59th Meeting of the IFIP Working Group on Dependable and Fault Tolerant Computing
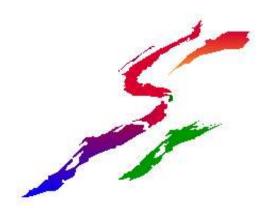
Workshop on Dependability Issues for a Smarter Planet

Co Chairs: Nick Bowen & Basil Smith
Colorado, USA
January 12-16, 2011

Agenda

- Welcome
- Review Agenda
- A Dependability retrospective
- Emerging trends in IT
- Workshop Goals

Program Agenda

Session 1 Dependable Cities
7:30 Colin Harrison (IBM), How Do We Build Community Trust in Technology?
8:15 Priya Narasimhan (CMU, Intel), Crowdsourced Civic Mobile Infrastructures
9:00 *Break*
9:30 Raju Rangaswami (FIU), Reliable, Self-Managing RT System Requirements for Persistent Memory
10:15 *Lunch Recess*
15:30 *Afternoon snack/late lunch*
Session 2 Smart Grid
16:00 Brian Gaucher (IBM), Computational Challenges and Dependencies of the Evolving Smart Grid
16:45 Bill Sanders (UIUC), Smarter Power Grids: Issues and Research Challenges
17:30 *Break*

Business Meeting of WG 10.4
18:00 IFIP Working Group 10.4 business meeting
19:00 *End of meeting day 1*

Session 3 Trustworthy Healthcare
7:00 Carl Landwehr (NSF, UMD), NSF Trustworthy Computing Healthcare Projects
7:45 Chalapathy Neti (IBM), Enabling Technologies for Healthcare Transformations
8:30 *Break*
8:45 Doug Bough (Georgia Tech), Securing Sensitive Healthcare Information in the U.S. Health Care System: Past, Present and Future
9:30 *Lunch Recess*
15:00 *Afternoon snack/late lunch*
Session 4 Smart Communications/Internet Infrastructure
15:15 Keith Marzullo (NSF, UCSD), NSF Program in Cyber-Physical Systems: Past, Present and Future
16:00 Kevin Staggs (Honeywell), Designing Robust, Secure Industrial Automation and Control Systems
16:45 *Break*
17:00 Ehab Al-Shaer (UNCC), Non-Invasive Smart Grid Threat Analyzer using Formal Methods
17:45 Charles Howell (MITRE), Application of Accident Investigation Notations and Tools for Incidents and Near-Misses in Critical Infrastructures
Session 5 Wrap-Up
18:30 Nick Bowen (IBM), Meeting Wrap Up and Discussions
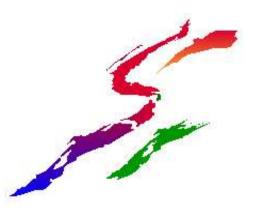19:30 *End of meeting day 2*

Dependability Retrospective

- Glory days of dependability had "systems" perspective
    - aircraft control systems
    - telephone networks
    - wall street trading systems
- That environment was
    - Often proprietary
    - Often delivered by one company
- What has changed
    - Fragmentation of IT industry
    - "good enough" technology and mentality

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Emerging Trends

- IT Industry / vendors are re-integrating
    - economics of arms supplier v. solutions provider
    - clients want "one throat to choke"
- IT is moving outside the traditional datacenters
    - "instrumented planet" / smarter planet solutions
    - traditional control systems advancing in functions

Workshop Goals

- Discuss breath of smarter planet solutions
    - Understand reliability strategy
    - Look in different industries
        - government
        - healthcare
        - grid
        - infrastructure
- Understand implications to a research agenda
    - New research areas?
    - Implications to future IFIP Working Groups?