



Systems and Software for Seafarers

A one-day conference organised by The DigitalShip and Lloyd's Register

Conference Chair

J Earthy, Principal Human Factors Specialist

Systems and Software for Seafarers
LLOYD'S REGISTER

**Digital
Ship**

**Lloyd's
Register**

Overview of presentation

- Safety and housekeeping
- Theme for the day
- Users and Software intensive systems – what, why and so what?
- Terminology and standards for usability
- Range of application in the marine sector
- Review of Agenda



Users and Software intensive systems – what, why and so what?

Software is:

- How things work
- Pervasive
- Invisible
- Man-made
- A product for sale
- Increasing in complexity

Users are:

- Not programmers
- Trying to do a job
- Diverse in competence
- Mobile
- Responsible

ISO 13407:1999 Human-centred design processes for interactive systems

Principles

- an appropriate allocation of function between user and system
- iteration of design solutions
- the active involvement of users
- multi-disciplinary design teams

ISO 13407:1999 Human-centred design processes for interactive systems

Activities

- understand and specify the context in which the system is/will be used
- specify the user and organisational requirements (including measurable criteria)
- produce designs solutions (and prototypes) using existing (HF) knowledge
- carry out user-based evaluation of quality in use
- and, specify how human-centred design fits into the overall design process

ISO 9241-11 Guidance on usability

Usability: Extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.

effectiveness: Accuracy and completeness with which users achieve specified goals.

efficiency: Resources expended in relation to the accuracy and completeness with which users achieve goals.

satisfaction: Freedom from discomfort, and positive attitudes towards the use of the product.

Context of Use: Users, tasks, equipment (hardware, software and materials), and the physical and social environments in which a product is used.

Application areas for marine IT

- **Navigation Equipment** - ARPA, ECDIS, Track and Speed Pilots etc., Bridges
- **Platform Management** - automation, alarm systems, emergency support, embedded electronics, etc.
- **Administration systems** - load planner, manifest, payroll, operations manual, planned maintenance, maintenance manuals, communications, CBT, QMS, Personnel database, etc.
- **Shore office systems** - maintenance management, staff management, chartering, schedule / passage planning, contracts, cargo information, risk trading, etc.

Programme

9:20 Introduction – Theme for the day

9:30 Session 1 – Owner's needs

Dr Stephan Polomsky, Deputy Managing Director, John T. Essberger GmbH & Co.

Lieutenant Commander Simon Gaskin, Royal Navy

Dr Jonathan Earthy, Lloyd's Register

10:30 Break

11:15 Session 2 – Seafarer's needs

Capt Margareta Lützhöft, researcher, Swedish National Road and Transport Research Institute

Professor Brian Sherwood Jones, Lloyd's Register

Erik Styhr Petersen, advanced systems manager, Lyngsø Marine

12:30 Panel discussion

13:00 Lunch

14:00 Session 3 – Delivering usability

Neil Chaplin, John Nurser, RNLI

Stafford Williams, Servowatch;

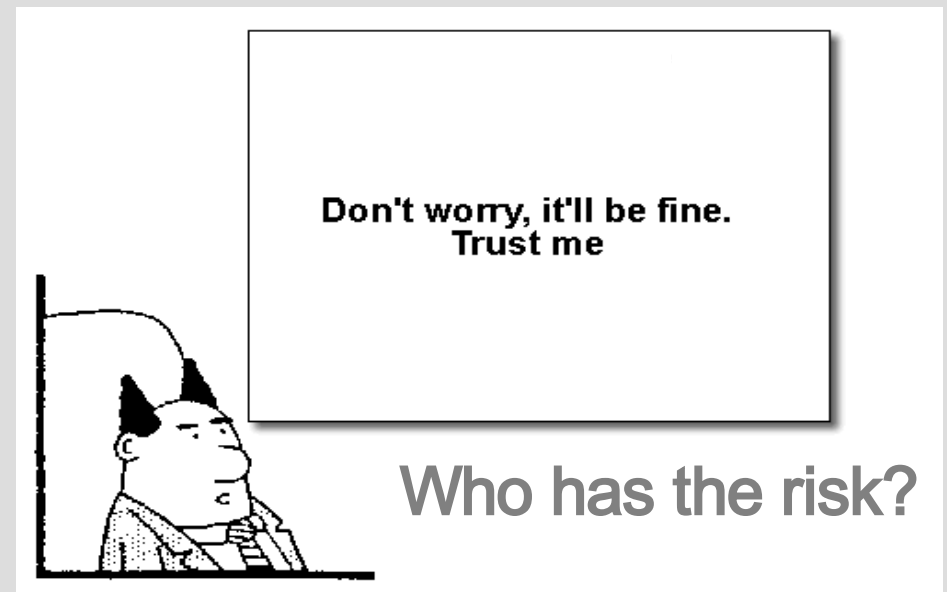
Pantelis Panteleimon, Ulysses Systems

15:15 Panel discussion and chairman's summary

16:00 Close

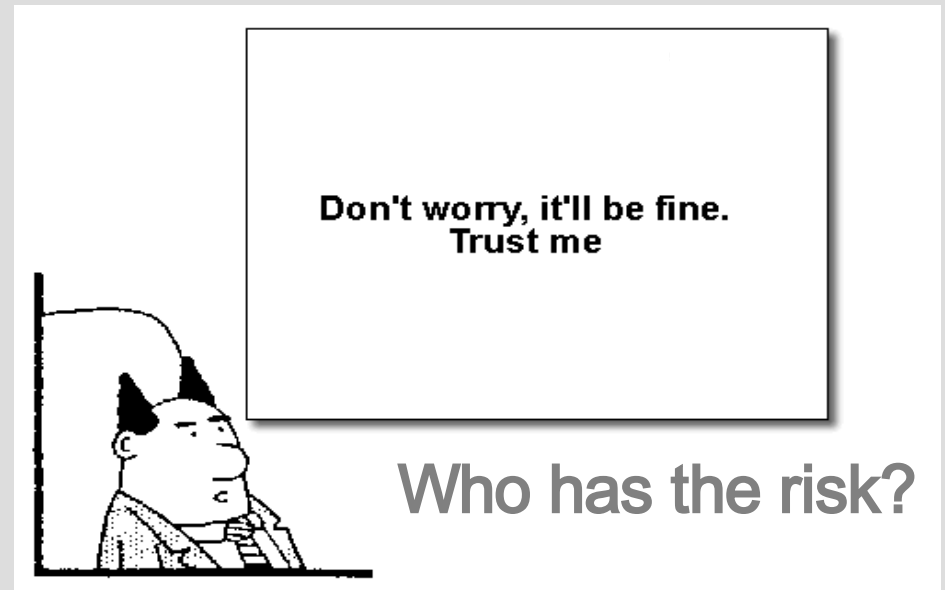
First discussion session

- (Does a very usable product create a false sense of security?)
- How much usability is practical?)
- How to ideally address usability of marine systems?
 - Buccaneer
 - “Blue team”



Second discussion session

- (If additional usability means additional expense, how does this get paid for?)
- The compromise between Human Factors and the need for type approval)
- Alternatives:
- What to do when the blue team shows up?
- What to do when it does not?
- Elected to discuss the not show up option.
- Information on what to do when they do show up is available at www.usabilitynet.org





C l o s e

Thank you for your participation

Systems and Software for Seafarers
LLOYD'S REGISTER

**Digital
Ship**

**Lloyd's
Register**