



22nd National NSF EPSCoR Conference

Coeur d'Alene, Idaho

October 24-27, 2011

Water and the Environment: Cyberinfrastructure

Dr. Richard D. Loft

Director, Technology Development

Computational and Information Systems Laboratory

National Center for Atmospheric Research

Boulder, Colorado

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Significant CI Accomplishment* in an EPSCoR State: NCAR-Wyoming Supercomputing Center

***That I am familiar with!**

What it is: A new \$70-million, 4.5 MW NSF supercomputing facility

What it does: Will house petascale supercomputers and data storage systems for Earth System science research

What it means: Greatly enhanced modeling and data analysis capability for the EPSCoR community in climate and weather research

Status: Construction completed, October, 2011. System install January 2012, operational mid-2012.

Subject of BoF Tomorrow, 6:30-7:30: Boardroom 5 A/B/C (7th floor)



Top EPSCoR CI Challenges

- **Lack of critical mass of CI expertise and resources in EPSCoR states**
 - CI is a key enabler of research, discovery, and wealth creation.
 - Lack of it creates a negative feedback loop.
 - National resources (XSEDE) can help augment, but cannot replace native capabilities in CI.
- **Environmental problems tend to be complex, persistent, growing, and present phenomena of a wide range of spatial and temporal scales.**
 - CI critical tools for tackling these problems.
 - Difficult to address without persistent focus, across jurisdictional boundaries, and with an interdisciplinary approach



Innovative CI Ideas for EPSCoR

- Embrace millennial thinking in environmental informatics: social networking, open source software development teams, create open repositories of data, tools to lower the barrier to participation.
 - EPSCoR states have a unique opportunity to help assemble the statewide and regional observations of the environment into a national picture
 - EPSCoR should develop strategies that embrace/integrate with Earth-Cube, Sustainability Initiatives at NSF, for example
- Focus on developing technology ecosystems based on CI
 - Integrated plan involving education, business, and government
 - Invest in incubators for technology startups at key EPSCoR institutions





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Any questions?