

Simulation and Training - Recent World News

May 2018

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Pictures: I/ITSEC 2017 Orlando exhibition hall, Boeing/QinetiQ Portal Farnborough, Warton F-35 sim, BAES sim integration facility

Contents

Countries and Regions mentioned

Word Count by subject area

Simulation and Training Events - ITEC in Stuttgart

Recent S&T news

Aviation S&T news - Civil Fixed-Wing, Civil Rotary, Military Fixed-Wing, Military Rotary, UAVs

Multi-Role S&T news, including cyber

Land systems S&T news, including medical

Maritime systems S&T news

Corporate S&T news,

New S&T systems

Countries and Regions mentioned in this newsletter *(Use the search function to find individual items)*

Asia, Australia, Austria, Bahrain, Brazil, Canada, China, Colombia, Czech Republic, Egypt, Estonia, Ethiopia, Europe, France, Germany, Hungary, Iceland, India, Japan, Jordan, Kazakhstan, Kenya, Macedonia, Malaysia, Mexico, Morocco, Netherlands, New Zealand, Norway, Oman, Portugal, Qatar, Russia, Rwanda, Saudi Arabia, Senegal, Scandinavia, Singapore, S Africa, Spain, Sweden, Switzerland, Thailand, Turkey, UAE, UK, USA, Vietnam. (Total 48)

Newsletter Content. This Newsletter refers to 48 Nations and Regions and has nearly 7000 words. About 4400 words (64%) are on aviation, 660 (10%) for Land systems (870 (13%) including medical) and 100 (1.6%) for Ship systems. New simulation systems have 330 (5%) and corporate changes 160 (2.4%). Within air systems, Civil Fixed-wing has 2600 (38%) and rotary 510 (7.6%), Military fixed-wing 300 (4.4%) and rotary 600 (9%). It is significant that, in worldwide simulation, Commercial Air Transport (CAT) has many more projects than the military. This is for two reasons. (1) The CAT area is expanding and is forecast to double over the next 20 years, and (2) world Civil Aviation Authorities are now requiring the highest standard of Full Flight Simulator so that training can go beyond the routine and include Upset and Recovery Training (UPRT) that cannot be accomplished with earlier standards of flight simulator.

ITEC - International Training and Education Conference and exhibition

The 2018 International Training and Education Conference (ITEC) will be held in Stuttgart, Germany, at the Alfred Kärcher Halle, Messe Stuttgart conference centre, just north of Stuttgart airport.

Monday 14 May

Simulation Interoperability Standards Organisation (SISO) Seminar on Modelling and Simulation (M&S) standards.

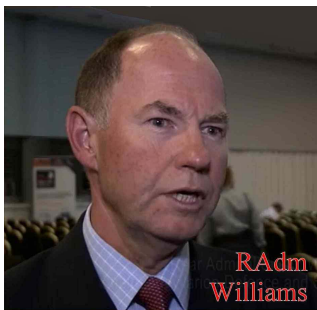
NATO M&S standardization will be addressed by NATO M&S Group (NMSG) vice-chairman Agatino Mursia of the Leonardo company. There will also be presentations from France, Germany, Netherlands, Sweden, UK, USA.



Subjects include the following:

- Cross Domain Security (CDS) Requirements
- Distributed Simulation - Standards
- Distributed Mission Simulation - Security aspects
- Medical M&S Interoperability
- M&S as a Service
- Open Standards in COTS Products
- Real-time Platform Reference Federation Object Model (RPR FOM) - the latest
- Urban Combat Advanced Training Technologies (UCATT)

TUESDAY 15 MAY - ITEC KEYNOTE SPEAKERS



Keynote speakers include Rear Admiral Simon Williams, RN Retd, Chairman of Clarion Defence & Security
Brigadier Markus Kurczyk, German Army, Director, Armed Forces Training,
Joint Support Service Headquarters, Bonn
Brigadier William Cole, US Army, US Army Program Executive Officer (PEO),
Simulation, Training and Instrumentation (PEO STRI)
Jürgen Michel, Head of International Sales, Rheinmetall Defence Electronics GmbH

ITEC CONFERENCE PROGRAMME 15-17 MAY

This includes the following subject areas - for more detail see www.itec.co.uk/conference-agenda

- Design and Engineering in the Virtual Space
- Disruptive Technologies - NATO monitoring more than 15 disruptive trends
- High-velocity Learning
- Humanitarian and Crisis Operations - Simulation
- Military Operations in Urban Terrain (MOUT) training
- Mission command simulators - Course Of Action (COA) analysis
- Mission command system - simulators for
- Modelling and Simulation as a Service (MSAAS)
- Multi-disciplinary optimization (MDO) using simulation
- Next-generation Modelling and Simulation technology
- Rotary-wing Training Systems
- Simulation training for Police Command situations

WORLD SIMULATION AND TRAINING EVENTS

2018 - May 15-17 - European International Training Equipment Conference and exhibition (ITEC) incorporating Civil Security Simulation conference

Venue: Alfred Kärcher Halle, Messeplatz Stuttgart, Germany

Organiser: Clarion Events, London, UK www.clarionevents.com & www.itec.co.uk

2018 - May 23-26 - KADEX-2018 International Exhibition Weapons Systems and Military Equipment

Venue: Astana, Republic of Kazakhstan

Reference: www.kadex.kz/eng

2018 - June 6-7 - T&S Industry Symposium (TSIS) 2018

Venue: Orlando, Florida, USA.

Organiser: NTSA www.trainingsystems.org

2018 - June 11-12 - RAeS Flight Simulation Group Conference - Future Flight Simulation

Venue: Royal Aeronautical Society, 4 Hamilton Place, London W1J 7BQ, UK

Organiser: RAeS Flight Simulation Group www.raes-fsg.org.uk

2018 - June 11-15 - Eurosatory - Defense & Security International

Venue: Paris-Nord Villepinte Exhibition Centre, Paris, France.

Organiser: Commissariat Général des Expositions et Salons (COGES) www.cogesevents.com
and the French Ministry of Defence www.eurosatory.com

2018 - July - Capitol Hill M&S Expo

Venue: Washington DC, USA.

Organiser: National Training and Simulation Association (NTSA) www.trainingsystems.org

2018 - August - IFEST 2018

Venue: Washington DC, USA.

Organiser: National Training and Simulation Association (NTSA) www.trainingsystems.org

2018 - 28–29 August 2018 - Asia Pacific Airline Training Symposium (APATS)

Venue: Marina Bay Sands, Singapore www.apats-event.com

Organiser: Halldale Group www.halldale.com

2018 - September 24-25 - National M&S Coalition Meeting

Venue: Omaha, Nebraska USA

Organiser: National Training and Simulation Association (NTSA) www.trainingsystems.org

2018 - September - Fall Simulation Interoperability Workshop (SIW)

Venue: Orlando, Florida, USA

Organiser: National Training and Simulation Association (NTSA) www.trainingsystems.org

2018 - 6–7 November 2018 - European Airline Training Symposium (EATS)

Venue: Madrid Marriott Auditorium, Spain www.eats2018.com

Organiser: Halldale Group www.halldale.com

2018 - November 12-13 - RAeS Flight Simulation Group Conference - Developments in Flight Simulation

Venue: Royal Aeronautical Society, 4 Hamilton Place, London W1J 7BQ, UK

Organiser: RAeS Flight Simulation Group www.raes-fsg.org.uk

2018 - November 26-30 - I/ITSEC 2018

Interservice/Industry Training, Simulation & Education Conference and exhibition

Venue: Orange County Conference Centre, Orlando, Florida, USA.

Organiser: National Training and Simulation Association (NTSA) www.trainingsystems.org

AVIATION SYSTEMS - *training systems for aircraft and the aviation environment*

CIVIL FIXED-WING AIRCRAFT SYSTEMS

For rotary wing systems (helicopters and propeller-driven tilt engine / tilt wings), see later

6MOUV - www.6mouv.com

France. 6MOUV Flight Simulators of Colomiers, on the west side of Toulouse, France, has obtained FTD2 and FNPT II MCC certification from the French Civil Aviation Authority (DGAC). This is for a simulator for the Beechcraft 1900D at SIMCOM Aviation Training Europe, Roissy, near Charles de Gaulle Airport, Paris (www.simulation-training.aero). This has Rockwell Collins Pro Line II avionics and the Garmin GTN625 flight management system.



Alsim - www.alsim.com

Airliner Sim. Alsim of Le Loroux Bottereau, East of Nantes, France, has launched a hybrid simulator with Airbus and Boeing configurations called "The Airliner". Its capabilities include Upset Prevention and Recovery Training (UPRT).
Colombia. Alsim is to install an AL250 flight training device in the Escuela de Aviacion flight school at Enrique Olaya Herrera Airport, Medellin, NW of Bogotá (www.escueladeaviacionflying.co). The AL250 is qualified as an FAA-AATD (Advanced Aviation Training Device) and EASA-FNPT (Flight Navigation Procedures Trainer) certified. It can be configured to single- and multi-engined configurations (SEP/MEP) with analogue or glass cockpit instruments.
France. Alsim has delivered two AL250 FNPT II simulators to Astonfly, a flight training school at Toussus-le-Noble airport on the SW side of Paris. These will be used for glass cockpit training in the Integrated Airline Pilot Course.
UK. Alsim is to provide an ALX simulator to Tayside Aviation of Dundee, Scotland (www.taysideaviation.com), for MPL training. Tayside Aviation already operates an Alsim AL200 MCC trainer.
US FAA. Alsim has US FAA approval for their AL250 design as an Advanced Aviation Training Device (AATD).

Ansett Training - www.ansettssimulators.com

Australia. Ansett Aviation Training of Melbourne, Australia, is developing a new three-bay aviation training centre adjacent to Brisbane Airport. This will include a new ATR-600 full flight simulator from TRU S+T and the company will re-locate a Dash-8 and a Fokker F-100, from its Melbourne facility.
Taiwan. Ansett is to install an ATR-600 simulator in May 2018 under a partnership with Mandarin airlines and ATR.

AvSoft - www.avsoft.com

Canada. AvSoft International of Denver, Colorado, USA, is to provide its eLearning system to R1 Airlines in Calgary, for Dash 8 Q300 and CRJ 200 pilot training.
Kenya. Avsoft has a contract for training aids with Kenya-based Jambojet.
New Courseware System. AvSoft announced a new HTML5-based courseware player for aircraft systems and general courseware. HTML5 works on mobile devices and on all major web browsers without having to download a plug-in. It can be integrated with any Learning Management System (LMS) or Training Management System (TMS) that conforms to the Sharable Content Object Reference Model (SCORM).

Baltic AA Training - www.baatraining.com

Vietnam. Baltic AA Training Aviation Academy of Vilnius, Lithuania, has established BAA Training Vietnam. Construction of a training centre has started, with the first Airbus A320 FFS to be deployed by the end of 2018. FFS for Airbus A320neo and Boeing 737 MAX are to be introduced in 2020, and an ab-initio flight school is to be added.

Britannica - www.britannica-ks.com

France, Singapore, S Africa, USA. Britannica Knowledge Systems (BKS) headquartered in Chicago, USA, has provided its Fox training management system to ATR's training centres in Toulouse, Paris, Johannesburg, Singapore and Miami. These have an annual throughput of over 3,500 pilot, maintenance, flight operations and cabin crew. ATR can use Fox to manage customer data, track training progress and document course completion.
Japan. All Nippon Airways is to use Britannica's Fox training management platform.

CAE - www.cae.com

600XR FTD. CAE has launched its fixed-base 600XR Series flight training device (FTD) with a representative flight deck and Tropos 6000XR collimated visual. It complies with ICAO Type 4, FAA Part 60 Level 6 FTD and EASA II FTD requirements.

Canada. CAE is to deliver an Airbus A320 FFS to its CAE Montreal training centre and a Bombardier Q400 FFS to its CAE Vancouver centre.

Extended Envelope Training. CAE, headquartered in Montreal, Canada, has qualified of 7000XR Series Airbus A320 full-flight simulator (FFS) to FAA Part 60 Change 2 requirements, covering Extended Envelope and Adverse Weather Training (EE/AWT).

EE/AW training will become mandatory under the US FAA by March 2019, to reduce Loss of control In-Flight (LOC-I) accidents. Crews will now train for full stalls, upset prevention and recovery training (UPRT), icing, gusting crosswind landings, and bounced landings.

Ethiopia. CAE has delivered an A350 XWB full flight simulator to Ethiopian Airlines Aviation Academy at Addis Ababa Bole International Airport.

France. CAE is providing a full flight simulator for the ATR 72-600 to ATR's training centre in Toulouse, to be ready for training in Q3/2018. The simulator will be qualified by EASA and FAA.

Hungary. CAE is to deliver two Airbus A320 full flight simulators with Tropos 6000XR visual to the Wizz Air crew training centre near Budapest International Airport. They will also deliver a fixed base simulator, a cabin emergency evacuation trainer and a firefighting trainer.

Malaysia. CAE has supplied its new Rise training system to AirAsia of Kuala Lumpur. Rise is part of the CAE Next Generation Training System. Rise will strengthen the ability of instructors to deliver standardised training and assess pilot competencies.

Mexico. CAE is to deliver an A320 FFS to its CAE Mexico training centre.

Oman. CAE has signed a Service Level Agreement (SLA) with the Omani Authority for Partnership for Development (OAPFD) to build the new Oman Aviation Academy at Sohar International Airport. The Oman Aviation Academy will be a CAE Authorised Training Centre and will train pilots for both the civil and military sectors. CAE will provide courseware, flight instructors, safety management and quality control systems.

UK. CAE is to train Virgin Atlantic pilot training on the Airbus A330 and A350 at the CAE training centre at London Gatwick. This will use CAE 7000XR full-flight simulators, and in addition, an A350 flight training device (FTD) will be delivered to Virgin Atlantic's training centre, known as "The Base", in Crawley, south of London Gatwick airport.



ERAU - <https://erau.edu>

Singapore. Embry-Riddle Aeronautical University (ERAU), headquartered in Daytona Beach, Florida, USA, is to provide Singapore Airlines (SIA) with training for Commercial Pilot's License with instrument and multi-engine ratings. This will start at the Embry-Riddle Asia Campus in Singapore followed by the final year at Daytona Beach.

Flame Aviation - www.flame-aviation.com

India. Flame Aviation of Wassenaar, NE of The Hague, Netherlands, has supplied a V9000 Commander Cabin Fire and Smoke Trainer to Jet Airways of Mumbai. The V9000 has an observation area that allows the training to be observed through a glass wall. It has an automatic fire extinguisher refilling station and a trainee monitoring system that provides feedback to the instructor. It deals with a range of scenarios, including lithium-ion battery fires.

Morocco. Flame has supplied a V9000 Commander Cabin Fire + Smoke Trainer to Royal Air Maroc (RAM). It is installed at RAM's new training facilities in Casablanca. Flame's fire training curriculum is used, which includes presentations, instructional videos and questionnaires, in both English and French.

FlightSafety - www.flightsafety.com

France. FlightSafety International (FSI), headquartered at La Guardia Airport, New York, USA, is to supply an Embraer 190-E2 simulator to the FSI Learning Center at Paris-Le Bourget. This will be FlightSafety's FS1000 model with next generation visual and CrewView collimated glass mirror display. The Paris Learning Center has been expanded with a new 1,145 square metre (12,346 sq. ft.) building with space for four simulators, seven classrooms, three rooms for other training devices, and six briefing rooms.

USA. FlightSafety has expanded its Learning Centre in Columbus, Ohio, by 63,000 sq ft. The Columbus facility now has 14 simulator bays, 29 classrooms, 28 briefing rooms, and facilities for Graphical Flight-Deck Simulators. Training includes for Bombardier Challenger 350 & 650, Global 6000; Dassault Falcon 2000; Embraer Phenom 300; and Cessna types Latitude, Sovereign, & Citation Excel / X / XLS, and Hawker 900XP.



Flyco Global - www.flycoglobal.com

Austria. Flyco Global, headquartered in London, UK, is to provide systems for Austro Control of Vienna. These include Flyco's Advanced Learning Management System (A-LMS) for pilots and other personnel. A-LMS has an E-library for pilots, dispatchers, technicians, managers, handling personnel, loadmasters and ground personnel. Training can be both on and offline via Flyco's apps for Android and iOS devices. Austro Control staff can create reports, obtain training performance statistics and carry out crew assessments. The system also has an Advanced Report Server (ARS) and automated Licence Auto-Track (LAT).

Egypt. Flyco has training agreements with Egyptian carriers Nile Air and Nesma Airlines.

Frasca - www.frasca.com

USA. Frasca International Inc of Urbana, S of Chicago, USA, is to supply an Advanced Aviation Training Device (AATD) for the Piper Archer to the Big Bend Community College (BBCC) of Moses Lake, Washington State, east of Seattle. This will have Garmin G1000 Nxi avionics and Frasca's TruVision visual.



FSI Training - www.flightsafety.com/fs_service_simulation_systems.php

USA. FlightSafety International (FSI) Simulation, headquartered at Broken Arrow, Tulsa, Oklahoma, USA, has supplied a simulator for the Pilatus PC-24 twin-engined business jet to FlightSafety's Learning Center in Dallas, Texas. This has been approved for training by the European Aviation Safety Agency (EASA) and the US FAA.

L3 Commercial Training - www.l-3com.com

Portugal. L3 Commercial Training Solutions (L3 CTS), headquartered at Crawley, S of London Gatwick airport, UK, has opened a new European Airline Academy at Ponte de Sor Airport, NE of Lisbon. This can train up to 500 cadets a year, and follows L3's acquisition of the G Air Training Centre in October 2017.

Singapore. L3 CTS is to train pilots of Jetstar Asia Airways, headquartered at Changi Airport.

Magnetic MRO - www.magneticmro.com

Estonia. Magnetic MRO AS, based in Tallinn, Estonia, has opened a new facility in Tallinn, close to the company's maintenance facilities. Courses include EASA Part-147 training for Airbus, Boeing and Bombardier aircraft. Engine training includes for CFM56-3/5/7, IAE V2500 and PW100 engine series. Other subjects include electrical wiring, fuel tank safety, and maintenance human factors.

MPS - www.flymps.com

Norway. Multi Pilot Simulations B.V. (MPS) of Groenekan, Utrecht, The Netherlands, will move a MPS-made B737 FNPT-II/MCC to the new facility of OSM Aviation Academy (OSMAA) in Norway. OSM Aviation Academy is the new name for Scandinavian Aviation Academy (SAA).

Sweden. MPS is to supply a B737-800W flight training device (FTD) to the OSMAA training Center in Vasteras.

UK - A320. MPS is to supply an A320 FTD to the Virtual Aviation flight training centre at Cambridge Airport (www.virtualaviation.co.uk/cambridge-airport).

UK - B737. MPS is to deliver a B737 MAX FTD to a new training centre in the UK.

one-G sim - <https://flyone-g.com>

Switzerland. one-G simulation, headquartered in Seattle, USA, has received EASA certification for its Swiss12 simulator as an AATD. The Swiss 12 simulator design is based on the Pilatus PC-12 turboprop aircraft.

OSM Academy - www.osmaviationacademy.com

Scandinavia. OSM Aviation Academy, Arendal Airport, Gullknapp, SW of Oslo, Norway, is the new title for the Scandinavian Aviation Academy (SAA).

PacSim - www.pacificsimulators.com

New Zealand. Pacific Simulators 2010 Ltd (PacSim) of Christchurch, New Zealand, is to supply their PS4.5 model of fixed-base simulator to Ardmore Flying School at Papakura, south of Auckland on the North Island.



Peak Pacific - www.peakpacificgroup.com

Malaysia. Peak Pacific Limited of Hong Kong, China, and Malaysia Airlines Berhad (MAB) are to develop Cabin Familiarisation and Safety & Emergency Procedures (SEP) for flight and cabin crew. This will be a combination of eLearning and mobile apps.

Pelesys Aviation Maintenance - <http://website.pelesys.com/maintenance>

USA - California. Pelesys Aviation Maintenance Training Inc (PAMT) of Richmond, S side of Vancouver, Canada, has supplied training for Boeing B777 maintainers of International Aerospace Coatings (IAC), Victorville, California, NE of Los Angeles. This included a self-study module plus instructor teaching, and time in the classroom was reduced to two days. Progress of the computer-based training was monitored using Pelesys' Learning Management System.

USA - Florida. Pelesys Aviation Maintenance Training is providing systems to the Glennco Aviation Maintenance Training Company of Weeki Wachee, Florida, N of Tampa (www.glenncotraining.com). These include Pelesys' self-study modules including Computer Based Training, Virtual e-Trainers and Interactive Schematics.

Qantas - www.qantas.com/au/en

Australia. Qantas is to open the Qantas Group Pilot Academy in 2019 at a location to be announced. This will train 100 pilots per year, but will be capable of building up to 500 pilots a year.

Rockwell Collins - www.rockwellcollins.com

Asia, Canada, Europe, USA. Rockwell Collins, headquartered in Cedar Rapids, Iowa, W of Chicago, USA, is to provide visual systems to TRU Simulation (www.trusimulation.com) for 15 commercial full flight simulators in Asia, Canada, Europe, and the USA. This includes EP-8100® image generators, JVC laser projectors, airport databases, spares and training. The systems will be manufactured at Rockwell Collins' facility in Salt Lake City, Utah.

RSI - www.rsi-visuals.com

USA. Redifun Simulation Inc (RSI) Visual Systems of Euless, Texas, is offering its Level D Epic Visual System under a "Visuals as a Service" programme under which customers pay a monthly fee rather than a large purchase price. Under this, RSi will install an Epic D-Series Visual System with airport libraries, software updates, spares and repairs.

Simthetiq - www.simthetiq.com

Turkey. Simthetiq Inc of Montreal, Canada, is supplying its X2 Visual System for five Level D full flight simulators (FFS) at the International Flight Training Center of Turkey (IFTTC) in Istanbul - <https://iftc.aero>, for installation later in 2018. The X2 Visual uses the aXion image generator and is said to be on over 50 Flight Simulation Training Devices (FSTD) worldwide. The system was recently qualified on a Level D Twin Otter FFS.

SoftekSim - www.softeksim.com

UAE. SoftekSim of Riga, Latvia, is to supply a EASA FNPTII MCC training device to the Fujairah Aviation Academy in the UAE, for Air Transport Pilot License (ATPL) training.

Spatial Composites - www.spatial-composite.com

Bahrain. Spatial Composite Solutions FZE, Jebel Ali Free Zone, Dubai, UAE, is to supply a Boeing 787 door trainer to the Gulf Aviation Academy at Bahrain International Airport, Muharraq.

Thailand. Spatial is to supply an Airbus A320 door trainer to Thai Flight Training (TFT), a subsidiary of Thai Airways. It is due to be in service later in 2018 and will have a visual system for training on the L1 door and over-wing exit.

TRU Simulation - www.trusimulation.com

Australia. TRU Simulation + Training Inc, headquartered at Charleston, South Carolina, USA, has Level D certification from the Civil Aviation Safety Authority of Australia (CASA) for a King Air simulator at Ansett Aviation Training, Sunshine Coast Airport, N of Brisbane. This is convertible between Beechcraft King Air 200 and 350i, and has Rockwell Collins Pro Line 21 avionics, TRU RealCue motion and ADAS X digital audio. Other customers include the Australian flying doctor service.

China. TRU is to supply an A320 FFS to the Airbus Hua-Ou Aviation Training Company in Beijing.

Iceland. TRU is to supply a Boeing 737 MAX FFS to Icelandair for delivery in Q4 2018.

Singapore. TRU has supplied an A320 FFS to the Airbus Asia Training Centre in Singapore



Tulmar - www.tulmar.com

Canada. Tulmar Safety Systems of Hawkesbury, west of Montreal, Canada, has created a family of scaled-down versions of aircraft emergency evacuation slides. They are designed to be used in a classroom environment, and the slides have markings, tie-downs, sea lights, re-entry straps and other equipment including a detachable girt.

Virtual Aviation - www.virtualaviation.co.uk

UK. Virtual Aviation Flight Training, headquartered at Cambridge Airport, UK, has launched its new "AirlineReady" Airline Pilot Standards (APS) Multi-crew Co-operation (MCC) course, which is approved by the UK Civil Aviation

Authority (CAA). The APS MCC course was introduced by EASA and courses also include "Advanced swept-wing jet aeroplane training" ; "Advanced airline operations scenario training" ; and 40 hours of simulator training. Virtual Aviation's courses will use its B737-800 simulator at Cambridge.

CIVIL ROTARY-WING SYSTEMS - *Helicopters and tilt wing / tilt engine designs capable of hovering*

Frasca - www.frasca.com

USA. Frasca International Inc of Urbana, S of Chicago, USA, has supplied a new design of Helicopter AATD to the Air Evac Lifeteam, headquartered in O'Fallon, Missouri, NW of St Louis (<https://lifeteam.net>). Air Evac already has seven earlier models of B206 HTDs, six in mobile trailers. The new HTD comes with an aircraft configuration kit for AS350, B206, B407, and R44, with either a Garmin G500H or analogue instrument panel. The collective lever system is based on aircraft configuration and can be governed or ungoverned piston, modulated, or FADEC. It has Frasca's helicopter mission training database, single channel visual system and Frasca simplicity touch-screen instructor station (IOS). Additional aircraft kits can be purchased and other options include a three-channel visual.



Helisim - www.helisim.fr

USA. Helisim, a Joint Venture (JV) between Airbus and Thales, headquartered at Marseille Provence Airport, France, is to open a new facility in Grand Prairie near Dallas, Texas. This will have two Thales Reality H model Full Flight Simulators for the H145 light helicopter and the H175 medium helicopter. A simulator for the H160 medium helicopter is planned for the future.

one-G sim - <https://flyone-g.com>

USA. one-G simulation, headquartered in Seattle, USA, has announced its Torrance 44 Augmented Training Platform (ATP) for the Robinson 44 helicopter. This merges virtual reality (VR) technology with flight simulation to create an augmented reality flight deck. It includes 360-degree visuals and an HTC Vive head mounted display.

Reiser - www.reiser-st.org

Austria. Reiser Simulation and Training GmbH of Berg-Höhenrain, SW of Munich, Germany, is to supply an Avionic Desktop Trainer to OEAMTC Air Rescue of Wiener Neustadt, Austria (<https://www.oeamtc.at>). This will have simulated Helionix software, touch screens and the same simulator software as in Reiser's Level D design.

Germany. Reiser has achieved Level D EASA certification of a full flight simulator (FFS) for the EC145 twin-engine light utility helicopter at the ADAC HEMS Academy in Bonn, Germany. This has a 240 x 80 degree dome-based visual display designed by Project Syntropy of Magdeberg, Germany (www.project-syntropy.de/en/) with Barco FS35 IR projectors. Night vision goggle (NVG) training is included. HEMS trains medical air rescue pilots and crews in civil urban traffic environments and in offshore scenarios.



Sikorsky - www.sikorsky.com

Colombia. Sikorsky Aerospace Services (SAS) of Stratford, Connecticut, USA, has opened a Black Hawk Helicopter Flight Simulator Center at the Colombian Air Force base in Melgar. This is for the Colombia Armed Forces and National Police, and will also be available to other Black Hawk operators in Argentina, Brazil, Chile and Mexico.

Wizz Air - <https://wizzair.com>

Hungary. Wizz Air is to open a new crew training centre near Budapest International Airport. This 3,800 square metre facility will have two Airbus A320 full flight simulators, a fixed base simulator, cabin emergency evacuation trainer and a firefighting trainer device, see above under CAE. The training centre will have 14 training rooms, and the equipment will be operated and maintained by CAE as part of a 10-year contract.

MILITARY FIXED-WING AIRCRAFT SYSTEMS

For rotary wing systems (helicopters and propeller-driven tilt engine / tilt wings), see later

ACME Worldwide - www.acme-worldwide.com

Jordan. ACME Worldwide Enterprises, Inc., of Albuquerque, New Mexico, USA, has supplied two True-Q® G-suit Systems for Lockheed Martin F-16 simulators for the Jordanian Air Force. ACME's G-suit systems are now used in simulators in seven nations. The G-suit system inflates the pilot's G-suit in the simulator when real G would be produced in the aircraft.



BAE Systems - www.baesystems.com

UK. BAE Systems, headquartered in London, UK, are using simulators at their Warton base to train pilots for F-35 aircraft to operate on the UK's new aircraft carriers. The carrier HMS Queen Elizabeth has operated Merlin and Chinook helicopters, and the first UK F-35 fighters are due shortly.

FSI Simulation - www.flightsafety.com/fs_service_simulation_systems.php

Japan. FlightSafety International (FSI) Simulation, headquartered at Broken Arrow, Tulsa, Oklahoma, has delivered a Boeing 777-300ER full flight simulator to Chitose Air Base in Hokkaido. This is to train crews of their new VIP transport aircraft and is FlightSafety's FS1000 simulator design with VITAL 1100 visual and a database of 100 airports.

Indra - www.indracompany.com

France & Germany. Indra Sistemas, S.A., headquartered in Madrid, Spain, is to deliver two simulators for the A400M military transport to the French Air Force base at Orleans-Bricey and the German Air Force base at Wunstorf. The simulator design was developed by Indra, Thales and Airbus.

Spain. An A400M simulator will be installed at Zaragoza airbase later in 2018.

one-G sim - <https://flyone-g.com>

USA. one-G simulation, headquartered in Seattle, USA, has developed its Torrance 44 Augmented Training Platform (ATP). This includes Head Up Display (HUD), Forward Looking Infrared (FLIR), and Night Vision Goggle (NVG) simulations, including for helicopter Search And Rescue (SAR) operations.



Saab Defence - www.saabgroup.com

Brazil. Saab Security and Defence Solutions, headquartered in Järfälla, Sweden, has developed a simulator for the Gripen E with a Wide Area Display (WAD) by AEL Sistemas of Brazil (www.ael.com.br). This is part of a technology transfer agreement that calls for Brazilian technology to be used in Gripen aircraft for the Brazilian Air Force that are being built in Sweden and Brazil.

MILITARY ROTARY-WING SYSTEMS

Helicopters and tilt wing / tilt engine designs capable of hovering

CAE - www.cae.com

Qatar. CAE, headquartered in Montreal, Canada, has a C\$150M contract to provide the Qatar Emiri Air Force (QEAF) with training for the NH90 helicopter. This will include a training centre with a suite of simulators and training devices, and training support. These will include two CAE 3000 Series full mission simulators for the NH90 TTH and NH90 NFH. There will also be a NH90 NFH rear-crew trainer for tactical coordinators (TACCO) and sensor operators, capable of networking with the mission simulators. Other trainers include CAE Simfinity integrated procedures trainers for the TTH and NFH; a winch and door gunner trainer; and a virtual maintenance training system (VMT) classroom. CAE will also supply a tactical control centre (TCC) for managing networked mission training.

ECS - <http://ecsol.com>

US Army. Engineering & Computer Simulations (ECS) of Orlando, Florida, USA, is to upgrade training systems for the US Army's Apache and Chinook helicopters. This includes maintenance training for the AH-64D Apache Longbow and the AH-64E Apache Guardian attack helicopters. It also includes the Multi Year II Configured Chinook with enhanced avionics, and the Chinook Block II CH-47F upgrade with greater payload.

Inzpire - www.inzpire.com

UK. Inzpire Ltd of Lincoln, UK, is to provide aircrew instruction and technical support to Lockheed Martin UK in a new simulator training facility at RAF Odiham, SW of London. This is part of Support Helicopter training for pilots and crewmen in individual or multi-aircraft scenarios.

Quantum3D - www.quantum3d.com

Saudi Arabia. Quantum3D, Inc., of Alameda, E side of San Francisco bay, California, USA, is to upgrade a Unit Training Device (UTD) for the Bell 412 helicopters of the Royal Saudi Air Force (RSAF) under a contract with the Advance Vision Company of Saudi Arabia (AVC Defense - www.avc-defense.com). This includes replacing the visual and sound systems, and the instructor operator station (IOS). The new visual will have Quantum3D's IDX 80 Image Generator with MANTIS® Scene Management software.

Russian Helicopters Holding - www.russianhelicopters.aero

India and Russia. Russian Helicopters Holding Company, headquartered in Moscow, part of the Rostec State Corporation, has developed a training program for Indian pilots and engineers for the Kamov Ka-226T twin-engined helicopter. Five simulators will be supplied for Ka-226T pilot training. One simulator will be at the Ulan-Ude Aviation Plant in the Russian Republic of Buryatia, Siberia, where 60 Ka-226T helicopters will be produced, and four flight simulators will be delivered to India.

Ryan Aerospace - www.ryanaerospace.com.au

Australia. Ryan Aerospace Pty Ltd of Southport, S of Brisbane, Australia, has launched the HELIMOD Mark III helicopter simulator. This uses a stereoscopic head-mounted display (HMD), enabling the pilot to look around including to the side and underneath the helicopter. HELIMOD has attachment points for mounting on motion platforms, and conventional visual screens can also be used as well as the HMD.



Thales Group - www.thalesgroup.com

Senegal. The Thales Group, headquartered in Paris, France, is to supply a helicopter mission simulator for the Mi-17 transport helicopter and the Mi-35 attack helicopter to the Senegalese Armed Forces. Training scenarios will include search and rescue, air landing, naval operations and commando insertion and extraction.

AIR CONTROL SYSTEMS

QuantaDyn - www.quantadyn.com

US Air Force. QuantaDyn Corporation of Herndon, Virginia, USA, E side of Washington Dulles airport, has installed their QFires™ Dome D500 Joint Terminal Control Training Rehearsal System (JTC TRS) for the 23rd Special Tactics Squadron (STS) at Hurlburt Field, east of Pensacola, Florida. The QFires D500 has a 5m dome for training Joint Terminal Attack Controllers (JTAC), Forward Air Controllers (FAC), and Forward Observers (FO). QuantaDyn also converted an earlier device at Hurlburt's Special Tactics Training Squadron (STTS) to a QFires D500. The QFires D500 is accredited by the Joint Fire Support Executive Steering Committee to replace live fly CAS aircraft for missions requiring a ground-based laser target designator, and is the Joint Fires simulation system used by USAF JTACs at the Nellis AFB school house, and at 17 current and 12 future training sites.

Singapore Aviation Academy - www.saa.com.sg

Macedonia, Rwanda. The Singapore Aviation Academy (SAA), headquartered at Changi Airport, on the west side of Singapore island, is to provide training for the Civil Aviation Agency of the Republic of Macedonia (MCAA) and the Rwanda Civil Aviation Authority (RCAA).

UFA - www.UFAinc.com

Jordan. UFA, Inc., of Burlington, NW side of Boston, Massachusetts, USA, has delivered an ATTower™ Tower Simulator to the Royal Jordanian Air Force (RJAF). This includes pseudo-pilot and instructor positions; an LCD-based visual system with tower, ground and approach controller positions, a voice communications system and surveillance displays. UFA delivered two airport databases and a training database with ATEditor™ airport management tools that allow in-house controller training. Procurement was through the U.S. Government Foreign Military Sales program.



USA. UFA is to deliver an ATTower tower simulator for the FAA's Terminal Flight Data Manager (TFDM) system. This is in a contract with Leidos Innovations Corporation (<https://www.leidos.com>). TFDM is an FAA programme to modernise ATC tower equipment at 89 airports by improving the exchange of electronic flight data, introducing electronic flight strips and other tools.

UNMANNED AIR SYSTEMS

Serious Simulations - www.serioussimulations.com

USA. Serious Simulations LLC of Orlando, Florida, USA, and Aeronyde Corporation of Melbourne, Florida (www.aeronyde.com) are to produce a wireless augmented reality (AR) head mounted display (HMD) for control of unmanned aerial vehicles (UAVs). Serious Simulations will use its wire-less video system, and the first prototype is expected to be ready by Q4/2018.

LAND SYSTEMS - *Simulators and training systems for the land environment (except Medical Training, which follows this section)*

Aegis - www.aegistg.com

US Army. Aegis Technologies, headquartered in Huntsville, Alabama, USA, part of Team ACLC (Aviation Center Logistics Command), has been awarded one of six positions on the 5-year, \$294M Army Virtual Learning Environment (A-VLE) contract for US Army Training and Doctrine Command (TRADOC). ACLC includes analysis, design, modelling and simulation, animation, augmented and virtual reality. ACLC partners include, as well as Aegis: ACLC llc; Bohemia Interactive Simulations (BISim); CSRA Inc.; Eduworks Corporation; Integration Innovations Inc. (i3); and Vertex Solutions.

ASTi - www.asti-usa.com

Germany. Advanced Simulation Technology inc. (ASTi) of Herndon, east of Washington Dulles Airport, USA, is to provide systems for the U.S. Air Force Warrior Preparation Center (WPC) in Germany. These include ASTi's Voisus voice communications, radio-over-IP (RoIP) bridging and ongoing support. Voisus products at the WPC cover communications to aircraft and ground forces, simulators and computer staff. Through the Web, WPC staff can remotely control tactical radios across Europe.

Charles River - www.cra.com

US Army. Charles River Analytics Inc (CRA), of Cambridge, Massachusetts, USA, has a two-year, \$1M U.S. Army contract to refine and test its Monitoring, Extracting, and Decoding Indicators of Cognitive Workload (MEDIC) system. This system assists trainers by monitoring indicators of workload, and analysing a trainee's performance. Charles River will further develop this system, making sensors more robust and refining data processing. MEDIC uses sensors inside the trainee's helmet, plus an armband with additional sensors.

Cubic Global Defense - www.cubic.com

Europe. Cubic Global Defense, headquartered in San Diego, California, USA, is to provide training and exercise services to the Joint Training and Exercise Division of U.S. European Command (EUCOM). This will be for the Joint Exercise Program (JEP) and Title X series of exercises.

Cubic Global Defense - www.cubic.com & **Thales UK** - www.thalesgroup.com

UK Army. Cubic Global Defense, headquartered in San Diego, California, USA, and Thales UK of Crawley, S of London Gatwick airport, are bidding for the British Army's Joint Fires Synthetic Training (JFST) project, part of the Training and Simulation Systems Programme (TSSP). This will include live, virtual, constructive (LVC) training, exercise management, after-action review and network security.

Lockheed Martin - www.lockheedmartin.com

US Army. Lockheed Martin Corporation, headquartered in Bethesda, N side of Washington DC, USA, has a seven-year, \$3.53 billion contract to sustain more than 300,000 training aids, devices, simulators and simulations (TADSS), including live-fire ranges and instrumentation. This is part of the Army TADSS Maintenance Program (ATMP) contract.

Saab Defence - www.saabgroup.com

Netherlands. Saab Security and Defence Solutions, headquartered in Järfälla, Sweden, has a 115M Swedish Kroner contract to update simulators at the Netherlands Army Mobile Combat Training Centre (MCTC). Saab originally delivered the MCTC in the early 2000s.

Sweden. Saab is to deliver Manpack 300 training systems to the Swedish Army under a contract worth 51M Swedish Kroner. Deliveries will take place at the end of 2018 and will include several network-based stations. Manpack 300 can control, monitor and collect training data and uses the Saab Exercise Control (Excon) system. The picture on the right shows a containerised base station.



SAIC - www.saic.com

US Army - Human Resources Command. Science Applications International Corporation (SAIC), headquartered in McLean, Virginia, USA has a \$108M task order to develop, operate, and maintain more than 191 virtual applications for the US Army Human Resources Command. Work will be performed primarily in Fort Knox, Kentucky.

US Army - Training Support. Science Applications International Corporation (SAIC), headquartered in McLean, Virginia, USA, is to provide training support for the US Army Mission and Installation Contracting Command under the Training Support Systems - Enterprise (TSS-E) contract. The Indefinite Deliver, Indefinite Quantity (IDIQ) contract has a five-year period and a ceiling value of more than US\$554M, shared among six other contractors as well as SAIC. There are five task areas: (1) Sustainable Range Program (SRP); (2) Combat Training Center (CTC); (3) Army Live, Virtual, Constructive, Integrating-Architecture (LVC-IA); (4) Soldier Training; and (5) Training Development.

MEDICAL TRAINING SYSTEMS

IVIR - www.ivirinc.com & **Simquest** - www.simquest.com

USA. Information Visualization and Innovative Research, Inc (IVIR Inc) of Sarasota, Florida, USA, and Simquest International Inc of Annapolis, Maryland, USA, are to develop training simulations for the Medical Technology Enterprise Consortium (MTEC) and U.S. Army Medical Research and Materiel Command (USAMRMC). Funding is about US\$4M, split between IVIR and SimQuest. The final result will become part of Joint Evacuation and Transport Simulation (JETS) systems, which the US DoD will use for Global/Joint Patient Movement (GPM/JPM).

Simetri - www.simetri-solutions.com

USA. Simetri Inc of Winter Park, Florida, USA, has a Small Business Innovation Research (SBIR) contract for a Joint Articulation and Reduction Simulator (JAARS) for shoulder dislocation and treatment. JAARS will integrate with existing manikin technology used by the military, healthcare professionals, and first responders. It will simulate the symptoms for dislocated joints, which include swelling, numbness, weakness, and bruising. Simetri has teamed with several subcontractors including Aptima and University of Texas Health Science Center - San Antonio (UTHSCSA).



US Army - www.army.mil

USA. The William Beaumont Army Medical Center in El Paso, Texas, has installed Medical Mannikins for neonatal resuscitation training. The training follows guidelines of the American College of Obstetricians and Gynecologists, and covers postpartum haemorrhage, umbilical cord prolapse, shoulder dystocia, and eclampsia.

MARITIME SYSTEMS - *Simulators and training systems for the ship, maritime and port environments*

DCI - www.groupepci.com

Malaysia. Défense Conseil International (DCI), headquartered in Paris, France, is to deliver e-learning systems to the Royal Malaysian Navy (RMN). In a three-year programme, DCI will set up hardware, software and provide specialised courses at the Malaysian Naval Education Training Centre.

SEA UK - www.sea.co.uk

Norway. Systems Engineering and Assessment Ltd (SEA), headquartered in Frome, Somerset, UK, is to supply a DECKsim Virtual Reality Trainer to the Royal Norwegian Navy. This models flight decks and airfield environments to train aircraft handling procedures. The system can be configured for different aircraft and ships.



CORPORATE AND INTERNATIONAL NEWS

International Agreements, Corporate Acquisitions, Partnerships and Changes

CAE - www.cae.com & **Pelesys** - www.pelesys.com

Canada. CAE, headquartered in Montreal, Canada, has purchased 45% of shares in Pelesys Learning Systems Inc, of Richmond, S side of Vancouver, Canada,

CAE Australia - www.cae.com/Worldwide-Presence/cae-australia-pty-ltd

Australia. CAE Australia Pty Ltd, of Silverwater, Sydney, has opened a new office in Canberra.

Cubic Corporation - www.cubic.com

USA. Cubic Corporation, headquartered in San Diego, California, USA, is to sell its Cubic Global Defense (CGD) Services business to Valiant Integrated Services (www.valiantintegrated.com) headquartered in McLean, Virginia, for US\$135M. The transaction is expected to be completed by July 2018.

QinetiQ - www.qinetiq.com

Germany & UK. QinetiQ Group plc, headquartered in Farnborough, UK, is to acquire E.I.S. Aircraft Operations for 70 million Euros (<https://eis-group.de>). EIS Aircraft Operations is based in Euskirchen, South of Cologne, and provides training services including threat representation and operational readiness to the German armed forces to the United States Air Force in Europe. It will become part of QinetiQ's International business unit.

SIMULATION AND TRAINING SYSTEMS

New or updated systems that can be applied generally to simulators and training devices (less systems specific to one of the Land, Sea or Aviation areas).

BISim - www.bisimulations.com

Czech Republic. Bohemia Interactive Simulations (BISim), headquartered in Prague, Czech Republic, released the VBS Blue IG image generator. This uses the Common Image Generator Interface (CIGI) and can be used in land, air and sea environments and Cloud-based collective training.

Diamond Visionics - www.diamondvisionics.com

USA. Diamond Visionics (DVC) of Vestal, west of Binghamton, Upper New York State, has released GenesisRTX version 10.5.3 with upgrades and feature enhancements designed for Level D FFS. These include dynamic ground tracks, the ability to transform flat-earth Open-Flight models into curved earth coordinates, underwater explosions, and improved surface reflections. The picture on the right shows cloud and visibility effects, and a tracking grid round the lead aircraft. The company is also developing underwater imagery for submarine training, and a new surface water model.



RT Innovations - www.rti.com & **VT MÄK** - www.mak.com

USA. Real-Time Innovations (RTI) of Sunnyvale, California, has partnered with VT MÄK, of Cambridge, Massachusetts, to provide interoperability between simulators and operational systems. These include the Data Distribution Service (DDS) used in operational systems, and Distributed Interactive Simulation (DIS) and simulator High Level Architecture (HLA). The companies have integrated VT MAK VR-Exchange RTI's Connex DDS. This allows training system developers to integrate components that use DDS, HLA, DIS and other standards.

Terrasim - www.terrasim.com

USA. Terrasim Inc of Pittsburgh, Pennsylvania, announced version 5.6 of its TerraTools terrain generation software. This has a new plug-in for generating Bohemia Interactive's VBS Blue IG insets. V5.6 can be added to existing TerraTools systems, or the OmniWizard function can start a new project with correlated terrain. TerraTools VBS Blue IG Source Plug-in gives control over satellite imagery, models, road layers, etc., and V5.6 can define attributes for lanes, one-way roads and crosswalks.



VT MÄK - www.mak.com

USA. VT MÄK, of Cambridge, Massachusetts, has released VR-Link 5.4 for simulation networking. Changes include improved support for DIS 7; code support for C#; improved Java interface; and bug fixes.

WORD COUNT BY SUBJECT AREAS

Sections	Words	%					
Editorial & Events	851	12.5	Aviation Sections	Words	%		
Aviation Systems	4364	64.2	Civil Fixed Wing	2579	37.9	Air	Words
Space Systems	0	0.0	Civil Rotary Wing	509	7.5	Civ total	3088
Multi role Systems	20	0.3	Mil Fixed Wing	298	4.4	Mil total	897
Land Systems	661	9.7	Mil Rotary Wing	599	8.8	RW total	1108
Medical Systems	208	3.1	UAVs	320	4.7		
Maritime Systems	106	1.6	ATC & Air Control	59	0.9		
Corporate changes	163	2.4	Total Air Sections	4364	64.2		
Simulation Systems	327	4.8					
Word count	100	1.5					
Total	6800	100.0					