

Airworthiness: We Are Only Human

Exploring the Engineering Challenge of Designing for Predictable and Reliable Human Performance

Programme and Registration Brochure

18 November 2008

Armada House, Bristol

www.imeche.org/events/s1319



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Baines Simmons Ltd

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Airworthiness: We Are Only Human

Advances in aircraft technologies affecting design, materials, systems and maintenance philosophies have reaped significant improvements in aircraft efficiency, reliability and safety. The largest cause of incidents and accidents continues to be attributed to human factors (HF). All branches of the aerospace industry have attempted to address the human issue in different ways, some with more success than others. This event will explore the challenge of engineering the defences against human error.

Attending will help you:

- Appreciate causes of human error
- Gain awareness of the impact we have on air safety and how different aspects of human error prevention interact with each other
- Determine the most effective strategies for minimising errors and how to implement them
- Gain an understanding of the effective implementation of regulations and safety management systems
- Gain an insight into possible future regulatory developments
- Recognise how design can reduce human error
- Understand the role of the operator in human error management
- Appreciate the consequences of maintenance errors on health, safety, the environment and the economy
- Use design modifications to address the issues caused by maintenance errors
- Gain knowledge of other perspectives of human error prevention from a range of industry professionals
- Network with key industry professionals

Who should attend

Engineers, trainers and designers, and all others involved in aircraft and their safe operation.

Exhibition and sponsorship

If you have a product or service to promote, you can enhance brand awareness through our range of exciting sponsorship/exhibition opportunities.

For details of how we can tailor a package to suit your needs, please contact **Aman Duggal** on tel + 44 (0)20 7973 1309 or email sponsorship@imeche.org

Organising Committee

Bob Simmons	Baines Simmons Ltd
Professor John Bristow	Cranfield University
Jim Hennessy	QinetiQ (MoD Boscombe Down)
Roger Holliday	Independent Consultant



PROGRAMME

18 November 2008

8:45 Registration and Refreshments

9:20 Chairman's Welcome and Introduction

9:30 Why Errors Happen and How We Minimise Their Impact on Aircraft Airworthiness

Dr Julia Scriven, Capability Leader of Air Human Factors, QinetiQ

In order to understand how to reduce the occurrence of human error, we need to consider what causes us to make mistakes. This presentation will outline influences on human performance with a view to determining the most effective strategies to minimise the likelihood of errors occurring. It will then describe how the discipline of human factors is currently woven into the test and evaluation assessments for airworthiness certification recommendations. However, at this stage in the development of an aircraft, the mitigations available are limited; strategies have to be implemented to try to reduce errors to an agreed tolerable level.

10:00 Human Factors from a Regulator's Perspective

Simon Roberts, Regional Manager, UK Civil Aviation Authority

This presentation will discuss effective implementation of human factor principles and safety management systems, against merely complying with the requirements. It will also examine the need for regulations and systems to co-ordinate activities including airline operations, aircraft maintenance, continuing airworthiness and aircraft design. Finally, the presentation will highlight areas which, in order to improve safety, the CAA believes both industry and the regulator should focus on in the future.

10:30 Refreshments

11:00 Addressing Maintenance Human Factors during Design

Simon Gill, Consultant, Mirce Engineering

Maintenance errors lead to safety, environmental, health and economic consequences for aircraft operators. This presentation will outline how design organisations can address this issue through developing an understanding of the in-service maintenance error situation, by modifying design requirements, enhancing design practice and identifying, analysing and managing potential maintenance errors early in design.

11:30 Continuing Airworthiness and Error Management – The Missing Link?

Chris Drew, Senior Consultant, Baines Simmons Ltd

History has provided irrefutable evidence of the need to understand and mitigate the effects of human error in aviation operations and maintenance. European regulations have been developed to take account of the 'lessons learned' from bad outcomes. Recent restructuring of European Aviation Safety Agency (EASA) regulations resulting in Part M Continuing Airworthiness Management Organisations (CAMO) may have resulted in a missing link in terms of human factors and error management continuity. What are the

implications and is this anomaly becoming increasingly relevant in terms of the operator's 'airworthiness accountability' and his ability to manage 'total airworthiness'?

12:00 Aviation Safety – Part 145 Human Factors

Kelvin Ironside, Training Manager, GE Caledonian

This presentation will cover how the EASA Part 145 Human Factors was implemented within a large organisation. Experiences will be shared; timelines and lessons learned will be imparted in order to influence how others approach what can be a very complex and confusing subject.

12:30 Workshop Introduction

12:40 Workshops and Working Lunch

Attendees will be divided into several discussion groups. These groups will review, discuss and examine human factors and their impact from different perspectives. Each will identify HF issues, considering possible ways to overcome problems and how this would affect airworthiness overall.

14:40 Workshop Feedback

Conclusions made during the sessions will be fed back in a plenary session, allowing for the discussion of ideas to create an overall picture, highlighting key issues and how the impact of human error can be minimised.

15:20 Refreshments

15:40 Open Discussion

The Chairman will lead a panel (which will include a representative from each group) in a general discussion to consider the feedback. Delegates will have the opportunity to contribute their own thoughts and experiences, with the aim of establishing a set of consolidated views.

16:20 Chairman's Conclusions

The Chairman will draw out key conclusions, issues and learning points from the day, identifying what actions or activities could and should be taken to improve the general situation of human factors in airworthiness.

16:30 Close of Seminar

The programme is subject to amendment.



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18/11/2008

S1319

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Completed application forms should be returned to the address below, along with the correct payment. Attendance at the event will be confirmed on receipt of the full balance. All participants are advised to bring a copy of their confirmation with them on the day, to ensure the fastest possible entry.

Special Requirements

Please inform us of any special requirements ie dietary or access, on the relevant section of this form.

Cancellation

For a refund (minus £25 + VAT admin charge), cancellations must be received at least 14 days prior to the event. Replacement delegates are welcome at any time.

Co-Sponsoring Organisations

Members of the following organisations can register at IMechE member's rates: Royal Aeronautical Society, Institution of Engineering and Technology, Health and Safety Laboratory, Cranfield University.

Venue

This event will be held at Armada House, Telephone Avenue, Bristol BS1 4BQ. Details will be sent upon registration.

Insurance

The organisers do not accept liability for any injuries or losses of any nature incurred by delegates and/or accompanying persons, nor for loss or damage to their luggage and/or personal belongings.

Accommodation

We have arranged special discounted rates at local hotels via the Corporate Team. Our list of hotels will be forwarded upon receipt of your registration and payment.

If you wish to contact the Corporate Team directly, please use the details below and quote ID number 8488AB.

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Email events@corporateteam.com

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Enquiries

For event enquiries, please call Robyn Clegg on +44 (0)20 7973 1304 or Email r_clegg@imeche.org

For registration enquiries call Tina Churcher on +44 (0)20 7973 1258 or Email t_churcher@imeche.org

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