	2Q/11	NAWCTSD Surface 407-380-4029
PC-based Reconfigurable Simulations	\$42M	4Q/10	2Q/11	NAWCTSD Surface 407-380-4029
Authoring Instructional Materials	\$4.5M	3Q/10	1Q/11	NAWCTSD Cross Warfare 407-380-4440
Maritime Skills Simulator Classrooms	\$500K	4Q/10	1Q/11	NAWCTSD Cross Warfare 407-380-4440
Defense Support of Civil Authorities Phase II	\$3M	4Q/10	1Q/11	NAWCTSD Cross Warfare 407-380-4440
Global Logistics Support Services	\$49M	3Q/10	1Q/11	NAWCTSD Cross Warfare 407-380-4440
Depot Level Maint Aircraft Staff Support	\$201M	4Q/10	2Q/11	NAWCTSD Cross Warfare 407-380-4440
Production Support Services	\$61M	1Q/11	3Q/11	NAWCTSD Cross Warfare 407-380-4440
Jordan Full Mission Bridge Trainer	\$2.5M	1Q/11	3Q/11	NAWCTSD International 407-381-8648
Royal Saudi Naval Forces Team Trainer	\$6M	1Q/11	3Q/11	NAWCTSD International 407-381-8648
Iraq Off Shore Vessel Training Systems	\$16M	4Q/10	4Q/10	NAWCTSD International 407-381-8648
Taiwan Navy OFT/WST Simulators	\$48M	4Q/10	1Q/11	NAWCTSD International 407-381-8648
Enhanced International Peacekeeping	to \$2M	1Q/11	3Q/11	NAWCTSD International 407-381-8648
Global Peace Operations Initiative	to \$3M	1Q/11	3Q/11	NAWCTSD International 407-381-8648

### PEO STRI

Medical Simulation Training Centers	\$215M	1Q/11	Aug/11	percy.parker@peostri.army.mil
Games for Training Increment II Flagship	\$20M	4Q/11	2Q/12	leslie.dubow@us.army.mil
Mi-17 FTD/G222FTD	\$15M	TBD	TBD	michael.younce@us.army.mil
AH-2F Cobra, Bell 412 Full Mission Sims	\$50M	TBD	TBD	michael.younce@us.army.mil
SLAMRAAM Suite of TADSS	\$5M	TBD	TBD	darryl.williams@us.army.mil
Common Driver Trainer (CDT)	\$350M	TBD	TBD	darryl.williams@us.army.mil
Desktop Maintenance Trainer	\$100M	TBD	TBD	Wayne.Golon@us.army.mil
MH-47/MH-60 Special Operations Upgrade	\$31M	Aug/10	Jan/11	Wayne.Golon@us.army.mil
Call for Fire Trainer II (CFFT)	\$11M	Nov/10	May/11	dererick.giles@us.army.mil
Joint Land Component Constructive Training	\$30M	4Q/11	Oct/11	mike.haddad@us.army.mil
Joint & Coalition Simulation Systems	TBD	N/A	N/A	don.phllpitt.@us.army.mil
Royal Saudi Land Forces CTC	\$85M	TBD	TBD	robert.farney@us.army.mil
Saudi Arabia National Guard CACTF	\$40M	TBD	TBD	robert.farney@us.army.mil
Taiwan Military MILES	FMS	4Q/10	3Q/11	james.montgomery@us.army.mil
CTC Modernization Instrumentation Systems	\$37M	2Q/11	4Q/11	Anne.Dunlap@us.army.mil
Interim Range Systems (IRS)	\$50M	3Q/10	1Q/11	Mark.Dasher@us.army.mil
Digital Ranges Training (DRTS)	\$450M	3Q/10	2Q/11	Humberto.Ravelo@us.army.mil
Shoulder Launched Munitions Recompete	\$20M	4Q/10	2Q/11	Andrew.Echols@us.army.mil
Individual Weapons Systems Recompete	\$27.6M	1Q/11	3Q/11	David.Brunat@us.army.mil
Combat Vehicle System (CVS) Recompete	\$100M	1Q/11	3Q/11	Michael.Bergman,us.army.mil
Range Radar Replacement Program	\$75M	TBD	3Q/11	bob.arora@us.army.mil
Joint Urban Test Capability	TBD	3Q/11	1Q/12	lorraine.castillo@us.army.mil
Rotary Wing Targets	TBD	3Q/10	2Q/11	llane.mcgee@us.army.mil
Mobile Ground Targets	\$25M	Sep/10	Mar/11	amy.donlin@us.army.mil

### Air Force Training System Product Group

KC-X Training Systems	TBD	Feb/11	Jan/12	mark.dipadua@wpafb.af.mil
C-130J Maintenance & Aircrew Training System	\$30M	TBD	TBD	daniel.annett@wpafb.af.mil
C27J Training Systems	TBD	FY11	TBD	daniel.annett@wpafb.af.mil
AWACS Mission Training Center	\$51M	TBD	Dec/13	kelly.morris@wpafb.af.mil
AWACS Maintenance Trainer System	\$25M	Jul/10	Jul/11	kelly.morris@wpafb.af.mil
AWACS Flight Crew Trainer	\$158M	TBD	Aug/14	kelly.morris@wpafb.af.mil
DMO Operations and Integration	TBD	Apr/12	Jun/13	andrew.hostetter.wpafb.af.mil
F-15 ATD/MTD	TBD	Mar/11	TBD	john.skalski@wpafb.af.mil
F-16 Training System Recompete	\$350M	Aug/10	Mar/11	rick.fennell@wpafb.af.mil
B-1 Training System	TBD	Aug/10	Oct/11	lindsay.liming@wpafb.af.mil
Predator Mission Aircrew Training Systems	\$89M	Aug/10	May/11	michael.carroll@wpafb.af.mil
T25 Simulator for Electronic Combat Training	\$19.9M	Jul/10	Dec/10	debra.botkin@wpafb.af.mil
Global Hawk Weapons System Trainer	\$58M	Feb/11	Mar/12	ilya.lipkin@wpafb.af.mil