

Cyberinfrastructure Priorities for FY2010

Final November 20, 2009

The term "cyberinfrastructure" describes the new research environments that support advanced data acquisition, data storage, data management, data integration, data mining, data visualization and other computing and information processing services over the Internet. In scientific usage, cyberinfrastructure is a technological solution to the problem of efficiently connecting data, computers, and people with the goal of enabling derivation of novel scientific theories and knowledge. (Source: Wikipedia; See also The Atkins Report at <http://www.nsf.gov/od/oci/reports/toc.jsp>)

Based on recent discussions within GPN as well as recent proposals to the National Science Foundation, there is a need for clarity in terms of GPN's role in the cyberinfrastructure domain. While CI is important at all levels from national to campus, questions remain about services and priorities for GPN in carrying out goals for CI. To answer these questions, we recommend focusing on the following subset of GPN CI objectives from the GPN Strategic Plan:

- 2.1.1 Identify and promote promising areas for CI and research collaboration among members.
- 2.2.1 Facilitate GPN member institutions in developing a regional CI plan for sharing resources and expertise
- 2.2.2 Facilitate, as appropriate, shared access to GPN member resources and GPN owned resources

Recommendation

We recommend that the EC form a CI Advisory Committee made up of a diverse cross-section of individuals representing the GPN membership. The advisory committee will be responsible for formulating a cyberinfrastructure plan to make it possible to achieve these objectives and distinguish the role of GPN from that of campus and state members and national organizations, and to partner with these organizations in ways that compliment and advance the mission of GPN members. This plan will then be presented to the Executive Council for consideration.

A table similar to the following will be developed in concert with the Advisory Committee to identify GPN's role in providing specific CI services across the national, regional, consortial and member landscape:

GPN CI Service	Audience			
	National – Regional	Consortium	Member Institution	Individual (technical, faculty, student,...)
Common infrastructure <ul style="list-style-type: none"> ▪ Facility ▪ Hardware (e.g., computation) ▪ Shared Hardware ▪ ... 				
Network-Enabled Services <ul style="list-style-type: none"> ▪ Revenue Generating for GPN or members ▪ Cost Containment/Avoidance for members ▪ ... 				
Knowledge Transfer <ul style="list-style-type: none"> ▪ Workshop ▪ Speaker's Bureau ▪ Repository ▪ ... 				
Novel CI Implementation <ul style="list-style-type: none"> ▪ Prototyping ▪ Development ▪ Deployment ▪ Publicizing (e.g., campus to campus, campus to regional/national, national to regional/campus) ▪ ... 				
Research <ul style="list-style-type: none"> ▪ Multi-discipline ▪ Multi-institution ▪ ... 				
Other areas				

The CI Advisory Committee will revise and expand the table as needed and complete the cells of the table, to reflect GPN's role(s) in the interaction between the CI Service and the Audience. Roles could include:

- Communication (e.g. information conduit from national CI groups and initiatives to regional/campus groups and vice versa),
- Facilitation (e.g. host special interest group listservs and teleconferences/webinars)
- Referral (e.g. putting researchers with similar interest in touch with each other, regionally and nationally)
- Doing (e.g. hosting workshops, conferences, operating shared services, providing co-location facilities)
- No Role

Method of Work

1. Form Advisory Committee comprised of Executive Committee members, researchers, CIOs, state representatives, outside people and others, as appropriate
2. Review December 2008 CI Summit Results
3. Review and revise the draft GPN CI Service table (above) to provide a comprehensive set of potential CI Services
4. Conduct focus groups (teleconferences/visits) and online surveys with the following to determine appropriate GPN role in each cell of the matrix:
 - a. Representative Council
 - b. Executive Council
 - c. Research Advisory Board
 - d. Collaborative CI Group
 - e. State networks
 - f. GPN Member researchers -- approximately 10/member (each GPN institutional representative will identify individuals to participate))
 - g. Relevant membership organizations (e.g., CASC, SURA)
 - h. State EBSCOR Directors
 - i. Others, as necessary
5. Advisory Committee drafts final set of recommendations
6. Obtain Executive Council Approval