

# DSN WADS 2007

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*Panel on*

## Architecting Critical Infrastructures



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### Panelists:

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# Critical Infrastructures

- **Organizations and facilities** that are of **vital importance** for public welfare and whose **failure or disruption** could have dramatic consequences
- **Many sectors involved:**
  - Transport and traffic
  - Energy
  - Finance, funds and insurance
  - Authorities, administration and justice
  - Water supply
  - Hazardous materials
  - Telecommunications
  - Information technology
  - Supply services
  - Others





# Evolution of Framework Conditions

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- Past:
  - Infrastructures could only be impaired locally
  - Limited interdependencies, at national level only
- Currently:
  - Strong networking within and between sectors through IT
  - National and transnational relations
  - Cooperation in the provision of services
- Future:
  - Increase of Large-area disturbances and variety of threats
  - Incidents abroad may become a problem for internal security
  - .....



# What is needed

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## Needs for (at least):

- Sound engineering design principles
- Protection against accidental/malicious attacks
- Evaluation of the resilience/trustworthiness

## Addressed by a number of initiatives:

- National and international projects (CRUTIAL, IRRIS, GRID, TCIP, ..)
- The International Institute for Critical Infrastructures - CRIS
- IFIP Working Group 11.10 on Critical Infrastructure Protection
- The Institute for Information Infrastructure Protection (The I3P)
- National programs
- ...



# Architecting Critical Infrastructures

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**Focus on how to address at architectural level the structuring, modeling and analysis of CI:**

- Which are the research challenges?
- What is needed to accomplish these challenges?
- How hard is architecting CI?
- Which are the building blocks for architecting CI?
- ??????