

NTSA Newsletter

[About NTSA](#)

Headlines from the Modeling, Simulation & Training Industry

[2016 Simulation Innovation Workshop \(SIW\)](#)

[2016 NTSA Modeling & Simulation Awards - Call for Nominations](#)

[Capitol Hill Modeling and Simulation Expo brings M&S community to Washington D.C.](#)

Upcoming Events

[2016 Simulation Innovation Workshop \(SIW\)](#)

September 12-16, 2016

Florida Hotel and Conference Center
Orlando, FL

[I/ITSEC 2016](#)

November 28 - December 2, 2016

Orange County Convention Center
Orlando, FL



I/ITSEC 2016

The World's Largest Modeling, Simulation & Training Conference

[Sponsorships now available for I/ITSEC 2016!](#)

[I/ITSEC 2016 – Attendee Registration is Open / Helpful Planning Tools Available](#)

[Hotel Reservations for I/ITSEC – Beware of Imposters!](#)



Certified Modeling and
Simulation Professional
THE DISTINCTION OF A TRUE M&S PROFESSIONAL

EARNING THE CMSP DESIGNATION WILL:

- Demonstrate expertise in the field of M&S to your employer and the larger M&S community
- Provide opportunities for professional advancement

Requirements include 3-8 years of work experience (depending on level of highest collegiate degree), 3 professional letters of reference, and successful completion of an online examination.

To learn more about the requirements, the CMSP exam, and the applications process, please visit

WWW.SIMPROFESSIONAL.ORG

YouTube - I/ITSEC 2016 Trailer Video



International Training and Simulation
Alliance
(ITSA) News

[Australasian Simulation Congress](#)

[MIMOS News June 2016](#)

[ETSA Update](#)

[CAE Wins Defence Contracts Valued at More Than C\\$100 Million](#)

[Thales Awarded Future Support Contract for Watchkeeper](#)

[Meggitt Wins Australian Defence Force Weapon Simulators Contract](#)

[CAE and Draken International Expand Adversary Air Training Partnership](#)

[First Enlisted Airmen Selected for Global Hawk Pilot Training](#)

[Carley Corporation Wins Navy Contract to Develop Aviation Training Curriculum](#)

[Cubic Increases Joint Training Effectiveness](#)

[BAE Systems Australia Delivers 250,000 ADF Flying Training Hours](#)

[MetaVR Releases Virtual Reality Scene Generator Version 6.0](#)

[US Air Force Selects Boeing for KC-46 Pegasus Maintenance Training](#)

[QinetiQ & Thales Select Textron AirLand Scorpion Jet for ASDOT Bid](#)

[Air Advisor Training at US Air Force Expeditionary Center](#)

STEM Connector News

[Discovery Education Hosts Esteemed Educators from Across the Globe in Chicago for Unique Summer Learning and Networking Opportunities](#)

[100 CEO Leaders in STEM Spotlight](#)

Full Articles HEADLINES FROM THE MODELING, SIMULATION & TRAINING INDUSTRY



**2016 Simulation Innovation
Workshop (SIW)
September 12-16, 2016
Florida Hotel & Conference Center
Orlando, FL**

Registration is open for the 2016 Simulation Innovation Workshop (SIW). The theme for the 2016 SIW is "Simulations Drive Innovation and Standards Drive Interoperability."

For complete details and to register, please visit www.trainingsystems.org/events.

Some of the highlights of the 2016 SIW:

- Over forty peer-reviewed papers covering three tracks:
 - Acquisition Lifecycle and Technology Transfer
 - Services, Processes, Tools, and Data
 - M&S Specialty Topics
 - Emphasis on the application of M&S for Cyber Warfare, Space, and Future Training
- Numerous Working Group sessions on specific standards and technical topics
- Keynote Speakers representing DoD, NATO and Industry perspectives
- Interactive Panel Sessions:
 - International (Focus on Standards)
 - Future Technologies
 - Operation Blended Warrior
- Tutorials
 - Tutorials on a range of subjects will be offered on Monday, September 12. There is a \$75 fee to attend (unlimited) tutorials. Final list of tutorials will be published on website shortly.

To see the preliminary agenda and complete details on registration and lodging, please visit <https://www.sisostds.org/2016SIW.aspx>.

To register, please visit www.trainingsystems.org/events.

Early Registration ends August 26.

[Top](#)



2016 NTSA Modeling & Simulation Awards - Call for Nominations
Nomination Deadline: Friday, September 16, 2016

Each year, NTSA presents awards for outstanding achievement in the development or application of models and simulations. Awards may be given for outstanding achievement in the following categories: Training, Analysis, Acquisition, Cross-Function (multiple uses) and Lifetime Achievement.

Nominations are now being accepted for the 2016 NTSA Modeling & Simulation Awards. **The nomination deadline is Friday, September 16, 2016.**

The awards will be presented at the annual NTSA Modeling & Simulation Awards Dinner (an invitation-only event) to be held on Tuesday, November 29, 2016, during I/ITSEC 2016 in Orlando, FL.

Submissions must be no more than 750 words, and should clearly explain why the nominated individual or team is worthy of special recognition. What was especially noteworthy about the individual's or team's work in terms of innovation, creativity, management of resources, timeliness, cost savings, etc.? You are strongly encouraged to include independent/customer

references and testimonials, which should be e-mailed separately to prowe@ndia.org AFTER you submit your nomination.

Please remember that these awards are for outstanding achievement and/or innovation by individuals or teams of individuals. No product pitches, please. In addition, please do not enter the same nomination in multiple categories.

The NTSA M&S Awards are a true showcase for "the best of the best" in Modeling & Simulation. Please consider submitting a nomination for a team or individual who you feel is worthy of special recognition. (Self-nominations are common and perfectly acceptable.)

For complete details, and to submit your nomination, please visit: <http://www.trainingsystems.org/nomform.cfm>.

If you have any questions about the NTSA M&S Awards, please contact Patrick Rowe at prowe@ndia.org or (703)247-9471.

[Top](#)

Capitol Hill Modeling and Simulation Expo brings M&S community to Washington D.C.

The 11th annual Capitol Hill Modeling and Simulation Expo attracted a sizeable audience of Hill staffers, government/military personnel, and Modeling & Simulation industry reps, as well as several members of the Congressional Modeling and Simulation Caucus. The event, held on July 7 in the foyer of the Rayburn House Office Building, was sponsored by the National Training and Simulation Association and the Caucus. Highlighting the event were state of the art exhibits from a number of Washington area corporations and other organizations.

The Congressional M&S Caucus was represented by Caucus Chair Congressman J. Randy Forbes (VA-04), as well as Congressman Rob Wittman (VA-01), Congressman John Mica (FL-07), and Congressman Bobby Scott (VA-03), who each gave brief remarks thanking the participants for the work that they do and underscoring the vital importance of Modeling & Simulation.

Attendees at the Expo experienced a wide variety of simulation applications, including virtual surgeries using state of the art robotics; coordination of an entire city's response to a natural disaster; and engagement in air to air and urban combat in a counterterrorism scenario. Exhibiting at the 2016 Capitol Hill Modeling and Simulation Expo were: Conflict Kinetics, the Defense Modeling and Simulation Coordination Office; Newport News Shipbuilding; Trax International; the U.S. Army; the Virginia Modeling, Analysis & Simulation Center (Old Dominion University); and VT MAK. The 2016 Hill Expo again demonstrated the high level of attention our nation's leaders pay to the importance of modeling and simulation and to its vital role in the future security and wellbeing of our nation and its people.

Headlines from the Interservice/Industry Training, Simulation & Education Conference (I/ITSEC)

I/ITSEC 2016 – Attendee Registration is Open / Helpful Planning Tools Available

[Sponsorships now available for I/ITSEC 2016!](#)

Registration is now open!

See www.iitsec.org/registration for complete details on registration for I/ITSEC 2016.

While you're on the website, see additional links for planning your trip to I/ITSEC here: www.iitsec.org/attendees

Useful information includes:

- Attendee Justification Templates
- FAQs for New Attendees
- Assistance for International Attendees
- Agenda Overview
- Information on Accommodations
- Directions

Hotel Reservations for I/ITSEC – Beware of Imposters!

Rogue companies continue to inaccurately represent themselves as our "housing vendor" when contacting individuals in the I/ITSEC community. Specifically, they will offer to make hotel reservations within the I/ITSEC block on your behalf, and some will also claim to be calling from one of the I/ITSEC hotels. If you provide your credit card information to any of these unauthorized vendors, your card may be charged but you may not have a reservation when you arrive in Orlando.

Stick with our approved provider – “**OnPeak**” - or a company that you know and trust. Disregard unsolicited sales pitches claiming to have rooms available for I/ITSEC. **OnPeak** is the only provider approved by NTSA-I/ITSEC. Complete housing information is available at www.iitsec.org/attendees/planningyourstay

If you have any questions about the I/ITSEC hotel block, or general questions about I/ITSEC, please contact Barbara McDaniel at 703-247-2569 or bmcdaniel@ndia.org. Complete information about the conference is also available online at www.iitsec.org.



Simulation
Australasia

Australasian Simulation Congress
September 26 – 29, 2016
Melbourne Convention and Exhibition Centre
Melbourne, Australia

Simulation Australasia, the national body for those working in simulation in Australasia, will once again bring together the SimHealth and SimTecT conferences under the name of the Australasian Simulation Congress (ASC), with opportunities for a number of joint sessions of mutual interest. In 2016, the event will also incorporate the International Simulation and Gaming Association (ISAGA).

ASC 2016 will feature a terrific slate of keynote speakers, master classes, paper presentations and panel sessions – in addition to a robust exhibition.

For complete details and to register, sponsor or exhibit, please visit <http://www.simulationcongress.com/>

[Top](#)



MIMOS Update

MIMOS Open Simulation Day – 17
November, 2016

MIMOS is glad to announce the first MIMOS Open Simulation Day which will be held in Rome on 17th November at Cinecittà Studios. This is part of the main MIMOS objectives to create synergies among industries, academies and institutions to foster new business opportunities.

The Open Simulation Days are multidisciplinary events where industries, academies and everyone else would like to present to the audience, and to the stakeholders in particular, their capabilities showing excellence and projects results in the interesting fields, allowing at the same time cross fertilization and networking opportunities. In particular, you will be invited to explain specific exploitation interest of research project results, or cooperation needs on specific activity or initiative, or describing tenders related to M&S and VR.

Next September, a dedicated News will explain how to join the 17th November event, which foresees in the afternoon the opening session of the 3rd Meeting on Education and Simulation in Urology entitled “Why Simulation”, with the MIMOS patronage. The session programme includes a Lectio Magistralis from Dr. Richard Satava “The essential role of simulation in surgical education”, followed by presentations on simulation applications on Commercial Aviation, Videogames, Formula 1, Defence, and Cultural Heritage.

Agreement MIMOS-AISE

On last 13th June, an agreement has been signed by MIMOS and AISE-INCOSE which is the INCOSE Italian Chapter. The purpose of the agreement is, among other, to foster the dissemination of knowledge, culture and sensitivity towards scientific aspects, research and innovation capabilities, to promote joint events organisation, to contribute to the professional development of their members, to foster know-how transfer on state of the art technologies and on relevant initiatives for the reciprocal interest.

For further information on AISE: <http://aise-incose-italia.it/>

TECHNOLOGY for ALL - Rome 4 - 6 October 2016

Registration open to Forum Technology for All 2016, the Innovation Forum on technologies applied to Landscape, Cultural heritage, and Smart City.

Registration is free of charge and allows the participation to the Conference, to the Technical and Educational Workshops, and to the On-Field Day at Circo di Massenzio on Appia Antica. The purposes of the Forum is to go in depth on the knowledge of the innovative technologies and their applications to show the real potentiality by means of operational tests.

The Forum TECHNOLOGY for ALL 2016 will be held at Central National Library in Rome, from 5th to 6th October 2016, and on 4th October with the on-field day.

For further information: tel. +39.06.6227.9612; e-mail: info@technologyforall.it Web: www.technologyforall.it

MI-HERITAGE Master in interactive and digital systems for the return and protection of cultural heritage Submissions at the Master's Degree promoted by IUAV University of Venice are open.

The training project proposed by MI-HERITAGE intends to respond to the urgent needs of the cultural heritage of our country. The historical monuments are not only a legacy of the past, but a treasure of forms, knowledge and identity memories that continue to live in the modern world, and as such should be preserved and enhanced. It will make use of operational protocols and technological tools in constant evolution, and especially of professionals able to use it in the best way.

MI-HERITAGE stems from the desire to draw professionals to actively intervene in the processes of the protection and enhancement of the architectural heritage, archaeological and figurative, following a philosophy oriented to combine theoretical knowledge, technical skills and expertise in the use of digital systems and the most advanced interactive.

For more information: master.iuav.heritage@gmail.com or www.mi-heritage.org

[Top](#)



ETSA European Pavilion at I/ITSEC

After three years of successful ETSA European Pavilions at I/ITSEC, plans are underway for I/ITSEC 2016. Demand for the 2016 Pavilion is likely to be high, so act soon.

For details, contact Wilkie at steve.wilkinson@etsa.eu or +44 (0) 7722 234 752.

SMi Military Flight Training Conference

The 5th annual Military Flight Training Conference is taking place in London, UK on 21-22 September 2016.

ETSA Members will receive the usual 10% discount (on top of any other offers!).

<http://www.smi-online.co.uk/defence/uk/conference/military-flight-training>

ITEC 2017

16-18 May, 2017

Rotterdam, Netherlands

ETSA had a very successful Pavilion at ITEC 2016. So ETSA will be arranging another Pavilion at ITEC 2017 in Rotterdam. It is not too early to start thinking about your place on the Pavilion!

For details, contact Wilkie at steve.wilkinson@etsa.eu or +44 (0) 7722 234 752.

[Top](#)

NTSA Member News

CAE Wins Defence Contracts Valued at More Than C\$100 Million

(Reprinted with permission of MS&T magazine)

CAE has won defence contracts valued at more than C\$100 million to provide a range of simulation products and training support services for global military customers.

CAE was awarded a contract by Lockheed Martin to provide Airbus Helicopters H135/H145 synthetic training equipment in support of the United Kingdom's Military Flying Training System (UK MFTS) program. CAE will provide a total of seven flight training devices (FTDs) and one command and tactics trainer (CTT) for the Airbus Helicopters H135/H145 family, which were recently selected as the training helicopters for the rotary-wing element of the UKMFTS program. All the training devices will be delivered in 2018 to Royal Air Force (RAF) Base Shawbury and used to support ab initio helicopter pilot training for the RAF, British Army and Royal Navy.

The FTDs developed by CAE will be equivalent to Level 4/5 flight simulation training devices (FSTDs) according to International Civil Aviation Organisation (ICAO) standards. In addition, the Level 4/5 FTDs can be networked for teaching multi-ship tactical formations. The CAE-developed Combat & Tactics Trainer will be a suite of

four Level 1/2 FTDs that can be networked for teaching and practicing formation flying. All the CAE-built training devices will include the CAE Medallion-6000 image generator and databases built to the Common Database (CDB) standard, which enables distributed, interoperable mission training.

Lockheed Martin has also awarded the company a five-year contract to continue providing in-service support for the Royal Canadian Air Force's CC-130J aircraft maintenance technician training program. The contract also includes options that could extend the in-service support by an additional five years.

Under the CC-130J Maintenance Training Program, CAE provides maintenance and support services for the CC-130J fuselage training devices, integrated cockpit systems training device, and virtual maintenance trainers. CAE also has responsibility for providing a range of training support services, including schoolhouse support staff, training device spares, upgrades and maintenance, hardware and software engineering, courseware updates, and obsolescence management.

L-3 MAS, a subsidiary of L-3 Communications, has issued an order for CAE to continue providing a range of in-service support solutions for the Royal Canadian Air Force's CF-18 aircraft. CAE will provide avionics software upgrades, integrated logistics support and data management services. L-3 MAS has been the prime contractor on the CF-18 in-service support program since 1986, and CAE has been performing systems engineering support services for the CF-18 fleet for almost 30 years.

[Top](#)

Thales Awarded Future Support Contract for Watchkeeper

(Reprinted with permission of MS&T magazine)

The UK Ministry of Defence has awarded Thales a £80 million contract to deliver support to the British Army's combat proven Watchkeeper Unmanned Aircraft System (UAS). The support contract will provide technical support over the coming years and provide important additional capacity for training in order to generate operational capability.

Training support will see the continuation of the Watchkeeper Training Facility, training solutions design, updates to training courseware, and additional instructional capacity for pilot and mission system operators, maintainers and support crew.

In addition to supporting force generation, through training, Thales will provide direct maintenance support, which includes the provision of trained personnel to enhance the Army's front-line engineering capacity.

The award of this contract will sustain around 160 high-quality engineering jobs at locations across the UK including Crawley, Leicester, Bristol and Boscombe Down.

Defence Secretary Michael Fallon said: "This £80 million

agreement ensures the British Army's Watchkeeper system will provide UK troops with next-generation battlefield intelligence for years to come. Sustained support for Watchkeeper is a key part of the UK Government's 10-year £178 billion equipment plan to provide our Armed Forces with the kit they need now and into the future."

[Top](#)

Meggitt Wins Australian Defence Force Weapon Simulators Contract

(Reprinted with permission of MS&T magazine)

Meggitt Training Systems has been awarded an \$18 million USD contract from the Australian Defence Force's Capability Acquisition and Sustainment Group. Meggitt will develop, manufacture and install 460 EF88 Steyr assault rifle simulators and 115 SL40 40mm simulated grenade launchers.

Contract deliveries will take place at 18 locations throughout Australia to support Army, Navy and Air Force training requirements and are expected to begin in the fourth quarter of 2017 and continue through May 2018.

"We have supplied, operated and maintained the ADF's weapon training simulation system since 1999 and this latest weapons simulator award further validates Meggitt's long-standing strategic partnership with the Australian Defence Force," said Chris Jordan, managing director, Meggitt Training Systems, Australia.

[Top](#)

CAE and Draken International Expand Adversary Air Training Partnership

(Reprinted with permission of MS&T magazine)

CAE and Draken International have signed a Memorandum of Understanding (MOU) to pursue global opportunities related to the provision of advanced adversary and aggressor air training services.

This new MOU expands on an existing teaming agreement between CAE and Draken already established in Canada, where the two companies are currently pursuing the Contracted Airborne Training Services (CATS) program.

Specifically, CAE and Draken will explore collaborative development and pursuit of integrated live-virtual-constructive (LVC) training in areas such as air combat support, contracted adversary and aggressor air training, embedded simulation, tactical training, threat simulation, and joint terminal attack controller (JTAC) training. The two companies anticipate pursuing global opportunities in markets including the United Kingdom and other parts of Europe; Australia and other parts of Asia/Pacific ;

and North America.

"We are pleased to expand our partnership with Draken to focus on next-generation training solutions for the aggressor training domain," said Chuck Morant, CAE's vice president of Global Strategy and Business Development, Defence & Security. "There is a growing market for third-party adversary training, and we believe the integration of virtual and constructive capabilities will be critical to providing realistic and high-quality training for pilots flying fifth-generation fighters. The combination of Draken's fighter aircraft with CAE's virtual and constructive simulation technologies will create an integrated and immersive red air training capability."

[Top](#)

First Enlisted Airmen Selected for Global Hawk Pilot Training

(Reprinted with permission of MS&T magazine)

The US Air Force recently selected the first 10 enlisted Airmen to attend RQ-4 Global Hawk pilot training, marking the first time since World War II enlisted Airmen will be behind the stick.

The first combined enlisted and officer training course will begin October 2016, with the first enlisted Airmen expected to graduate in 2017.

"We're opening the RQ-4 career field to enlisted pilots for the first time," said Secretary of the Air Force Deborah Lee James. "We'll take this important step in a deliberate manner so that we can learn what works and what we'll need to adjust as we integrate our highly capable enlisted force into flying this weapons system."

The initiative to incorporate enlisted pilots is the first step to developing future operating concepts within the multi-domain intelligence, surveillance and reconnaissance enterprise. Enlisted pilots will undergo the same rigorous Air Force training as current RPA pilots with respect to flight training, rules, and responsibilities.

The new enlisted pilots will begin their Undergraduate RPA Training with the RPA Initial Flight Training where they will learn to fly a DA-20 Falcon. From there they will attend RPA instrument qualification and fundamentals courses before finishing with Global Hawk Basic Qualification Training. At the conclusion of their training they will be rated, instrument qualified pilots who are FAA certified to fly the RQ-4 in national and international airspace and mission qualified to execute the high altitude ISR mission.

The training plan could see 12 Enlisted Pilot Initial Class graduates in fiscal 2017, 30 in fiscal 2018, 30 in fiscal 2019, and 28 in fiscal 2020. In 2020, approximately 70 percent of those flying day-to-day missions in the RQ-4 are expected to be fully trained enlisted pilots.

[Top](#)

Carley Corporation Wins Navy Contract to Develop Aviation Training Curriculum

(Reprinted with permission of MS&T magazine)

The US Navy has awarded Carley Corp. a potential five-year, \$93 million contract to develop new curriculum for the training of aviation platform maintainers and operators.

The indefinite-delivery/indefinite-quantity contract also covers updates to existing curriculum and provision of related training materials to the service branch.

Work will occur in Orlando, Florida, through July 2021.

The Naval Air Warfare Center Training Systems Division awarded the small business set-aside contract through an online competitive procurement process with five bids received and will obligate \$10,000 from the service branch's aircraft procurement funds for fiscal 2014 at the time of award.

[Top](#)

Cubic Increases Joint Training Effectiveness

(Reprinted with permission of MS&T magazine)

Cubic Global Defense (CGD) has integrated its Air Combat Maneuvering Instrumentation (ACMI) system onboard the Canadian Air Force F-18 aircraft, to the Cubic Canadian Weapon Effect Simulation (CWES) system.

The enhanced training capability was demonstrated during the Canadian Forces' largest annual air-ground training exercise, Maple Resolve, at the Canadian Manoeuvre Training Centre in Wainwright, Alberta, Canada.

Canadian F-18 aircrew used Cubic's ACMI system to conduct simulated attacks and process Real-Time Kill Notification (RTKN) weapon effects on live, ground targets of opportunity outfitted with CWES systems. More than 6,500 Maple Resolve air and ground participants benefitted from the advanced training that improved Close Air Support coordination while preventing friendly fire, or 'Blue on Blue' incidents. The combined arms training was also enhanced by allowing detailed, live-tracking operations-level control that was recorded for comprehensive debriefs by Joint Terminal Attack Controllers (JTAC) and Canadian Air Force pilots.

[Top](#)

BAE Systems Australia Delivers 250,000 ADF Flying Training Hours

(Reprinted with permission of MS&T magazine)

BAE Systems Australia's Flight Training Tamworth facility has delivered 250,000 flying training hours for the Australian Defence Force's (ADF) student pilots. More than 5,600 ADF students have

graduated from the facility after completing flight screening, training on CT4B air trainers and basic flying training courses.

The Company also provides training services to the Republic of Singapore Air Force, Royal Brunei Air Force and Papua New Guinea Defence Force. In total, the facility has delivered around 360,000 training hours over almost 25 years.

[Top](#)

MetaVR Releases Virtual Reality Scene Generator Version 6.0

(Reprinted with permission of MS&T magazine)

MetaVR has released version 6.0 of its Virtual Reality Scene Generator™ (VRSG™) that creates 3D real-time environments which provide the fidelity of geospecific simulation with game quality graphics and performance.

Version 6.0 introduces several new features, enhancements, and 3D content and underwent extensive tests in the field in two pre-production systems of the USAF Joint Terminal Control Training and Rehearsal System (JTC TRS) close air support dome simulator.

It contains several infrastructure updates, including:

- Full support for Windows 10 64-bit system, to support customer integration efforts, in keeping with US Department of Defense (DoD) mandate for all the military services, Unified Combatant Commands, defense agencies, and field activities to upgrade their systems to Windows 10 by January 31, 2017.
 - DirectX 11 support, which includes VRSG support for Pixel Shader Model 5.0. In addition, VRSG's plugin API now uses DirectX 11 objects. (Note: any user-developed custom plugin which drew graphics or otherwise interacted with the DirectX 9 Graphics API under VRSG version 5 will need to be modified to use DirectX 11 with VRSG 6.0.)
 - Built with Visual Studio 2015, which means that if a user-developed custom plugin extends VRSG's Dashboard interface with a property sheet, the plugin must be rebuilt with Visual Studio 2015.
 - Support for Nvidia's new GeForce GTX 1080 gaming graphics card that has a baseline of 8 GB memory and delivers increased performance with less power consumption than the GTX 980 series.
- Other new features and enhancements include:
- 189 new models (including 121 new military models) to MetaVR's 3D content libraries. Among the culture models is a set of 7 trees now available with variants for all seasons. The models tree-163, tree-164, tree-cassia-001, tree-cassia-005, tree-elm-002, tree-elm-006, and tree-poplar-004 now offer 4-season variants via their appearance switch states. There are currently over 6,500 models of all types in MetaVR's 3D model libraries.

- Solid particle effects that model projectiles with dust trails being cast from detonation events. These 10 new ballistic effects, located in VRSG's \Effects directory, all spew solid particles. Some effects thrust particles in a given direction that is denoted in the filename. The release also includes a new billboard flame effect.
- Heat refraction post processing effect for sensor views. This feature, available both on the Sensor tab of the VRSG Dashboard and via a fixed-length SetDataPDU interface, adjusts the simulated heat haze appearance of a scene when it is viewed through a layer of heated air (produced from conditions such as jet fuel exhaust).
- Set of 14 high-resolution microtextures, many of them newly created for this release, of a variety of dirt, sand, and grass geotypical ground textures. VRSG blends a microtexture with the geospecific terrain imagery to produce the most realistic visual depiction of the terrain when it is viewed at close range. The textures are located in \MetaVR \VRSG\Textures\Microtextures.
- VRSG Multichannel is now part of the VRSG.exe; there is no longer a separate executable for running VRSG in multichannel mode. You access the multichannel capability on the Startup Parameters tab on the VRSG Dashboard.
- Changed layout of the Startup Parameters tab on the VRSG Dashboard to improve specifying the location of terrain, models, scenarios, and so on, for VRSG to load (VRSG's search path).
- New direction properties for the Rotating Animation custom attribute of MetaVR's FBX to HPX model converter. DirectionX, DirectionY, and DirectionZ are three distinct properties that define mesh rotation around an arbitrary axis other than a primary axis.

This release also includes Scenario Editor version 1.4 and all features that were in VRSG version 5.11, which was released in April 2016.

[Top](#)

US Air Force Selects Boeing for KC-46 Pegasus Maintenance Training

(Reprinted with permission of MS&T magazine)

Boeing will help the US Air Force train its KC-46 Pegasus maintenance personnel for the next seven years under a new \$78 million contract, which includes contract options.

Under the agreement, Boeing will install maintenance training systems at two Air Force bases. The first of the two training systems, at McConnell Air Force Base, Wichita, Kansas, will be operational in the second quarter of 2018. The second will be established by 2021 at a location to be determined.

Boeing's system combines an interactive, multi-media classroom environment, virtual touch-screen trainers and simulator-like

maintenance trainers, all of which are networked. The system's realism creates substantial aircraft familiarity. Activities in one part of the system are replicated in the others, allowing for coordinated team training as well as in-depth individual instruction.

[Top](#)

QinetiQ & Thales Select Textron AirLand Scorpion Jet for ASDOT Bid

(Reprinted with permission of MS&T magazine)

QinetiQ, Thales and Textron AirLand have announced a collaboration that will bid for the UK Ministry of Defence's upcoming Air Support to Defence Operational Training (ASDOT) programme.

The three companies' CEOs met at Farnborough International Airshow to announce the signing of the Memorandum of Understanding (MOU) setting the foundation for the bid.

The operational training activities that will comprise the the ASDOT programme are currently fulfilled by a number of providers, both military and civilian. The team will propose an innovative, cost effective, technologically advanced reliable managed service using the Textron AirLand Scorpion jet equipped with Thales and QinetiQ sensors to provide a broad spectrum of training for all three armed services. The competitive contract, expected to be awarded in September 2018 with a service delivery start in January 2020, is anticipated to be worth up to £1.2bn over 15 years.

QinetiQ will offer the safe operation and highly capable and flexible mixed fleet of Scorpion and other platforms - including maintenance and provision of pilots. Its proposal will include integration of sensors and jamming pods into the aerial fleet and certification of the aircraft to ensure compliance with military air worthiness regulations. The solution will include provision for the introduction of synthetic operational training and airborne aerial target capabilities.

Thales brings extensive experience in delivering fully managed training services and engineering bespoke high fidelity training equipment such as full mission simulators for leading air platforms such as A400M, Voyager, Tornado, Rafale, Mirage 2000, Hawk and Eurofighter. It will offer a range of sensors optimised for situational awareness, threat replication and targeting training, as well as Electronic Warfare capability.

Textron AirLand will offer its Scorpion jet, which was selected based on the aircraft's multi-mission capability, combined with unparalleled acquisition and operating costs and a dispatch reliability rating exceeding 98 percent.

[Top](#)

Air Advisor Training at US Air Force Expeditionary Center

(Reprinted with permission of MS&T magazine)

Cubic Global Defense (CGD) has won a \$6.2 million follow-on award to support the US Air Force (USAF) Expeditionary Center's Advisor Academic Services at Joint Base McGuire-Dix-Lakehurst in New Jersey.

Team Cubic, composed of Language Directions, LLC, Marton Technologies, Inc., and Fae Vectus, LLC, will continue to collectively provide classroom and scenario-based training on core skills applicable to all Air Advisors. The USAF Expeditionary Center is the Air Force's Center of Excellence for advanced mobility and expeditionary combat support training, and it prepares Air Advisors and other airmen to work with partner nations on multi-faceted peacetime and wartime operations.

Under the contract, Team Cubic will offer various types of education and training requirements organized into two pillars: Core Knowledge; and Language, Region and Culture (LRC). These kinds of instruction are necessary to provide a solid foundation for Air Advisors who work with partner nations in support of their respective Air Components, Combatant Commands (CCMDs), Headquarters Air Force (HAF) and Major Commands (MAJCOMs).

Cubic is the incumbent contractor currently providing Air Advisor Academic instructors and role players to the USAF Expeditionary Center. The follow-on contract will begin in October 2016.

[Top](#)

STEM Connector News

Discovery Education Hosts Esteemed Educators from Across the Globe in Chicago for Unique Summer Learning and Networking Opportunities

Unique Professional Development Events Support Educators in Delivering Effective STEM Instruction and Creating Authentic Digital Learning Environments

[Discovery Education](#), the leading provider of digital content and professional development for K-12 classrooms, recently hosted 240 educators from around the world at Loyola University in Chicago, IL for its 11th annual [Discovery Educator Network](#) (DEN) Summer Institute, as well as the first-ever Discovery Education Summer STEMmersion.

On July 14-17, 41 STEM (**S**cience, **T**echnology, **E**ngineering and **M**ath) educators from across the world convened for the inaugural Discovery Education Summer STEMmersion professional development event. This immersive experience, which was focused on the grand engineering challenge of urban infrastructure, provided participating educators with a variety of new strategies they can use to deliver effective STEM instruction in their school system. Topics covered included using virtual reality in the classroom, writing effective grants for STEM, integrating

engineering concepts into instruction, and more. Participants hailed from 14 different school districts and individual schools that are currently collaborating with Discovery Education to build a culture of STEM teaching and learning system-wide that helps students become innovative problem-solvers.

Following STEMmersion, on July 17-22, Discovery Education's Discovery Educator Network convened 150 educators from the U.S., Canada, the UK, Sweden, Egypt, Saudi Arabia and Antigua for the 2016 Discovery Educator Network Summer Institute (DENSI). An immersive, week-long professional development experience, DENSI is designed to support educators as they combine the latest technologies and digital content to create authentic digital learning environments that engage students and improve achievement. Throughout DENSI, participants had the opportunity to connect, collaborate, and share resources, ideas and strategies for integrating the latest technologies and digital content into classroom instruction.

In addition, DENSI attendees engaged in a series of interactive workshops led by the Discovery Education professional development team and other DEN members that focused on creating digital content and integrating mobile and web-based tools into instruction. Participants collaborated with fellow educators on a variety of educational technology projects, and shared ideas and best practices with their peers. Participation in the DEN Summer Institute is open to educators recognized by Discovery Education as STAR Discovery Educators - active members of the DEN and proven leaders in transforming teaching and learning.

"I am honored to have been selected to participate in DENSI 2016. This experience has allowed me to learn from and connect with other enthusiastic educators from around the world who share a passion for using innovative methods to enhance student learning," said Dave Tchozewski, Director of Information Technology at Jenison Public Schools in Michigan. "I am excited to share these new, creative strategies and techniques for advancing student achievement with my colleagues, and to help our educators integrate them into classroom instruction for the 2016-2017 school year."

After participating in the DEN Summer Institute and STEMmersion, educators will return to their schools equipped to transform teaching and learning with new strategies and techniques for integrating digital resources and STEM into curriculum and instruction.

"The exceptional group of educators selected to participate in the 2016 DENSI and STEMmersion have demonstrated their leadership and commitment to improving students' learning experiences through innovative technologies and effective STEM instructional strategies," said Lance Rougeux, vice president of learning communities and innovation for Discovery Education. "The resources and strategies they have learned during these experiences will increase their students' engagement and achievement, and better prepare all learners with the critical skills they need to succeed beyond the classroom."

For more information about Discovery Education's STEMmersion, the DEN Summer Institute or other Discovery Education initiatives, visit www.discoveryeducation.com.

About Discovery Education

Discovery Education is the global leader in standards-based digital content and professional development for K-12, transforming teaching and learning with award-winning digital textbooks, multimedia content that supports the implementation of Common Core, professional development, assessment tools, and the largest professional learning community of its kind. Serving 3 million educators and over 30 million students, Discovery Education's services are in half of U.S. classrooms, 50 percent of all primary schools the UK, and more than 50 countries. Discovery Education partners with districts, states and like-minded organizations to captivate students, empower teachers, and transform classrooms with customized solutions that increase academic achievement. Discovery Education is powered by Discovery Communications (NASDAQ: DISCA, DISCB, DISCK), the number one nonfiction media company in the world. Explore the future of education at www.discoveryeducation.com.

[Top](#)

100 CEO Leaders in STEM Spotlight:

Bradley Feldmann

President and Chief Executive Officer

Cubic Corporation

Cubic Corporation designs, integrates and operates systems, products and services focused in the transportation, defense training and secure communications markets. As the parent company of two major business units, Cubic's mission is to increase situational awareness and understanding for customers worldwide. Cubic Transportation Systems is a leading integrator of payment and information technology and services to create intelligent travel solutions for transportation authorities and operators. Cubic Global Defense is a leading provider of realistic combat training systems, secure communications and networking and highly specialized support services for military and security forces of the U.S. and allied nations.

Bradley H. Feldmann has served as president and chief executive officer of Cubic Corporation since July 2014. Feldmann was appointed to the board of directors in May 2014.

Previously, he served as the president and chief operating officer from January 2013 until assuming his current position, and as the president of the companies comprising the Cubic Defense Systems segment from 2008 through March 2013.

Prior to re-joining the company in 2008, Feldmann held senior leadership positions at OMNIPLEX World Services Corporation and ManTech International. He previously worked at Cubic Defense Systems from 1989 to 1999.

Feldmann is a graduate of the Stanford Executive Institute and holds a Master of Business Administration with honors from San Diego State University. He is also a distinguished graduate of the U.S. Air Force Academy with a Bachelor of Science in Electrical Engineering and a top graduate of the USAF Squadron Officer School.

Feldmann is a Fellow of the National Association of Corporate Directors. He is also a member of the Aerospace Industries Association board of governors, and serves on the board of several organizations including the National Defense Industrial Association and UrbanLife.

According to statistics from the National Math + Science Initiative (NMSI), by 2009, over half of U.S. patents were awarded to non-U.S. companies because STEM shortcomings are forcing a hold on innovation. Seeing these kinds of statistics is not good when you manage a company that relies on cutting-edge products and solutions.

Cubic Corporation, founded and headquartered in San Diego, CA, is a company well known for its innovation in the transportation and defense industries. Cubic Transportation Systems (CTS) is a leading integrator of payment and information technology and services for intelligent travel solutions; and Cubic Global Defense (CGD) is a leading provider of realistic combat training systems, secure communications and networking and highly specialized support services for military and security forces of the U.S. and allied nations. Both businesses are engaged in the design, development, integration and sustainment of high-technology systems, products and services for government and commercial customers worldwide. We began as an innovation company in 1951 and we continue to be an innovation company today. At Cubic we understand the importance of STEM and recognize the need to promote STEM-based learning to students at an early stage. To support these initiatives, Cubic and its subsidiary Intific developed a multitude of online games related to STEM to help attract America's youth to the STEM subjects. Teaching physics to Kindergartners and promoting computer programming and robotics to middle school girls are few successful examples.

Developing STEM educational activities relatable to these age groups is critical for not only the children, but also to global companies that will need employees who studied subjects in the hard sciences related to STEM. We need to lean forward and be creative with how we attract the brilliant minds of tomorrow to STEM disciplines to spark the nation's competitiveness.

In order to maintain Cubic's competitiveness and to foster leading-edge innovations, we developed IdeaSpark – an internal innovation social system where our employees solicit and share ideas across the company. These ideas include the development of new products, improvements to current products or discovering solutions our customers need.

Employees are encouraged to participate and every week, a Tech

Council reviews submitted ideas and chooses the best “IdeaSpark” to advance to the next ‘make-it-real’ stage. This allows the idea to be provided with seed funding, researched and developed into prototype production, solution or service. Lastly, when all is complete, the idea is launched into an offered solution.

Since the inception of IdeaSpark in 2014, over 245 ideas have been submitted, 136 catalogued, 106 advanced to the ‘make-it-real’ stage and three products/solutions launched. We at Cubic believe creativity and interaction between employees is important. It’s the reason we leverage 2-3% of our revenue into research and development. Cubic is also committed to co-developing with our customers. We observe for possible pain points and brainstorm potential solutions cooperatively with customers. We rank order these projects and make investments to a portfolio approach for short-term, long-term, incremental and game-changer products and services. Today, we have nearly 20 unique projects that are in the process of working to solve our customers’ pain points. We work on innovation projects using a phased, incremental approach to co-develop with our customers to ensure we are developing the most relevant solutions. Cubic is known for many great breakthroughs over the years, including inventing the ‘Top-gun’ training system, implementation of the first contactless-card ticketing system and the first ‘One-Account’ ticketing system using a smartphone. We are continuously working to increase the pace of breakthroughs for our customers through our innovation social system, IdeaSpark.

Cubic is dedicated to encouraging and cultivating ideas and innovations, which start from a young age. It’s why Cubic interacts with hundreds of students, teachers and administrators who are hungry and excited for the opportunity to implement STEM technology and learning paradigms into their education curriculum. And it’s one of the many ways Cubic is global, innovative and trusted (our motto). Similarly, I believe that in order for the U.S. to be a top producer of innovation, we need to empower the youth of our country with the STEM sciences and recognize our workforce for their creativity. By making such efforts, we can maintain our competitiveness and provide better products and solutions that help make the world a better place.

[Top](#)



[About](#) | [Events](#) | [Membership](#) | [CMSP Certification](#) | [I/ITSEC](#) | [To Advertise](#)

This communication has been sent to you as a member or customer of NDIA and its affiliates AFEI, NTSA, PSA, and WID. Your e-mail address is used to maintain member and customer contact and provide notification of new activities. If you do not wish to receive future messages from NDIA or its affiliates, please send a message to bmcDaniel@ndia.org.

National Defense Industrial Association, 2111 Wilson Boulevard, Suite 400, Arlington, VA 22201

To ensure that you receive all valuable and informative email communications from NDIA, please add NTSAnewsletter@NDIA.ORG to your list of trusted senders (called the White-List).