Responses to Discussion Questions
For Breakout Sessions

Table 1: Data - Has your institution been addressing data management and data-sharing issues? Is your library involved? How are other universities dealing with digital storage of various electronic data formats?
- Who is generating data?
- What types of data are generating and how much data?
- What are they doing with it now?

- Data
  Library/IT-IS relationship
  How does library get in thought process?
  Repositories – data + publication
  Selectivity – who is? Do we need to be?
  Bioinformaticist on staff (grants)
  Different attitudes regarding sharing
    - Differences by discipline
    - Changing trends (generational?)
- Who is generating data?
  Everyone
- What
  Spectral Data
  GIS
  Chemistry – biology
  Core samples
  Images
- Where
  IRS
  Other purchased tools
- When
  Time
    - One more task
    - One more topic

Tables 2 & 7: Web Portal – What components should a web portal for e-science include?

Table 2:
- Resources
  - Library resources
  - Data
    - Repository (if available)
- Instruction
  - Tutorials
  - Simulation
  - Classes
- Collaborative tools/data sharing
- Services
- Document delivery
- Publication support

- Grid
- Links
- News
- Audience?
  - Used
- Subject
  - Specific or e-science in general

Table 7:
- Infrastructure
  Technology
  Champion(s)
  Budget
  Flexibility of content, management system
  Mobile
  Feedback mechanisms
  RSS feeds
- Scope
  Who is audience?
  Librarians = Us } faculty/researchers
  Wiki space? } students
  Institutions } staff
  Region/state
  Disciplinary
- Content
  Freely available resources/tools
  Licensed resources (trickier outside your own institution)
  Educational tools/tutorials
  Expertise profiles/databases
  Digital repository content
  Compilation of core facilities/data services that exist
- News

Table 3: Delivery - What organizational structure would facilitate regional delivery of e-science resources and services? What are essential components of regional delivery of e-science resources and services?

- Regional delivery - E-science – what is it?
- Cloud computing
  Data sharing
  Reuse
- Virtual Organization – ARL? NERL?
  Borrow-direct
  Keep copyright
- Archive presentations
  Research trends
  Documentation
Table 4 & 5: Staffing/Building New Roles - How can our current library staff obtain the training and credentials necessary to support e-science resources and services? How interested/comfortable/knowledgeable/expert are your library’s staff in understanding or contributing to the data landscape and challenges at your institution?

Table 4:

- **Training and Credentials**
  - Sit in on classes taught at institutions – NN/LM, Science boot camp
  - Online tutorials – MIT, NCBI website (medical librarian course), HEAL, MERLOT, MedEdPortal, AMIA
  - NCBI pulled funding for outreach and education
  - Collaborate/partner with researchers
    - Team teaching – PubMed and bibliographic databases as part of bioinformatics course
  - Library schools ??
  - Get foot in door
    - Liaison program CSTA
    - Events – advertising expertise
    - NIH mandate support
    - IR
  - Survey researchers on their needs
  - How to apply things librarians already know really well to support e-science?
    - Expert searcher
    - Entrez architecture based on MEDLINE
    - Connecting
  - Another model: hire PhDs in subject areas – must be service oriented

- **Comfort**
  - Not a lot!
  - Research vs. clinical info

Table 5:

- **Identify**
- **Organize**
- **Archive**
- **Share**

- **Content knowledge (MS/Phd)**
- **Collaboration skills**
- **Bioinformatic tools – NCRI, etc.**
- **Invest money and time in education and training**
- **Specialized programs**
- Pressure library schools

Table 6 & 9: Regional - How can we find out about e-science initiatives in the region & facilitate collaboration among libraries/librarians and their researchers?

Table 6:

- **E-science initiatives in region**
  - Find out
  - Facilitate collaboration amongst librarians with researchers in your institution
- **What do we want to share?**
Build a collaborative tool/web based, wiki, blog

- Database with structured records
  - Repository of
    - People - librarians
    - Projects
    - Tools – programs, languages
  - tag clouds
  - taxonomies

- Discussion area
  - Trends
  - Experiences
  - Bibliographies
  - Primers
  - Learning applies

- Community of interest within BLC
  - Librarians finding others
  - Librarians doing e-science
  - Librarians finding researchers doing e-science
    - First step – understanding our own idea of e-science

- Is it:
  - A systematic way of inventorying e-science initiatives
  - Or:
    - Footwork within our own institution to generate interest
    - Lunch time topics (brown bag) on data management for research assistants
    - Discussion with faculty armed with a demonstration project of successful librarian intervention, i.e., the portal

Table 9:
- Identify e-science initiatives
  - Word-of-mouth/networking
  - Conferences
  - Literature
  - Surveys
  - Consortia
  - Listservs
  - Cruising the web
  - Ask faculty
  - Liaison activities
  - Campus funded grants
  - Mining network (university websites)
  - Mining IRS

- Collaborating among librarians and researchers
  - Sharing knowledge of info resources
  - Networking with other libraries
  - Networking with other faculty worldwide
  - Creating online/physical space for Data and e-science and promoting
  - Providing staff to create metadata
    - Using standards
    - provide guidelines or recommendations
  - Single interface or meta-search of collections
  - From high level at institution
  - Panels of science scholars on e-science
  - Developing open access journals
Open access discussions/policies
e-Sciences global initiative portal
Working with Office of Research
Co-teach (GIS, Bioinfo…etc.)
Consult with faculty and grad about data
Software support/installation?
Outreach: emails, scheduled workshops
Education: how users to find data
Professional development: educate staff on e-science and data issues
Best practices: share with faculty

Table 8: Given today’s presentations, what roles do you see for libraries in e-science initiatives & potential strategies? What are practical approaches for understanding the scope of this issue at your institution?
- Bioinformatics and E-Science: Are they the same thing? Where are the overlaps?
  What are the differences?

- Roles of librarians in e-science
  Bring scientists into the library/share expertise – bring them early – listen to what they need
  Informationist needs to expand
  Patient ed – CTSA
  Help organize data
  Database design role
  Copyright/licensing/scho/pub – NIH mandate, journal publishing
  Helping manage large complex bibliographies
  “Linking” specialists to resources
  Attend – be visible in scientific/disciplinary conferences
  Deliver info in other formats

- Definition – Bioinformatics vs. E-science
  They are different
  Bioinformatics – computational
  E-science – broader, general
  - collaborates
  - getting people to work together for collaboration in science
  Cyber infrastructure – building large
  Datasets and sharing

- Regional roles
  Joint development of online tutorials to help educate ourselves
  Joint development of web resource – pulling variety of biotools together in one place