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MONDAY, NOVEMBER 28, 2016

USAF Looks to SCARS for Cost and Schedule Savings

With Virtual-Constructive operational training now an everyday event in the US Air Force, it's no surprise that planners are positioning to expand that critical capability in the future.

Key to the planning process is the Simulator Program Office at the Air Force Life Cycle Management Center at Wright-Patterson Air Force Base, which oversees a current inventory of 46 different simulator systems.

"What's happened over time is that we have bought each of these systems as the aircraft came online or as the weapons system came online, which means they are all different designs," explained Colonel Daniel Marticello, Simulators Division Chief. "So I've not only got a livery of 46 different systems, but even in each of those 46 there are varying baselines. For instance, there are 11 different configurations of C-17 sims, because they were bought over a span of ten to twenty years. And then you look at F-16s where I've got eight different configurations."

"In the past, the Air Force may not have cared as much about 'what happened behind the curtain.' We only cared that the simulator was an accurate representation of the weapon system, with the managing of the baseline designs left to the contractors. But now, in this era of cyber security, we have to be able to update all of those baselines."

But updating each of the individual baselines to maintain cyber security comes at a cost, which Marticello characterized as "a cyber security tax".

"It's a tax in the form of documentation and in the form of scans; in the form of all the checking that you have to do to ensure that particular configuration is safe from cyber threats," he said. "Obviously, across 46 systems – with many branches within each – that's just cost prohibitive."

He returned to the example of the 11 C-17 simulators, noting that vulnerability patch upgrades across all models would not only be cost prohibitive but also schedule prohibitive.

The solution being pursued by Marticello's office is called Simulator Common Architecture Requirements and Standards (SCARS).

"It's an attempt to do what the smart phone industry has done over the last decade," he said. "If you remember back in the day when cell phones were new, there was a plethora of different designs. Each vendor had their own implementation. But now there are basically two dominant designs, with the same underlying operating system on different phone models. So if there's a vulnerability in that operating system, the manufacturer pushes that patch out to all of those phones just once and they're done."

"What distinguishes your phone from my phone is really the applications that run on top," he added. "And that's what we want to do to simulators. We want to move towards an open system

BLENDED WARRIOR	NTSA WELCOME	I/ITSEC NEWCOMERS
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TODAY'S CONFERENCE
HIGHLIGHTS
MONDAY, NOVEMBER 28

SIGNATURE EVENTS

1030 -1200 **Congressional Modeling, Simulation and Training Panel**
(Room W311BCD)

1430-1600 **Operation Blended Warrior: Unrest to Upheaval** *(Booth 349)*

TUTORIALS (SEE PROGRAM GUIDE FOR SYNOPSES)

0830-1000 Tutorials *(Rooms W304A-H, W307A-D)*

1245-1415 Tutorials *(Rooms W304A-H, W307A-D)*

1430-1600 Tutorials *(Rooms W304A-H, W307A-D)*

EXHIBIT HALL HOURS

1400-1800

REGISTRATION HOURS

0730-1800

SHOWDAILY

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Cover photo: US Air Force

I/ITSEC 50th Anniversary Bags

This year marks I/ITSEC's 50th anniversary! What started as a gathering of fewer than 200 individuals has grown to an event with approximately 450 exhibitors and an anticipated attendance of about 15,000. Enthusiastic volunteers from government, industry, academia and research organizations again assembled on Sunday morning to help stuff 2,600 bags for attendees in what has become an I/ITSEC tradition. The effort is indicative of the teamwork that ensures the success of I/ITSEC each year.

Elbit Delivers First UK Training Project Aircraft

Elbit Systems (Booth 1901) has delivered the first two Grob G120TP Prefect elementary training aircraft to support the UK Military Flight Training System (UKMFTS) program.

In February 2016, Affinity Flying Training Services (AFTS) – a joint venture between Elbit Systems and KBR – was awarded a fixed price contract to support Ascent Flight Training in the delivery of the Fixed Wing element of the UK Military Flight Training System (UKMFTS) program with the UK Ministry of Defence. Revenue associated with this project is estimated to be circa £500 million, which will be split evenly between the two joint venture partners. The ground training will be provided by the Ascent consortium of Lockheed Martin (Booth 849) and Babcock. The UK-MFTS will be fully operational by 2019.

A key aim of the UKMFTS is to reduce the cost of pilot training. Affinity will procure, operate and maintain 38 aircraft and aircraft related infrastructure, through 2033. The training aircraft will be 23 Grob G 120TP Prefects for elementary flying training, 10 Beechcraft Texan T-6Cs for basic flying training, and five Embraer Phenom 100s for multi-engine pilot training. All aircraft will feature digital cockpits, thus exposing students at an early stage to the technologies they will rely on at the operational level.

The G120TP, which is a side-by-side two seater aircraft, will be used to teach basic aviation principles and handling skills as well as provide an introduction to basic navigation, night flying and instrument-only flying. The two Prefects were delivered to RAF Cranwell, home to the RAF College which trains the service's new officers, only nine months after contract award. The G120TP will also be based at RAF Barkston Heath where elementary flying training is conducted for Royal Navy and Army Air Corps students.

In September, Affinity awarded TRU Simulation & Training Inc. (Booth 1301), a contract to provide maintenance training courseware which will be used to train Affinity technicians and engineers supporting the T-6C Texan II.
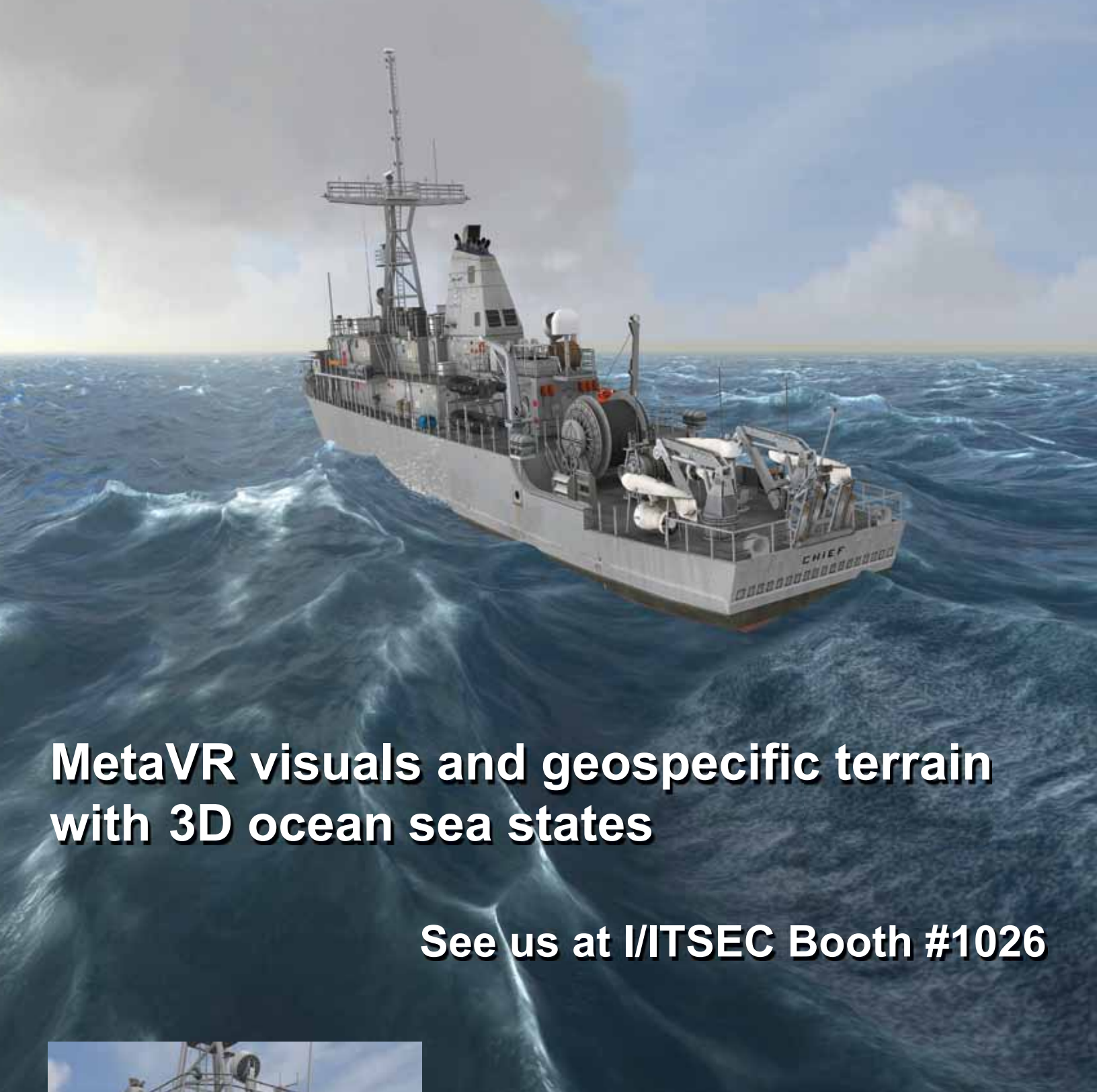
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architecture that will be common across all of our simulator platforms. Whether it's a tanker, transport, fighter, bomber, you name it, it's running the same underlying structure. It may not be the same hardware, but it's the same underlying architecture."

Marticello said that, once that underlying architecture is in place, the Air Force can use different applications to tailor the simulator into a particular weapon systems training device.

"So what does that do? Number one, it reduces the number of baselines we have to manage, so that makes things much more affordable. Number two, it reduces the number of baselines we have to patch if we discover a vulnerability. Again, this increases affordability and agility in the cyber world that we have to be able to respond quickly in. And thirdly, the SCARS approach allows us to segment data in the form of applications, so now we can partition off proprietary information or compete different components of the simulator versus having to build one monolithic system from one contractor. That increases both competition and innovation."

Marticello offered a comparison between different GPS map program applications, noting that they run on the same underlying architecture but that each one reflected how a vendor might bring something new to the marketplace.

"Just like that, SCARS gives an opportunity for a vendor to come in with an innovative product and 'buy their way onto the simulator' versus having a monolithic single point design by one contractor," he said. "There are a lot of advantages to moving toward an open system like that, which is why the commercial world has done that largely across most things electronic. And that's where we want to go with simulators."

Primary Air Force activities are currently directed toward the development of what the SCARS requirement or specification will actually look like.

"We're leveraging commercial standards that already exist," Marticello said. "For instance, there's a standard commercial interface for image generators called Common Image Generator Interface (CIGI). We're going to leverage as many of the things that have already been built and standardized by industry as possible."

"Our ultimate goal is to produce what I call an 'RFP [request for proposal] ready spec.' That will be the instruction set that we will put out for competition in FY19 to start converting our simulators over," he said,

Acknowledging that the specification "is going to be a mix," he offered, "There are going to be some things in that specification that will be highly specified, telling the contractor, 'You're going to do it this way.' There are going to be some areas in that spec where the contractors are going to compete for this business. They can pick from a host of options. Then there are going to be some areas in the spec that are going to leave it up to the vendor, but we're going to own the data rights."

"We're trying to balance all of that," he continued. "We don't want to be overly prescriptive – in order to allow for innovation – but we also want to ensure that we have an open system that can be maintained. So between now and FY19, that's what my team is working on here at Wright-Patterson, with the intent to start converting simulators over to the common architecture starting in FY19."

Asked about budgeting, Marticello said that the Air Force is currently looking to budget funding starting in FY19 "to start these conversions wholesale."

"So, versus the 'onesies' and 'twosies' that we would be able to do on the budgets we currently have, they are looking at giving us a large plus up starting at FY19 to convert. They realize all of our systems have to be updated. They can't continue to run multiple baselines with legacy operating systems in this new cyber environment."

In the meantime, Marticello said that his team intent is "to work with vendors to get their ideas on some of the things we talked about. What things should be specified? What things should be left as options? What's the best way to implement this architecture to get all stakeholders a place at the table to start designing this so,

> *"Just like that, SCARS gives you an opportunity for a vendor to come in with an innovative product and 'buy their way onto the simulator' versus having a monolithic single point design by one contractor."*
>
> —Colonel Daniel Marticello, US Air Force

when we start releasing draft RFPs in late FY17 and early FY18, we can get some good feedback going."

He noted that the Air Force has already established an Integrated Product Team (IPT) to support the draft RFP process, adding, "We will need to release the final RFP sometime in late FY18 if we hope to award a competition in FY19."

"The Navy's PMA 205 and Naval Air Warfare Center Training Systems Division are part of the government IPT and we're hoping to expand out to the Army as well," he said. "But for high end aircraft simulators, the Navy was the first step. They're actively participating and we're sharing our resources as part of the IPT."

While emphasizing that SCARS represents "a significant sea change" in Air Force simulators, Marticello cautioned, "We're not going to 'boil the ocean' by doing all the simulators in one year. We are probably going to stretch it across the FYDP [Future Year Defense Program]. Obviously with competition we're hoping to generate some savings, so we'll buy at a budget."

Between now and then, he said that his office will work to rollout and test incremental changes like the CIGI image generator specification.

"We're already talking to our contractors that are coming up for renewal on sustainment contracts or having modifications to the image generator system, whether they're putting in new projectors or a new visual system to start moving towards some of those common interfaces," he said.

Blended Warrior Builds on 2015 Success

After taking some valuable lessons from the inaugural Operation Blended Warrior (OBW) event last year, the live R&D exercise is again back at I/ITSEC, but vastly expanded in scope and ambition.

The unique event allows government and industry to team together to work on the standards and networking technologies needed for such complex, distributed exercises.

Underlining the success of the 2015 event, OBW has seen the number of participants increase from 31 to 50 this year, with some 90 systems being integrated.

RADM James Robb, USN (Ret.) President of NTSA, said the event this year had been expanded to include long haul feeds, multilevel security, cross domain solutions and performance measurements.

"NTSA is committed to supporting this year's I/ITSEC theme: 'Pushing the Training Envelope – Live, Virtual, Constructive' by helping our leaders inside the government shape the requirements for synthetic environments," Robb said.

"It is clear to the services that LVC has great potential but the challenge remains how to clearly define the requirements and effectively communicate them to industry so that they can align their own research and development towards common objectives. We are on a good path but there is much work to be done."

With strong support again from all four services, much of the action during OBW will be focused on the event's Distributed Training Center at Booth 349.

While the overall approach is similar to 2015, instead of running 15 disparate 30 minute vignettes, OBW will feature five continuous battle threads – aviation, ground,

maritime, cyber, and C4I – that will run concurrently throughout all five windows.

This gives the team the advantage of demonstrating an increased amount of LVC activities within the timeframe of the event.

OBW Director Kent Gritton said the team was able to leverage a number of key lessons from 2015 as it prepared for an even more complex event this year.

"We did learn quite a bit from last year. Things in the integration space, standards, some policy issues, different aspects and the advantages of cyber and some of the architectural challenges. So we uncovered quite a few things that we were able to learn from, which is quite valuable," Gritton explained.

"These were things that for the most part we expected but it gave us a little more clarity on some of the rationale behind them, which was very beneficial for us."

One of the key focus areas was injecting more 'live' assets from outside the exhibition center into the exercise, with Rockwell Collins (Booth 2300) flying an L-29 jet trainer from a location in Iowa.

"Last year, we had a little bit, but not nearly enough. This year, through Rockwell Collins, they actually have a live aircraft that will be flying out in Iowa during our event on Wednesday. It will be integrated into our blocks three and four. We're really excited about that. We're hoping that the weather cooperates with us out in the Midwest so that we'll be able to make that happen."

Another key focus area that the OBW planners have added this year is effective performance measurement tools and how they can increase the value of the training.

"We've got a whole team working on that. We're really looking forward to learning more about how do we architect the system to get the best data capture and performance measurement

capability out of the overall event, from the individual operator all the way up to the event itself."

As one of the initial participants in last year's OBW, Marine Corps Systems Command's Program Manager for Training Systems (PM TRASYS) continues its involvement this year by providing representative

Participants – Distributed Training Center – Booth 349
National Training and Simulation Association
132nd Wing Distributed Training Operations Center
Naval Air Warfare Center Training Systems Division
Government Business Results, LLC
Booz | Allen | Hamilton

Participants – Exhibit Floor
772d TS/Electronic Warfare Operation Support (EWOS) (1339)
ACME Worldwide Enterprises, Inc. (665)
Adobe (459)
Aero Simulation, Inc. (801)
Air Force Research Lab (1339 and 1173)
Air Force Training Systems Product Group (1339)
Alion Science and Technology (1515)
Aptima, Inc. (701)
BGI, LLC (654)
The Boeing Company (2049)
Bohemia Interactive Simulations (2348)
CAE (1533)
Calytrix Technologies (1363)
Camber Corporation (2748)
Cubic Global Defense (1549)
Dignitas Technologies (424)
Distributed Mission Operations Center for Space (DMOC-S) (428)
Esri (558)
Explotrain, LLC (325)
FlightSafety International, Inc. (1501)
ImmersaView (349 and 551)
KGS TraumaFX (2672)
Krauss-Maffei Wegmann GmbH & Co. KG Company (1012)
L-3 Communications Link Simulation & Training (1249)
Laser Shot (781)
Lockheed Martin (849)
Marine Corps Systems Command Program Manager Training Systems (PM TRASYS) (1333)
MASA Group Inc. (2360)
Metova, Inc. (1873)
The MITRE Corporation (629)
Naval Air Systems Command (NAVAIR) and Naval Air Warfare Center Aircraft Division (NAWCAD) (337)
Office of Naval Research (337)
PLEXSYS Interface Products, Inc. (2340)
Presagis (1057)
Pricewaterhouse Coopers Public Sector LLP
Program Executive Office for Simulation, Training and Instrumentation (PEO STRI) and Army Research Laboratory's (ARL) Advanced Training and Simulation Division (ATSD) (629)
Rockwell Collins (2300)
Saab Defense and Security (2449)
SAIC (2113)
SOAR Technology, Inc. (601)
Software Engineering Institute, Carnegie Mellon University (714)
TRU Simulation + Training (1301)
U.S. Navy Surface Warfare Officer School (SWOS) (337)
U.S. Pacific Command Cyber War Innovation Center (1539)
VT MÄK (1048)
ZedaSoft, Inc. (2341)

Blended Warrior Builds *from page 8*

training systems.

PM TRASYS (Booth 1333) Col Walter Yates said this would include participation in the amphibious assault vignettes of OBW with the Combined Arms Command and Control Trainer Upgrade System (CACCTUS) and Deployable Virtual Training Environment (DVTE) training systems.

"In addition, PM TRASYS will demonstrate the latest version of 'Animatronics' technology used to provide immersive 'role players' as well as graphic displays of its products and services. This year we are increasing our contribution to OBW by using CACCTUS and Command and Control Personal Computer (C2PC) for the first time to generate the common operational picture (COP) for the entire event," Yates said.

C2PC brings the tactical picture to a desktop and is supported by robust planning tools, decision aids and display capabilities. It provides real-time situational awareness and the immersion that's mission critical for military operations.

"C2PC is a much-needed application to enable sharing and editing the COP across multiple workstations and among several agencies. It can also support operations in moving vehicles and work over tactical radios.

"This effort is a great opportunity to utilize C2PC and test CACCTUS's ability to generate the messages needed to stimulate C2PC for a large exercise."

One of the challenges for the organizers is – as the various exercise elements are running across multiple locations over the exhibition hall – how to best present what is happening to an ever-changing audience.

Gritton said much of the public focus would be on a mock newsdesk, which would present updates as the scenarios advance and with the reporters explaining to the gathered crowd what technologies were involved in that element of the exercise.

"One thing that's going to be different from last year when we had individual-themed vignettes that ran for 30 minutes each, this year you basically have this huge event that's running. We've got stuff happening on the ground warfare spectrum, we've got stuff on surface, at sea, in the air, in cyber. It's all running concurrently. We've got some social media interaction going on… Then we've got all the different services playing, we've got all the different warfare areas. We've got more cyber participation this year. It's going to be fun."

Schedule of Events

Block	Event	Day	Date & Time
Block 1	Unrest to Upheaval	Monday 28	Nov 1430-1600
Block 2	The Opposition Strikes	Tuesday 29	Nov 1430-1600
Block 3	Taking Control	Wednesday 30	Nov 1030-1200
Block 4	Turning the Tide	Wednesday 30	Nov 1600-1730
Block 5	The Enemy Unmasked	Thursday 1	Dec 1000-1130

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Robb Points to Success at I/ITSEC 50th

"It's a great year to be involved in modeling, simulation and training."

That's the welcome message for I/ITSEC 2016 attendees from NTSA President RADM James Robb, USN (Ret).

Reflecting on the 50th Anniversary of I'ITSEC, Robb offered, "The baseline is that overall attendance is really strong this year. And that's mirrored by record high attendance scheduled by government distinguished visitors, decision makers, flag and general officers, and members of the Senior Executive Service."

In addition to a slightly larger show floor area, Robb said that one of the other exciting aspects of I/ITSEC 2016 is that it is becoming easier for government personnel at all levels to attend.

"In many cases, the folks that we really lost in the previous four years were the more junior people," he said. "They weren't speaking or on a panel so they got removed from the list. But we're seeing more and more of the junior officer and junior enlisted coming back. And that is wonderful, because these people are really the future leaders and, in many cases, they are down in the programs making decisions. So the overall footprint of the government side is starting to return to normal and on the senior side it is probably better than it ever has been."

As a reflection of four-star level interest, Robb pointed to attendance by both the Chief of Naval Operations and Commander of Air Force Materiel Command.

"The CNO is very excited about I/ITSEC," he said. "He wanted to come last year and got called away to testify. But he has a significant program – the *Sailor 2025* program – that actually got its embryonic start here in the I/ITSEC environment three years ago.

"Today it represents a significant investment in transforming Navy training and education, all the way from accession through how to best keep people up to date over time," he added. "And the Navy is putting a significant amount of money in it: $5 billion over five years. So the CNO is coming here and bringing a lot of the *Sailor 2025* stakeholders to have off site meetings about the program, how it's going, and to make sure that everybody is on the same page. That's not only a great success story for the I/ITSEC family, but it's also a success story for training and education and getting people to make investments."

Robb will also be hosting two new sidebar roundtables at I/ITSEC 2016.

"One of them is a gathering of university representatives," he explained. "We're teaming with the DoD Advanced Distributed Learning program. Among other things, we're working all the way back into the STEM programs to create a better pipeline to get better qualified people to enter not only the military but also the industry track, because we have a shortfall of technically competent people on both sides. And in some ways we're competing for the same group.

"The goal of the university roundtable is to try to formulate a plan – we need to vet this with as many entities

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That's not only a great success story for the I/ITSEC family, but it's also a success story for training and education and getting people to make investments.

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as possible – if we're going to go do the K-12 part of this, then we need to engage industry and also the universities, so we're all on the same page and going in the same direction with the same objectives in mind," he added.

He continued, "The second roundtable focuses on Big Data and Big Data Analytics. We've pulled together a pretty impressive group to discuss: what it is; future requirements associated with it; identify stakeholders in industry, academia and government; and the opportunities for Big Data to be a theme within the I/ITSEC environment.

"We're always looking for new technologies; new applications; leading edge ways that our capabilities – especially on the industry side – can be utilized," he said. "So we're still strongly looking at commercialization as a way for the industry partners here to diversify.

"So all is really good for I/ITSEC 2016," he concluded. "In almost every area there are positive signs."

Modeling and Simulation History in Video Spotlight

2016 is a landmark year in the history of I/ITSEC – the 50th Anniversary of what has become the world's largest and most comprehensive modeling and simulation event.

The story behind this evolution is both exciting and inspirational and I/ITSEC 2016 attendees are encouraged to enjoy a wonderful and evocative video presentation of that history at the following locations:

- Booth 2386 – I/ITSEC 50th Anniversary Museum
- Room 100 – Connections Cafe
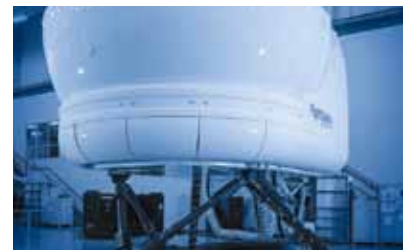- Monitors placed around the exhibit hall

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LVC Pushes the Training Envelope at I/ITSEC 2016

In her welcome to attendees of I/ITSEC 2016, Program Chair Elizabeth Biddle, Ph.D., CMSP, highlighted this year's theme: "Pushing the Training Envelope: Live-Virtual-Constructive." Biddle said that the theme "emphasizes the need to seamlessly integrate our live, virtual and constructive capabilities to enable our military and civilian personnel to train on the complex tasks enabled by today's technological advances that are not practical, or possible, in the real world.

"Building on the Conference's military-focused history, I/ITSEC has emerged as the predominant cross-industry forum, drawing an increasing number of attendees from industries including healthcare, energy, transportation and manufacturing, who are in search of new innovations to change the way people learn and perform, to drive down costs, and increase their ability to compete," she said.

Biddle highlighted the efforts of myriad volunteers that have resulted in 133 technical papers, 23 tutorials, 19 educationally-focused events and a range of special programs.

Expressing her thanks and appreciation to dedicated volunteers and I/ITSEC sponsors, she said that their commitment and support "have made I/ITSEC 2016 a reality and ensured this conference remains the premier professional development event across the globe for the training and simulation professional."

Meggitt Chases FMS Sales of EST II

With deliveries of its Engagement Skills Trainer (EST) II now well underway to the US Army, Meggitt Training Systems (Booth 1313) is using I/ITSEC to chase further sales of the small arms trainer.

Larry Raines

Originally awarded a $99 million contract in 2014, Meggitt Training Systems started worldwide deliveries of more than 900 EST II systems in August.

Larry Raines, director of key programs for Meggitt Training Systems, said – as well as showcasing several new products – the company planned to use I/ITSEC to convince the wider market of the benefits of EST II.

"The Army obviously went through a very stringent requirements review and analysis to get to the point they were sure that it is meeting all of their training requirements. We are now trying to present that to the international marketplace through direct or FMS sales as the only certified trainer by the US Army for their program of record small arms training program," Raines explained.

Key advantages of the system over the legacy EST2000 include an intuitive tablet interface, improved visual clarity, 3D marksmanship with a moving eye point, and auto-coaching features. Deliveries to the Army are expected to be complete by April 2018.

"The visual clarity and the immersion that it creates is something they did not have before. We are trying to make it look like they are on an actual range with the wind blowing and the clouds moving – the shadows help create that real environment. That is much more realistic than what they previously had."

Raines said the automatic coaching feature it had introduced to both EST II and its FATS 100e virtual training system was a means of helping to alleviate the instructor's workload.

"It automatically evaluates and highlights a student that may have problems, whether it be jerking the trigger or poor breath control, those types of things. On the tablet, the instructor can go to that student, pull up their doctrine, pull up videos to help reinforce what they should be doing and what they were trained," he explained.

"So, as opposed to having to keep your eye on every student, and trying not to miss things that occurred during a training event, this will help them. It doesn't replace them, but it helps to coach, identify the problems and gives them the tools at their fingertips to help raise the level of the student more quickly."

The BlueFire wireless weapon simulators, meanwhile, provide information on parameters like a student's trigger squeeze, buttstock pressure and shot placement to allow instructors to give immediate feedback on any bad habits.

"That's definitely something that was not there before and we think it's a kind of game changer. It's been very well received by the units that have taken delivery of these systems, as well as the training materials at the firing line to help them quickly correct poor habits or reinforce good habits in their marksmanship skills."

At I/ITSEC, Meggitt will provide a range of BlueFire weapon simulators for demonstration, including the BlueFire SA80, M4, Beretta M9, Glock 17, Sig 226, M27 IAR, MSGL, and G36 as well as a tethered M240.

Meanwhile, an 81mm mortar simulator will be interactive with the FATS 100e to demonstrate mortar crew and collective training.

"There has been a lot of interest in that worldwide because obviously mortar rounds, mortar training, can be expensive just because of the cost of the rounds. To be able to do that in a virtual training environment and teach both your mortar crew and the forward observer simultaneously as would occur in combat is a key to the Meggitt training system.

"The mortar portion is something we have delivered to both the US Marine Corps and the Australian Defence Force previously. There has been some interest from other customers as well and we are just trying to show the breadth we have with the US Army and others as well. We can have those type of capabilities, beyond our core small arms training system for which we are known."

In addition, the company is showcasing a variety of desktop trainers, including armored fighting vehicle, remote weapon station and anti-tank guided missile trainers.

Nevertheless, the key focus for the company at I/ITSEC is clearly to spread the word about progress on the EST II program, particularly among users of the older EST2000 system.

Key advantages of the system over the legacy EST2000 include an intuitive tablet interface, improved visual clarity, 3D marksmanship with a moving eye point, and auto-coaching features.

Meet the I/ITSEC 2016 Video Team

The I/ITSEC video crew is an increasingly common sight across the exhibit hall as they move from booth-to-booth and event-to-event, enhancing global awareness of I/ITSEC and its significance to the training industry.

"The video crew is here to record for our YouTube channel (NTSAToday)," offered John Williams, NTSA Director of Media Relations. "Throughout the day they are providing feeds to that channel – almost in real time. It helps to create an audience throughout the entire I/ITSEC event that begins to view I/ITSEC from afar, establishing a worldwide audience with an understanding of I/ITSEC and that it is the most important and dynamic event of its kind in the world."

From left: Allyson Myles, Kari White, Gabriel Dohrn and Andra Dohrn of Denver Film Company, a part of Trade Show Media Partners. See their video production at YouTube.com/NTSAToday.

CAE Portfolio Highlights Strength

CAE Defense and Security Group (Booth 1533) is using its appearance at I/ITSEC 2016 to highlight a number of systems across the company's broad product portfolio.

"Over the last few years we've tried to bring more equipment and hardware to I/ITSEC," offered Group President Gene Colabatistto. "Again this year, the systems are not only indicative of what we do, but also a little bit different than what others do."

As an example, he pointed to the MQ-9 Reaper mission trainer, explaining, "We are already the current Predator training provider for the US Air Force and we're working now with the Italian Air Force, providing training systems to them. For us, we look at this as a substantial market opportunity because we're working with our strategic partner, General Atomics, and we see a lot of opportunity around the world.

"There are probably somewhere between six and eight current pursuits that we have around the world, that will comprise training systems, training support, courseware and also the training itself.

"The significance here is that the US Air Force is retiring its fleet of Predators in another two years and they will go to an MQ-9 Reaper fleet," he said.

The mission trainer on display at I/ITSEC corresponds to the Block 30 Ground Control Station with enhanced cockpit geometry and user interface.

"The usability is better than we've seen in previous generations of Predator ground stations," Colabatistto said. "It's a nice capa-bility to bring to the show, because it allows us to talk to people and tell them why what we are building is a little different.

"I think some of the things that make our system different is the fact that we do a very good job simulating the sensors," he added.

"The sensors are based on physics based models and the representation of the output is more realistic. That turns out to be very important to the operators. The other is to be able to use our network capability, our interoperability standards, to create a more realistic tactical environment. This system can be networked to other systems or to a command and control training system. You can create your computer-generated forces. That was one of the other gaps or desires that the operators had: It isn't just about flying the aircraft and learning the procedure; it's about flying the aircraft in a tactical environment."

The MQ-9 trainer will be participating in the Operation Blended Warrior LVC event during I/ITSEC.

The CAE exhibit will also feature one of the company's aeromedical evacuation training systems.

"We've done several and it looks like we have several more that we'll be doing," Colabatistto said, noting that the fuselage mock up "can be used to train any type of crewmember."

The exhibit will also incorporate high-end medical simulators from another CAE business unit as well as role-player "Cut Suits" from CAE partner Strategic Operations.

The CAE exhibit area will also include two naval tactical mission trainers,

"We've been supporting training around the world in places like Europe, India and Asia for many years," he said.

"A few years ago, we found opportunities to take our ability to build very high fidelity hardware, coupled with modeling and simulation based training capabilities, to create a tactical mission trainer that can be used for any one of a number of functions. They can also be networked, so you can take a dozen consoles and configure three of them as radar; three as sonar, two as communications and one as command and control. And you can configure them in a way that you can then support team training as you would on a combat information center on a ship."

Gene referenced a recent program that CAE conducted for the Swedish Navy, describing the project as "an amazing experience" in which the customer was using the trainers "more than they anticipated because of their flexibility."

"It also became a basic building block of the solution that we offered to the UAE Navy and it will be the hardware, software component of the naval training center program that we're executing now in the UAE," he said.

Other elements of CAE's presence at I/ITSEC range from the most recent version of the company's Medallion XR series visual systems to its expansion across live flight training.

"Live flight training has become an important market for us and we have a lot of opportunities," Colabatistto said.

"You could be doing primary or advanced training, as we do, or you could be supporting the customers who are doing live flight training. And that's where we step into aggressor training or providing adversary aircraft."
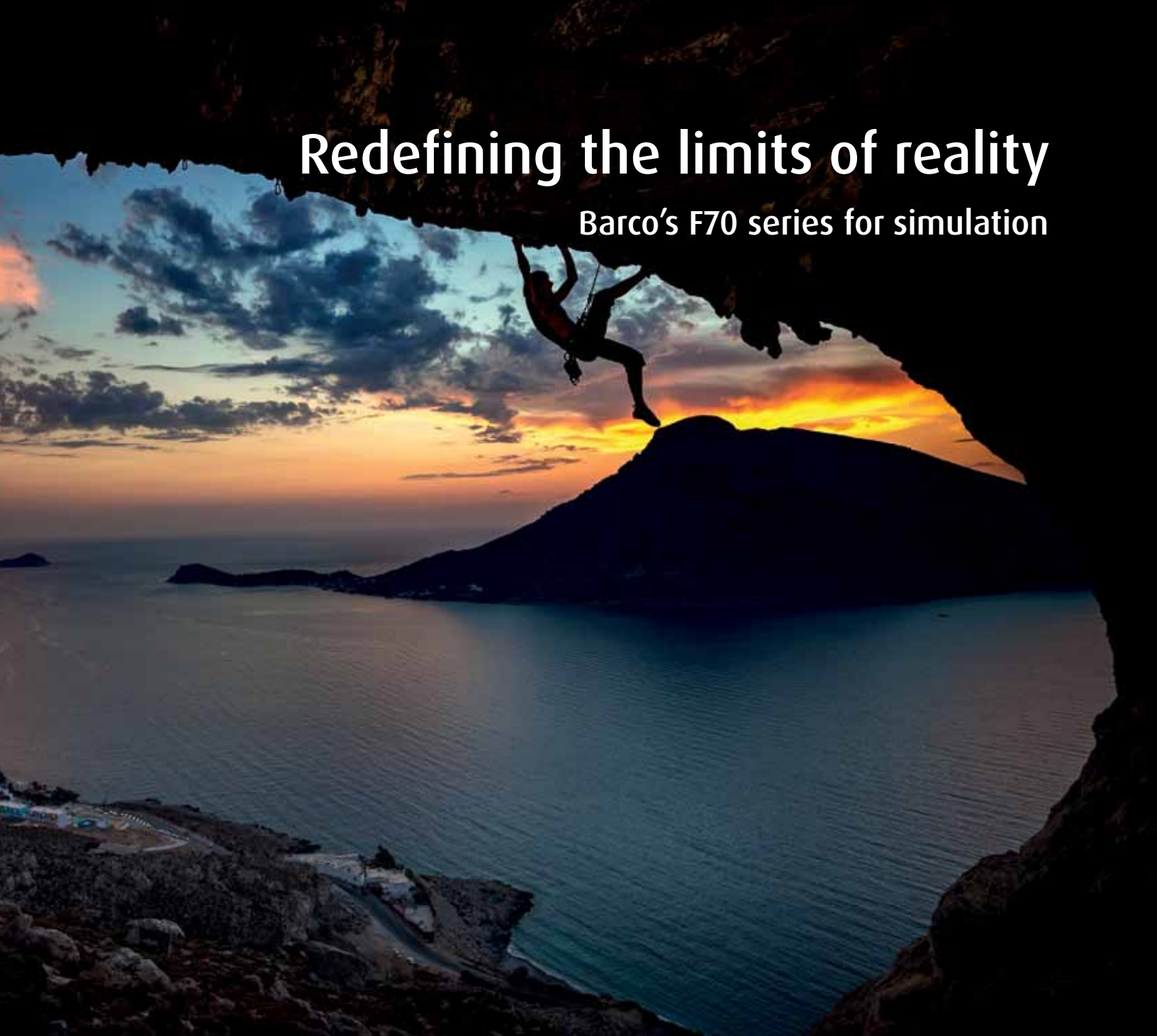
Noting recent work with Draken International and the presence of Draken representatives in the CAE booth, he added "We see other opportunities elsewhere around the world because it is a function that air forces are outsourcing on an increasing basis and that is just part of our live flight training approach."

Cubic Expands NextTraining Strategy Spotlight

Cubic Global Defense (Booth 1549) is enhancing the I/ITSEC 2016 attendee experience with an expansion of its NextTraining strategy.

"We rolled out the NextTraining concept last year," said Dave Buss, president of Cubic Global Defense.

Buss, who took over as president in May 2016, said that one of his first activities "was to try to add some clarity to exactly what NextTraining solutions look like."

Much of that clarity is reflected at I/ITSEC 2016, where Buss described the displays as attempting to highlight "best of breed" solutions that showed "the best attributes of what NextTraining solutions look like.

"They're innovative; they're 21st century; they're leading edge technology kinds of things," he said. "We find them, develop them, or find them and very quickly integrate them into our solutions."

Consequently, Buss offered that one underlying I/ITSEC 2016 theme would involve placing "meat on the bones of what NextTraining really means."

"The second thing – and again this is based on my 36-year military career background – is how you do performance-based training," he said. "It's a pretty powerful concept and it's a dialog we're having with a lot of customers now. At its essence, what performance-based

"If you can figure out a way to make the adversary force that you have today more threat-representative and more capable, that's a pretty good value proposition."

training is really about is a set of measures of effectiveness and desired outcomes from training. We don't devise those at Cubic. The Army tells us what's important to them for their maneuver units. The Navy tells us what's important for their squadrons, their ships, their submarines and their battle groups. Most of the services have mission-essential task lists and things like that."

Once the performance measures are understood, Buss said that the best solutions "ascertain how individuals and aggregated units do in measurement in their performance, individually and collectively. Done properly, you do some measurement against the standards, you provide some gap analysis, you provide some opportunity for remediation and probably most importantly, the critical skills that our training solutions provide should have a longer half-life: in other words you retain those skills longer than other types of training methodology.

"If you can do that, if you can provide training solutions like that, then in this era of declining defense budgets – and we'll see what the new administration does and so forth – you will get maximum bang for the training buck," he said.

Another aspect of Cubic's NextTraining solutions highlighted at I/ITSEC 2016 is something called Bandit Board.

Buss noted that another "vexing challenge" was that investments in fleet aircraft and technologies have not been matched by upgrades to adversary training aircraft.

Explaining that part of the dilemma is the reduction in service life

for valuable operational aircraft, he said, "If you can figure out a way to make the adversary force that you have today more threat-representative and more capable, that's a pretty good value proposition. What Bandit Board does is take some of the data information that we have resident in our Air Combat Maneuvering Instrumentation (ACMI) – our 'Top Gun' system – and port it to a portable display that the adversary pilot can wear on his thigh when he's sitting in the cockpit. The display information gives the pilot, absent a radar or absent a red data link like our adversaries would have, the ability to have situational awareness on what his fellow red force guys are doing as well as some degree what the blue forces are doing. With that awareness he can act in a much more threat-representative, fourth generation or fifth generation threat way in an older airplane. And that's pretty cool."

2016 marked delivery of Cubic's courseware for LCS.

Buss said that 2016 also marked Cubic's delivery of its first immersive virtual training courseware under contract to NAWCTSD for different watch stations on the US Navy's Littoral Combat Ship.

"We have delivered our first 130 lessons to the Navy. They have been vetted through the surface warfare officer school up in Newport, Rhode Island and they're now out in the fleet," he said. "This courseware is game-based. It's a virtual environment. It's the way millennials learn. It's a training solution that looks like Call of Duty. The kids get it. They understand it. It's fun and I contend that it is more effective than an instructor with a piece of chalk and an eraser standing at a chalkboard, and probably more effective than any other training solutions that we have out there today."

Along with the messages surrounding NextTraining solutions and objective performance-based training, Buss pointed to the fact that service chiefs are in agreement over anticipated future operations in "highly complex denied environments" and also the value of "high velocity learning."

He concluded, "I truly believe that we've got some very innovative, very cutting-edge, very 21st century technology solutions that help address both those needs."

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WHEN RESULTS MATTER

Rockwell Collins Unveils "Mixed Reality"

Rockwell Collins (Booth 2300) will unveil its concept of "mixed reality" – interactive training presented through augmented reality – at this year's I/ITSEC.

The company will launch its Coalescence product at the exhibition, which it describes as an augmented vision environment that immerses the user in any virtual-reality training scenario.

Nick Gibbs, interim Vice President of Simulation and Training Solutions at Rockwell Collins, said the Coalescence system on display at I/ITSEC is a mixed reality display system based on Oculus Rift – although it is compatible with other headsets.

"Mixed reality is where you would combine a virtual application along with interactive training," Gibbs explained.

IDVS has the ability to fuse multispectral night vision sensors with situational awareness information to support operations in day, night and degraded visual environments (DVE).

"IDVS assists the warrior, basically, to have an unfair fight, so that they can identify foes and friendlies. They can identify all the situational awareness they need. It's a heads up display so you're not looking down, you're not looking through a pair of goggles. You're looking through a near-eye display. Currently, it's prism-based, but we will release a waveguide solution which we'll have on display at the show," Gibbs said.

The company acquired the Matrix line of projectors in February 2016 from Christie Digital Systems and the products are now part of its central offering.

Binding much of this together is Rockwell's CORE simulation architecture, which Gibbs noted was a customizable open architecture for reduced risk and enhanced training.

"Our CORE simulation architecture acts as the host for the simulation environment. It doesn't matter what you hook into it,' Gibbs explained.

"CORE has an application layer that allows us to easily incorporate different communications, different simulation environment applications, and then synthesize them into a single simulation environment integrated with the different components, the image generators, the EP-8100 or EP-80 that we provide, the cockpit, the avionics. All of that is controlled by the CORE simulation architecture."

The company will also use I/ITSEC to announce a teaming agreement with Bluedrop Training and Simulation Inc.

"We signed an MOU agreement with Bluedrop that allows the two companies to jointly share IP," Gibbs said.

"We're excited because they're a small business in Canada. They're very innovative, very creative people and they were doing a really good job training their customers."

With Operation Blended Warrior again a key component of this year's I/ITSEC, Gibbs said the resultant industry interaction with the services in 2015 was invaluable to gain visibility of emerging requirements.

"I would say learning from each other is what really matters. We're all about identifying what the customer's training needs are and then working hard to provide either new technology or apply existing technology to provide the right solution.

"There still is a lot of looking for the right combination of technologies and applications at the right participation levels so that you really optimize the training. There are still many in the services in the US and elsewhere who strongly favor live training and only live training. The cost/benefit of that is what's difficult. It's very expensive and time consuming and for that and other reasons the virtual and combined, augmented, virtual, and live virtual constructive training regimens are becoming so important."

"In this instance, we'll have a real cockpit with real instruments where – when you look out the window – you'll see a virtual world. It will be a high fidelity virtual world using our EP-80 and EP-8100 image generators, our virtual databases that we employ around the world for training,

"But you will also be able to look down at the instrument panel, to be able to grab and see the instrument panel as it is, touch it with your hands, and see your actual hands – not a rendering of the hands, not another virtual application pretending to be your body or your cockpit."

To enable such training, the company has developed a fully digital head-worn system it calls the Integrated Digital Vision System (IDVS).

Development of these two new systems has triggered a new mixed/augmented reality product line that Rockwell Collins calls Wearable Augmented Vision Environment Solutions (WAVES).

"Basically, it is a product line that goes from operational augmented reality for the warfighter in the IDVS product, all the way through to full virtual reality where you've got a traditional simulation environment. Then also the mixed reality portion that I described. All the way through to the constructed."

Despite this evolution of head-worn VR systems, Rockwell Collins is not in a hurry to put the high-fidelity projection market out of business.
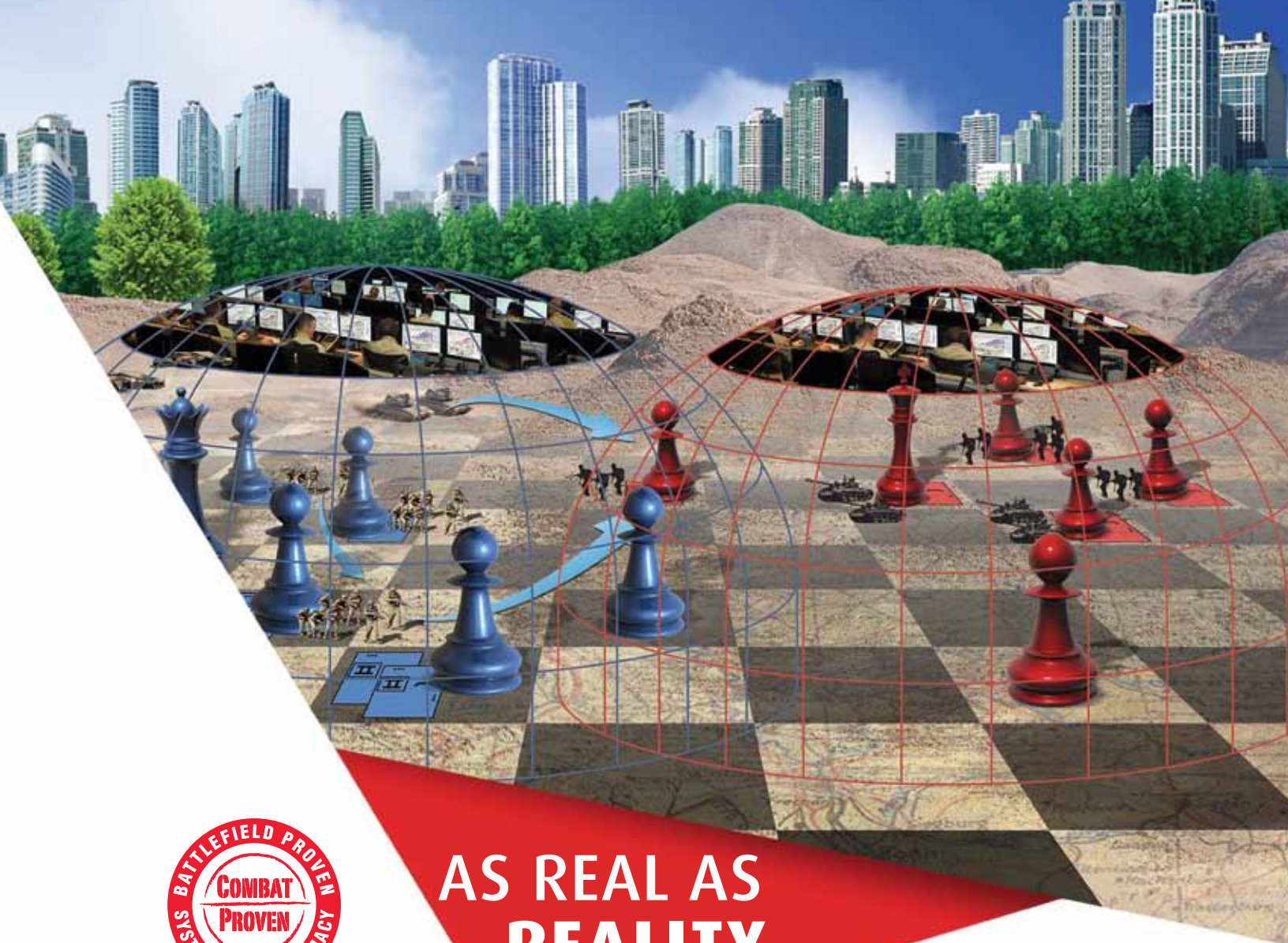
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IAI Displays Military-Civil Aircraft Collision Avoidance System

Israel Aerospace Industries (IAI) is displaying its new Collision Warning System (CWS), developed to enhance the safety of the EHUD range-independent autonomous air-combat maneuvering instrumentation (AACMI) system, on Booth 1949.

Seventeen different countries, many in Europe and Asia, use the EHUD system. IAI's MLM division, along with Elbit Systems, which also produces the EHUD, have between them built more than 1,000 EHUD pods for use on at least 20 different fighter types including the A-4, AMX, F-5, F-15, F-16, F/A-18, Harrier, Hawk, Mirage, Tornado, Typhoon and the MiG family. The Lockheed Martin F-35 has a built-in AACMI capability which is compatible only with the US Cubic AACMI system and as more than half of the existing international F-35 customers, including Italy, Norway, Singapore, Turkey and the UK, use the EHUD system, IAI is developing a concept to ensure interoperability with the EHUD.

Amit Haimovich, the director of marketing and business development in the IAI/MLM Division, told the *Show Daily* that there is "a crucial safety gap" for military and civilian aircraft flying in "hybrid environments," adding this will become ever more severe with the growing number of civil and military unmanned air vehicles operating in already congested airspace especially when commercial aviation routes cross military operational areas. He said that there have been numerous near misses, many of which are not reported.

The EHUD system, which is named after an Israeli fighter pilot killed in a mid-air collision, already incorporates a ground and military air collision avoidance system. Haimovich said IAI had identified the need to extend the EHUD's safety features to include civilian aircraft and began development work when an undisclosed user approached the company with such a requirement. The CWS is embedded in existing or new EHUD/ RAIDS/FRP systems, or carried as a stand-alone pod, which requires only a single interface unit, and thus requires only minimal integration into the aircraft.

The CWS extends the EHUD's collision-warning functions by monitoring non-military platforms through integration of Identification Friend/Foe (IFF) and the Automatic Dependent Surveillance-Broadcast (ADS-B) system fitted in commercial airliners. "ADS-B was invented not for safety reasons but specifically for economical command and control, to understand who is where if you open the sites on the Internet," said Haimovich. "We took it farther and we embedded this into our system so that we can receive those signals and really understand what's going on with those aircraft. All of this data is blended to create for each aircraft which carries the EHUD CWS a very accurate picture, and constantly calculate and predict whether it's going to be a bad scenario, and if such is about to occur to initiate an alert."

I/ITSEC 2016 Welcomes New Exhibitors

I/ITSEC 2016 and NTSA extend a warm welcome to the following exhibitors, who are either new to I/ITSEC this year or are returning after a hiatus.

505th Command and Control Wing
5DT, Inc
A. Harold & Associates, LLC
AAFMAA Wealth Management & Trust LLC
ACS Hydraulics, Inc
Advanced Distributed Learning (ADL) Initiative
Advanced Tactical Training System
Allied Powers LLC
AMSEC, a Subsidiary of Huntington Ingalls Industries
AnimaticmediaVR
Army Modeling & Simulation Office
Army Research Laboratory
Army Research Laboratory - HRED
Aruba, a Hewlett Packard Enterprise company
Astronics Test Systems, Inc.
AT&T Global Public Sector Solutions
ATS/SimulationDeck
Avenge, Inc.
Aviation Instrument Technologies Inc
Brain Vision, LLC
Caliente LLC
Cape Henry Associates
Cardionics
Carl Zeiss Corporation
Charles River Analytics Inc.
Cisco Systems
Clear-Com, LLC
Coherent Labs
Creative Veteran Productions
CSRA

Cyber Security & Information Systems Information Analysis Center (CSIAC)
DefendSafe LLC
Defense-Update - Milisim
Digital Solid State Propulsion
Distributed Mission Operations Center for Space (DMOC-S)
Eblanks AS
ECA GROUP
Enhanced Vision Technologies, LLC.
Envision Innovative Solutions
ESG Elektroniksystem- und Logistik-GmbH
EWA GSI
Explotrain, LLC
F3 Solutions
Floatograph
GBL Systems Inc.
General Dynamics Mission Systems
General Services Administration
GEOZY SOLUTIONS LLC
GlobalSim, Inc.
Healthtec
Hewlett Packard Enterprise
I/ITSEC 50th Anniversary Museum
Intellivance
Katmai
Knowledge Based Systems Inc.
LuxCarta
m3 Solutions Technologies
Mass Virtual

MES Simulation & Training Corp
Metova Federal, LLC (CyberCENTS)
Military Training International
Mittler Report
Motion Analysis Corporation
NanoLumens
Old Dominion University Online
OPFOR Solutions, Inc.
OptiTrack
Orlando EDC
OSTi
Pathfinder Systems, Inc.
Pinnacle Solutions Inc.
project: syntropy GmbH
Questionmark
Real-Time Innovations
Riverside Research
Rustici Software LLC
Seminole County Public Schools
SimCentric Technologies
SimCore Technologies
Skyline Software Systems, Inc
Software Engineering Institute, Carnegie Mellon
Starline
T-100 Trailer
Tactical Communications Group
Transtecs Corporation
TrianGraphics

The warnings are visible only to the military pilot and are provided in three different forms – a voice warning, graphical indication on a tablet panel, and via symbols presented on existing cockpit displays.

"We created several prototypes that were extensively tested by a Western air force in close to 10 scenarios," said Haimovich, adding that the customer is now in "advanced" negotiations to acquire the CWS. He said that IAI will be demonstrating the system to other customers "very soon" and predicted that several contracts would be placed in 2017.

SimCentric Demonstrates JTAC Training

SimCentric Technologies (Booth 2348) is demonstrating its VBSFiresFST software that was NATO accredited earlier this year as part of the Nautilus International Joint Terminal Attack Controller (JTAC) system. It is also showing the integration with Crowd Ambience providing the first JTAC system with real pattern of life behaviors as part of the training system.

Working with Nautilus to deliver a deployable and highly portable system including COBRA screen and VBS3 software, VBS3FiresFST has been NATO accredited to Type 2 and 3 controls, Day, Night, FMV and Laser. Using Form, Fit and Function emulated JTAC equipment, such as the LF28 LTD, PLRF25, IZLID Ultra and Harris Communications 7800HH radios with 7800T downlink receivers, the system can be set up and ready for use within two hours. All of the JTAC simulation scenarios and terrain are based on real locations.

Following accreditation the system supported the UK JTAC Concentration at RAF Honington, England, which included JTACs from Canada, the UK and the USA.

"We now have a system which is accredited to replace live fire training, has a minimal set-up time from delivery

to service and is also integrated with our pattern of life technologies," said Adam Easton, CEO SimCentric. "This provides a unique training environment which delivers complex and real-world urban environments to stretch the JTAC trainee beyond standard systems."

L-3 Link Seeks to Raise Simulations in Flight Training

Commercial airline pilots receive almost 100 per cent of their training using simulators and there are numerous arguments, including cost and safety, for military pilots to receive a much greater share of their training in simulators, Lenny Genna, President of L-3 Link Simulation & Training [Booth 1249], told the *Show Daily*.

Genna cited cost as the primary reason that commercial airlines do most of their training on simulators with safety being another. "There are certain things you are not able to perform in aircraft but you have the ability to train for in a simulator, like Sully's landing in the Hudson River with his A-320. He never practiced that in the real airplane but he had training with bird strikes and 'engines out' in a simulator."

He noted other factors unique to the military which restrict "real world" training. "Weapons are expensive and you can't just go flying all around the world 'lighting things' up with your weapons or radars so it makes sense to perform more of this training in simulators."

The US Air Force is L-3 Link's largest customer and the use of simulation varies widely depending on the aircraft type. "We have on the high end our C-17 simulators with almost 85 per cent of training achieved through simulation and I believe you can approach zero flight time. I think air-to-air refueling is an area that will help push programs like C-17 over the 85 percent mark. In the last couple of years there's been a big push to have increased fidelity in both the

L-3 Link will be demonstrating its Immersive Maintenance Guide (IMG) which enables technicians to safely and cost-effectively develop their skills.

aircraft refueling and the tankers, so that that interaction is much more realistic. It will be up to the user community to decide. Our job is to make the simulations as realistic as possible."

He cited the unmanned air systems community as a simulation 'high end' user. L-3 Link is working on a contract option exercised in January to build 34 new Predator Mission Aircrew Training System (PMATS) simulators to train USAF and US Air National Guard MQ-1 Predator and MQ-9 Reaper pilots and sensor operators. "I believe UAS training is getting more like the commercial business where 100% of training can be accomplished on a simulator," said Genna.

Fighter training is on the low end of the spectrum. "I think they should move up into the 50 per cent range," said Genna. He acknowledges that there are challenges for industry to replicate air-to-air combat compared to the type of missions that are flown by aircraft such the C-17. "There are certain physical sensory type things that would need to be accomplished in the real aircraft versus

a simulator. Obviously there are differences such as weapons engagement in air-to-air combat, but the fidelity of the visual systems and the acuity of the visual systems today are very good. It's also the simulations of the sensors. A lot of air combat is fought at ranges that are greater than visual acuity so you're counting on the fidelity of your sensor and weapons simulations. You can give users a more complex battle space in the simulated world than economically you could do in the real world.

"Our challenge is to work with customers to go back and revisit existing curriculums. There has to be a methodical plan to update the curriculums and ask 'Can these tasks now be trained in the simulator?' or decide 'This was being done five times in the aircraft, now we're going to only do one mission and the other four will be in simulators'.

"We went through upgrades with our US Navy F-18 customer to upgrade the visual system on our F-18 simulator and were able to increase the number of tasks that can be trained on the simulator."

In August L-3 Communications was awarded a seven-year contract to provide training solutions in support of the USAF's Warfighter Readiness & Training program following a recompetition process. L-3 initially won the Warfighter program in 1997 and L-3 Link will continue its prime contractor role under an initial task order valued at $23.5 million with a maximum ceiling value of $200 million. "The research we undertake, with the support of our industry team, will positively impact USAF and joint training doctrine, in addition to enhancing the design of future training systems," said Genna at the time of the award. Working with the US Air Force Research Laboratory (AFRL) the L-3 team will provide evaluation and validation of training approaches, including methods, tools, instrumentation and enterprise infrastructure.

During I/ISEC 2016, as well as Operation Blended Warrior, L-3 Link will be participating with the AFRL, and other industry partners, in daily Cleared Hot LVC demonstrations. "Involving live A-10s, some virtual aircraft that are simulated and constructive aircraft all flying in the same environment, it will be a true LVC event", said Genna.

Using Link-3's Distributed Training & Analysis Center (DTAC) in Arlington, TX the events will be displayed on a video wall controlled by an Analyst/Video Wall Control Station within the booth. The DTAC will conduct performance assessments/mission analysis in real-time.

L-3 Link will also be demonstrating its Immersive Maintenance Guide (IMG) which enables technicians to safely and cost-effectively develop their skills in a school house or remotely without using actual aircraft. Using an overlay to the existing and already accredited technical manual the IMG links the maintenance steps to a virtual aircraft which allows the maintainer to actively view the steps being performed in a virtual environment. Maintainers can also manipulate the virtual aircraft to perform tasks as a practical exercise and have Rite-Train monitor performance to ensure the task is performed safely and correctly.

DiSTI Receives Two US Army Contracts

The DiSTI Corp (Booth 2380) has received two trainer contracts in recent weeks from the US Army.

PEO STRI (Booths 629 and 1233) awarded the company a $2.8 million contract to develop a Counter-Rocket, Artillery and Mortar (C-RAM), Land-Based Phalanx Weapon System (LPWS) Operator/Maintainer Trainer (OMT). DiSTI will provide a fully integrated solution incorporating a 3D interactive virtual environment, simulation software, a networked instructor/operator station, and multi-mode lesson engine/procedure monitor software, as well as the networked electronic classroom's computers and displays. The C-RAM LPWS OMT will use the latest release of DiSTI's commercially available VE Studio development toolkit that provides a proven, patented process to efficiently create interactive 3D content published to the Unity game engine. Unlike using Unity by itself, VE Studio offers a database-centric production pipeline to efficiently manage 3D virtual environment development, reducing program development cost and risk. The training systems will be delivered to Fort Sill in OK, Fort Campbell in KY, and Fort Lee in VA by April 2018.

Under a $4.4M phase IVa contract award, DiSTI will provide upgrades for the Stryker Maintenance Training System (MTS) Diagnostic Troubleshooting Trainer (DTT) used at Fort Lee. The project will update maintenance and troubleshooting procedures for the Stryker Infantry Carrier Vehicle, Anti-Tank Guided Missile, and other Stryker variants and subsystems including the engine, suspension, and remote weapons system.

The updates will convert existing training from a legacy 2D user interface to an enhanced 3D Virtual Environment (VE) developed by DiSTI for the Stryker Mobile Gun System (MGS) recently fielded in Stryker MTS Phase IV. The Phase IVa contract includes upgrading 158 existing procedures to the 3D VE, updating to the latest version of the Interactive Electronic Technical Manual, installing the new software in the DTT classrooms, and providing instructor/operator training. In addition to the MTS DTT classroom virtual training, the MTS also includes hardware Hands On Trainers and Part Task Trainers.

DiSTI's team for the contract includes Rockwell Collins Simulation & Training Solutions (Booth 2300), the incumbent contractor for the original Stryker MTS program and a member of the DiSTI team during development and fielding of the MGS virtual training environment.

NEWS IN BRIEF

CAE Launches New Image Generator

CAE (Booth 1533) is using I/ITSEC 2016 this morning to launch its next-generation CAE Medallion-6000XR image generator.

Company representatives note that the CAE Medallion-6000XR was developed with full support from the Open Geospatial Consortium (OGC) CDB (formerly known as Common Database) standard and builds on the proven features and performance of CAE's long-standing Medallion-6000 family of image generators and visual solutions tailored specifically for the military market. They add that the next-generation image generator will continue to leverage COTS graphics processors and includes enhanced features that support the creation of highly realistic, interoperable and immersive synthetic environments.

The first simulator to be delivered with the CAE Medallion-6000XR image generator will be a CAE 3000 Series helicopter simulator that CAE is currently developing for the Canadian Coast Guard. That simulator will feature CAE's revolutionary roll-on/roll-off cockpit design and include cockpits for both the Bell 412 and Bell 429 helicopters used by the Canadian Coast Guard.

According to Marc St. Hilaire, CAE's Chief Technology Officer, the new CAE Medallion-6000XR "will deliver enhanced capabilities for generating highly immersive and realistic synthetic environments. Importantly, we are developing our technologies such as the Medallion-6000XR to fully support and utilize the OGC CDB standard, which will facilitate interoperability and better enable integrated mission training."

Demonstrations are being held throughout I/ITSEC.

CACI Awarded $192 Million Contract to Support Navy Training

CACI International Inc (Meeting Room 573) has been awarded a prime position on a multiple-award, indefinite delivery/indefinite quantity six-year contract, valued up to $192 million, to provide training and curriculum development to the Naval Education and Training Command (NETC).

NETC, the US Navy's largest shore command, is responsible for the training and development of Navy personnel to ensure fleet readiness. Under the contract, CACI will support training and distance learning objectives by developing and delivering instructor-based learning and modular, scalable, interactive solutions for mobile and stationary devices.

"CACI's experts in curriculum design and instruction offer cost-effective training that can be delivered in a variety of settings and on multiple devices," said John Mengucci, CACI's Chief Operating Officer and President of US Operations. "We will provide the US Navy with engaging, effective instruction that helps ensure our forces are prepared for the complexities of modern naval warfare."

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- QuantaDyn will showcase the JTC TRS and debut our Remotely Piloted Aircraft Sim (RPA). We will demonstrate how the RPA and the JTC TRS work together to train JTACs, RPA Pilots, and RPA sensor operators. This will be a full mission profile demonstration.

  Scenario: This is a COIN operation. The QuantaDyn RPA simulator will be utilized to find and facilitate PID of a HVT operating in Kismayo Somalia. RPA crew will work with JTAC in the JTC TRS and other aircraft on station to facilitate the mission.

- QuantaDyn will connect by a short haul network to the Air National Guard for a joint demonstration with the F-16 trainer in the ANG booth #1080. Demonstrating how QuantaDyn systems are integrate-able and interoperable.

  Scenario: This is a Force on Force scenario located in South Korea. In this scenario the JTAC is faced with a several Tactical problems to solve. The enemy force has AAA/SAM capabilities, Armor, C2 and Air support. The JTAC has to problem solve on the battlefield in order to shape the battle space and prevent enemy forces advancement into the AO.

- QuantaDyn will demonstrate the "Z-Box" portable JTC TRS system in the ANG booth with a connection to the Distributed Training Operations Center in Des Moines, IA for a long haul networked exercise.

- QuantaDyn will also switch between MACE/VRSG and VBS IG/VBS3Fires FST to demonstrate modularity and software agnostic capabilities by using different Image Generators and Environment Generators

  Scenario: This is a Force on Force battle located in VBSIG Eastern Europe Geotypical terrain. The JTAC will engage multiple targets with multiple fire support assets and CAS/CCA assets.

QuantaDyn training solutions are

PROVEN   RELIABLE   INTEROPERABLE   SCALABLE   MODULAR

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With defense forces around the world extending their use of integrated live-virtual-constructive (LVC) training to support mission readiness, CAE is leading the way with its interoperable, integrated and immersive solutions. As the one truly global provider focused exclusively on training, no other partner can offer you more advanced technologies, such proven experience or breadth of services. CAE will help you achieve an optimal balance of LVC training to deliver integrated mission training and support your readiness requirements.

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