

**COLORADO**  
**ALLIANCE**  
**OF RESEARCH LIBRARIES**

**Completion Date: November 15, 2010**

**Creation Date: November 15, 2010**

**E-Rate Technology Plan**

**January 1, 2011-December 31, 2013**

# **1. GOALS, OBJECTIVES, STRATEGIES, AND ACTIVITIES**

## **I. MISSION**

The Colorado Alliance of Research Libraries is a long-term partnership of research, public and educational institutions with a history of working in concert to serve the information needs of the students, faculty and research scholars of member institutions and the general public. The twofold mission of the Alliance is:

- 1) to share resources
- 2) to identify and resolve issues of information creation, collection, access and distribution.

The Alliance institutions seek to reduce member operating costs and provide additional services to its constituencies by sharing their resources, expertise and leveraged purchasing. In pursuit of its mission the Alliance will:

- ◆ Collaborate and innovate as problem-solving techniques
- ◆ Offer automated and conventional systems and/or cooperative arrangements to enhance access to information resources
- ◆ Forge alliances with other organizations that offer information products and services
- ◆ Share ideas and strategies for managing changing conditions in the library environment
- ◆ Undertake research that seeks solutions to a wide range of information management problems
- ◆ Develop strategies for reducing costs.

## **II. VISION STATEMENT**

The Alliance is a not-for-profit corporation operating on behalf of its ten members and their thirteen libraries. The Alliance is diverse, consisting of institutions that are private and governmental, state and municipal, public and academic, in Colorado and Wyoming, general purpose and special. Although each institution is unique, the members have embraced the strategy of collective action by maximizing the collaborative use of the Alliance's principal assets.

These assets are:

- ◆ Ability to enhance collections at most favorable pricing

- ◆ Staff energy, creativity and expertise regarding technology and contract negotiation.
- ◆ The power of collective action
- ◆ Available installed hardware and software, and
- ◆ Strategic use of Alliance portfolio.

The Alliance vision is outcomes based and recognizes the varied needs and desires of its members and will continue to provide existing operations and services to meet those needs. By emphasizing the most current technology and the advantages of collaborative activity, the Alliance seeks to build on the accomplishments of the past and to be a national leadership organization with the ultimate goal of providing improved services for library users.

Special purpose partnerships within the Alliance will use a variety of funding mechanisms, including outside grants. The objective is to provide access for every Alliance patron to the full range of available information products and services, as defined by each institution.

### **III. ENVIRONMENT AND ENABLING METHODOLOGIES**

The digital library marketplace is changing dramatically and the trend is to buy and sell in ways that take advantage of size and economies of scale. The Alliance's long history of resource sharing, entrepreneurial initiatives and collective acquisitions has placed it among the leaders in the consortial movement and its unifying organization, ICOLC, the International Coalition of Library Consortia. ICOLC is now very powerful and international in scope, currently consisting of over one hundred consortia meeting several times a year in the US, Canada and Europe dedicated to fulfilling their constituents' needs.

The Alliance seeks to obtain and operate the best products and services for its libraries at the best terms, conditions and prices. At present, acquisitions are being made by the Alliance central staff on behalf of all twelve libraries, for clusters of libraries within the Alliance, clusters outside the Alliance, and jointly with other consortia and state or regional organizations. The principle is leverage. The task is to determine if an arrangement exists or can be established to maximize the opportunities inherent in a vendors pricing scheme.

While service to its members is at the heart of every transaction, the Alliance also is interested in assisting non-members where it is mutually beneficial. Where the contractual relationship with a vendor permits adding an additional institution and its additional usage on the margin, the Alliance is prepared to do so. Under such an arrangement, a service fee will be imposed to cover Alliance overhead and management costs.

The Alliance has an entrepreneurial perspective. It intends to find or create opportunities to develop new products and services of value to its members and potentially, to others. These opportunities may be in the public or private sector. In addition, the Alliance intends to request grant fund support where appropriate.

The functions performed by the Alliance are extremely varied and of significant benefit at many levels within member institutions. Unfortunately these functions sometimes escape the notice of institutional and governmental budget staffs, school faculty and administrators, students, library patrons and other members of the Alliance audience. The Alliance desires to make its activities better known. The purpose is to raise the level of understanding and appreciation in order to ensure continued support by key officials and to expand the scope of services provided by the Alliance to its members.

#### **IV. January 1, 2011 – December 31, 2013 Activities**

A. Continue high quality service levels in all operations.

B. Server Maintenance

1. Continue system operation of Voyager ILS at Alliance Central Office for the Colorado School of Mines.
2. Have installed a samba server as the domain controller
3. Have installed a Microsoft Exchange server

C. Gold Rush

1. Conduct training sessions (ongoing)
2. Continue to update Gold Rush title lists. (ongoing)
3. Continue aggressive Gold Rush marketing effort (ongoing).
4. Have implemented advanced electronic resource management (ERM) features including the ability to customize Subscriptions templates and workflow.
5. Install an Incident Tracker to track system outages for contract compliance and to report outages to Gold Rush users
6. Have implemented XML Gateway to the Gold Rush web services layer to act as an alternative to the public interface A-Z interface

D. Prospector

1. The Prospector union catalog has grown to 40 libraries in Spring 2011 through the addition of the Marmot Library Network which adds 15 libraries on the Western Slope of Colorado.

2. Installed an Encore discovery interface in 2010 to augment the classic catalog interface.
3. Continue to upgrade the INN-Reach catalog as new software releases become available
4. Continue to monitor open source developments in union catalog technology to see if opportunities may be available outside of the INN-Reach software currently being used by Prospector

#### E. Resource Sharing

1. Continue to promote the RAPID Interlibrary Loan System as a Prospector pod
2. Continue to monitor delivery times for Prospector to determine how they can be optimized through the courier and local discipline.
3. The Shared Collection Development Committee (SCDC) is doing cooperative collection development using Prospector as the backbone for delivery. Special attention is being given to ebooks and other electronic resources. For example, a joint purchase of Springer ebooks by a cluster of libraries may be shared with other libraries in Prospector who are not part of the plan.
4. Continue hosting The Charleston Advisor home page in return for free electronic access and print copies (ongoing). The journal home page will continue to be hosted at the Alliance and the master PDF images will be warehoused at Ingenta.

#### F. Alliance Digital Repository (ADR) 2011-2013

The mission of the Alliance Digital Repository (ADR) is to provide services for the preservation of and access to digital assets inherent to the research, information, and education missions of the Colorado Alliance of Research Libraries member institutions. The service began ingesting material from member libraries in June 2007 and has gone live for eight of the libraries since its inauguration.

The purposes of the ADR are to:

- Provide access to digital content by students, faculty, staff, patrons, researchers, and customers of Alliance institutions, as well as to the world
- Host hardware and software infrastructure that supports digital repository services and functionalities for Alliance institutions and affiliated partners
- Store digital assets created and collected by Alliance libraries, universities, and communities

The vision of the ADR is to serve as a standards-based repository and infrastructure supporting a diverse set of applications, services, and discovery tools that offer long-term

management, secure storage, preservation solutions, and - when possible - open access to digital assets of enduring value, as determined by the Alliance institutions.

Examples of possible ADR applications include:

- A university's institutional repository: including but not limited to pre-prints, post-prints, electronic theses and dissertations, student projects, raw datasets, publications and learning objects.
- A library's special collections, archival materials, and other unique materials in digital form, with interactive discovery and review tools along with methods for viewers to obtain versions for personal and commercial use.
- An institution's secure, managed repository of records and documents, including publications, policies, operational documents (minutes, contracts, employment records, etc.)

As part of the ongoing work of the ADR, the Alliance has joined the InCommon Federation in order to support Shibboleth authentication services.

## **2. Professional Development**

The staff at the Colorado Alliance of Research Libraries are all highly trained and expert in their fields. The Alliance provides staff training on an as needed basis when new hardware or software is acquired. However, as working professionals all of the basics have been covered and the staff in the office are among the most expert in the state in their specialties. Alliance staff regularly provide consulting, teach classes and do presentations at local, regional and national conferences.

The Alliance already has a highly trained staff in network administration, Unix system administration, Exchange system administration. Training for staff is done on an as needed basis in areas such as:

- ◆ CISCO router configurations
- ◆ Firewall set-up and maintenance
- ◆ Unix system administration and Exchange system administration
- ◆ Programming, Perl & CGI scripting, PHP, XML
- ◆ Inn-Reach training through Innovative Interfaces

### **Alan Charnes**

Executive Director

Colorado Alliance of Research Libraries

Degrees

- 1957, MA Columbia University
- 1953, BA Rutgers Univeristy

Significant employment history

- 1991-Present: Executive Director, Colorado Alliance of Research Libraries
- 1986-1991: Manager of Revenue, City and County of Denver
- 1976-1986: Executive Director, Colorado State Department of Revenue
- 1975-1976: Executive Director, Colorado State Office of Planning and Budgeting
- 1965-1975 Staff Director, Joint Budget Committee, Colorado General Assembly
- 1963-1965 Investment Officer, Capitol Life Insurance Co.
- 1953-1963 Personnel Analyst/ Long Range Planner, Prudential Insurance Co.

### **Tim Donnelly**

System/Network Administrator

Degrees

- Bachelor of Science, Information System Security - ITT Technical Institue 2005
- Associate of Applied Science, Computer Network Systems Technology 2001

Significant Employment History

- 2005-Present IT and system administration, Colorado Alliance
- 2003 - 2005 DR Horton - Continental Series, Desktop Support Technician
- 2000 - 2003 360networks, CAD Operator
- 1996 - 2000 Office Depot, Consultative Sales Specialist: Technology

Certifications/Honors:

- CompTIA Network+
- Member National Technical Honor Society

### **Terry Leopold**

Electronic Database Manager

Degrees

- 1987, MA, Literature and the Visual Arts, University of Reading, Reading, England
- 1969, MSLS, Simmons College, Boston, Massachusetts
- 1967, BA, Pembroke College in Brown University, Providence, Rhode Island

Significant employment history

- 2004- present, Electronic Database Manager, Colorado Alliance of Research Libraries
- 1999-2002, Head of Collection Development, University of Colorado at Denver

- 1995-1999, Humanities Bibliographer, University of Colorado at Denver
- 1980-1995, Reference Librarian, University of Colorado at Denver
- 1976-1980, Periodicals Librarian, University of Colorado at Denver
- 1970-1976, Periodicals Librarian, Metropolitan State College

Special Expertise

- Coordination of database purchasing
- Goldrush records, group purchases
- Shared Collection Development

**George Machovec**

Associate Director

Colorado Alliance of Research Libraries

Degrees

- 1977, MLS University of Arizona
- 1974, BS/double major in physics and astronomy, University of Arizona

Significant employment history

- 1993-present, Colorado Alliance of Research Libraries
- 1987-1992, Head Library Technology and Systems, Arizona State University
- 1977-1987, Science Reference Librarian and Manager of Solar Energy Collection at Arizona State University

Special Expertise and Projects

- Prospector Union Catalog 1998-present
- Gold Rush project manager
- Managing Editor, *The Charleston Advisor*
- Extensive experience in the online information industry

**Rose Nelson**

Systems Librarian

Colorado Alliance of Research Libraries

Degrees

- 1997, MLS Emporia State University
- 1991, BA University of Colorado at Boulder

Significant employment history

- 2005-present, Systems Librarian, Colorado Alliance of Research Libraries
- 1999-2005, Technology Consultant, Colorado State Library
- 1998-1999, Automation Consultant, South Central Kansas Library System
- 1992-1997, Senior clerk, Circulation clerk, Denver Public Library

Special Expertise and Projects

- Prospector support
- Alliance collection development activities
- Goldrush training and marketing
- Goldrush maintenance and updating
- Technology trends in libraries

## **Geri Virtue**

Administrative Coordinator

Degrees

- BA, French, Western Illinois University

Significant Employment

- 1998-present, Colorado Alliance of Research Libraries
- 1991-1998, CARL Corporation
- 1985-1991, Colorado Alliance of Research Libraries
- 1977-1985, DU Penrose Library in various positions such as ILL, serials and administration

Special Expertise

- Budgets, finance, office management
- E-Rate

## **Jessica Branco Colati**

Project Director, Alliance Digital Repository (ADR)

Degrees

- MS, Simmons College
- BA, Tufts University

Significant Employment

- Prior to working at the Alliance, Ms. Colati worked as an independent consultant with libraries, collaboratives, and cultural heritage institutions assessing, advising, and facilitating metadata development, finding aid encoding, collections management workflows, digital content creation, digital repository design processes, and digital library services programs.
- Her previous experience includes serving as a library portal specialist at the Washington Research Library Consortium, with a focus on the implementation of a shared institutional repository program, as well developing interfaces to electronic and digital library resources. She has also worked as an archivist at the Archives Center, National Museum of American History, Smithsonian Institution, where her primary focus was developing physical and digital processing workflows, managing digital assets and metadata, and producing access points and web resources to highlight images from the Scurlock Photographic Studio Records collection. Earlier work has included serving as Project Coordinator of Boston Streets: Mapping Directory Data, an IMLS-funded project at the Digital Collections and Archives (DCA), Tufts University. While at Tufts, she also worked on the Edwin C. Bolles Collection: A Digital Archive of the History and Topography of London and the Online Encyclopedia of Tufts History.

Special Expertise

- Management of Fedora digital repository software
- Archives and document management

## **Ed Fugikawa**

Technical Lead, Digital Repository Services

#### Degrees

- BA, University of Toledo

#### Significant Employment

- Kent State University, IT

#### Special Expertise

- Fedora software
- Islandora software
- Fez software

### 3. Needs Assessment

The consortium has thirteen member libraries and offers several projects to libraries outside of our formal consortium structure on a cost recovery basis. Prospector, a Colorado Unified Catalog, currently has 25 member libraries and will be growing to 40 libraries in Spring 2011 with the addition of the Marmot Library Network. Gold Rush, an electronic resource management system (ERMS), journals A-Z service and link resolver, has users within Colorado and around the United States.

The Alliance Digital Repository initially has Alliance member library partners. However, the project has added one affiliate (Colorado State Publications) and may add content from additional organizations in the future. Since ADR houses primary digital objects (unlike Prospector and Gold Rush which primarily contain descriptive metadata), it has huge growth potential in terms of storage and servers. To accommodate the growth for ADR, the University of Denver has become a collocation site for ADR to house their growing server/disk farm. This location is in a specially allocated footprint dedicated to ADR

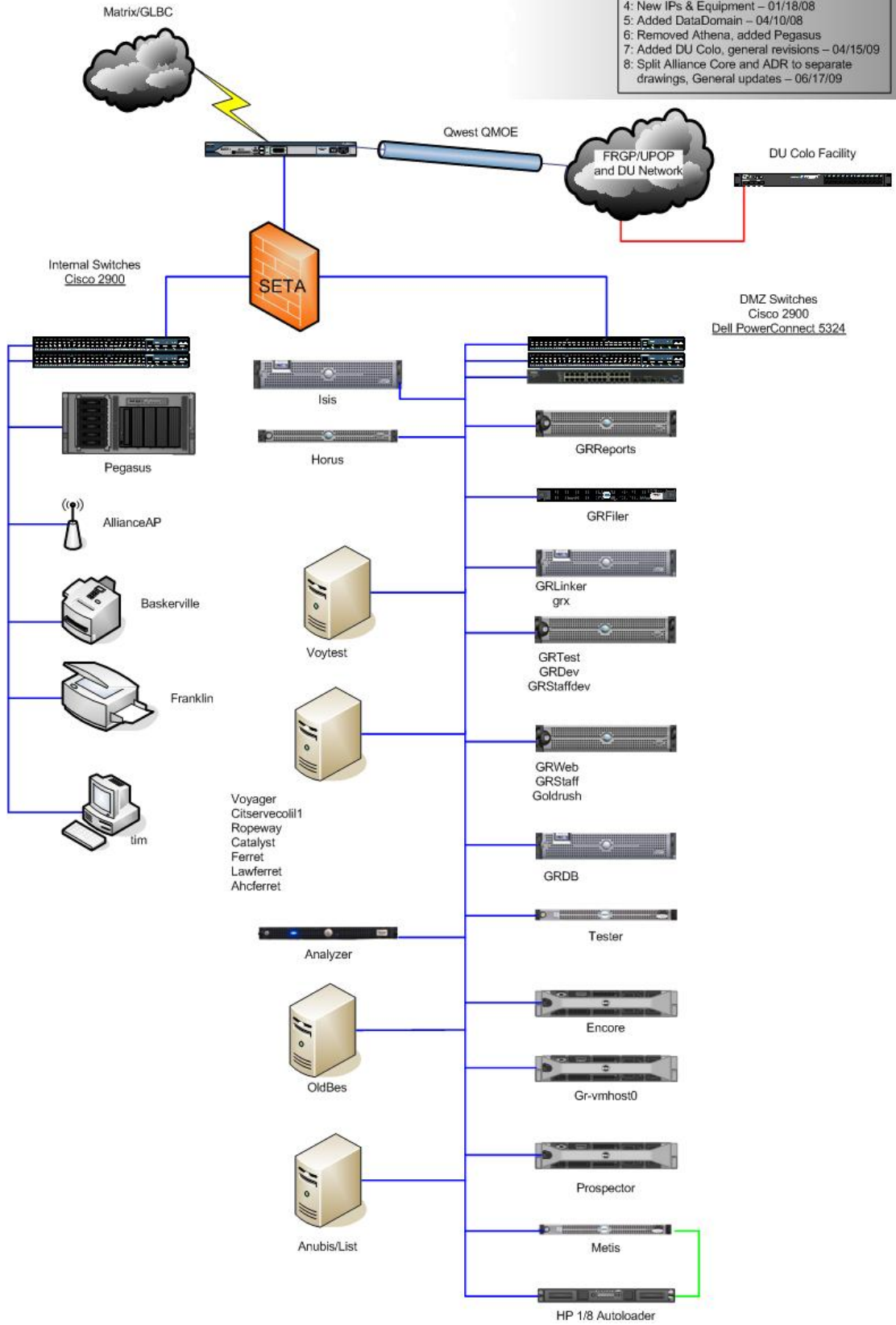
The Alliance regularly monitors its network traffic to ensure adequate bandwidth. Sufficient bandwidth is available for all of the Alliance services and projects for the foreseeable future and within the scope of this three-year plan. Bandwidth for the Alliance primary data center is provided via a 10 Mbps Qwest QMOE line which connects with the Front Range GigaPop (FRGP). This connection is an on-ramp to the I2 higher-education Internet backbone providing short path routing to most of the Colorado Alliance academic members. A back-up T1 line is provided by Matrix/GLBC in case the primary FRGP pipe has problems.

- ◆ T1 to Matrix
- ◆ 10 Mbps to FRGP via Qwest QMOE
- ◆ Border Gateway Protocol (BGP) is used to ensure Internet redundancy
- ◆ Internet filtering software is available in the office.

- ◆ The Alliance currently supports 20 production servers in the Alliance data center and an additional 6 physical servers in the ADR collocation which represent 45 virtual servers. site at the University of Denver. The number of servers change as projects are added, servers are replaced and/or consolidated. The Alliance does not have any public access PCs for the general public in the office.
- ◆ All servers are backed up on a nightly basis using automated software and tapes are regularly shipped off-site for safety. Iron Mountain provides off-site storage and recovery.
- ◆ The ADR site provides disk-to-disk backup using a Data Domain appliance and this Data Domain is then backed up to tape for off-site storage and recovery. Current tests are underway for cloud based storage using technology from Duraspace and will likely be implemented on a production basis in the next year or two pending success and costs.
- ◆ CISCO routers are used at the Alliance data center and Foundry routers are used at the ADR collocation site.
- ◆ Dual Checkpoint Firewalls are provided offering redundant protection
- ◆ 1 Gbps Fast Ethernet internal backbone with a variety of Ethernet switches
- ◆ A gigabyte switch is used as a backbone
- ◆ A variety of Unix and Linux servers support the major Alliance projects
  - Prospector operates on Quad core Dell server with Red Hat Unix
  - Encore discovery interface operates on a Quad core Dell server with Red Hat Unix
  - Voyager integrated library system for the Colorado School of Mines operates on a Sun server
  - Gold Rush operates on 5 high end Dell servers with Unix
  - The ADR project operates on a suite of HP servers and uses a fiber channel storage area network (SAN).
  - A variety of other Linux servers support email, listservs, ftp, Web services, specialty databases, and The Charleston Advisor

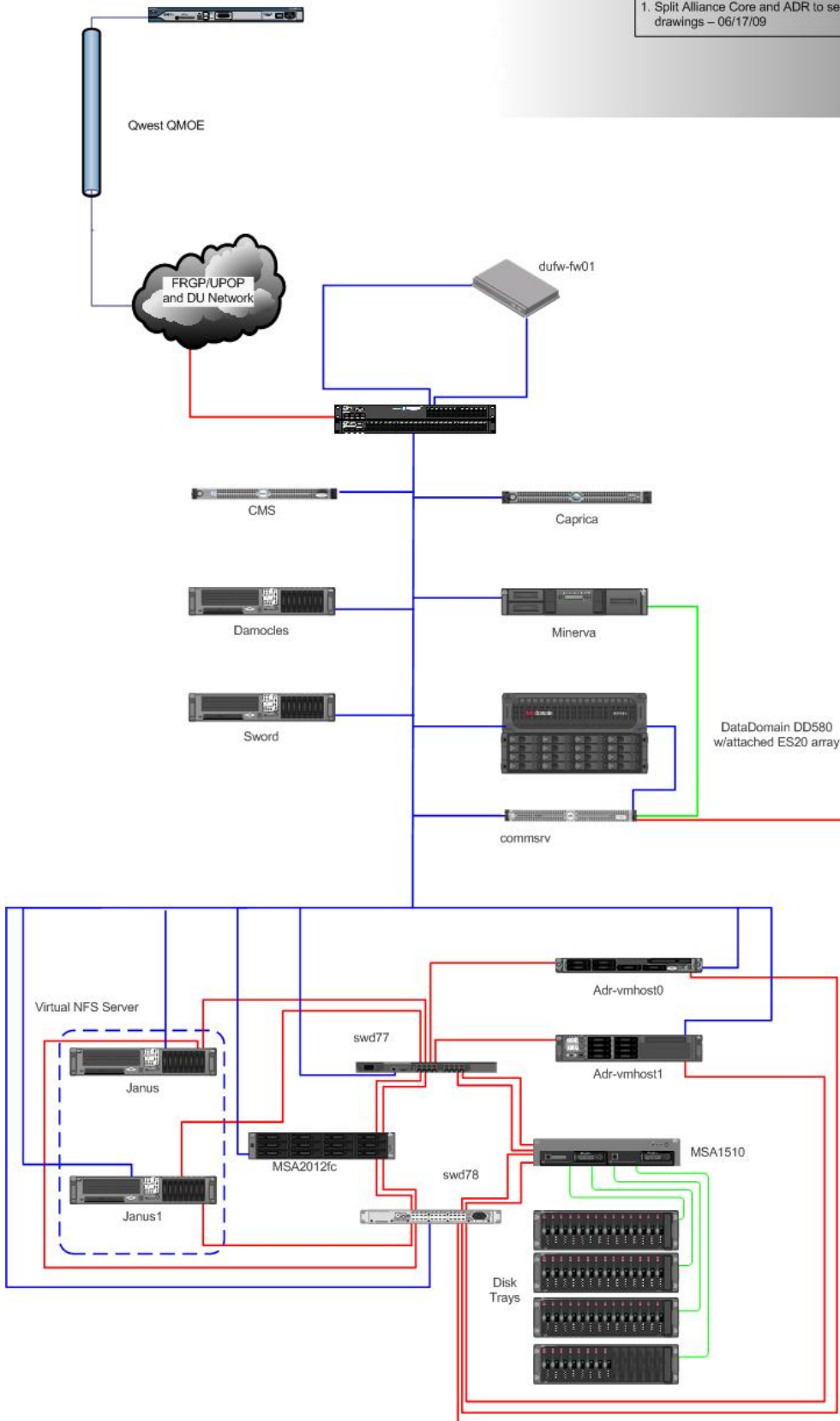
Colorado Alliance of Research Libraries  
Network Diagram

- 3: Added Isis – 05/17/07
- 4: New IPs & Equipment – 01/18/08
- 5: Added DataDomain – 04/10/08
- 6: Removed Athena, added Pegasus
- 7: Added DU Colo, general revisions – 04/15/09
- 8: Split Alliance Core and ADR to separate drawings, General updates – 06/17/09



Colorado Alliance of Research Libraries  
Network Diagram

1. Split Alliance Core and ADR to separate drawings - 06/17/09



## 4. TECHNOLOGY PLAN BUDGET: Colorado Alliance of Research Libraries

***INSTRUCTIONS:***

This form is not intended to be a final budget approved by your accounting office, but rather a reasonable reflection of the planning process you have put into place for your ongoing technology needs for the next three years.

1. Fill in the name of your library or library consortium on the line marked **FOR:** above.
2. If you will use only existing computer hardware during the budget period, check the box marked “**Existing**” and do not enter any budget amounts in that line. The same instruction applies for computer software in the next line.
3. Enter your actual or planned expenditures in the appropriate blanks. Where appropriate, subtract your e-rate discount amount from your total budgeted amount and enter only the net amount (your actual cost *after* the discount).

| <i>Category</i>               | <b>FY11<br/>(Actual)</b>            | <b>FY12<br/>(Anticipated<br/>3% increase)</b> | <b>F13<br/>(Anticipated<br/>3% increase)</b> |
|-------------------------------|-------------------------------------|---|--|
| Hardware/Software             | \$57,900                            | \$59,637                                      | \$61,426                                     |
| Training                      | \$0                                 | \$3,000                                       | \$3,090                                      |
| Telecommunications services   | \$21,000                            | \$21,630                                      | \$22,279                                     |
| Hardware/Software Maintenance | \$51,900                            | \$53,457                                      | \$55,061                                     |
| E-rate Funds Received         | \$20,199<br>(funding<br>commitment) |   |  |

## 5. PLAN EVALUATION

The Technology Plan for the Colorado Alliance of Research Libraries is a direct reflection of the Alliance's initiatives initiated and directed by its Board of Directors (see [http://www.coalliance.org/index.php?option=com\\_content&task=view&id=49&Itemid=128](http://www.coalliance.org/index.php?option=com_content&task=view&id=49&Itemid=128)). The Board of Directors, in conjunction with Member Council, makes final determination on the success and ongoing continuation of projects. Reports and analyses are provided to the Board and Member Council to help in this determination.

The Alliance Member Council, includes all library deans and directors and they take a more hands-on role in directing Alliance projects (see [http://www.coalliance.org/index.php?option=com\\_content&task=view&id=50&Itemid=129](http://www.coalliance.org/index.php?option=com_content&task=view&id=50&Itemid=129))

Periodic additions and alterations to the Plan are reported in *DataLink: The Alliance Newsletter* ([http://www.coalliance.org/index.php?option=com\\_content&task=blogcategory&id=27&Itemid=50](http://www.coalliance.org/index.php?option=com_content&task=blogcategory&id=27&Itemid=50)) The Alliance makes an effort to stay current on the latest technologies and takes advantage of opportunities as they arise in the marketplace.

Members Council votes on new directions that are taken by the Alliance during mid-strategic plan cycles and if funding is required the Alliance Board of Directors may also review it.

The primary barriers in meeting the plan are financial cutbacks by participating institutions. If libraries cut back on their funding of Alliance services or projects there will need to be concomitant reductions in the budget and related services.

### **Contact Information:**

For more information on the Technology Plan for the Colorado Alliance of Research Libraries contact:

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