

Spring Flight Simulation Conference
Flight Simulation Technology: Future Potential
40th Anniversary of the First RAeS International Symposium
Wednesday 9 – Thursday 10 June 2010
No.4 Hamilton Place, London W1J 7BQ, UK



Sponsored by:



The Royal Aeronautical Society's Flight Simulation Group Conferences are both well established and highly successful. In 2010, it will be 40 years since the first such international symposium. To mark that anniversary, a special Conference will be held to examine the latest flight simulation technology, consider trends, define the challenges and review future opportunities. The Conference will begin with a session reviewing that first international symposium and discussing progress over the past 40 years – expectations dashed and expectations fulfilled. Subsequent sessions will discuss modelling, visual and motion cueing requirements, environmental representation, simulator testing and maintenance, mission simulation and training and interoperability.

This informative and wide-ranging two day Conference will examine flight simulation technology – the art and the science – from the perspectives of fixed-wing and rotary-wing aircraft manufacturers and operators, makers and users of training systems, training providers, airspace managers, researchers, and regulators. The Conference has a very broad agenda and seeks both to ensure that appropriate work is taken forward and also to determine how the Royal Aeronautical Society might best facilitate progress.

The papers, some of which will be novel and contentious, will be presented by leading experts in their fields and some 150 delegates are expected from Europe, North and South America, the Middle East and Indian sub-continent, China and the Far East. Regardless of whether you are involved with management, manufacturing, training, regulating, airspace, or any other aspect of operations, this Conference provides a unique opportunity to engage in discussing the issues and influence the work required to resolve them. The Conference will be followed by the Edwin A Link Lecture, which is open to everyone and is free to attend. Steve Grinham, VP Training and Simulation from Thales will be presenting 'Why the Downturn is an Opportunity'. The Edwin A Link Lecture was established in 2007 to honour Edwin A Link, the distinguished pioneer of synthetic training. His remarkable foresight led to the creation of the Link Trainer, or 'Blue Box' as it came to be known, the precursor of today's powerful synthetic training devices, most notably full flight simulators.

SPONSORSHIP & EXHIBITION SPACE

Various sponsorship, exhibition and corporate profiling opportunities are available in connection with this Conference. For more information or to discuss these packages, please contact Emma Brown in the Conference & Events Department on +44 (0)20 7670 4372 or email emma.brown@aerosociety.com.

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PROGRAMME

DAY 1 - Wednesday 9 June 2010

08.30 *Registration / Tea and Coffee*

09.00 **Welcome and Opening Remarks**

Capt David Rowland, Past President, Royal Aeronautical Society, UK

Peter Barrett, Conference Chairman & Learned Society Board, Royal Aeronautical Society, UK

09.15 **Keynote Address: Applying Emerging Technology to a Strong Legacy for an Effective Future**

Dieter Hass, Consultant, IATA, Germany

Session 1: How Did We Get Here and Where Are We Going?

Chairman: Brian Laven, Royal Aeronautical Society, UK

09.30 (1) **The 1970 Flight Simulation Symposium - Lessons from a Retrospective**

Dr John Rolfe, Visiting Professor, Cranfield University, UK

09.50 (2) **Aircraft Development Simulation in the 1960's**

Arthur Barnes, Royal Aeronautical Society, UK

10.10 (3) **Are We Nearly There?**

Barry Swainston, Flight Simulation Group, Royal Aeronautical Society, UK

10.30 *Tea and Coffee Networking Break*

11.00 (4) **Flight Simulation for Research - Developing Capability**

Barry Tomlinson, Simulation Consultant, BT Associates, UK

11.20 (5) **The Legacy of the Last 40 Years**

Brian Hampson, Retired, Canada

11.40 (6) **Simulation Needs, Has Anything Changed?**

Capt Trevor 'Paddy' Carver, Retired Head of Flight Operations Standards & Retired Director/Head of Quality, CAA & CTC Aviation plc, UK

12.05 **Discussion**

12.25 *Networking Lunch*

Session 2: Modelling for Effect

Chairman: Jack Shlien, Flight Simulation and Training Consultant, Canada

13.35 (7) **The Operating Envelope - Expanding the Data Package**

John Foster, Senior Research Engineer, NASA Langley Research Center, USA

13.55 (8) **Improving Fidelity in Ground & Near Ground Handling**

Peter Jarvis, Chief Engineer, Civil Simulation Technologies, CAE Inc, Canada

14.15 (9) **Simulating Avionics - What's Inside the Box?**

Arnaud Gillette, Head of Flight Dynamics Group, Simulation Products, Airbus Operations SAS, France

Session 3: Environmental Representation

Chairman: Capt Raymond Teunissen, Managing Partner, SimConsult, The Netherlands

14.35 (10) **ATC, Radar & Datalink - The Requirements for Line Training**

Dr Norbet Wiesner, Vice President Flight Simulators, Lufthansa Flight Training GmbH, Germany

14.55 (11) **Military Communications - Improving Voice & Data Communications**

Gp Capt Gordon Woolley OBE, Tactical Control Centre Manager, Serco Defence Science & Nuclear, UK

15.15 (12) **Getting the Atmospherics Right - Turbulence, Shear and Vortices**

Capt Colin Stephens, 757/767 Senior Training Captain & Simulator Standards Evaluation Pilot, British Airways, UK

15.35 **Discussion**

16:00 *Tea and Coffee Networking Break*

Session 4: Testing & Maintenance of Flight Simulation Training Devices

Chairman: Bernard Mattos, Senior Simulation Expert, Airbus Operations SAS, France

16.30 (13) **The Testing Challenges**

Dr David White, Chief Scientist, Thales Training & Simulation Ltd, UK

16.50 (14) **Realising the Simulation Fidelity, Repeatability & Maintenance Dream**

Capt Lloyd Watson, Head of Training (UK), Oxford Aviation Academy, UK

17.10 **Discussion**

17.30 **FLIGHT SIMULATION GROUP ANNUAL GENERAL MEETING**

17.45 *Evening Reception*

*Programme is
subject to changes*



DAY 2 - Thursday 10 June 2010

08.30 *Registration / Tea and Coffee*

09.00 Opening Remarks

Peter Barrett, Conference Chairman & Learned Society Board, Royal Aeronautical Society, UK

Session 5: Cueing Requirements: Visual & Motion

Chairman: Peter Tharp, Vice-Chairman, Flight Simulation Group, Royal Aeronautical Society, UK

09.10 **(15) Visual Cueing: I Need to Clear my Conscience Before I Die**

Owen Wynn, Consultant, Rockwell Collins, UK

09.30 **(16) The Future of Display Technology**

Paul Lyon, Director, Products and Solutions, Barco Inc, USA

09.50 **(17) Everyman's Image Generator**

Andy Ramsden, Products Manager, Visual Systems, Rockwell Collins, UK

10.10 **(18) Motion Cueing Requirements - Looking Beyond ICAO 9625 Rev 3**

James Takats, Motion Task Team Leader, ICFQ, Royal Aeronautical Society, UK

10.30 *Tea and Coffee Networking Break*

11.05 **(19) "Train as we Fly and Fly as we Train" Flight Simulation as an Essential Component in Aviation Safety & Training**

Capt Bryan Burks, B-737 Captain, ALPA Training Committee Chair & ICFQ Member, Alaska Airlines, USA

11.25 **(20) Towards Objective Motion Cueing Tests**

Ir Eddy van Duivenbode, System Engineer, Bosch Rexroth BV, The Netherlands

11.45 **(21) ICAO 9625 Rev 3 – Status Report**

Don Irving, Flight Simulation Group, RAeS & Chairman, ICFQ, UK

12.00 **Discussion**

12.30 *Networking Lunch*

Session 6: Mission Training and Interoperability

Chairman: Mike Southworth, Operations Manager - Simulation, BAE Systems, UK

13.40 **(22) Simulating the World - Matching the Technology to the Functional Needs of Interoperability**

Stefan Sandberg, President, Pitch Technologies, Sweden

14.00 **(23) Towards a UK Terrain Database Generation Capability**

Bijal Shah, Training & Simulation Desk Officer, UK MoD / Dstl, UK

14.20 **(24) Immersion - What Does It Mean?**

Wg Cdr Roger Flynn, SO1 Simulation, Joint Helicopter Command, UK

14.40 **(25) Synthetic Air Support to Joint Training: UK MTDS Past, Present and Future**

Wg Cdr Kevin Marsh, SO1 Training, Theatre Airspace Capability Division, Ministry of Defence, UK
Ebb Smith, Capability Advisor, Dstl, UK

15.00 **Discussion**

15.20 *Tea and Coffee Networking Break*

Session 7: Concluding Keynote

15.55 **(26) Simulation Technology - Is There a Limit?**

Dr Kenji Takeda, Senior Lecturer in Aeronautics, University of Southampton, UK

Session 8: Open Forum

Chairman: Peter Barrett, Conference Chairman & Learned Society Board, Royal Aeronautical Society, UK

16.15 **Open Forum and Proposals for Resolutions for Further Work**

Royal Aeronautical Society Panel

16.45 *Close of Conference*

17.30 *Lecture Registration / Tea & Coffee*

18.00 **Edwin A Link Lecture: The Downturn Opportunity in the Flight Simulation Industry?**

Marion Broughton, Vice President Avionics, Training and Simulation, Thales UK

19:30 **Lecture Reception**

