



# Mid-Atlantic Crossroads

Advanced Regional Internetworking for  
Higher Education and Research

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

October 31, 2009

## Welcome

Welcome, to the October 2009 edition of the MAX Newsletter. In these updates we highlight current technical activities and policy initiatives amongst our staff, our participants, the Regional Optical Network and national networking communities. Please let us know your thoughts, and especially your suggestions.

## Executive Director Message

We are renewing monthly newsletters after a long hiatus. This past summer was a blur with considerable time expended working with many of our colleagues across the region as well as across the country on broadband and stimulus funding proposals. MAX did participate with many of the counties across Maryland on an NTIA One Maryland Broadband Consortium proposal and Internet2 and Starlight on an NSF ARI proposal. There were also a number of requests we responded to in support of others submitting proposals.

At the encouragement of our founding members, MAX began a strategic planning process in September which we hope to gain consensus on in February 2010. The process we are following involves conversations with our staff, the founding members, and all of our participating organization's technical and administrative contacts. In addition, we are reaching out to meet and talk with other program and research directors from our participants to explore new opportunities to align our efforts and provide value to those in our region. Our intent is to take stock of the fact that MAX is now 10 years old, has weathered a number of growing pains, is financially stable, and wishes to commit to a future that will focus, sustain, and invigorate our role in the region.

- Peter O'Neil

## MAX Fall All-Hands Meeting Date Set

On Thursday December 3rd, MAX will host an All-Hands Meeting at the UMUC Conference Center. As MAX engages with you in individual conversations about the services we offer, how well we are doing, and a range of possible future directions, this meeting will provide a timely opportunity to collectively reflect on the themes we are hearing and gain consensus and support. We encourage you to attend and thank those who have already registered. For those who haven't, the link to register and find directions can be found at:

<http://wiki.maxgigapop.net/twiki/bin/view/MAX/Fall2009MemberMeeting>

## NLR Announces Glenn Ricart as New CEO

Board Chair Kurt Snodgrass announced that National LambdaRail (NLR) selected Glenn Ricart Ph.D. to lead NLR. Glenn received his graduate degree from the University of Maryland and was CIO during the NSFnet project serving as Co-PI for SURAnet. Further background on the appointment is at:

<http://www.nlr.net/release.php?id=49>

Glenn takes the reins from founding CEO Tom West whose vision and foresight over the past 6 years helped inspire our community to explore using dark fiber and our own optical equipment to increase bandwidth flexibility and cost savings and to enable the provisioning of dedi-



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cated lambdas and vLANs for research and scientific collaborations quite apart from common bearer routed layer 3 service. <http://www.nlr.net/tomwest.php>  
<http://hosted.verticalresponse.com/472009/77122abea4/1617001396/2eea9f8831/>

## NIST Congestion Control Simulations

As part of larger research effort related to the modeling and analysis of large distributed systems, NIST announced the draft release of a study investigating several Internet congestion-control algorithms. The thoroughness of the effort is impressive and the results, while derived from simulations, raise a number of interesting areas for further empirical work on improving data throughput performance. Please contact us if you are interested in conducting studies of these algorithms over actual networks.

[http://www.antd.nist.gov/Measurement%20Science%20for%20Complex%20Information%20Systems\\_files/ICC-study-Draft.htm](http://www.antd.nist.gov/Measurement%20Science%20for%20Complex%20Information%20Systems_files/ICC-study-Draft.htm)

## Smart Grid Standards Effort

NIST is requesting commentary on coordinating the development of a framework that includes protocols and model standards for information management to achieve and interoperability architecture for Smart Grid devices and systems that interconnect with electrical power grids. [http://www.nist.gov/public\\_affairs/releases/smartgrid\\_interoperability.pdf](http://www.nist.gov/public_affairs/releases/smartgrid_interoperability.pdf)

A number of IETF participants led by Fred Baker are also contributing to a draft of core Internet protocols that should be considered for such a Smart Grid architecture. <http://tools.ietf.org/html/draft-baker-ietf-core-04>

Smart Grids are also gaining significant interest in Europe and Asia. <http://www.smartgrids.eu/>

## NIST Special Cryptographic Publication

SP 800-102 is intended to address the timeliness of the digital signatures generated using the techniques specified in Federal Information Processing Standard (FIPS) 186-3. Establishing the time when a digital signature was gener-

ated is often a critical consideration. A signed message that includes the (purported) signing time provides no assurance that the private key was used to sign the message at that time unless the accuracy of the time can be trusted. SP 800-102 provides methods of obtaining assurance of the time of digital signature generation using a trusted timestamp authority that is trusted by both the signatory and the verifier.

<http://csrc.nist.gov/publications/PubsSPs.html>

## OSTP/OMB Science & Technology Memo

On August 4, the US Office of Science & Technology Policy (OSTP) and Office of Management & Budget (OMB) released a memorandum setting priorities for science & technology going forward. The memo's link is: <http://www.ostp.gov/galleries/default-file/Final%20Signed%20OMB-OSTP%20Memo%20-%20ST%20Priorities.pdf>

## DNSSEC for .edu Domain

In September, Educause, which manages the .edu domain under a cooperative agreement with the Department of Commerce, announced the start of a project with Verisign to deploy Domain Name Security Extensions (DNSSEC). <http://www.educause.edu/About+EDUCAUSE/PressReleases/SecurityofeduInternetDomaintoI/178963> For an introduction and better understanding of the security requirements see <http://www.ietf.org/rfc/rfc4033.txt> and for operational practices, see <http://www.ietf.org/rfc/rfc4641.txt>

The North American Network Operators Group (NANOG) has focused on DNSSEC at several of its meetings in the recent past. A number of excellent presentations are available here: <http://www.nanog.org/presentations/archive/index.php> and a recent IETF panel discussion summary on DNSSEC is at: <http://www.isoc.org/tools/blogs/ietfjournal/?p=1367#more-1367>

It is worth noting too that the .gov TLD has been operating with BIND 9.6.X without encountering difficulties. However, there are those concerned about the way Verisign plans to implement the zone signing key (ZSK). For



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that point of view posted by Eric Rescola see:  
[http://www.educatedguesswork.org/2009/10/on\\_the\\_security\\_of\\_zsk\\_rollove.html](http://www.educatedguesswork.org/2009/10/on_the_security_of_zsk_rollove.html)

ICANN recently hosted a workshop in Seoul, South Korea on DNSSEC. Presentations from that forum are now available at: <http://sel.icann.org/node/7089>

## Evidenced Based Practices for Online Learning by the Department of Education

This report highlights findings that support the use of technology mediated instruction as more effective in teaching and learning than face to face instructor only practices. For the schools and colleges across our region, this report documents what you may already intuitively know.

<http://www.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>

## Latest Validation of RFC 2549

The OECD Directorate of Science, Technology, Here's the link on the contestants in the race: <http://www.henriska.com/blog/?p=615> and the rules are posted here: <http://pigeonrace2009.co.za/pigeon-race-2009-blog> and the RFC <http://www.rfc-editor.org/rfc/rfc2549.txt>

## SC '09 Support

MAX is providing a number of 10G waves across our research infrastructure in support of the Navy Research Lab and NASA GSFC application demonstrations at the mid-November SuperComputing event in Portland, Oregon. <http://sc09.supercomputing.org/>

## Community-Campus Partnerships for Health Initiative at NIH

NIH recently announced a grant program to promote health science partnerships between communities and higher educational institutions. Funding for these grants come in part from the American Recovery & Reinvestment Act of 2009. Note that letters of intent to submit a proposal are due November 12th.

<http://grants.nih.gov/grants/guide/rfa-files/RFA-OD-09-010.html>

Additional information on such efforts can be found by looking at Community-Campus Partnerships for Health (CCPH), a nonprofit organization that promotes health through partnerships between communities and higher educational institutions. <http://www.ccpb.info/>

## SURA Fall Meeting

The Southeastern Universities Research Association (SURA) held its fall Board of Trustees and Committee meetings in the District of Columbia this month and the agenda and presentation materials can be found at: [http://www.sura.org/news/2009/trustees\\_fall09.html](http://www.sura.org/news/2009/trustees_fall09.html) Of particular interest to our community is the materials from the Information Technology Committee. [http://www.sura.org/news/2009/it\\_matsf.html](http://www.sura.org/news/2009/it_matsf.html)

## MAC vs PC

For those who have not as yet been let in on the secret capability inherent in a MAC laptop, here it is: <http://thenextweb.com/2009/06/25/mac-option-pc/>

## GAO Report on H1N1 Impact

The Government Accountability Office (GAO) asked itself what if a global pandemic like the H1N1 flu forces many people to stay home and telecommute using home Internet connectivity? Would the Internet be capable of supporting the extra traffic load and, as importantly, would financial institutions and markets continue to function with their dependency on bandwidth? Their report on these questions is available here: <http://www.gao.gov/new.items/d108.pdf>

## Member Spotlight

### University of Maryland Baltimore

The [University of Maryland, Baltimore](http://www.umb.edu) (UMB) has captured 104 of 476 Maryland grants from the National Institutes of Health (NIH) under the American Recovery and Reinvestment Act of 2009.



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Attracting more than 100 NIH competitive grants under the recovery act reflects an overall expansion of vital research programs in recent years at UMB, including increasing success in attracting funding in the areas of infectious disease, oncology, human virology, vaccinology, genomics, and stem cell research, says UMB President David J. Ramsay, DM, DPhil.

Despite the slow economy and tight federal funds for research, UMB showed significant growth in funding to campus researchers, totaling \$517 million in Fiscal Year 2009 (FY09) from \$450 million in FY08.

Previously, under Ramsay's leadership, the campus increased its research base from \$138 million in 1997 to \$411 million in 2007. The research and development surge places UMB among the top public academic medical centers in the country for research dollars.

With its grants, NIH is, in effect, asking for answers to critical health and medical questions, including:

\* Will two muscle molecules found by [School of Nursing](#) researchers help restore strength to people with muscular dystrophy? (Grant title, "Genetic disease modifier of muscular dystrophy")

\* Can an unprecedented, large-scale study by [School of Medicine](#) investigators convince parents and caregivers that different toddler feeding styles limits obesity among low-income children? (Grant title, "Toddler feeding styles")

\* Will an investigation of Medicare and insurance claim data by [School of Pharmacy](#) researchers clear up uncertain long-term benefits of common clinical treatments for a blood-related disorder affecting at least 10,000 new patients annually? (Grant title: "Erythropoietic stimulating agents in treatment of MDS")

\* Can [Dental School](#) researchers see if a recent spike in early childhood caries is due to drinking more sugary

beverages? (Grant title: "Beverage consumption and early childhood caries")

Descriptions of these and all 104 NIH grants to UMB can be found at <http://report.nih.gov/recovery/arragrants.cfm>. UMB's nearly 2,400 faculty members in seven professional and graduate schools train the majority of the state's physicians, nurses, dentists, lawyers, social workers, and pharmacists. The University is located on a 61-acre research and technology complex in West Baltimore near the Inner Harbor.



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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)
- USDA, Beltsville Agricultural Research Center
- U.S. Department of Health and Human Services
- U.S. Department of State (through GWU)
- U.S. Department of Veterans Affairs
- U.S. Holocaust Memorial Museum

### Higher Education:

- American University
- 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
- Inter-American Development Bank (IADB)
- Northrop Grumman Corporation
- The Institute for Genomic Research
- Windber Professional Services, Inc.
- World Bank
- The Venter Institute