



Hazards forum



The Hazards Forum Newsletter

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Web version

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Edited by James Kearns

Views expressed are those of the authors, not necessarily of the Hazards Forum

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Hazards Forum Secretary: *Brian Neale*

December 2010

The First 200-plus Days as Chair of the Hazards Forum

Paul Thomas

I am delighted to write this opening piece for this, our Winter 2010/11 edition of the Newsletter. It is a good opportunity for me to communicate with members – and particularly those who, for whatever reason, have not been able attend any Evening Events recently. Back in the Spring, I felt privileged to be nominated as a trustee of the Forum at the AGM and then honoured to become the new Chair of the Forum, taking over from Sir David Davies - which seemed a daunting prospect at the time. I wasn't too sure what to expect and am happy to report that I have been impressed with the support and encouragement I have received from so many people, including members, guests, presenters and sponsors at events, the Executive Committee and the Secretariat. Looking forward, we are planning stimulating events for 2011 and it would be a pleasure to see as many of you as possible on each of those occasions – beyond my first 200 days as Chair. In the meantime, I am pleased to wish you well for whichever of the festivals you may be celebrating during the coming months. ...

Hazards Forum Celebrates a New Distinguished Member

Brian Neale and James Kearns



*Sir David Davies with Paul Thomas, who presented the plaque
(Photograph: Brian Neale)*

Becoming a Distinguished Member of the Hazards Forum is a rare event and one reserved for those “*who have demonstrated significant work for the Forum, and are distinguished members of the engineering or other profession*”. Earlier this year, the Executive Committee was delighted to recommend that **Sir David Davies** should be honoured in such a way because of his personal contribution to the Forum’s activities in the many preceding years

when he was Chairman. At a short ceremony before the Evening Event on 21st September, **Paul Thomas**, the current Chair and direct successor to Sir David, took pleasure in announcing the elevation of Sir David to that of a Distinguished Member of the Hazards Forum.

Mr. Thomas mentioned that the Hazards Forum had much to thank Sir David for, and in particular for his tireless efforts devoted to successfully improving the reputation and standing of the Hazards Forum and the strengthening of the links with the Royal Academy of Engineering and other engineering institutions during his tenure as chairman. In presenting a certificate bestowing distinguished membership, Mr. Thomas mentioned other achievements such as one aimed at attaining higher visibility of the Forum by introducing an Electronic version of the Newsletter for member organisations. The plaque was kindly created and donated by Dr Ian Lawrenson.

Avoiding Catastrophe – Driving for Competence at the Top

James Kearns

On **Tuesday 21st September 2010** the Hazards Forum and the Institution of Civil Engineers jointly hosted an **evening event** at the latter's premises in Westminster, London. The event was sponsored by the Health and Safety Executive.

The evening event was the second in a short series of two on competence and follows on from the previous event held in June. The focus of this event was on the issues of competence, such as ways of closing credibility gaps within organisations through legal drivers, improved competency protocols and guidance from the Engineering Council.

The event began with **Hazards Forum Chairman and chair for the evening Paul Thomas**, who welcomed the audience and thanked the Health and Safety Executive for sponsoring the event, and the Institution of Civil Engineers for hosting the event.

Mr. Thomas particularly welcomed **former Hazards Forum Chairman Sir Den Davies**, who he then announced was to be made a **distinguished member** of the Hazards Forum, as reported elsewhere in this Newsletter.

The event consisted of three presentations, followed by a discussion period with the audience and lastly a reception for networking opportunities.

The first presentation was given by **Anne Davies, Senior Counsel at Crowell & Moring**, whose talk, titled "*The credibility gap – do directors have a false sense of security?*", explored the idea that an organisation's health and safety policies and management systems can give the Board of Directors a false sense of security, which may then lead to a "credibility gap" whereby the Board's perception of the organisation's safety culture does not match reality. The talk also looked at how this gap could be closed through legal measures.

This was followed by a presentation from **Allan Bain, Development Director of the Safety and Reliability Society**, titled "*Competencies – when the incredible becomes credible*" with the sub title of "*The Professionalism Project: National Competencies in Safety and Reliability Engineering*". This talk discussed a movement by many engineering organisations to evolve a set of common

competence standards, a movement spurred on by the recommendations of the Haddon-Cave Review.

The talk also recognised the importance of industry-specific competence, including the “fundamental level” of competence which employees learn during their training.

Finally, **Professor David Bogle FEng CEng**, of **University College London**, discussed some of the work being done on updating the Engineering Council’s 1993 *Guidelines and a Code of Practice on Risk Issues*, which is applicable profession-wide.

Professor Bogle is chairing a working group that includes nominees from the professional engineering institutions (PEIs) and other organisations, that is looking at how best to produce new guidance on risk that is brief, top-level and is generic enough so that it can be used by all engineering institutions.

The guidance is also intended to demonstrate to society the profession’s commitment to managing risk effectively.

Anne Davies described how the way in which an organisation manages its health and safety policies can lead to problems in the overall leadership of the organisation, and how problems with the leadership can affect the rest of the organisation.

Poor management systems can often mean that there are large amounts of burdensome documents. This excessive amount of paperwork can unduly reassure a Board of Directors that the organisation has accounted for all eventualities. In the case of health and safety management systems, this means that a director’s perception of their organisation is that it is safer than it actually is. This is known as a “credibility gap”.

This situation was summed up in the phrase “paperwork does not save lives”.

crowell Credibility Gap

- **Judith Hackitt**
accused Directors of creating a “Credibility Gap”
March 2009
- **Rita Donaghy**
“there should be positive duties on Directors to ensure good health and safety management through a framework of planning, delivering, monitoring and reviewing” – one death is too many
July 2009
- **Report of the Steering Group June 2010**
Will a new duty be recommended?

The false sense of security and overconfidence a Board may have in the organisation’s health and safety policies can also inhibit responsible leadership based on integrity and common sense. Furthermore, an overconfident attitude from a director can filter down to other employees in the organisation. This means that it is very important that the credibility gap at the top level of an organisation is closed, so that the attitude of the Board, or the “tone at the top”, is appropriate to the reality of the situation.

crowell Tone at the Top

- **Incident/fatality – not simply health and safety issue**
- **Consider**
 - Civil claims/compensation
 - Inquest
 - Publicity
 - Share price
 - Business continuity
 - Customers existing and new
 - Investigation and possible prosecution of company
 - Investigation and possible prosecution of directors
 - Investigation and possible prosecution of employees
 - Fines/prison/publicity order

There has been some important legislation introduced to attempt to reduce the credibility gap, most of which focus on making managers and directors liable for health and safety offences. The Health and Safety at Work etc. Act 1974, Section 37 focuses on issues of consent, connivance and neglect. The sanctions for breaching this act range from fines to imprisonment. Another key piece of legislation is the Corporate Manslaughter and Corporate Homicide Act 2007 which allows companies to be found guilty of corporate manslaughter should serious

management failures result in a fatality to one of its employees.

There have also been recent issues with the level of fines that were imposed. Whereas it used to be the case that fines were too low to worry directors, there is now more consideration being given to higher levels, in order to “focus the minds” of directors towards compliance.

The threat of brand damage and damage to reputation is also an incentive towards achieving compliance.

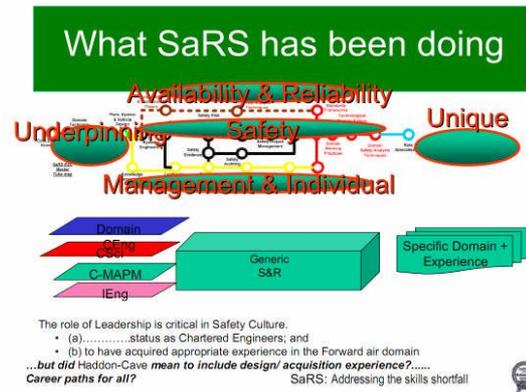
crowellmoring **Key Legislation and Guidance**

- Corporate Manslaughter and Corporate Homicide Act 2007
- Section 37 Health & Safety at Work etc Act 1974
- Health & Safety (Offences) Act 2008
- IOD/HSE Guidance 2007
- Section 157 Environmental Protection Act 1990
- Section 95(2) Environment Act 1995

Allan Bain then discussed how many of the organisations in the engineering sector had identified the need for a common set of safety standards, which been recognised at the Safety and Reliability Society’s 2008 annual conference.

This position was also mirrored in the recommendations of the Haddon-Cave Review of the loss of Nimrod XV230. This review recommended that: “A *single professional body should be formed for Safety Experts to set professional and ethical standards, accredit members and disseminate best practice.*”

The Safety and Reliability Society is now acting in response to criticisms of the defence sector and to a lesser extent, of safety practice in general, in partnership with the Ministry Of Defence, with ideas to help improve competence standards throughout the engineering industry.



There have been some initiatives from other bodies to form a common set of basic standards. The Institution of Engineering and Technology has published guidance on basic competencies in their 2007 document “*Competence Criteria for Safety-related System Practitioners*” and the Health and Safety Executive has published a research report which outlines proposals for a basic teaching package of key safety concepts for engineering undergraduates in RR452 “*Development of an IIG/HSE e-Learning Health and Safety Risk Education Package for Engineering Undergraduates*”, where IIG is the Inter Institutional Group on health and safety.

However, despite the initiatives being undertaken to form a common set of competencies, it should still be recognised that domain-specific competence is also very important, such as an understanding of the domain in which people practice in, knowledge of the technology being used and knowledge of the appropriate analysis techniques. The Safety and Reliability Society has been looking at domain-specific competencies and has identified some key thematic areas of competency, such as generic safety engineering, availability and reliability, which can form a basis for standardisation. The Society has also been looking at the competencies learnt at various qualification levels, and identified gaps between them, which can give rise to differing competence standards.

examined in isolation. Professor Bogle stressed that there is always a need for honesty and clarity, for supporting evidence and to be able to challenge misrepresentations.

Mr. Thomas then thanked the speakers for their presentations and opened the floor for questions.

The following discussion, which consisted of a mixture of questions to the speakers and comments, explored more general areas of competence, such as the competence of an organisation as a whole, rather than competence of individuals, and whether an organisation being prosecuted for causing a large accident could ever be found to have operated competently. There was also a comment about a study of 10 major accidents which found that there was a lack of understanding of cultural and social issues present in each accident.

Mr. Thomas then thanked the sponsors for the event, the speakers for their talks and those who had contributed to the discussion. He then gave some final remarks, which were that safety is achieved not through paperwork but through people, and that the “soft” social and cultural issues are the areas of vulnerability. Mr. Thomas then invited all attendees to network and continue their discussions over the light refreshments which followed.

[Ed. note: The first event in the mini-series on competencies was reported in Newsletter No. 68]

[Ed. note: A report on the undergraduate health and safety risk teaching package, mentioned above, was published in Newsletter No. 68]

The Institute of Measurement and Control

Peter Martindale
Chief Executive Officer



Founded in 1944 and incorporated by Royal Charter in 1975, The Institute of Measurement and Control is committed to promoting the professional excellence of engineers and technologists at all levels in

the automation, instrumentation, control and related industries. Its aims are to advance the science and practice of measurement and control technologies and their various applications, to foster the

exchange of views and the communication of knowledge and ideas in these activities, and to promote the professional qualification and standing of its members. The Institute is therefore both a learned society and a professional qualifying body occupying a niche in the automation-focussed industries.

In keeping with its commitment to excellence, the Institute welcomes as members those practising or interested in measurement and control technologies. Honorary Fellow (HonFInstMC) recognises distinction in relevant scientific or technical achievements or meritorious service to the Institute. From Fellow (FInstMC) - the most senior membership grade, recognizing significant contribution to the industry - through to Student, the Institute accommodates the aspirations of individuals at all stages of their professional careers. Acceptably qualified and experienced members are also able pursue professional qualifications of international standing, including Chartered Engineer (CEng), Incorporated Engineer (IEng) and Engineering Technician (EngTech) registration with the Engineering Council. All members are offered the fullest possible support for their professional development.

In essence, the Institute is its members, the majority of whom are domiciled in the UK. There is an international dimension nevertheless, with a noticeable membership in Hong Kong and a growing membership in Malaysia and China. Catering at regional level for the members' professional, technical and, occasionally, their social interests are the Institute's Local Sections. Run by members for members, there are currently ten active Sections in the UK, one active Section in Hong Kong and a fledging Section in Malaysia.

Companies are invited to join the Institute's Companion Company Scheme. Access to its website, use of its logo and promotion in its publications offers them the opportunity to demonstrate their association with the Institute and to so enhance their business profiles.

As a learned society, the Institute delivers a range of services and benefits to Members. Key services include publication of:

- the *Yearbook*, a principal source of information and reference for practitioners in instrumentation and control
- *Measurement and Control*, a monthly journal containing news and technical articles of interest to the membership generally, with special features on particular topics, and
- *Transactions*, a series of refereed papers at the forefront of the theory and practice of measurement and control.

It also organises a range of conferences and symposia, nationally and internationally, either on its own or in conjunction with other institutions and societies or on behalf of international federations. Many of its shorter technical meetings are run by its Local Sections which are invariably able to use their links with local industry for topics.

Supporting the Institute's learned society activities are its Technical Panels which cover measurement science and technology, safety, standards, systems and control, systems management and weighing and force measurement. Comprised of members volunteering their experience and expertise in particular fields, the Panels provide much of the Institute's interface with industry. The Panels also provide forums through which the Institute can channel its commentaries on, and responses to, matters of public concern and consultation.

The Institute has strong links with international bodies such as the International Measurement Confederation (IMEKO), where it represents the UK, and the International Federation of Automatic Control, as well as bilateral links with other overseas professional organisations. Within the UK the Institute participates in the activities and deliberations of the British Standards Institute, the Parliamentary and Scientific Committee,

the United Kingdom Automatic Control Council and the affairs of the engineering profession generally. It enjoys good relationships with the National Physical Laboratory, GAMBICA, the Trade Association for Instrumentation, Control, Automation and Laboratory Technology in the UK, and the Worshipful Company of Scientific Instrument Makers.

The underpinning emphasis of all the Institute's activities and services is to provide thinkers and practitioners with opportunities to participate in the affairs and proceedings of an organisation that is committed to promoting excellence in the profession it serves.



The Institute's Coat of Arms incorporates an albatross with lightning in its beak as a symbol of control concepts. The albatross extracts energy from sea-waves and the varying airflow above them, in order to sustain flight indefinitely by locking its vast wing span in the open position allowing it to glide for hundreds of miles, touching land only for the necessity of breeding with its life partner.

For enquiries and/or further information, please contact Peter Martindale, ceo@instmc.org.uk.

The Institute of Measurement and Control's website is: www.instmc.org.uk.

What is the IIG?

Graham Barber, IET
Secretary to the Inter-Institutional Group on Health and Safety

The idea for a cross-disciplinary professional group to collaborate on key health and safety issues came out of the Institution of Electrical Engineers' (IEE) health and safety group in the mid-1990s, and in particular its Chairman Dr Dick Taylor (now Professor Taylor).

A first meeting was held on the 18th November 1995, at the IEE, between representatives from the four large engineering professional bodies (see details below). Also present were representatives from the Hazards Forum which had been set up in 1989 by the four large institutions to provide an important interface between engineering and the social sciences.

The conclusion of the first meeting was that the organisations involved were "welcoming co-operation", and had "a feeling that it could be made to work". Thus the Inter-Institutional Group (IIG) on health and safety was born. The IIG has

met regularly since then, and usually twice a year. It is an informal group that operates by consensus and discusses issues and promotes work on health, safety and risk that are of broad interest to all the institutions and their members. A key aspect is the exchange of information about individual institution's health and safety activities. In between meetings the IIG conducts its work electronically and through representation at meetings.

The IIG has progressively grown in membership to comprise the:

- Engineering Council
- Hazards Forum*
- Health and Safety Executive
- Institution of Ergonomics & Human Factors
- Institute of Marine Engineering Science and Technology
- Institution of Chemical Engineers*
- Institution of Civil Engineers*

- Institution of Engineering and Technology (formerly the IEE)*
- Institution of Mechanical Engineers*
- Institution of Occupational Safety and Health
- Institution of Structural Engineers
- Safety and Reliability Society

* Represented at the first meeting

Since 1995, the IET (formerly the IEE) has provided both the chairman and secretariat. Professor Dick Taylor has chaired the IIG since the first meeting. This arrangement has worked well but with the expansion of the IIG it has recently been proposed that the chairmanship and secretariat rotates amongst the membership. This possibility is currently being discussed. Hosting of meetings will continue to alternate amongst the institutions' London venues.

Historically the IIG activity has centred on aspects of risk teaching, occupational health, and safety culture issues.

The IIG is currently working on two key cross-disciplinary areas:

- Contributing knowledge to the work of the Engineering Council on new "Guidelines on Risk" aimed at informing engineers about risk in-line with the UK specification for Chartered Engineers, and to demonstrate to the public how seriously the engineering profession(s) take its responsibilities and accountabilities on risk. This project was presented at the Hazards Forum evening event on the 21st September 2010.

- The undergraduate (and other students) health and safety risk teaching project reported in Newsletter No. 68 (autumn 2010).

Further details about current IIG work, and some of its output, can be found at: <http://www.theiet.org/publicaffairs/panels/iig/index.cfm> . The IIG and Hazards Forum work closely through executive co-membership.

For more information please contact the IIG Secretary Graham Barber, gbarber@theiet.org

The Name Says It All – What Should We Now Call the Ergonomics Society?

Reg Sell
Former President of the Ergonomics Society

The **Ergonomics Society** is now known as the **Institute of Ergonomics & Human Factors**. This name change came about in order to make it clear to professionals and industry that human factors specialists are part of the ergonomics community. Their training and expertise is the same as for ergonomists and they have the same aim which is to use their knowledge of human abilities and limitations to design and build for safety, efficiency, productivity and comfort.

This brought us in line with understanding in the international ergonomics community that the terms ergonomics and human factors are interchangeable. When the Ergonomics Research Society was founded in 1949, it was the first of its kind in the world and the term human factors had not been created. It was therefore rather timely that the name change came into effect towards the end of the Society's 60th anniversary year, because 2009 gave us the

opportunity to reflect on the achievements and developments over the years, before moving onto new challenges.

Because technology advances are moving at such a pace, understanding and designing for the human operator at the centre of the process is now more important than ever before. Now almost a year on, the Institute has been organising some very topical international events including the design of control rooms and human & organisational factors in the oil, gas & chemical industries.

If you would like to know more, please contact: iehf@ergonomics.org.uk or see www.ergonomics.org.uk

From the Secretary ...

The next **AGM date and venue** is shown in the Calendar of Events on page 12. This is, of course, for members and is scheduled to begin at 16.30 on the 22nd March. As usual, an evening event will follow. All members are urged to attend, if possible. A formal notice will be sent to members early in 2011.

Lord Young's Report on Health and Safety received much publicity. Those who are not aware of the HSE response may find the link in the section below of interest. The site also includes a link to the report.

Readers will have seen in recent editions, **articles by various bodies** describing who they are and what do, often with background about that organisation. What may not be clear always is why they appear in the Newsletter. It is because they are **member bodies** on the Forum and the reason for the articles is to help with mutual understanding of our fellow members.

Brian Neale

HSE eNews – Some Examples

++ HSE Welcomes Lord Young's Report on Health and Safety ++

The Health and Safety Executive (HSE) today warmly welcomed the publication of Lord Young's report into health and safety. Judith Hackitt, the HSE Chair, said:

"Lord Young's report is an important milestone on the road to recovery for the reputation of real health and safety. HSE welcomes it and will be actively pursuing those recommendations within our remit.

"HSE will continue to champion a sensible and proportionate approach to dealing with serious risks in the workplace - not eliminating every minor risk from everyday life."

<http://www.hse.gov.uk/press/2010/hse-lordyoungreport.htm>

++ HSE Chair Warns Against Complacency Creeping Back in the North Sea Offshore Industry ++

Judith Hackitt, Chair of the Health and Safety Executive (HSE), has warned of the dangers of allowing another cycle of decaying commitment to maintaining the integrity of offshore facilities at a conference organised by the North Sea Offshore Authorities Forum (NSOAF) in Aberdeen today (23 November).

<http://www.hse.gov.uk/press/2010/hse-nsoaf.htm>

++ Publications ++

Estimating the chances of people being harmed from an industrial incident – a number of publications can be seen at the following address:

<http://www.hse.gov.uk/societalrisk/index.htm?ebul=hsegen&cr=25/29-nov-10>

++ 'What to expect when a health and safety inspector calls' ++

HSC 14 - A brief guide for businesses, employees and their representatives. This updated leaflet explains what you can expect when a health and safety inspector calls at your workplace. It also tells employees and their representatives what information they may expect from an inspector during a visit.

<http://www.hse.gov.uk/pubns/hsc14.htm?ebul=hsegen&cr=5/29-nov-10>

Calendar of Events

Please check the Events section of the Hazards Forum website for more information at www.hazardsforum.org.uk including any updates in the calendar. These may include additional events or perhaps amendments to the Events shown below. Please note that attendance to Hazards Forum events is by invitation.

Date	Event	Venue	Contact/further information
DECEMBER			
1	IMechE event, HF supported: Using Human Factors for Engineering Success	Austin Court, Birmingham	Jacqui at j_parker@imeche.org
JANUARY			
11	IET event: Thrills not Spills – Evening Lecture	Shrewsbury	http://www.theiet.org/local/uk/westmids/salop/events/thrills-not-spills.cfm
MARCH			
22	Hazards Forum AGM for members	Institution of Civil Engineers, One Great George Street, Westminster, London, SW1P 3AA	Tim at admin@hazardsforum.org.uk
22	Hazards Forum Evening Event Provisional Date	Institution of Civil Engineers, One Great George Street, Westminster, London, SW1P 3AA	Tim at admin@hazardsforum.org.uk
30 - 31	ICE event: Energy from Waste 2011	Institution of Civil Engineers, One Great George Street, Westminster, London, SW1P 3AA	darren.morris@ice.org.uk or events@ice.org.uk also: http://www.ice-energyfromwaste.com/
APRIL			
11	IChemE event: "Hazards XXII" Symposium	Manchester	Rosemary Cragg – rcragg@icheme.org also; http://www.icheme.org/hazard_sxxii/

Please see members own websites for further events.

The Hazards Forum's Mission is to contribute to government, industry, science, universities, NGOs and Individuals to find practical ways of approaching and resolving hazard and risk issues, in the interests of mutual understanding, public confidence and safety.

The forum was established in 1989 by four of the principal engineering institutions because of concern about the major disasters which had occurred about that time.

The Hazards Forum holds regular meetings on a wide range of subjects relating to hazards and safety, produces publications on such topics, and provides opportunities for interdisciplinary contacts and discussions.

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