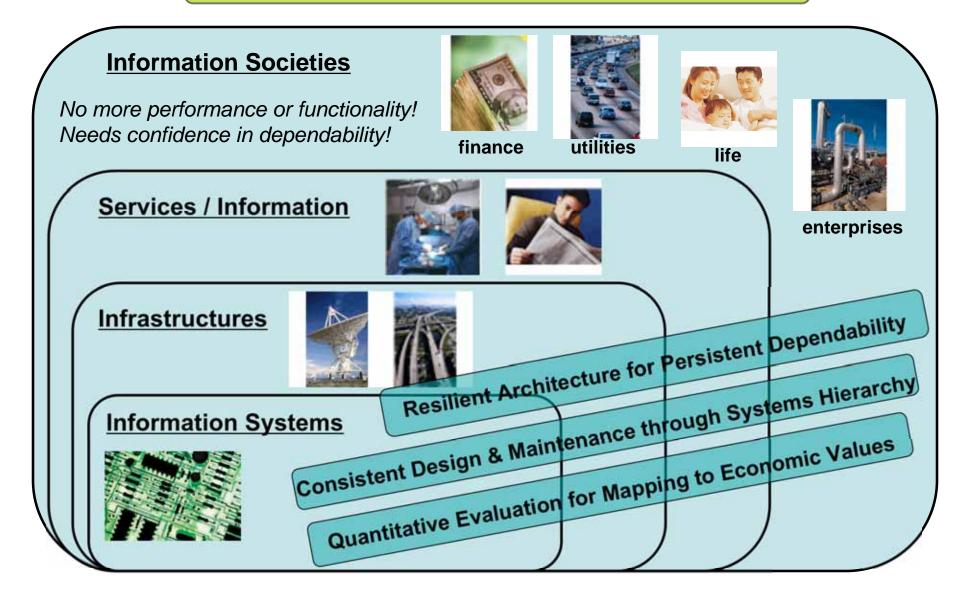# Dependability of Information Societies

--- *Dependability is a main stream !* ---

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Dependability of Information Society

Strategic Initiative proposed by JST (Dec. 2007)

Information Societies

No more performance or functionality!
Needs confidence in dependability!

finance   utilities   life   enterprises

Services / Information

Infrastructures

Information Systems

Resilient Architecture for Persistent Dependability

Consistent Design & Maintenance through Systems Hierarchy

Quantitative Evaluation for Mapping to Economic Values

OECD Global Science Forum

Workshop on

Complex Systems and the Science of

Unanticipated Consequences and Unrealized Opportunities

Italy, October 5 - 7, 2008

Participants: Belgium, EC, France, Germany, Italy, Japan, Norway, UK, USA, OECD

- identify the principles of complex systems that would help policy makers better predict the consequences of policy actions, and
- explore ways to better enable international research capacity in this area
- Examples of the areas in which a complex system approach may, or has been proved to, be useful and relevant to policy-making in the future:
  - Weather and Climate
  - Disease
  - Energy
  - Disasters
  - Political Instability
  - The Brain
  - Computing
  - New Functional Materials
  - Sustainability of Infrastructures
  - Self-organizing Sensor Networks

Observations

- Interest in dependability is growing everywhere and every layer
- Many dependability papers in other conferences are not surprising

- What we need are
  - to apply dependability technologies to the real world,
  - to evaluate the dependability from users' point of view, and
  - to translate it to economic values.

- Then, these give strong incentives
  - for industries and policy makers to look at DSN
  - for researchers to submit papers to DSN
  - for students to study the principles of DSN

Challenges

- Trans-disciplinary collaborations toward information society technology

- Dependability metrics from users' point of view

- Quantitative evaluation and mapping to economic values

- Integration of dependability and security

- Approach to "complexity" and "interdependency" of systems

- "Homeostasis" in dependability and security

- Dependability of "services" and "information"

Last, but not least, comments

Some people say

"… from dependability to resilience … "

This is misleading and confusing indeed!

Resilience is simply a means to realize dependability

Don't break what you built right by yourself !

We need a right change, never a wrong change!