

NECC Evaluation



Leslie Cooksy
2012 Annual NECC Meeting,
Newark, Delaware – March 16, 2012

Track-2 C2 Evaluation

External Evaluation Leader



- Delaware Education R&D Center
 - Independent unit of UD
 - Evaluation experience with engineering and other science programs
- Leslie Cooksy
 - Past-president of the American Evaluation Association
 - Faculty in UD's School of Education (Research Methodology & Evaluation specialization)
 - Evaluation contractor and PI on various federal projects

Track-2 C2 EAB Goals



Goal 1: Close gaps in key intra-campus network systems

- **UD** – upgrade broadband between Newark and Lewes campuses
- **DSU** – provide redundant cyber connectivity from key campus locations to the main biotechnology laboratory, provide cyber-connectivity to plant growth facilities
- **Wesley** – upgrade campus broadband connectivity to enable new interdisciplinary education initiatives and provide access to large external data sets
- **DTCC** – Improve Georgetown Campus network infrastructure through new “intelligent” managed switches within an improved operating environment

Track-2 C2 EAB Goals



Goal 2: Catalyze the development of a statewide *Environmental Monitoring and Analysis Center (DEMAC)*: Hire an environmental informatics specialist, coordinate data collection from diverse sources, organize and host workshops to enable DEMAC center usage.

Goal 3: Promote broader based education in spatial technologies: Establish a new GIS education course at DSU, launch an environmental toxicology program at Wesley, strengthen green technology education at DTCC, coordinate among existing GIS and visualization educators, organize workshops to enable broader usage.

Goal 4: Enhance cyber-based environmental outreach targeting under-represented urban populations: Establish a new partnership with the Delaware Nature Society, including server upgrade and watershed internship program through the Northeast Cyberinfrastructure Consortium (NECC).

Track-2 C2 Evaluation

– Questions & Methods



- **Goal 1: To what extent have the cyber-gaps been filled?**
 - Evidence on infrastructure in place
 - Baseline = needs identified in proposal
 - Evidence of personnel in place
 - Baseline = needs identified in proposal

Track-2 C2 Evaluation

– Questions & Methods



- **Goal 2: Compared to previous usage, to what extent and in what ways is the cyberinfrastructure being used?**
 - Usage rates
 - Baseline = use of bandwidth pre-C2 infrastructure
 - User surveys
 - Baseline = self-report of change in research activities and results from before access to bandwidth to current
 - User interviews to probe survey results
 - With those who report increased research activities and results to gather details about the role of the new cyberinfrastructure
 - With those who report little or no added benefit to learn what the barriers to use are

Track-2 C2 Evaluation

– User survey questions



- To what extent, if any, has the quality of the following cyberinfrastructure components changed since 2010?
 - Much worse $\leftarrow \rightarrow$ Much better
- To what extent, if any, are the following cyberinfrastructure components important in your research and/or teaching?
 - Little or no extent $\leftarrow \rightarrow$ Very great extent

Track-2 C2 Evaluation

– User survey questions



- ...do you think the changes [in cyberinfrastructure] facilitated collaborations with other researchers within your institution?
 - Same question for “across institutions”.
- Please rate your institution’s effectiveness at integrating the cyberinfrastructure resources to provide seamless support...?
- To what extent, if any, are more improvements to cyberinfrastructure components needed to help support your research and/or teaching?

Track-2 C2 Evaluation

– Questions & Methods



- **Goal 3: What new opportunities for education in spatial technologies have been created?**
 - Interviews with faculty and review of documents
 - Baseline = courses and workshops offered before Track-2 C2

- **Goal 4: What are the activities and results of the partnership with the Delaware Nature Society?**
 - Interviews with key informants (purpose and nature of activities)
 - Baseline = self-report of change in activities and results
 - Review of DNS records (number and type of participants)
 - Baseline = involvement of underserved youth in DNS activities pre-Track-2 C2 partnership

Track-2 C2 Evaluation

– Timeline



- **Currently:**
 - Gathering usage data to date
 - Documenting current course offerings on data visualization
 - Compiling lists of users for user survey
- **By April 2012:**
 - Distribute user survey
 - Assemble usage data
 - Develop interview guide

Track-2 C2 Evaluation – Timeline



- By May 2012
 - Conduct interviews with users
 - Changes in personnel
 - Changes in research productivity
 - Results of DNS partnership
- By June 2012
 - Update usage time series data
 - Update DNS participant counts and demographics
- July 2012 - Draft report for review
- August 2012 – Final report