



Shaping the Future of the West: Technology, Geography and Demography

Connecting Minority-Serving Institutions to US Advanced Cyberinfrastructure

**A Lariat Summit
August 14-15, 2006
Montana State University**

Sponsors:

Lariat Network and the National Center for Research Resources of the National Institutes of Health, Montana State University, University of Washington, Western Interstate Commission on Higher Education, Pacific Northwest Gigapop

Overview

Advanced information, communication, computation and collaboration technologies, known as "cyberinfrastructure," have become essential elements for education and for research in the 21st century. Of particular interest to many researchers and educators is the use of these tools for "e-science," as computational discovery has emerged to complement the traditional practices of theory and experimentation. Examples abound across all scientific disciplines as well as in the arts and humanities.

Explosive growth in the resolution of sensors and scientific instruments has led to unprecedented volumes of environmental and experimental data, which can be combined, compared and correlated across time, place, and types of data. Computational science aids in modeling, simulation, and scenario assessment using data from diverse sources. Complex multidisciplinary problems, from health care to public policy through national security to scientific discovery and economic competitiveness, complement the historical focus on single disciplines. And important multidisciplinary discoveries are now made by distributed teams of experts spread across the country and around the world.

Advanced cyberinfrastructure, enabled by very high-speed research and education networks, is essential for participating in all these efforts. Those without access and the ability to participate will be left behind 21st century innovation.

Therefore, a major challenge confronting our nation today is how to insure that all colleges and universities, including those that have not traditionally benefited from expensive research infrastructure, can participate seamlessly in national and multi-national cyberinfrastructure-enabled e-science efforts. This begins with the need for ubiquitous deployment of advanced research and education networks.

The West faces unique challenges to respond to this opportunity – challenges of geography, sparse populations, limited resources, and political culture. Yet the West also has some unique assets, including (1) a new broadband network, called the Lariat Network, which is connecting many – but not all – of the research universities in the West; (2) potentially the resources of various higher education organizations as well as support from state legislatures; (3) the accumulated political influence of the West at the Federal level; (4) and the entrepreneurial spirit of the West.

Not only does the West have complex geography, but also its demography is increasingly a significant shaper of its destiny. The West is home to nearly 100 minority-serving institutions and many more that serve diverse populations and have historically under participated in federal R&D programs. These institutions are often the last to be served, if served at all, by leading-edge advances in technology. Given the impact of advanced cyberinfrastructure on all aspects of science and, increasingly, throughout many other disciplines as well, it is essential that these institutions are connected to national advanced research and education networks. Such connections will allow to the West's diverse population to participate in e-science activities; access remote data, devices, and expertise; collaborate with colleagues across the region, nation, and world; and give their diverse students and faculty opportunities to engage in transformative research and educational opportunities that now characterize the life, physical, and earth sciences.

NOTES: (1) The "West," for the purposes of this summit, will comprise the WICHE states – Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington – and West Texas. (2) "Minority-serving and under-participating institutions," for the purposes of this summit, are being construed broadly to include those institutions listed under the Department of Education's Title III programs, those institutions serving large numbers of under-represented minorities in the West though not necessarily part of Title III, and those institutions who participate in NIH and NSF programs, such as INBRE and EPSCOR.

Summit Planners and Participants

Kathleen Ross President, Heritage University

Joe McDonald President, Salish Kootenai College

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Tom West CEO, National Lambda Rail

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Sara Young Director, Montana INBRE Outreach Core, Montana State University

David Yarlott President, Little Big Horn College

Bill Wertman Vice President, Chief Dull Knife College

David Lassner Chief Information Officer, University of Hawaii System

Steve Smith Chief Information Technology Officer, University of Alaska System

Robert Franza Executive Director, Seattle Science Foundation, and Affiliate Professor of Bioengineering, University of Washington

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Sidney A. McNairy Director, Research Infrastructure, National Center for Research Resources, National Institutes of Health

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Adele Pittendrigh Associate Dean, College of Letters and Science, and Program Coordinator, Montana INBRE-BRIN, Montana State University

The Lariat Summit

Participants: This Lariat Summit will bring together 30-40 academic and technology leaders from minority-serving and under-participating institutions in the West, leaders from federal funding agencies concerned with cyberinfrastructure and related applications (e.g., NSF, NIH, IMLS, etc.), and national leaders in cyberinfrastructure and e-science.

Summit Goals: Over two days of discussion, these diverse participants will outline an action plan for (1) engaging and educating academic leaders in minority-serving and under-participating institutions about the critical importance of cyberinfrastructure for the future of education and research among *all* higher education institutions, not just research universities; (2) ensuring that minority-serving and under-participating institutions in the West will be among the "connected" institutions in the United States; and (3) assisting these institutions to develop and participate in local, regional and national activities that will infuse the culture and practice of e-science and cyberinfrastructure down to the faculty and student level in departments, colleges and institutes throughout the West.

Deliverable: A white paper outlining the action plan above, which will be shared with state and federal legislators, federal funding agencies, and private foundations.

Where and When: The summit will be held at the Montana State University/Alumni Foundation Building starting at 9:00 AM on Monday, August 14 and concluding at 1:00 PM, Tuesday, August 15.

To Register: Contact Cali Morrison, Lariat Communications Coordinator. Email: calim@cns.montana.edu or phone: (406) 994-7568.

Accommodations: 30 rooms have been held at the Best Western GranTree in Bozeman, you may make reservations by calling (406) 587-5261 and requesting Group #803596 or MSU-MSI. Room rates are \$119 for a standard room (1-4 persons) and \$139 for King Suites. Participants will be responsible for making their own transportation and lodging arrangements. For additional assistance or questions about local arrangements, please contact Cali Morrison (contact information above).

If you prefer to make other arrangements at one of our local hotels, inns, or bed and breakfasts, contact information is below. We recommend that you make these arrangements as soon as possible, as the Bozeman and Yellowstone-areas are popular with tourists during the summer:

1. Voss Inn: www.bozeman-vossinn.com (406) 587-0982
2. The Olive Branch Inn: www.theolivebranchinn.com (866) 587-8403
3. Gallatin River Lodge: www.grlodge.com (888) 587-8403
4. Gallatin Gateway Inn: www.gallatingatewayinn.com (800) 676-3522
5. Fox Hollow Bed & Breakfast www.bozeman-mt.com (800) 431-5010
6. Silver Forest Inn: www.silverforestinn.com (877) 394-9357
7. Lehrkind Mansion Bed & Breakfast: www.bozemanbedandbreakfast.com (800) 992-6932
8. Josie's Bozeman Bed & Breakfast: www.josiesbozemanbb.com (406) 522-1521

Meals and Reception: A Continental Breakfast will be provided at the Alumni/Foundation Building the mornings of August 14 & 15. Lunch will also be provided during both days of the Summit. On Monday, August 14 at the conclusion of the Summit for the day, a reception will be held for conference participants. *If you have special dietary needs (vegetarian, vegan, diabetes, etc.) please inform Cali Morrison via email at: calim@cns.montana.edu NO LATER THAN July 31, 2006 so that alternative arrangements may be made.*