



Asia
MILSim

19th-20th January 2016
Marina Bay Sands, Singapore

The only event for the Military Simulation,
Training & Education community in Asia



ENHANCING MILITARY CAPABILITY
IN AN ERA OF ASIAN MODERNISATION

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WELCOME TO MILSIM ASIA 2016

MilSim Asia is the only event for the military simulation, training and education community in the region. Taking place on the 19th – 20th January 2016 at the Marina Bay Sands in Singapore the event is centrally located within this dynamic region.

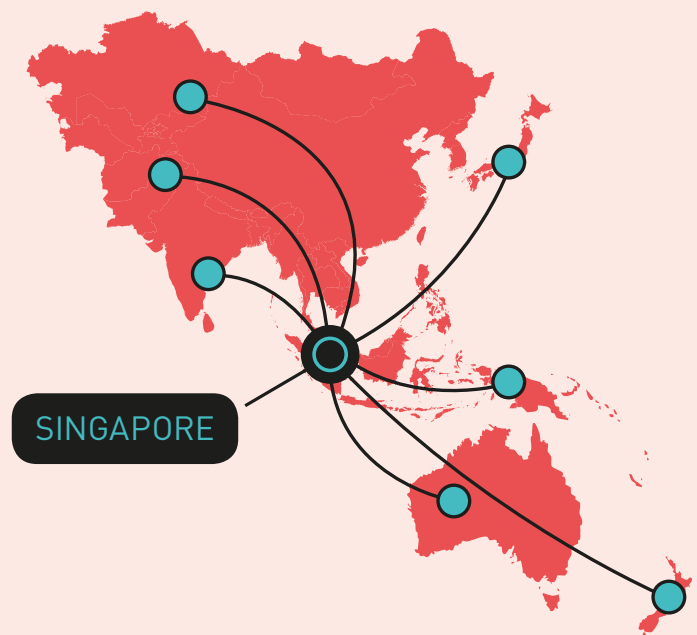
The global military simulation and virtual training programs market were valued at over US\$10bn in 2015, and projected to reach US\$15.8 billion by 2025. The market has three main strands of simulation categories: flight, combat, and maritime. However the true size of the market is enhanced by a number of complementary products from immersive display solutions to any number of cutting edge COTS motion technology for training and development applications.

OVERVIEW

MilSim Asia, delivered by the team behind the globally renowned ITEC (itec.co.uk) exhibition and conference, will provide the leading networking opportunity for industry and military in the region.

The conference program will address the theme **'Enhancing military capability in an era of Asian modernisation'** and will feature Keynote presentations from senior Military personnel delivering perspectives from across the region.

These sessions will be complemented by cutting edge technical papers prepared by those at the forefront of training deployment, and those within industry that provides the innovative drive behind training product development.



WHY ATTEND?

- > MilSim Asia is the only event within the region to focus on the training, simulation and education market providing a unique meeting place for the industry
- > All of our programs are free for serving military to attend and our dedicated VIP manager actively engages with senior officials to invite and secure senior delegations from key regional forces
- > Network with high quality international and regional attendees across the two days amongst our industry display area
- > Learn from thoughts leading speakers about the sectors latest innovations and requirements
- > Hear insights from a diverse range of markets including Malaysia, Korea, Brazil and Italy

KEY SPEAKERS

Lieutenant Colonel Son. Eun Chul, *Chief of Tech Support, Combined Battle Simulation Center, Combined Force Command, Republic of Korea Army*

Wayne Plucker, *Director – North America, Aerospace & Defense, Frost & Sullivan*

Lieutenant Colonel (OF4) Marco Biagini, *PhD – CD&E Branch Chief, NATO Modelling and Simulation Centre of Excellence, Italy*

Dr Dinesh Sathymoorthy, *Senior Research Officer, Science & Technology Institute for Defence, Ministry of Defence, Malaysia*

Brigadier Roger Noble, *Director General – Training, Forces Command, Australian Army*

John Kling, *Program Manager, Korea Battle Simulation Centre*

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+62%

of Military spending in Asia and Oceania between 2005 and 2014

\$439

Billion market in 2014

DAY ONE: Tuesday 19th January 2016

8.00 Registration and Coffee

8.50 Opening remarks from the Chair

STRATEGIC LANDSCAPE

9.00 Strategic outlook: A look at force modernization trends in Asia and the its implications for military technologies

Dr Michael Raska, *Research Fellow*, **S. Rajaratnam School of International Studies (RSIS), Singapore**

9.40 Understanding the changing dynamics of the training and simulation (T&S) market in the Asia Pacific region

- An in-depth examination of the market potential in Asia
- The drivers behind the military training and simulation market
- Impact of diminishing defence budgets and other impediments to uptake
- A quantitative analysis of the Asia-Pacific region

Wayne Plucker, *Director – North America, Aerospace & Defense*, **Frost & Sullivan**

10.15 Keynote Address: The role of technological innovations in military capability management for Singapore's Armed Forces

10.35 Keynote Industry Address: Delivering the capability requirements in simulation and training and the challenges for the future

11.00 Morning tea and networking

MODELLING AND SIMULATION

11.30 Technical presentation: Simulation Supporting Army Concept Development and Experimentation

- Concept Development & Experimentation (CD&E) approach applied to development and acquisition of new C2 and C4ISTAR systems, combat platforms and equipment is a well-known and worldwide accepted process in Defense. Italian Army Chief of Staff established the Unit for Digitization Experimentation (USD) to execute digitized C2 and C4ISTAR systems experimentation and integration.
- The role of simulation supporting CD&E cycles within the availability of a distributed battle labs organization is also well known. Live, Virtual and Constructive simulation-based training systems could also be effectively used to support fielded test and experiments.
- The author developed a capability model to design a generic Army Unit for Experimentation and Transformation (UET). Applying this model the author defined organizational aspects, simulation-based training and experimentation capabilities should be required by a generic UET to support experimentation and transformation processes.
- Simulation support to UET units could benefit from latest cost-effective Live and Virtual immersive simulation-based training solutions to support C2 and C4ISTAR experimentation campaign.

Lieutenant Colonel (OF4) Marco Biagini, *PhD – CD&E Branch Chief*, **NATO Modelling and Simulation Centre of Excellence, Italy**

12.05 Technical Presentation: Global Positioning System (GPS) Receiver Evaluation Using GPS Simulation

- GPS receiver evaluation is essential to determine vulnerabilities to various error parameters, such as radio frequency interference (RFI) and spoofing, atmospheric delays, obstructions and multipath, and satellite clock and ephemeris errors.
- Field GPS receiver evaluations, which employ live GPS signals, are commonly used but they are subject to various changing conditions that are uncontrollable by users.
- Alternatively, GPS simulation allows for the evaluations of GPS receiver performance under various repeatable conditions, as defined by users.
- This presentation highlights on research conducted in STRIDE on GPS receiver evaluation using GPS simulation, focusing on RFI and spoofing.

Dr Dinesh Sathymoorthy, Senior Research Officer,
Science & Technology Research Institute for Defence (STRIDE)
Ministry of Defence, Malaysia

12.40 Lunch and networking



13.40 Technical Presentation: Terrain Database Generation for Military Simulation

- Terrain databases are essential for almost each military simulation and users have become accustomed to the high quality of environments provided by nowadays computer games.
- This presentation will describe the concepts to reach an extraordinary high level of automation in database generation and thus meet the new demands of serious games.
- The optimization of the transfer of data between database generation system and simulation system under consideration of the interdependencies are explained with referencing to a customer project.

Stephan Kussmaul, Managing Director, **TrianGraphics GmbH, Germany**

PLATFORMS AND SYSTEMS PROCUREMENT

14.15 Technical Presentation: Naval mission simulation solution capability to support maritime challenges in the Asia-Pacific region

- Naval mission simulation solutions can and should support acquisition, realisation and capability sustainment for Asia-Pacific naval platforms to a far greater extent.
- Recognition of simulation solution capability suffers from being at the end of a platform acquisition process amongst Integrated Logistic Support (ILS) with training.
- This presentation aims to raise the awareness of training and simulation's contribution toward the establishment and sustainment of naval platform capability.
- Highlighting this capability is directed toward Navies as well as platform and system suppliers to ensure its value adding integration into current and new platform programmes.

William Lambert, Regional Sales Director,
Naval Simulation, **Rheinmetall Defence Electronics GmbH, Germany**

14.50 Afternoon tea and networking



15.20 Panel Discussion: Exploring the opportunities and challenges associated with the procurement of platform and systems simulators

- Is there room for improvement within the procurement process associated with simulation technology?
- How important is the acceptance of innovation both in the provision of solutions but also at a strategic – user perspective level?
- What do you see being the next major trends in simulation in an era of increasingly complex operational environments.

OPEN STANDARDS

16.10 M&S interoperability overview: The development of standards that enhances greater modelling and simulation capability, interoperability, reuse and cost-effectiveness

- Supporting the development of industry standards.
- Providing support to open-source software.
- Exploring a potential technology solution as a future standard.

16.45 Closing remarks from the Chair

16.50 End of day one and networking drinks



DAY TWO: Wednesday 20th January 2016

8.00 Registration and Coffee

9.00 Opening remarks from the Chair

INDIGENOUS CAPABILITY VERSUS COTS

9.05 Keynote Address: Indonesia's domestic defence industry and its importance in striving for self-reliance

- Priorities under the country's defence policies
- Revolutionising Indonesia's defence industry
- The focus toward building integrated defence systems

9.40 Convergence of computer game technologies and military simulation

- The hybrid solution mix of high fidelity simulation with experiential simulation
- Applications for haptic technology in military training
- Understanding the future commercial growth of gaming technologies on military applications

TRAINING AND CAPABILITY

10.15 Case study: Australian Army

Brigadier Roger Noble, *Director General – Training, Forces Command, Australian Army*

10.50 Morning tea and networking

11.20 Applying the concept of 'blended training' to the battlefield environment

- The trend toward blending live training with virtual and constructive capabilities for ground combat training
- Integrating simulation to the live training environment
- The pursuit of an efficient and cost effective method to deliver the next generation of fidelity and realism

John Kling, *Program Manager, Korea Battle Simulation Centre*

11.55 Technical Presentation: Enhancement of Interoperability during ROK-US combined exercise

- ROK-US have improved more than 10 years to make interoperability functions of simulation support for combined exercise. CBSC (Combined Battle Simulation Center) is main organization to support it.
- Korea Simulation System (KSIMS) which is ROK federation support system have a capability to link with US JTTI+ (Joint Training Transformation Initiative+) federation. ROK JCS (Joint Chief of Staff) is developing many special functional models for wartime OPCON (Operational Control) transition.
- Recently, ROK-US links between JTTI+K (KSIMS) federation and JS J7 JLVC (Joint Live Virtual Construction) federation. KSIMS also have a capability to link with other federation through Confederation Interface (CI).
- This presentation highlights on a solution to enhance leading capability of simulation support by ROK side.

Lieutenant Colonel Son. Eun Chul, *Chief of Tech Support, Combined Battle Simulation Center, Combined Force Command, Republic of Korea Army*

12.30 Technical Presentation: Pyrotechnic Battlefield Simulation – added Realism in Tactical Training

- Realistic, tactical training was recognized long ago and led to the introduction of sophisticated training systems, improving the tactical training of combatants.
- The usage of pyrotechnic simulation during training provides realism to the trainees both in weapon usage and battlefield effects.
- Training with all senses will provide so-called stress inoculation and thus prepares combatants for operations in theatre of war.
- Although pyrotechnic simulation does not differentiate between friend and foe, an optimized “dosage” provides realistic effects, but still takes into account the safety element during training exercises.

Hans G. Morotini, *Director Business Development, Drew Defense GmbH, Bremerhaven Germany*

13.05 Lunch and networking





14.05 Technical Presentation: Employing interoperability of simulators on military training – case of use in the Brazilian Army

- Military training is very expensive from both a military equipment and personnel perspective. From the risks of live training to the impact on the environment, every military must balance force readiness with the challenges of undertaking live training
- The use of simulation to train military forces is very expensive to install but provides a realistic training with a very good cost to sustain and to do that training.
- Use of integration and interoperability between simulators is a cutting edge technology where you can to employ live, virtual and constructive simulators in same scenery and allow to train soldiers and commanders and staff in same exercise with high realistic effects and very good results.
- Brazilian Army started on 2010 the Project to interoperability between simulators, after four years on 2014, we did the first exercise training – Armoured Taskforce, with live, virtual and constructive simulations. That had been a two week exercise with live fire, manoeuvre and simulation exercise. Although conducted for the first time, it was a success, The system worked with very good realism and provided a lot of lesson learned to troop and to technical people. This paper will share our experiences

Lieutenant Colonel Sérgio Simas Lopes Peres, *Attaché of Simulation Division, Command Of Ground Operation, Brazilian Army, Brazil*

14.40 Technical Presentation: Next-Gen Training

- Transformation to a utopia where training solutions are delivered through truly flexible 'plug and play' architectures and cloud based common services
- Whilst being cognisant of advances in training techniques, future platforms and the impact of technology on today and future generations
- Challenges involved in first identifying and then integrating common components and tools into a reliable, supportable and robust training system

Sanjay Khetia, *Chief Architect, QinetiQ, UK*

15.15 Afternoon tea and networking

15.45 Technical Presentation: Aviation Live Training Instrumentation

- The Tactical Engagement Simulation System (TESS) is an advanced system of components that simulate tactical weapons actions and effects in a live training environment, providing virtual Force-on-Force and Force-on-Target weapons engagement training without the need for live ammunition
- TESS is designed to integrate with multiple platforms, including AH-64, UH-60, CH-47, UH-72, OH-58, ground vehicles, targets and emerging Unmanned Aerial Systems (UAS)
- The advanced aircraft instrumentation system receives and transmits real-time data, enabling realistic weapon engagements for 30mm gun, rockets and Hellfire missiles, and is engineered to accommodate future strategic growth of TESS requirements across all platforms
- TESS systems are currently used at all US Army Combat Training Centers, as well as by the UAE, UK, Netherlands, Singapore, Taiwan, Egypt and Kuwait

Gregory Kraak, *Vice President, Business Development, Inter-Coastal Electronics (ICE)*

TRAINING SYSTEMS COLLABORATION

16.20 Strengthening bilateral and multilateral defence relations to improve training capability

- Improving regional cooperation and collaboration.
- Joint training hubs and training & simulation centres.
- Exploration of new and creative cooperation opportunities.
- Avenues for building trust – e.g. joint surveillance operations.

16.55 Closing remarks from the Chair

17.00 End of day two and networking drinks



HOW TO REGISTER?

Book your place for MilSim Asia on www.milsimasia.com

Book 3 delegates passes or more at the same time on www.milsimasia.com and benefit from a **20% discount!**

	Book Before 31 December 2015	Book before 20 January 2016
Military/Armed Forces Pass	FREE	FREE
Press/Media Pass	FREE	FREE
Industry and Academia	£995*	£1,295*
Public Sector and Government	£995*	£1,295*

*This price includes an access to all the conference sessions on 19-20 January, the exhibition area, tea and coffee as well as lunches on both days. Excluding VAT/local taxes.

PRACTICAL INFORMATION

MilSim Asia will be held at the Marina Bay Sands, in the heart of Singapore, one of the world's major commercial hubs, the fourth-largest financial centre and one of the top two busiest container ports in the world.

Marina Bay Sands features three 55-story hotel towers connected by a 1 hectare sky terrace on the roof, named Sands SkyPark. The SkyPark is home to the world's longest elevated swimming pool, with a 146-metre (478 ft) vanishing edge, perched 191 metres above the ground.

More information on how to access the venue on our website www.milsimasia.com

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