Welcome

Welcome to the April 2010 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

In this issue I'd like to ask us all to reflect on the social construct of MAX as a "community." What does thinking about and talking about MAX as a community mean? What is there about community based organizations that can help inform who MAX is and can become? While the word community is often used, its meaning is often elusive. It seems worth understanding the essence of a community as a set of possibilities we can make explicit and explore as a way of understanding the implications for all of us.

In using the term it seems worth highlighting that a community is more of a constructive way of speaking and thinking about organizations and the individuals representing them. In our case, those who comprise and are MAX Participants. There are obvious bounds on the size of those who are interested in participating in MAX by our geographical reach in this part of the country as well as those whose primary missions are associated with the regional and larger R&E community (there's that word community again). However, we do believe there are other organizations in our region who may well benefit from participating if we reach out to them.

It appears there are aspects to community that are tangible and physical as well as aspects that are more elusive, more a felt experiential sense of doing and acting that arises from the practices of the group. These are the aspects MAX, in the inclusive sense that includes all of us, is most interested in bringing to the foreground, strengthening, and broadening not only in dyadic relationships between a participant organization and MAX but amongst and across all our participants. Each of you

faces some number of similar challenges and shares some number of similar aspirations. And each have developed unique competences and expertise that can be shared to help bootstrap others who share those interests. We intend to convene forums where such conversations can take place, opportunities raised and tried out, and the outcomes spread to all.

In effect it requires opening ourselves up to the notion of becoming interdependent on each other across our organizational boundaries. It recognizes that we are more than a set of individuals, that we are a set of relationships that change and deepen over time by virtue of what we do together, as well as our attitudes and ways of behaving. This concept of community is motivated by the notion of the whole as being greater than the sum of the individual parts [participants] and the way the participants inter-act shape who we are as individuals. Overtime such conscious practices come to dominate the culture and empower who we are as a regional optical network community.

- Peter O'Neil

June 24th Spring All-Hands Meeting

MAX will be hosting our Spring All-Hands Meeting onThursday June 24th from 9am to 3pm at UMUC. Please join us! Here's the link to event and as usual we ask you to register.

<http://wiki.maxgigapop.net/twiki/bin/view/MAX/Spring2010MemberMeeting>

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ALL THINGS TECHNICAL

The Economics of Digitization

Andrew McAfee, a blogger for the Harvard Business Review, researched data detailing the amount of money American companies spent on fixed assets annually. The US Bureau of Economic Analysis (BEA) has been keeping track of the different types of equipment bought by U.S. companies since the early 1900's. In reviewing the BEA's records, McAfee found that for almost all categories of equipment the expenditures got more expensive over time, as expected. However, unlike any other asset, computer software prices have dropped and computer hardware prices have had an even more drastic decline. To read the explanation for this downward trend go to:
http://blogs.hbr.org/hbr/mcafee/2010/03/the-weird-and-wonderful-econom.html

Internet Privacy in Today's World

In a recent blog Bruce Schneier wrote about how today's young internet users have had their privacy stripped from them without them even knowing it. More and more people are posting photos and having conversations online. But it's not that they don't care about their privacy. A lot of young people are not technically savvy, and the web sites know that. Recent actions by social-networking websites that automatically changed users privacy settings made their personal information available for public viewing. These companies make more money when user information is shared more publicly. Read more on Schneier's comments on the "death of privacy."
http://www.schneier.com/blog/archives/2010/04/privacy_and_con.html

Although Schneier's blog focused mainly on the youth, people of all ages are concerned about electronic privacy. For example, transmission of personal medical records and identity theft are just two matters of importance to the general public. See Andrew McLaughlin, the White House's deputy chief technology officer for internet policy, in his video presentation on privacy issues:
http://radar.oreilly.com/2010/04/setting-white-house-priorities.html

BioTorrents Technology Allows Rapid Transfer of Scientific Data

Transferring scientific data files has typically been an arduous, lengthy task since datasets are often large. But the new BioTorrents website now allows scientists to share their datasets and results rapidly using the BitTorrent file-sharing technology.
http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0010071

More Interesting Articles...

Government Web Sites Growing in Use
http://www.pewinternet.org/Reports/2010/Government-Online.aspx

Tim O'Reilly on the State of the Internet Operating System
http://radar.oreilly.com/2010/03/state-of-internet-operating-system.html

Teaching Kids About the Web
http://www.pzpublications.com/404pdf.html
http://www.commonsensemedia.org/get-cybersmart-phineas-and-ferb
http://www.nytimes.com/2010/04/09/education/09cyberkids.html

HOW COOL!

So You Think You Can Run Fast?

Football analysts used a computer software program to overlap video of athletes running the 40-yard dash at the 2010 NFL Combine with video of one of the commentators running in order to show the dramatic difference in speed. And then the fun began.
http://kottke.org/10/04/average-dude-vs-pro

Seeing the Time Zones

Every Time Zone is a new web application that visually displays the difference in time zones in various parts of the world. Visit the website and it automatically displays the current time in your area and its relation to the local time in major cities around the world. The application

also works on some smart phones.
http://everytimezone.com/

MAKES YOU SAY "HMMM"

Commuting and Its Many Costs

Jonah Lehrer is a writer that often blogs about how our daily routines affect our mental behavior. In one of his recent blogs he discusses how the length of a person's commute to work can affect his overall happiness. While some people enjoy the time alone to think and listen to music, others consider commuting to be the worst part of their day. But the average daily commute has still gotten longer over the years. Is it because it is too costly to live in the city or because people want a bigger house in the suburbs? What's the trade-off for happiness?
http://scienceblogs.com/cortex/2010/03/commuting.php

The New York Times Website and Its Dictionary Feature

On www.nytimes.com there is a feature that allows readers to highlight a word and then click the question mark symbol to access the definition of that word. *The Times* uses many complex vocabulary words in its articles and decided to track the usage of the feature and the most commonly looked-up words. To see a list of the top fifty words that stumped readers, go to:
http://www.stumbleupon.com/su/2dKKfv/bit.ly/d2pvGM/r:t

Social Illness: The Contagion Effect

Two scientists from Harvard and UCSD conducted studies about the social connection between people and how a person's traits and behaviors can be communicable to those around him. The study mainly focused on the negative and self-destructing habits such as obesity, anxiety, depression, criminal activity, and alcoholism. Their belief is that people are very impressionable and that these "social germs" are spread sometimes subconsciously.
http://www.slate.com/id/2250102/entry/2250103/

Contributions to Decline in Cancer Mortality

This research paper analyzed the affect two types of medical innovation had on U.S. cancer mortality rates over a ten year period. Diagnostic imaging (x-rays, MRIs, etc.) and pharmaceuticals, along with a decline in occur-rences, are believed to account for a three-fourths decline in cancer mortality between 1996-2006.
http://www.nber.org/papers/w15880.pdf

The Expectations of College Students

A biology professor at LSU was recently removed from teaching after several students complained that her testing method was unfair and administration learned that over ninety percent of her students had either dropped the class or were failing halfway through the semester. The professor admitted that the standards she set for testing and grading were more challenging than traditional standards, but felt her higher expectations taught students a valuable lesson to work harder and not just give up when challenged with a difficult learning situation. Some feel that her removal from teaching restricts the academic freedom of faculty in the classroom.
http://www.insidehighered.com/news/2010/04/15/lsu

More Interesting Articles...

Could Our Universe be in a Wormhole?
http://www.eurekalert.org/pub_releases/2010-04/iu-oua040610.php

Harvard Symposium on Solving Social Science Problems
http://harvardmagazine.com/dispatches/social-sciences-hard-problems?

The Agility Cost of Complexity
http://www.shirky.com/weblog/2010/04/the-collapse-of-complex-business-models/

Robustness and Fragility
http://fooledbyrandomness.com/robustness.pdf

Could Cutting out Economics History Courses Have Caused our Financial Crisis?
http://moneywatch.bnet.com/economic-news/blog/maximum-utility/how-mathematics-might-have-caused-the-financial-crisis/577/

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Use of Intellect to Reconcile Oneself to the Past
http://www.theatlantic.com/national/archive/2010/04/the-ghost-of-bobby-lee/38813/

IN OTHER NEWS

Hundreds Gather at MIT to Honor Economist Paul Samuelson

Paul Samuelson, the first American to win the Nobel Prize in Economics, passed away last December at the age of 94. Last month family, friends, and colleagues paid tribute to Samuelson at MIT, whose economics department he has helped gain worldwide recognition since he first started teaching there seventy years ago. Samuelson was also a columnist, advisor to presidents Kennedy and Johnson in the 1960's, and author of the biggest-selling economics textbook of all time. He was considered by many to be the most celebrated and accomplished economist of the twentieth century.
http://web.mit.edu/newsoffice/2010/samuelson-memorial-0412.html
http://economistsview.typepad.com/economistsview/2010/04/paul-samuelson-memorial.html

MEMBER SPOTLIGHT

Johns Hopkins University Applied Physics Laboratory Chooses Innovation of Year

A method to quickly determine whether potentially harmful microbes are resistant to certain drugs has been named the year's top invention at The Johns Hopkins University Applied Physics Laboratory.

The winner was chosen from the 118 inventions reported by 218 APL staff members and collaborators in 2009. An independent panel of 30 representatives from industry, the high-tech sector and patent law selected the top invention based on its benefit to society, improvement over existing technology, and commercial potential. Acting Technology

Transfer Director Norma Lee Todd and Bharat Doshi, head of APL's Milton Eisenhower Research Center, presented trophies and cash awards to the inventors during the Laboratory's 11th annual Invention of the Year ceremony April 8 on the APL campus in Laurel, Md.

Invented by APL researchers Plamen Demirev, Miguel Antoine, Andrew Feldman, Nathan Hagan and Jeffrey Lin, the "IsoMS-Drug-Array" uses mass spectrometry to determine whether a microorganism is susceptible or resistant to one or more drugs – in a fraction of the time required by current technologies. The method requires no prior identification or characterization of the organism; in fact, it can simultaneously characterize and identify the organism and determine its drug susceptibility or resistance in a matter of hours. Based on APL-developed algorithms, this novel method has potential applications in homeland defense, clinical microbiology, infectious disease treatment, and drug development and testing.

Twelve other inventions, covering areas ranging from materials and nanotechnologies to computer security and communications, were finalists for the award. [Read descriptions of the finalists.]

"Every day, our staff is called on to address the nation's most critical technical challenges," says APL Director Richard Roca. "These inventions are perfect examples of how APL's best scientists and engineers apply their skills with innovation, imagination and creativity."

Former APL researcher Micah Carlson was also named as a "Master Inventor," joining 22 other past and current APL staff members who earned that honor by holding at least 10 patents.

Technology Transfer at APL

APL opened its Office of Technology Transfer in late 1999 to facilitate the transfer of APL-developed technology to the private sector. The Lab ranks among top research universities in its number of inventions, licenses, patent applications, patents issued, start-up companies, and associated research and development income. APL technologies have been transferred to companies all over Maryland and in 36 other states, as well as in Canada, Brazil, the Netherlands and Denmark. Other accomplishments over OTT's first decade include:

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- 1,306 inventions disclosed
- 274 U.S. patents issued
- 1,384 U.S. patent applications filed
- 238 license agreements executed
- 20 start-up companies; more than 50 jobs created
- More than $31.5 million in licensing and related research and development income
- 52 products based on licensed APL technologies

APL's 2009 Invention of the Year was recently featured in The Baltimore Sun. To read the article, visit http://www.baltimoresun.com/news/maryland/bs-md-invention-20100416,0,3512549.story.
For more information on APL's Technology Transfer programs, visit www.jhuapl.edu/ott.

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MAX Participants

Federal Labs and Agencies:

- ATDnet - NRL, LTS, DISA
- Army Research Lab
- 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