
CCIC Applications

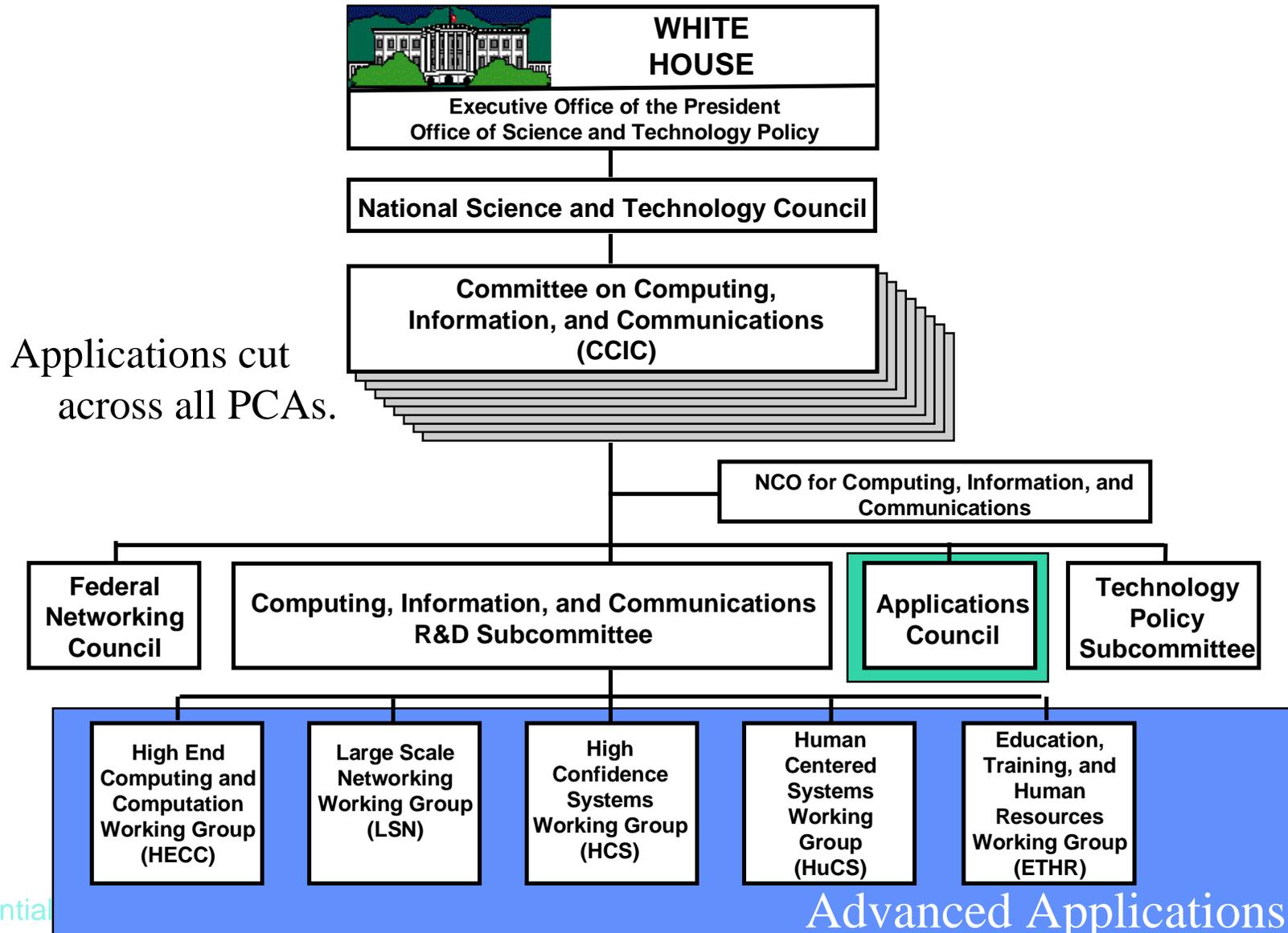
Briefing to the

Presidential Advisory Committee on
High Performance Computing and Communications,
Information Technology, and the Next Generation Internet

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Applications Cross-Cut PCAs



Applications

- Agency missions and their CIC-based applications play a critical role in CIC's coordinated R&D agenda
- CIC agency mission applications provide focus, and accelerate the development and deployment of technologies to meet broad Federal and societal goals
- Basic research and its underlying science and technology enable those applications requiring the highest performance computing, communications, and information technologies

Roles of Applications Agencies

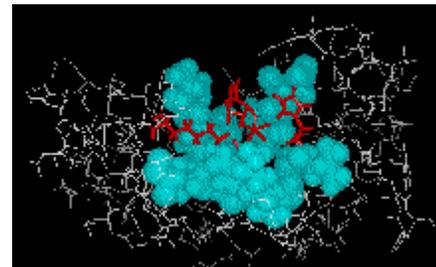
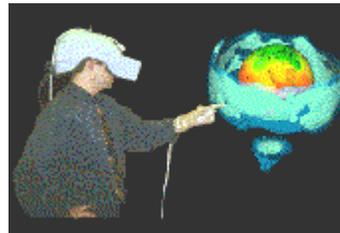
- Specify the technologies needed by classes of applications
- Develop those applications using early versions of the technologies
- Refine the technologies to better meet their needs
- Identify new applications that have new technology needs
- Develop testbeds, pilot projects, and demonstrations to provide proof-of-principle & technology transfer

Roles of Technology Agencies

- Listen to the needs of the applications
- Conduct curiosity-based research to develop wholly new approaches
- Seek collaborations with the applications developers
- Inform the applications community of technology developments

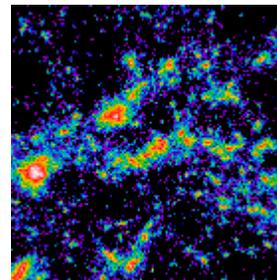
Grand Challenges

- Biological Molecular Models



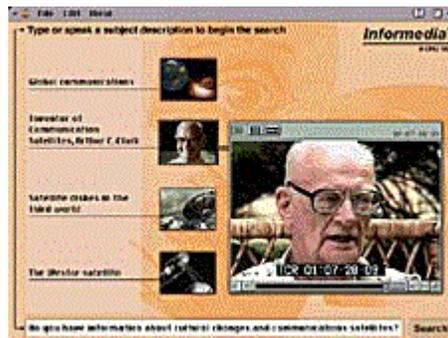
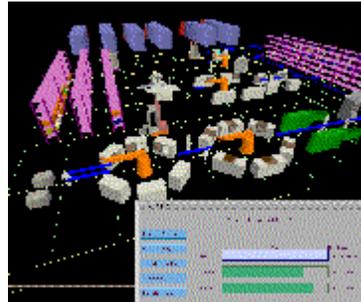
- Visualization of Models

- Simulation of gravitational clustering of dark matter



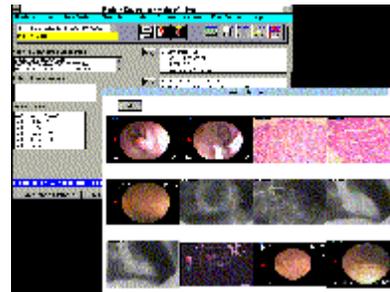
National Challenges

- Manufacturing Testbed



- Digital Libraries

- Visual Medical Chart



Select Applications Areas

- CIC R&D Subcommittee
 - Medical - Michael Ackerman
 - Environmental - Joan Novak

- Applications Council
 - Overview - Mel Ciment