



MOTIA FINAL CONFERENCE

Round Table



Developing Scientific Foundation for CIIP and Dependency Analysis: Questions for discussion

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Questions for Discussion (1/5)

- Are there emerging problems in the present and future of Critical Information Infrastructure Protection (CIIP), with special emphasis to mutual dependency and cascading effects?
- Which is the role of the mutual dependency concerning the risk analysis issue?
- Is it worth measuring mutual dependency? does it improve company risk awareness? does it foster the global preparedness to negative events?

Questions for Discussion (2/5)

- What elements of scientific theory, experimentation, and/or practice should the research community adopt to make significant progress in the previous mentioned areas? How will this benefit the community?

- Are there “laws of nature” in cyberspace that can form the basis of scientific inquiry in the previous mentioned areas? Are there mathematical abstractions or theoretical constructs that should be considered?

Questions for Discussion (3/5)

- Are there metrics that can be used to measure with repeatable results mutual dependency of ICT systems or networks? Can existing measurement theory or practice be expanded to improve our ability to quantify the level of CIIP and mutual dependency?
- How should a scientific basis for CIIP research be organized? Are the traditional domains of experimental and theoretical inquiry valid in CIIP? Are there analytic and methodological approaches that can help?

Questions for Discussion (4/5)

- Repeatable CIIP experiments are possible in small closed and controlled conditions but can they be scaled up to produce repeatable results including Internet as the means that support Critical Infrastructure operation?
- How can modeling and simulation methods contribute to a science of CIIP and Dependency Analysis?

Questions for Discussion (5/5)

- Can the traditional scientific domains and methods such as complexity theory, physics, theory of dynamical systems, network topology, formal methods, mathematics, social sciences etc. contribute to a science of CIIP?
- Is there reason to believe the above goals are, in principle, not achievable and if so, why not?