



# Mid-Atlantic Crossroads

Advanced Regional Internetworking for  
Higher Education and Research

Office: 8400 Baltimore Avenue  
Suite 102  
College Park, Maryland 20740  
301.405.6666

June 30, 2007

## Welcome

Welcome to the June 2007 edition of the MAX Newsletter. In these updates we highlight current technical activities and policy initiatives amongst our staff, our participants, and the Regional Optical Network and national networking communities. Please let us know your thoughts, and especially your suggestions.

## Executive Director Message

A few days ago we announced that the MAX brought up a new peering with NLR's Layer 3 Packetnet via MATP. MAX participants can take advantage of this new service by choosing amongst VRFs (separate routing instances) from the current default of

- Internet2 only plus NGIX networks: (NISN, DREN, ESnet, USGS, NASA, GEANT)

to either:

- NLR only plus NGIX networks, or
- a blend of Internet2 and NLR plus NGIX networks

The blend of Internet2 and NLR provides the advantage of path redundancy and route diversity, plus offer access to about 500 routes not on Internet2.

We would like each of you to let us know how you would like your route information to be set up based on this new service offering. Several of you have already requested to move to the "blend" option and we are scheduling the changes in concert with each

participant (the route change does involve a quick BGP flap as it takes effect).

This offering marks an important step forward in our collaboration with MATP and improves route availability, reachability, as well as NLR having an improved AUP. <http://www.nlr.net/benefits/>

Please call or send email with any questions about this new offering or how to take advantage of it.

## Technical Advisory Council (TAC)

The MAX TAC met again this month to review results and findings from MAX staff visits to finalist optical vendors laboratories. MAX engineers obtained additional DWDM roadmap details from each vendor and were able to see the network management systems operated across a topology simulated to our own. Following the visits, a thorough comparative analysis was performed against the primary technical requirements and 5 year total cost of own-



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ership figures were generated for maintenance, management software, and component upgrade potential.

This information was presented and discussed with the TAC and a unanimous recommendation emerged from the meeting. MAX staff finalized a bill of materials and presented a sole-source justification to the University of Maryland's purchasing department to enter into an agreement with Fujitsu Network Communications for our new DWDM equipment. We'll provide a functional overview of the new capabilities next month.

## Calit2 Research Intelligence Portal

The UC San Diego division of Calit2 announced the beta release of the Research Intelligence Portal, which promises to "aggregate to inform." The site's tools offer information and insight that go well beyond what faculty members traditionally have relied upon to learn about available grants and collaborators for new research initiatives.

"We wanted to take some of the lessons learned from commercial business intelligence efforts and then apply them to the business of a research university," says project leader Jerry Sheehan, manager of government relations for the UCSD division. "This portal is a living experiment in how data mining, visualization and Web 2.0 technologies can be used to support the research endeavor."

"We are doing real-time business analytics along with content and knowledge management in a participatory way," explains Sheehan. The portal is broken into four main sections:

- Grant funding (Updated Daily). New and ongoing solicitations from the federal government, with funding opportunities by agency. Weekly maps of new funding are also available.
- Industrial partners (Updated Daily). Profiles of 72 Calit2 industry partners with up-to-date breaking news, and interactive maps that geo-locate where each partner is headquartered. Users can also sign up to get news via email or RSS feed, and can search the portal's backlog of partner data.
- Research interests (Updated by Users). This section offers a snapshot of Calit2 research, based on keyword data from the websites and grant abstracts of 218 faculty and staff at UC San Diego. The software uses keyword analysis to generate tag clouds -- making it easier for a user to locate a researcher with specific expertise. Likewise, the user can get a glimpse of Calit2's overall research emphasis by choosing to look at 50 or 100 keyword tags at a glance. Separately, a treemap provides an interactive, visual representation of the 311 federal, peer-reviewed research grants awarded in the past four years to Calit2-affiliated faculty. Users can dig down to details on the smallest grant, while also capturing the bigger picture (e.g., NIH edges out NSF as Calit2's top provider of project funding, while the Department of Defense ranks #3).
- Developer's Blog. This section offers site analytics; a bug box that encourages users to report any problems with the site; and a live-chat section that is usually staffed during business hours (Pacific time). Also on the site: a video primer on subscribing Really Simple Syndication (RSS) feeds.



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A similar intelligence portal would greatly benefit the research community across the region served by Mid-Atlantic Partnership (MAP). <http://ri.calit2.net/>

## Internet Innovation Workshop

An "Internet Innovation: Applications and Architectures, An Industry Perspective on Internet Research," workshop brought together academic and industry researchers to explore the next-generation Internet based on the National Science Foundation (NSF) Global Environment for Network Innovation (GENI) initiative. Speaker slides as well as videos of the talks themselves can be found at:  
[http://cfit.ucdavis.edu/internet\\_futures/event.html#imagine](http://cfit.ucdavis.edu/internet_futures/event.html#imagine)

## Computing Community Consortium

Under an agreement with the National Science Foundation, the Computing Research Association (CRA) establish the Computing Community Consortium (CCC) to engage the computing research community in formulating and articulating longer-range visions for the computing research and large-scale computing community. A recent Federated Computing Research Conference was held and , there were six CCC-related talks were given and slides are available online.  
<http://lazowska.cs.washington.edu/fcrc/>

## Economic Benefits of Information Technology

The Information Technology and Innovation Foundation released a report about IT's impacts on the economy by collecting, organizing, and surveying

studies and examples of IT's impact in five key areas: 1) productivity; 2) employment; 3) more efficient markets; 4) higher quality goods and services; and 5) innovation and new products and services. The report finds that "...in the new global economy information and communications technology (IT) is the major driver, not just of improved quality of life, but also of economic growth. Moreover, there are strong indications that IT has the potential to continue driving growth for the foreseeable future. Yet, most policymakers do not adequately appreciate this fundamental reality. In fact, after the post-2000 economic dip many concluded incorrectly that the IT economy was smoke and mirrors."

"The reality is that while the benefits of new technologies are often exaggerated at first, they often turn out to exceed initial expectations in the moderate-to-long term. This is exactly what has happened with the digital revolution. The digital economy is more than fulfilling its original promise, with digital adoption rates exceeding even the most optimistic forecasts of the late 1990s. The integration of IT into virtually all aspects of the economy and society is creating a digitally-enabled economy that is responsible for generating the lion's share of economic growth and prosperity." The full report is available at:  
[http://www.itif.org/files/digital\\_prosperity.pdf](http://www.itif.org/files/digital_prosperity.pdf)

## Inadvertent Information Disclosure

While the previous report emphasizes the benefits of information technology, a paper given at the *Sixth*



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*Workshop on the Economics of Information Security* highlights the impacts of unintended leaks of sensitive financial information through peer-to-peer file sharing networks.

<http://weis2007.econinfosec.org/papers/43.pdf>

An earlier report prepared the United States Patent and Trademark Office from the Office of International Relations primarily focuses on the impacts on copyright infringement, however, it highlights the broad set of concerns for the security of personal, corporate, and governmental data. The report "...analyzes five popular file sharing programs to determine whether they have contained, or do contain, "features" that can cause users of these programs to share files inadvertently. It concludes that these programs have deployed at least five such "features," and that distributors of these programs continued to deploy such features after their propensity to cause users to share files inadvertently was, or should have been, known."

[http://www.uspto.gov/web/offices/dcom/olia/copyright/oir\\_report\\_on\\_inadvertent\\_sharing\\_v1012.pdf](http://www.uspto.gov/web/offices/dcom/olia/copyright/oir_report_on_inadvertent_sharing_v1012.pdf)

## National Academies Cybersecurity Report

A new report was released from the National Research Council *Toward a Safer and More Secure Cyberspace*

[http://www7.nationalacademies.org/cstb/pub\\_safercyberspace.html](http://www7.nationalacademies.org/cstb/pub_safercyberspace.html) and is available to purchase or read as a series of pdf chapters from

[http://books.nap.edu/catalog.php?record\\_id=11925](http://books.nap.edu/catalog.php?record_id=11925)

## Grid Production Organizations

IBM has compiled a list of some of the production projects and organizations shaping the future of grid computing. The article provides a comprehensive list of current projects in such diverse areas as cancer research, astronomy, and physics, just to name a few. They also have links open source tool kits, security, and data management. The intent of the links is to introduce programmers, administrators, and new users to specific information and projects related to using, deploying, and developing grid infrastructure.

<http://www.ibm.com/developerworks/grid/library/gr-gridorgs/index.html>



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## Member Spotlight

The National Library of Medicine, a part of the National Institutes of Health, announced the release of an extensive selection from the papers of Mary Lasker (1899–1994), a noted patron of science, medical research advocate, and health promoter, on the Library's Profiles in Science Web site.

With this addition, the number of prominent researchers, public health officials, and promoters of medical research whose personal and professional records are presented on Profiles has grown to twenty-two. The site is at [profiles.nlm.nih.gov](http://profiles.nlm.nih.gov).

“In the decades after World War II, Lasker acted as a catalyst for the growth of the world's largest and most successful biomedical research enterprise, with the National Institutes of Health (NIH) as its centerpiece,” said Donald A.B. Lindberg, M.D., director of the National Library of Medicine.

Called “this country's First Lady of science and medicine” by former National Cancer Institute director Vincent T. DaVita, Lasker was a well-connected fundraiser and astute advocate who through charm, energy, and skillful use of the media persuaded donors, congressmen, and presidents to provide greatly increased funds for biomedical research. “I'm infuriated when I hear that anyone's ill, especially when it's from a disease that virtually nothing is known about,” she explained.

Lasker was driven by an unshakeable belief that the nation's postwar wealth could be mobilized to unravel scientific mysteries and find cures for even the most intractable diseases. “You can solve any problem if you have money, people, and equipment,” was

her mantra. She developed a compelling political rationale for federal sponsorship of medical research, built a powerful lobby that won large research appropriations, and pushed NIH into new scientific directions, at times in opposition to scientists.

Her Wisconsin childhood, though otherwise placid, was scarred by disease. She herself suffered from painful ear infections as a child and had to interrupt her undergraduate studies when stricken in the influenza pandemic of 1918. The absence of medical remedies against these conditions left her “deeply resentful” at an early age, she remembered, and would later fuel her advocacy of medical research and drug development.

With her husband, the wealthy advertising pioneer Albert Lasker (1880–1952), she established the Lasker Foundation in 1942 to promote medical research. The Foundation created America's most prestigious prizes in biomedical research. More than seventy Lasker Award winners have become Nobel Laureates.

Lasker led the reorganization of the American Cancer Society as a modern fundraising and lobbying organization powerful enough to persuade Congress to boost appropriations for cancer research. She was an early supporter of cancer chemotherapy, and urged scientists to apply their research findings to drug development more quickly. She lobbied for the establishment of the National Heart Institute (now the National Heart, Lung, and Blood Institute) and the National Institute of Mental Health, and secured a place for the lay public on NIH scientific advisory boards, a role she often filled herself. Congressional leaders relied on the expert witnesses she presented



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to justify large increases in the NIH budget year after year.

Asked about her own scientific talent, Lasker averred that “nobody would have me in their laboratory for five minutes. I couldn’t cut up a frog, and I certainly couldn’t perform surgery. I’m better at making it possible for other people.”

Her political influence diminished after she helped launch the War on Cancer in the early 1970s, a controversial measure that raised unrealistic public expectations of impending breakthroughs in cancer treatment. Nevertheless, she continued to serve as the “Fairy Godmother of Medical Research,” in the words of *Business Week*, raising money for research on hypertension, arthritis, osteoporosis, diabetes, and AIDS until her death in 1994.

The online exhibition features correspondence, newspaper accounts, and photographs from the Mary Lasker papers at Columbia University Libraries. Visitors to the site can view, for example, an extensive exchange of letters with her confidante and fellow advocate, Florence Mahoney, a note of tribute from Salvador Dali with a drawing in his hand, and a photo of her at a tree planting ceremony with New York City Mayor Robert Wagner that captures her interest in urban beautification.

Located in Bethesda, Maryland, the National Library of Medicine is the world’s largest library of the health sciences. For more information, visit the Web site at [www.nlm.nih.gov](http://www.nlm.nih.gov).

The National Institutes of Health (NIH) — *The Nation's Medical Research Agency* — includes 27 Institutes and Centers and is a component of the U.S.

Department of Health and Human Services. It is the primary federal agency for conducting and supporting basic, clinical and translational medical research, and it investigates the causes, treatments, and cures for both common and rare diseases. For more information about NIH and its programs, visit [www.nih.gov](http://www.nih.gov).



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## MAX Participants

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- ATDnet - NRL, LTS, DISA
- D.C. Government
- Energy Sciences Network (ESNet)
- Laboratory for Telecommunications Sciences
- Library of Congress
- NASA / GSFC
- National Archives and Records Administration (NARA)
- National Institutes of Health (NIH)
- National Institute of Standards and Technology
- National Library of Medicine (NLM)
- National Oceanic and Atmospheric Administration (NOAA)
- National Science Foundation (NSF)
- U.S. Census
- USDA, Beltsville Agricultural Research Center
- U.S. Department of Health and Human Services
- U.S. Department of State (through GWU)
- U.S. Geological Survey
- U.S. Holocaust Memorial Museum

### Higher Education:

- Baltimore Education & Research Network
- Catholic University
- GEANT
- Georgetown University
- George Mason University
- George Washington University
- Johns Hopkins University

- Johns Hopkins University - Applied Physics Laboratory (JHU-APL)
- Montgomery College
- National Consortium for Supercomputing Applications / ACCESS
- Network Virginia
- Smithsonian Institution
- Southern Universities Research Association (SURA)
- University of California, D.C. campus
- University Consortium for Advanced Internet Development (UCAID / Internet2)
- University of Maryland, College Park
- University of Maryland, Baltimore
- University of Maryland, Baltimore Co.
- Univ. System of Maryland Network
- University of Southern California, Information Sciences Institute / East
- Washington Research Library Consortium

### Corporate and Non-profit:

- Columbia Telecommunications Corporation (CTC)
- Howard Hughes Med. Institute
- Fujitsu Labs of America
- Inter-American Development Bank (IADB)
- Northrop Grumman Corporation
- The Institute for Genomic Research
- Windber Professional Services, Inc.
- World Bank
- The Venter Institute