

# Evaluation of UTPA Cyberinfrastructure Day

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The Minority Serving Institutions Cyberinfrastructure Empowerment Coalition (MSI-CIEC) held its fourth Cyberinfrastructure Day event for Minority Serving Institutions (MSIs) on March 27, 2008. The UTPA Cyberinfrastructure Day was held at University of Texas Pan American, a 17,500-student Hispanic-Serving Institution in Edinburg, Texas that, in addition to serving undergraduates, awards master degrees in 60 graduate program and doctoral degrees in Business Administration, Rehabilitation Education and Pharmacy. The goals of UTPA Cyberinfrastructure Day were to: (1) provide interested faculty, staff, and administrators UTAP with information about cyberinfrastructure developments in education and research, (2) create networking opportunities with national cyberinfrastructure organizations and experts, and (3) conduct facilitated discussions in which participants brainstormed ways to use CI in their own classrooms and labs.

In addition to the IT staff and administrators who helped put on the event, the registered participants at the UTAP CI Days included 29 faculty and IT staff from Business, Computer Science, Engineering, Mathematics, Educational Psychology, Health & Kinesiology, Library Sciences, Physics & Geology, and the university's Rapid Response Manufacturing Center. The number of participants was somewhat lower than hoped, due in part to scheduling conflicts. In order to measure the initial impact of the event and solicit feedback on how future CI Days could be improved, the 29 registered participants who were not involved in organizing the event were emailed an online evaluation survey three days later (this was as soon as their email addresses were received). Fourteen of the 28 people who received the survey replied within two weeks, for a response rate of 50%. This report summarizes the data from that survey.

## 1. Respondents' background and the overall impact of CI Day on their CI awareness and interest:

The 14 respondents to the UTPA CI Day survey were 10 tenure track faculty (71% of all respondents) one non-tenure track instructor, and two research staff members from Computer Science or Information Systems (4), Education (3), Engineering (2), and 1 each from Computational Physics, Technology Transfer, Kinesiology and Manufacturing. When asked, "Before attending CI Day @ UTPA, what was your level of experience with cyberinfrastructure and high performance computing?" the responses were the following (with the points on a 5-point rating scale that each was assigned in parentheses):

21%(3) = I had never explored using CI in research or teaching. (1 pt)

7%(1) = I had explored using CI in teaching or research but hadn't implemented it yet. (2 pts)

35%(5) = I had used some CI in teaching or research but am a relative novice. (3 pts)

21%(3) = I consider myself fairly experienced at using CI in teaching or research.(4 pts)

14% (2) = I am an expert at using CI in teaching or research. (5 pts)

average = 3.0

Respondents were then asked, "Now that you have attended CI Day, which statement best describes your position on the relevance of cyberinfrastructure to the work/teaching/research that *you* do?" The responses are seen below, with the number of points on a 4-point rating scale that each was assigned:

7%(1) = I cannot see how it will ever be relevant. (0 pts)

7%(1) = It doesn't seem relevant now, but it might be in the future. (1 pt)

14%(2) = I can see some relevance, but don't have the time/resources to pursue it. (2 pts)

71.4%(10) = I can see a lot of relevance and am willing to work with others on finding resources or developing applications. (3 pts)

average = 2.5

There were 4 comments appended to these responses:

- I would like to see more sessions around support for high end graphics and expert systems
- As administrative staff, it is not useful to me, but part of my job is facilitating the best research possible which leads to invention disclosures. In this regard, it is relevant because I can advocate it's use to the researchers here so they will perform better.
- I see less relevance for the strictly engineering or health-related topics that were the main areas presented and discussed. This means that HPC still has relatively little application for me. CI in the larger sense, of leveraging disparate and distant digital resources, I think has lots of potential.
- I can see now how the National Science Digital Library (NSDL) and its portal providing educators with a cyber-teaching environment, developing a cyber-workbench for researchers, and integrating education research and practice

## 2. Responses to particular CI Day sessions:

For each of the CI Day sessions that occurred that Friday, survey respondents were asked to indicate whether they attended, found it interesting, wanted to know more about that topic, or wanted to collaborate with others on that topic. Table 1 shows the responses.

**Table 1:** The percentage and number of 14 respondents who attended each of the CI sessions on Friday March 27th, , the *percentage of attendees* who found that session helpful, and the percentage of *all respondents* who wanted to know more or get involved.

UTPA CI Day Sessions	I attended this %(n)of 14	I found helpful % of n	I want to know more % of 14	I want to get involved ASAP % of 14
Geoffrey Fox's keynote speech giving an overview of CI	71.4% (10)	71.4% (10)	21.4% (3)	0.0% (0)
George Adams's NanoHUB	42.9% (6)	100% (6)	35.7% (5)	7.1% (1)
Bob Panoff's Computational Science & Education in K-20	35.7% (5)	100% (5)	21.4% (3)	14.3% (2)
Jack Ox's CI, the GridJam and Visual Music	35.7% (5)	20.0% (1)	7.1% (1)	7.1% (1)
Panel discussion: National & Regional Organizations Supporting Faculty in C	28.6% (4)	75.0% (3)	7.1% (1)	7.1% (1)
UTPA Showcase Projects Related to CI	35.7% (5)	60.0% (3)	7.1% (1)	14.3% (2)
Strategic Directions: Facilitated Discussion by Amelia Rouse	35.7% (5)	40.0% (2)	7.1% (1)	14.3% (2)

Comments about these sessions were added by 4 respondents:

- As an expert in the field, I have an aversion to being facilitated. Most of the activities like nanoHUB are focused on broadening participation, not improving applications.
- A serious attempt at determining strategic directions takes much more time, data, thought, members participating, etc., than we were able to have for this short session. I consider the result an example of the bare-bones structure of how such planning might proceed, but not a product which actually properly reflects the content one should demand of a serious strategic planning session.
- I will be part of two teams forming to seek external funding.
- As a UTPA faculty member, prior to the meeting I had looked at information about most of the projects available online in preparation. Nonetheless, and most importantly, seeing the individuals' presentation of their own ideas in person, as well as meeting and interacting with them was a useful and memorable experience.

### 3. Obstacles to moving forward with CI at UTPA:

Respondents were asked: “What do you see as the greatest obstacles to people in your department or college moving forward in exploring or developing the use of cyberinfrastructure?” The 9 responses are below, clustered by topic. As is the case with most educational reforms, the biggest perceived obstacles are lack of time and resources to explore new ways of teaching and doing research:

- Lack of administration support.
- I really believe that it comes down to a lack of resources at the college and department level. I am in the college of education and I think that there is still a view that technology is other departments and not that important to what we do. This is an attitude that needs changing and I think that this is an attitude that will only change when the top administration gets involved!
- From what I understand, we don't have the high bandwidth connection to the supercomputing facilities in Austin. I'd say that's an obstacle.
- Interest and Support
- Some are just not interested in doing more, as was evident from the lack of attendance. Others would be interested if they had a mentor/leader. Some doubt the value in their interest world.
- Institutional commitment to research - time, money, PhD student programs development and support.
- Matching educational needs of teachers and learners with the cyberspace; providing educators a customized cyber-teaching environment; developing a researcher's cyber-workbench to design and test educational interventions
- Time to write
- UTPA is an evolving institution. As such, patience is required ... A fine example is the multiprocessor processor system recently acquired last year, which is essentially unusable (I hear) because of lack of commitment of personnel resources for its support. Hence, to pick a single "obstacle", the "careful consideration of all costs" of CI is pretty concrete.

For an elaboration on these perceived obstacles and how conference attendees thought they should be addressed, see the notes from the facilitated discussion on Strategic Directions, the last session of the day.

### 4. Suggestions for how to improve CI Day events for the future:

Respondents were asked for “suggestions for how to make events like this more useful.” The 6 responses are below, clustered by topic:

- The primary target audience for this should be senior administration. None attended, with the exception of the Vice Provost for Research (and she already knows about this). I do not believe that senior administration understands how virulent is the criticism of their lack of interest and support among the workers.
- Give the host institution more time to plan and get the word out to the faculty.
- Provide info sessions to professors at different levels, assistant, associate, and full.
- As we move forward, I'd like for the UTPA Faculty showcase projects to be cases of actual partnerships with the outside resources being presented, such as the High-Performance Computing Clusters, the Hub, etc, rather than less relevant topics. I understand that these may not yet exist. The experiential how-to knowledge locally would be very useful.
- Agenda needs to be far in advance much like UTPA CDL does when getting the faculty to assist. Assisting to these events should be considered for Merit Professional Development
- Evening or Saturday events

## 5. Follow-up opportunities with faculty and staff who want to know and do more in CI:

Here are the stated CI interests and other comments of the six individuals who provided their names for follow-up and said they “wished to be involved in CI”:

- **Mircea Chipara**, [mchipara@utpa.edu](mailto:mchipara@utpa.edu), Physics faculty, who has “used some CI in teaching or research but is a relative novice” Greatest interest: “We can collaborate within the nanoHub framework.” Wants to do this ASAP.
- **John Lloyd**, [johnlloyd3124@gmail.com](mailto:johnlloyd3124@gmail.com), a researcher with Engineering’s Rapid Response Manufacturing Center who considers himself “fairly experienced at using CI in teaching or research.” Greatest interest: “NanoHUB and the CS&E in K-20 were of interest. I hope to test the NanoHUB in my research, and the CS&E in a summer teaching program.”
- **John Lowdermilk**, [jlowdermilk@utpa.edu](mailto:jlowdermilk@utpa.edu), Special Ed/Media & Tech faculty member, who has “used some CI in teaching or research but is a relative novice.” He is most interested in “the visual music because it is nice to see the blending of technology and art.”
- **Jaime Curts**; [jbcurts@utpa.edu](mailto:jbcurts@utpa.edu), Education/Curriculum & Instruction faculty, who has “explored using CI in teaching or research but hasn’t implemented it yet.” One comment: “I can see now how the National Science Digital Library (NSDL) and its portal providing educators with a cyber-teaching environment, developing a cyber-workbench for researchers, and integrating education research and practice.” His greatest interest: “cyber tools to develop portfolios.” He also indicated he wanted to get involved ASAP in Bob Panoff’s workshops.
- **Richard Fowler**, [fowler@utpa.edu](mailto:fowler@utpa.edu), Professor of Computer Science, who considers himself “fairly experienced at using CI in teaching or research.” He mentioned no particular follow up interests but did give his name.
- **Allan Beck**, [beckam@utpa.edu](mailto:beckam@utpa.edu), support staff in Manufacturing, who has “used some CI in teaching or research but is a relative novice.” Greatest interest: “Fox's concepts.”

Two other individuals, one from Technology Transfer and one from Computer Science, indicated their greatest CI interest was in the NanoHub, but they did not offer their names for follow-up contacts. Another individual from Computer Information Systems who did not offer his name for follow up had the following comments regarding his CI interests: “I see less relevance for the strictly engineering or health-related topics that were the main areas presented and discussed. This means that HPC still has relatively little application for me. CI in the larger sense, of leveraging disparate and distant digital resources, I think has lots of potential. Agent-based modeling, because of its potential for my own field of Information Systems [is my greatest interest]. HubZero for the possibility of accessing infrastructure for large-scale projects we cannot necessarily support ourselves at UTPA.”