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Memorable Quote:

I think of cyberinfrastructure as the "second revolution" in information technology because of the vast possibilities it holds to engender new modes of research, education and collaboration.

Dr. Arden L. Bement, Jr., Director,
National Science Foundation, January 4, 2007

1. Latest News

First GPN K20 Teleconference – Held January 9, 2007. The GPN K20 Initiative brings together member institutions to extend new technologies, applications, middleware, and content to all educational sectors, as quickly and connectedly as possible. To join this group, go to: <http://collaboration.greatplains.net/wiki/index.php/Register-url>.

GPNgrid Workshop, February 2-3, 2007, University of Kansas. This is a hands-on workshop to help you to improve the performance of your GPNgrid Node or to configure a node to build upon the existing infrastructure. The morning of February 3 will offer assistance to application scientists. [Register here](#).

PIERRE, S.D. (AP) - Governor Rounds today announced a donation will help connect the state university system to a technology upgrade that some think is needed to lure a national underground physics laboratory to the Black Hills.

Rounds says the Great Plains Education Foundation is donating eight (m) million dollars for the connection to the so-called I-3 Internet. He says the universities would be connected to a dedicated **ten gigabyte fiber-optic network** and the hoped-for **Homestake underground science lab**. Rounds says the donation will further enhance South Dakota's National Science Foundation application for the lab.

Homestake is one of two finalists for the **500 (m) million-dollar project**. The winner is expected to be announced in April. He says the conceptual design report for the lab was submitted today.

2. Campus Notes



KU researchers head to Antarctica to test unpiloted aircraft model – Lawrence, KS - Imagine traveling several



hundred kilometers to work (say, the distance from Lawrence to Omaha), working a regular eight-hour day in temperatures 40 degrees below zero and then making the commute back home with loads of information. Researchers at the University of Kansas are building an aircraft that can make that trip in Antarctica — without a pilot.

KU architecture designs for New Orleans earn regional, national top honors – Lawrence, KS - Designs by University of Kansas architecture and urban design students to help residents of New Orleans’ Seventh Ward rebuild their community are gaining recognition not only in the Big Easy but also within regional and national communities of architects.

New Nanomedicine Institute Poised to Unlock Cancer Secrets – Columbia, MO - Size does matter, but in this case, the smaller the better. With the groundbreaking of the new University of Missouri-Columbia International Institute for Nano and Molecular Medicine, MU scientists will soon be using nanoparticles, or materials that are 100,000 times smaller than the width of a human hair, to unlock secrets to some very large problems.

Transpacific Comparison – Fayetteville, AR - As a matter of policy, both the United States and Japan try to reduce occurrences of human injury and death due to medical error. Health officials in both countries realize that to develop any successful quality-improvement program to address this problem, they must obtain accurate information on the nature, frequency and cause of medical errors.

K-STATE GRAD STUDENT RESEARCHING FUNCTION OF BRACHIAL PLEXUS IN T-REX – Manhattan, KS - Imagine pulling pieces of

a puzzle out of a box and attempting to put the puzzle back together. Only in this instance, the pieces of this puzzle are between 65 to 70 million years old and you must be very careful because of their fragile state. That's what a research project that a Kansas State University graduate student has undertaken involves.

3. Recent Awards

NSF: Here are the new NSF awards that were registered between November and December 2006.

Arkansas

1/1/2007; Thompson, Clay; [SBIR Phase I: Delivery of Hyper-Concentrated Dissolved Ozone for More Effective Treatment of Drinking Water](#); Blueingreen; IIP; #0637963; \$100,000.

1/1/2007; Wang, Yongqiang; [SBIR Phase I: Affordable Multicolor Nanocrystal Emitters at Electronic Grade](#); Ocean Nano Tech, LLC; IIP; #0638209; \$100,000.

Kansas

12/1/2006; Pei, Zhijian; [Workshops: 2007 NSF CAREER Proposal Writing Workshops; University of Hawaii at Hilo, March 23, 2007; and University of Hawaii at Honolulu, March 26, 2007](#); Kansas State University; CMMI; #0703246; \$49,950.

2/1/2007; Shuai, Bin; [Learning Plant Molecular Biology Through Research-Oriented Investigations](#); Wichita State University; DUI; #0632986; \$77,438.

Nebraska

1/1/2007; Redleaf-Collet, Betty; [Improving Science, Technology and Math Programs at Little Priest Tribal College](#); Little Priest Tribal College; HRD; #0631248; \$299,353.

1/1/2007; Thompson, Jonathan; [RUI: Development of a Fixed Frequency Aerosol Albedometer](#); University of Nebraska at Kearney; ATM; #0634872; \$152,364.



NIH: There are no new awards in our region for Bioinformatics and/or Computational Biology from NIH's CRISP database.

4. New Funding Opportunities

Advanced Technological Education – NSF - With an emphasis on two-year colleges, the Advanced Technological Education (ATE) program focuses on the education of technicians for the high-technology fields that drive our nation's economy. The program involves partnerships between academic institutions and employers to promote improvement in the education of science and engineering technicians at the undergraduate and secondary school levels. (Deadlines: Preliminary Proposal: April 26, 2007; Full Proposal: October 11, 2007, annually through 2009).

Advancing Knowledge: The IMLS/NEH Digital Partnership – NEH/IMLS - The Institute of Museum and Library Services (IMLS) and the National Endowment for Humanities (NEH) invite proposals for innovative, collaborative humanities projects using the latest digital technologies for the benefit of the American public, humanities scholarship, and the nation's cultural institutions. (Deadline: March 27, 2007).

Breast Cancer Research Program Multidisciplinary Postdoctoral Award – DOD - The Multidisciplinary Postdoctoral Award enables exceptionally talented recent medical or other doctoral degree graduates to obtain significant training and experience in at least two discrete disciplines so that they may more effectively pursue an independent career at the forefront of breast cancer research. Proposals should emphasize a multidisciplinary program in which two or more major disciplines are integrated into a common research and training environment. (Deadline: February 13, 2007).

Breast Cancer Research Program Synergistic Idea Award – DOD - The Synergistic Idea Award supports collaborations between two independent, faculty-level (or equivalent) investigators who address an innovative, high-risk, potentially high-reward breast cancer research question from synergistic and complementary perspectives. (Deadline: February 13, 2007).

Collaborative R01s for Clinical and Services Studies of Mental Disorders, AIDS and Alcohol Use Disorders (R01) – NIH - The National Institute of Mental Health (NIMH) and the National Institute on Alcohol Abuse and Alcoholism (NIAAA), National Institutes of Health (NIH), seek to support collaborative intervention trials in the treatment, prevention or rehabilitation of those with mental disorders and alcohol use disorders and comorbid mental disorders. Support is also sought for other collaborative clinical studies, including but not limited to mental health services research, AIDS, genetics, psychopathology, stigma, and cultural and social processes (Deadline: Multiple Receipt Dates).

Conservation Innovation Grants – USDA – The Natural Resource Conservation Service requests applications for CIG's to stimulate the development and adoption of innovative conservation approaches and technologies while leveraging the Federal investment in environmental enhancement and protection, in conjunction with agricultural production. (Deadline: February 2, 2007).

Digital Humanities Start-Up Grants – National Endowment for the Humanities - NEH invites proposals for the planning or initial stages of digital initiatives in all areas of the humanities. Digital Humanities Start-Up Grants should result in plans, prototypes, or proofs of concept for long-term digital humanities projects prior to implementation. These grants



support full-time or part-time activities for periods up to eighteen months (Deadline: April 3, 2007).

Ethical, Legal, and Societal Implications (ELSI) of Research on Alternative Bioenergy Technologies, Synthetic Genomics, or Nanotechnologies – DOE - The Office of Biological and Environmental Research (OBER) of the Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving applications for research in the area of Ethical, Legal, and Societal Implications (ELSI) of research on alternative bioenergy technologies, synthetic genomics, or nanotechnologies. (Deadline: April 19, 2007).

Experimental Program to Stimulate Competitive Research (EPSCoR); Building EPSCoR-State/National Laboratory Partnerships – DOE - The purpose of the DOE/EPSCoR program is to enhance the capabilities of designated EPSCoR states to conduct nationally competitive, energy-related research and to develop science and engineering human resources in energy-related areas to meet current and future needs. The purpose of this program notice is to initiate and promote partnering relationships that build beneficial energy-related research programs with strong participation by students, postdoctoral fellows, and young faculty from EPSCoR states. (Deadline: July 16, 2007).

Hemispherical Array Detectors for Imaging (HARDI) – DOD - DARPA is soliciting innovative research proposals to develop Hemispherical Array Detectors for Imaging (HARDI) in the VIS-NIR-SWIR (400-1900 nm) spectral region. The ultimate vision for the program is to demonstrate a focal plane array integrated on a hemispherical surface that will enable high-performance imagers with a small form factor and field of view that far exceeds the state of the art possible

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with planar focal plane arrays. (Deadline: February 12, 2007).

Industry/University Cooperative Research Centers Program – NSF - The Industry/University Cooperative Research Centers (I/UCRCs) program develops long-term partnerships among industry, academe, and government. The centers are catalyzed by a small investment from the National Science Foundation (NSF) and are primarily supported by industry center members, with NSF taking a supporting role in their development and evolution. Each center is established to conduct research that is of interest to both the industry and the center. An I/UCRC contributes to the Nation's research infrastructure base and enhances the intellectual capacity of the engineering and science workforce through the integration of research and education. (Deadlines: Letter of Intent: June 29, 2007; Planning Grant and Full Center Proposal: September 28, 2007, annually).

Innovations in Biomedical Computational Science and Technology Initiative – NIH - Small Business Innovation Research (SBIR) grant applications from small business concerns (SBCs) that propose innovative research in biomedical computational science and technology to promote the progress of biomedical research. (Deadlines: February 9, 2007, May 24, 2007, September 24, 2007, continuing dates).

Integrative Graduate Education and Research Traineeship Program (IGERT) – NSF - The program is intended to catalyze a cultural change in graduate education, for students, faculty, and institutions, by establishing innovative new models for graduate education and training in a fertile environment for collaborative research that transcends traditional disciplinary boundaries. It is also intended to facilitate diversity in student participation and preparation, and



to contribute to a world-class, broadly inclusive, and globally engaged science and engineering workforce. (Deadlines: Preliminary Proposal: April 5, 2007; Full Proposal: October 5, 2007).

Interdisciplinary Partnerships in Environmental Health Sciences

– NIH - This initiative is intended to support collaborations between scientists with basic and clinical expertise to advance understanding of the etiology, prevention, and treatment of environmentally induced human diseases (deadline: Multiple Receipt Dates).

Mathematical Sciences: Innovations at the Interface with Computer Sciences

– NSF - Investments in the MSPA-MCS program aim to deepen support of collaborative research in fundamental mathematics and statistics, and computer science with a focus primarily on mathematical and statistical challenges posed by large data sets, managing and modeling uncertainty, and modeling complex nonlinear systems. (Deadline: March 12, 2007).

Medical Free Electron Laser-Related Biomedical Research

– AFOSR - AFOSR invites the submission of research proposals from medical or scientific organizations for research that is aimed at exploiting optical and laser technology in medicine and biology, especially for military needs. Proposed efforts should be limited in scope and directed toward the development of new or improved applications of lasers and other light sources in medicine, photobiology, surgery, and related materials sciences (deadline: Undefined).

National Leadership Grants for Museums and Libraries

– IMLS - Projects should enable libraries and museums to address current problems in creative ways, develop and test innovative solutions, and expand the boundaries

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within which cultural heritage institutions operate. (Deadline: March 1, 2007).

National Science, Technology, Engineering, and Mathematics Education Digital Library

– NSF - Building on work supported under the multi-agency Digital Libraries Initiative, this program aims to establish a national digital library that will constitute an online network of learning environments and resources for science, technology, engineering, and mathematics (STEM) education at all levels. (Deadlines: Letter of Intent: March 14, 2007; Full Proposal: April 11, 2007).

NIBIB Quantum Projects: Exploratory Phase I (R01)

– NIH - The goal of the Quantum Program is to develop innovative biomedical technologies with the potential for a profound (quantum) impact on the detection, prevention, diagnosis or treatment of a major disease or public health problem, compared with present-day approaches (Deadline: January 24, 2007).

NIJ FY07 Criminal Justice Technology Evaluation

– National Institute of Justice - NIJ solicits proposals to inform its search for the knowledge and tools to guide policy and practice. NIJ seeks evaluations of technologies designed to prevent and reduce crime, and improve the functioning of the criminal justice system. NIJ is specifically interested in evaluations that determine if the application of existing or newly developed technologies works to improve outcomes (January 30, 2007).

Robert Noyce Scholarship Program

– NSF - The Robert Noyce Scholarship program seeks to encourage talented science, technology, engineering, and mathematics majors and professionals to become K-12 mathematics and science teachers. The program provides funds to institutions of higher education to support scholarships, stipends, and programs for students who commit to teaching in high-



need K-12 school districts. (Deadlines: Letter of Intent: February 28, 2007; Full Proposal Deadline: March 29, 2007).

Shared Instrumentation Grant Program – NIH - The NCRR Shared Instrument Grant (SIG) program solicits applications from groups of NIH-supported investigators to purchase or upgrade commercially available instruments that cost at least \$100,000. The maximum award is \$500,000. Types of instruments supported include confocal and electron microscopes, biomedical imagers, mass spectrometers, DNA sequencers, biosensors, cell sorters, X-ray diffraction systems, and NMR spectrometers among others. (Deadline: March 22, 2007).

Small Business Innovation Research – CSREES - The purpose of the SBIR program is to provide an opportunity for US-owned, for-profit small business firms to submit innovative, applied, research and development projects that address important problems facing American agriculture and have the potential to lead to significant public benefit if the research is successful (deadline: February 1, 2007).

5. Upcoming Meetings

GPN Representative Council Teleconference — Fourth Wednesday of every month at 10:00 a.m. Next: January 24, 2007.

Bioinformatics/Computational Biology Teleconference — First Wednesday of every month at 2:00 p.m. Next: February 7, 2007.

Middleware/Grid Teleconference — Alternate Fridays at 1:30 p.m. Next: January 19, 2007.

Middleware/Grid Tech Administration - Alternate Fridays at 1:30 p.m. Next: January 26, 2007.

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LCI Workshop - February 20-23, 2007 at the University of Oklahoma. Link to register.

NSF Regional Grants Conference — The second National Science Foundation Regional Grants Conference of fiscal year 2007 will be hosted by Oklahoma State University on **March 19 - 20, 2007** in Oklahoma City, with optional FastLane workshops on March 18th.

Oklahoma Supercomputing Symposium 2007 - Wed Oct 3, with a reception/poster session the evening of Tue Oct 2 at the University of Oklahoma. Link to register.

6. Subscription Information

[Join the GPN email list here.](#)

[Join GPN Projects here.](#)

Please send any notices to share with the GPN community to denab@ksu.edu.

Further information can be found at:
<http://collaboration.greatplains.net>.