



Report on the
INCOSE 2002
12th Annual
International Symposium

July 27 - August 1, 2002

What's it all about?



- This year's theme was “Engineering 21st Century Systems: Problem Solving Through Structured Thinking”
- The annual symposium is the showcase event for the International Council on Systems Engineering
 - An International Workshop is also held in January each year to work on key initiatives



Chapters & Membership



- Committee Meeting was held on Sunday before the conference
- Key Topics
 - The 2003 International Workshop will be in Tampa, FL next January/February (2004 will be in Portland, OR)
 - Annual chapter awards
 - Sharing of best practices
 - Tutorial guides
 - Local school involvement
 - Chapter roles & responsibilities



Guest Speakers



- Keynote
 - Margaret Billson, CTO of Honeywell Aerospace, Phoenix, AZ
 - Plenary 1
 - Virginia Dunstone, President of Life Enhancement Institute, Reno, NV
 - Plenary 2
 - Ken Salter, Executive Director of Systems Engineering at Walt Disney Imagineering
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Keynote Speaker



- Margaret Billson, CTO of Honeywell Aerospace, Phoenix, AZ
- Discussed process improvements initiated at Honeywell
 - Processes based on the application of SE principles
 - Resulted in reduced aircraft weight and life cycle costs while improving reliability

Plenary Speaker 1



- Virginia Dunstone, President of Life Enhancement Institute, Reno, NV
 - Private practice therapist, national speaker, and author of “*Why Do I Do What I Do?*”
 - Designer and developer of “LifeScripting”, a new approach to group and individual counseling
 - Virginia gave a rousing presentation on dealing with stress
 - Becky will demonstrate the “Power Shower”
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Plenary Speaker 2



- Ken Salter, Executive Director of Systems Engineering at Walt Disney Imagineering
 - Previously worked for Hughes Aircraft in the SE Laboratory
 - In 1999, developed SE process based on EIA-632 for Disney
 - Ken's multimedia presentation described the SE principles that Imagineering follows and the ones they violate/tailor to their needs
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Session Slides

CD Available from INCOSE Web Site



Session 2.1.5



Title: Does Object-Oriented System Engineering Eliminate the Need for Requirements?

- Joseph Kasser, D.Sc., C.Eng., CM
- Defines objects and “object-oriented” concepts while comparing & contrasting SE & SWE
- “If requirements are still poorly implemented after all these years, perhaps they should be eliminated or bypassed.”
- “We don’t perform SE to get requirements...we perform SE to get systems that meet specific needs...”
- Focus is on needs, not requirements; requirements are a means, not an end!

Session 2.2.5



Title: Analysis of the Rational Unified Process

- James N. Martin & Jozsef Bedocs
- Comparative analysis between RUP-SE and EAI632 and C4ISR Architecture
- RUP-SE is a derivative with new artifacts
- Rational's definition of systems engineering doesn't mesh with traditional SE
- RUP-SE has potential utility but lacks connection between process and methodology

Session 3.5.3



Title: Product Line Requirements Management

- Michael Sutherland, Galactic Solutions Group LLC
- Presents a strategy for requirements management across product lines
- Specific set of requirements for an Application is a Configuration; one Configuration per Application
- Child configurations inherit requirements from parents
- Showed a compact line-item form (“expert view”) for representing requirements
- PLRM leverages production effort for common subsystems



Session 2.6.3



Title: From Function-Driven Systems Engineering to Object Oriented (UML) Software Engineering

- Hans-Peter Hoffmann, Ph.D., I-Logix
 - Describes model-based approach combining functional-driven SE and object oriented Software Engineering
 - Software engineers apply OO techniques successfully; SE is mostly structure-based & driven by *functional* requirements
 - If properly thought through, a bridge can be successfully built between the two very valuable methods
 - Bridging helps achieve the best of both worlds
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Session 3.2.0–Tech Panel



Title: Evaluating Your Risk Management Program

- A panel of experts will provide the risk management practitioner and program observer with useful guidelines to answer such questions as:
 - How do you know how well your risk management program is doing?
 - Who should evaluate it?
 - How should it be evaluated and when?
 - How should findings be handled?

Session 3.5.5



Title: Integrated Cost/Schedule Risk Analysis

- D.T. Hulett, Hulett & Associates, LLC
 - B. Campbell, III, Northrop Grumman Corporation
 - This paper presents a method of incorporating the uncertainty in task durations into the assessment of cost risk.
 - Projects costs often exceed their estimates because the actual duration of the project activities are not taken in consideration.
 - Schedule information should be used to estimate cost risk.
 - Incorporating the schedule risk results into the cost risk model provides the linkage between schedule and cost risk.
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Session 4.4.3



Title: It's the People that Matter – Applying a Systems Engineering Approach to Process Improvement

- D. Kemp, UK MOD Warship Support Agency
- E. Carver, BAE SYSTEMS
- This paper describes approaches taken within the UK Warship Support Agency (WSA) and BAE SYSTEMS to implement improved Systems Engineering processes throughout complex supply chains.
- Describes how teams analyze improvement requirements, and how they implement change in such a difficult, but critical, area.



Session 3.6.3



Title: Where Does Software Engineering Begin During Systems Engineering?

- C.S. Lee, University of Maryland University College
- Within systems engineering and systems development, it is typical to bring in the software engineers after the system has been designed.
- SW Eng may discover that the system design has not accounted for some of the necessary components or subsystems, which would require that the system design be updated or changed.
- When system engineering begins, so should software engineering.



Summary



- Attending the symposium was a positive experience with great opportunities to network and learn from other SE's
- Watching a large group of engineers have fun can be a scary sight! (Power Showers?)
- INCOSE 2003 will be held in Washington, DC... check it out!

