

Spring Flight Simulation Conference



ROYAL
AERONAUTICAL
SOCIETY

THE WORLD OUTSIDE THE AIRCRAFT

SIMULATING THE OPERATIONAL
ENVIRONMENT

LONDON / 8 - 9 JUNE 2011



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THALES

A TWO DAY CONFERENCE

THE WORLD OUTSIDE THE AIRCRAFT

SIMULATING THE OPERATIONAL
ENVIRONMENT

The Royal Aeronautical Society Flight Simulation Group Conferences are well established in the simulation and training calendar. Much progress has been made and discussed in previous RAeS Flight Simulation Group Conferences on the simulation of an aircraft and its operational systems for use in flight crew training.

But what are the challenges that still need addressing in the fidelity of the simulation of the real world operational environment outside the aircraft? Weather, visual scenes, sensor simulation, traffic, threat and error management, air traffic control, computer generated forces are all examples that spring to mind. So what is missing or lacking in this area that could improve the training value and realism of flight simulation based aircrew training in both civilian and military operations? What is on the horizon and what are the challenges to be resolved and how should we address them?



VENUE

RAeS Headquarters
No.4 Hamilton Place, London W1J 7BQ, UK
T: +44 (0)20 7670 4345
E: conference@aerosociety.com
Organised by the RAeS Flight Simulation Group.

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SPONSORSHIP & EXHIBITION

Please contact the Conference & Events Department for details on exhibiting, sponsorship and insertion of information into delegate packs.

REGISTRATION FEES: (include refreshments, lunch and access to conference proceedings)

	Fee £	VAT 20% £	Total £
<input type="checkbox"/> Non-Member	595.00	119.00	714.00
<input type="checkbox"/> RAeS Corporate Partner * (inc. Armed Forces)	500.00	100.00	600.00
<input type="checkbox"/> RAeS Member	425.00	85.00	510.00
<input type="checkbox"/> RAeS Retired Member	125.00	25.00	150.00
<input type="checkbox"/> RAeS Student Member	90.00	18.00	108.00

RAeS Student Affiliate Members may attend free of charge subject to availability.

FOR MORE INFORMATION AND TO REGISTER www.aerosociety.com/conference

PROGRAMME - WEDNESDAY 8TH JUNE 2011

08:30 **Registration and Refreshments**

09:00 **Welcome and Opening Remarks**
Capt Dave Rowland, Past President, Royal Aeronautical Society, UK
Mark Dransfield, Conference Chairman, Flight Simulation Group, Royal Aeronautical Society, UK

09:15 **Keynote Address:**
Creating and Maintaining a Predictable Environment in an Unpredictable World
David White, Professor & Chief Scientist, Thales Training & Simulation, UK

▶ **SESSION 1:**
THE OPERATIONAL ENVIRONMENT
Chairman: Mark Dransfield, Flight Simulation Group, Royal Aeronautical Society, UK

09:45 **1 Operational Requirements of a Dynamic Synthetic Environment**
David Graham, Director, Technology Application, CAE, USA

10:10 **2 Threat and Error Management, True Training Value beyond the Buzz Phrase, De-mystifying the Acronym**
Nassima Hamza, International Training Development Manager, ETOPS, France

10:35 **Tea and Coffee Networking Break**

11:00 **3 Simulating the LOC-I Environment: Alternatives and Complements to Using Full-Flight Simulator to Teach Pilots Upset Recovery Manoeuvring Skills**
Dr Rodney O. Rogers, Professor of Aeronautical Science, Embry-Riddle Aeronautical University, USA

11:25 **4 The Psychological Boundaries of Flight Simulation**
Randall Brook, Senior Director of Flight Training, Opinicus Corporation, USA

11:50 **5 Improved Pilot Training: The Need to "Fast Track"**
Kip Caudrey, Senior Manager, Simulator Evaluation, Standards & Regulatory Affairs, Boeing Training & Flight Services, USA

12:15 **Discussion**

12:50 **Networking Lunch**

▶ **SESSION 2:**
THE SENSOR & SENSORY ENVIRONMENT
Chairman: Jack Shlien, Flight Simulation Group, Royal Aeronautical Society, UK

14:00 **6 Meeting the Challenge of High Fidelity Complex Sensor Simulations in Interoperable Environments**
Eric Delagrave, Technical Specialist, CAE, Canada

14:25 **7 SNE Through Life Cost Management**
Amit Talati, Head of Strategy & Military Solutions, Thales Training & Simulation, UK

14:50 **Tea and Coffee Networking Break**

15:15 **8 Use of Real Helmet-Mounted-Display (HMD) in a Helicopter Simulator: Lessons learned from Tiger and NH90 Experiences**
Marc Renault, Electronics Team Manager, Training & Simulation, Thales, France

15:40 **9 Simulating the Sensor Environment in Real-Time**
Niklas Peinecke, Doctor, Institute of Flight Guidance, DLR, Germany

16:05 **Discussion**

17:00 ▶ **END OF DAY 1**

17:30 **Lecture Registration/ Tea & Coffee**

18:00 ▶ **EDWIN A LINK LECTURE:**
My 53 Years as a Flight Simulation User, John Farley OBE, AFC

19:30 **Lecture Reception**

PROGRAMME - THURSDAY 9TH JUNE 2011

08:30 **Registration and Refreshments**

09:00 **Opening Remarks**

Mark Dransfield, Conference
Chairman, Flight Simulation Group,
Royal Aeronautical Society, UK

09:15 **Keynote Address: Towards a Truly
Dynamic Synthetic Environment
Simulation**

Adolfo Klassen, Chief Technology
Officer, CAE, Canada

▶ **SESSION 3:
RADIO AND ATC ENVIRONMENTS**

Chairman: Gp Capt Gordon Woolley,
Chairman, Flight Simulation Group,
Royal Aeronautical Society, UK

09:45 **10 The World Beyond the Windscreen**

Marsha Bell, VP - Civil Pilot Training &
Systems, Adacel Systems, Canada

10:10 **11 Simulation of Communications -
A User's View of Requirements**

Sqn Ldr Adam Robinson, OC
Simulation, RAF Simulator Training
Squadron, RAF Benson, UK

10:35 **Tea and Coffee Networking Break**

11:00 **12 The Challenges and Complexities
of a Real-World Radio Environment
for Military & Civil FSTDs**

Neil Waterman, Project Engineer, ASTi,
USA

11:25 **13 The "GAIA Virtual Sky", A Co-
operative Tool for Realistic ATM
System Simulation**

Antoine Casta, Project Leader for
ATM Validation Platforms, Research
& Technology, Methods & Tools Group,
Avionics & Simulation Products,
Airbus, France

11:50 **Discussion**

12:20 **Networking Lunch**

▶ **SESSION 4:
VISUAL ENVIRONMENTS**

Chairman: Dr Sunjoo Advani, Flight
Simulation Group, Royal Aeronautical
Society, UK

13:30 **14 Perceptions of Reality**

Andrew Ramsden, Products Manager,
Commercial Visual Systems, Rockwell
Collins, UK
Owen Wynn, Displays Specialist,
Commercial Visual Systems, Rockwell
Collins, UK

13:55 **15 New Approaches in Visualizing a
Virtual World**

Philippe Perey, Technology Director,
CAE, Canada

14:20 **16 Using Common Databases (CDB)
in Dynamic Synthetic Environment
Simulations**

Bernard Lalonde, Director, CTO, CAE,
Canada

14:45 **Tea and Coffee Networking Break**

15:10 **17 Missionland - A Geo-Typical
Dataset**

Edward Jones, Technical Analyst,
Defence Science & Technology
Laboratory, DSTL

15:35 **18 Simulating the Environment at
the Aircraft-Ship Dynamic Interface:
Research, Development and
Application**

Steve Hodge, Senior Simulation
Engineer, BAE Systems, UK

16:00 **Discussion**

16:30 **Conference Chairman's Closing
Comments**

Mark Dransfield, Conference
Chairman, Flight Simulation Group,
Royal Aeronautical Society, UK

16:45 **Close of Conference**

17:00 ▶ **FLIGHT SIMULATION GROUP
ANNUAL GENERAL MEETING**