The Transportable Satellite Internet System (TSIS), a combined research effort between OARnet, ITEC-Ohio, Ohio State University, and the American Distance Education Consortium (ADEC), has been nominated by Microsoft Chairman Bill Gates for the Computerworld Honors Program’s 21st Century Achievement Award in the Education and Academia category. The program recognizes the visionary use of information technology and promotion of positive social change.

The Computerworld Honors Program brings together the Chair or Chief Executive Officers of the foremost information technology companies in the world, and the world’s leading universities, libraries, and research institutions, to document the global information technology revolution. Established in 1988, the Program is dedicated to identifying the men and women, organizations, and institutions that are leading this revolution, and to recording the impact of their achievements on society.

From the nominees in each of 10 categories, a distinguished panel of judges selects five to become Worldwide Finalists. In June, in Washington, D.C., the Program honors these finalists. At that time, the Chair’s Committee presents 10, 21st-Century Achievement Awards to the organizations selected by the judges as first among their peers. The June event honors both outstanding individuals and extraordinary organizations and institutions.

The Ohio research team nominated for its work in developing the TSIS includes Pankaj Shah, M.S., ITEC-Ohio Manager; Alan Escovitz, Ph.D., Director of External Affairs for the OSU Office of the CIO; Robert Dixon, Ph.D, P.E., Senior Systems Engineer for OARnet and the Chief Research Engineer for the OSU Office of the CIO; Megan Crabb, B.A., Systems Specialist for OARnet and OSU; Gabriel Moulton, Technology Engineer for OSU.

The TSIS project focused on improving Internet access and distance education delivery to underserved audiences, particularly in rural and remote settings. The Ohio team was chosen to develop the first TSIS because of their combined expertise in wireless and satellite technology, radio frequency, Internet and telecommunications research. For the complete story about the TSIS go to the News Updates on the OARnet website, www.oar.net.

Columbus is once again the “Internet Crossroads” for international telecommunications and education. On January 15-16, OARnet and the Ohio State University provided the equipment, technical expertise and engineering staff for an international Internet videoconference that originated in Israel and was transmitted to thousands of students and teachers at Jewish schools throughout North America and Europe including the United States, Canada, England, the Netherlands, France, Russia and Germany. OARnet is the Internet Services Division of the Ohio Supercomputer Center, and is a national leader in telecommunications research and development.

Israeli engineers connected via an underwater trans-Atlantic ISDN (Integrated Services Digital Network) cable to Multipoint Control Units (MCUs) located at Ohio State. OARnet engineers...
then connected to the MCUs at Ohio State using a relatively new Internet technology called H.323, which allows for ubiquitous, inexpensive Internet videoconferencing and video streaming. OARnet then streamed the content to sites throughout North America, which then re-broadcast the events to their local audiences. The Israeli engineering group was headed by Alain Attar, Director of Videoconferencing, Jewish Agency for Israel. The OARnet team included network engineer Arif Khan, and network technician John Langkals. The Ohio State team was headed by Carl Palmer of the UNITS division.

The theme of the two-day event was “Renewal via Extending Our Communities,” and took place during the Israeli Arbor Day (Tu B’S’hat), a Jewish celebration and study time on life and the environment, which also marks the Jewish Agricultural Yearly cycle. The festival is a favorite among Jewish schools worldwide, and part of the ritual requires eating 15 different fruits. Events included a tree planting ceremony, religious observances, and a live archeological tour through an ancient temple in Jerusalem. Joining the celebrations were thousands of students, teachers and other observers in Jewish schools and academies throughout the United States and Canada including locations in Los Angeles; Sylvania, OH; Birmingham, AL; Greensboro, NC; Pittsburgh; New York City; Cincinnati; Montreal; and Toronto. Part of the event occurred just prior to the launch of the Space Shuttle Columbia on the morning of January 16, which carried the first Israeli astronaut, Payload Specialist Colonel Ilan Ramon of the Israeli Air Force, into space. Colonel Ramon joined the event via cell phone from Cape Canaveral just prior to Columbia’s launch. OARnet joins the families of the shuttle flight crew and the international community in mourning the loss of the Space Shuttle Columbia after it was destroyed during re-entry on February 1.

The event signaled the beginning of a new, month-long celebration called Israel Education Month (IEM), which started Jan. 19. The event is designed to foster better relations and understanding about Israel throughout North America, as a result of more than two years of civil and military conflict between the Israelis and Palestinians. IEM is also meant to enhance educational discourse about Israel in North American Jewish life, in the hope that the project will be a starting point for encouraging educational engagement with Israel.

OARnet coordinated a similar Internet videoconferencing event for Israel last year that brought together Jewish schools and communities from around world including North and South America, Australia and Russia, for a musical performance.

OARnet and Ohio State have collaborated for several years on developing the H.323 Internet videoconferencing technology, and enjoy an international reputation for developing and deploying equipment and software for worldwide Internet videoconferencing, as demonstrated by four years of coordinating the internationally recognized “Megaconference.” The Megaconferences simultaneously connected, via the Internet, hundreds of academic locations throughout the world, from the South Pole to the International Space Station, and has included nearly 100 countries from every continent around the world.

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Prasad Calyam

From Asia’s “Silicon Valley” to America’s “Ohio Valley,” OARnet employee profile Prasad Calyam traveled half way around the world to make the Internet a better place. And he’s doing an incredible job of that at OARnet.

Prasad is originally from Bagalore, India, a city with the reputation as the “Silicon Valley” of Asia. After receiving his bachelor’s degree in Electrical Engineering from Bangalore University in 2000, Prasad came to the United States and in spring 2002 he received his master’s in EE from Ohio State.

Even before he graduated from OSU, Prasad was already at OARnet. He first joined OARnet’s ITEC-Ohio division as an intern from OSU during summer quarter 2001, when he worked with Paul Schopis on a QoS (Quality of Service) research project for large-scale H.323 videoconferencing, the results of which were presented during Megaconference III. Also during that summer internship Prasad worked on developing a QoS measurement prototype for the Beacon Project. Prasad said the H.323 Beacon is a tool that can be used to measure and monitor an H.323 Videoconference session. It is also used to qualify an H.323 Videoconference session, and as a debugging tool to troubleshoot H.323 application performance problems in the network and at the host.

Prasad learned about OARnet while he was a Graduate Research Assistant for Dr. Bob Dixon, a Senior Systems Engineer at OARnet, and the Chief Research Engineer for the Office of the CIO at Ohio State University. “Dr. Bob” as he is widely know, is famous for his work in developing and coordinating the worldwide H.323 Megaconferences for the past four years. “I went to Dr.Bob for advice on a thesis topic, and he suggested I do QoS research for H.323 Videoconferencing. Since Paul was getting started in the area, Dr. Bob recommended me to OARnet,” Prasad said.

Since his summer internship, Prasad has never looked back. He stayed on at OARnet and is now a Systems Developer/Engineer for ITEC-Ohio, as well as for Internet2. Prasad says he currently divides his time between two main projects. At ITEC-Ohio he continues his work on the H.323 Beacon Project; for Internet2 he is working on the Internet2 End-to-End Performance Initiative’s Performance Environment Project (E2EpiPE). The E2EpiPE is the Abilene network wide measurement infrastructure. Prasad develops software for this project that identifies and solves end-to-end network performance research problems. Prasad says these are pretty much the same projects he worked on while he was an ITEC-Ohio intern.

Prasad said it was an interesting adjustment working for two different agencies and having two different bosses. “Since my time for ITEC and Internet2 is divided equally, I need to spend half of my week working on ITEC related responsibilities and the other half on my Internet2 related responsibilities. I am very fortunate to have very reasonable bosses both at ITEC (Paul Schopis) and at Internet2 (Eric Boyd),” Prasad said.

Prasad recently passed the Cisco Certified Network Associate (CCNA 640-607), with a score of 961 out of 1000. Wow! He said the testing requires configuring routers, troubleshooting networks, and “tons” of conceptual questions.

In addition to his love for engineering, Prasad also has a passion for music. He plays the bamboo flute, the Indian drums, and even composes music. He said Columbus has a large Indian community who are actively engaged in music-related activities. “In the past 2 years, I have performed more than 25 times at various venues and occasions. I was part of the OSU Indian Students band called “Sangam” and presently I am developing a band called “Param” that plays fusion music that combines Indian classic music and Western music,” Prasad said.

NSF RFP Deadline in April


The purpose of the HPNC program is to: (1) Enable research and education at the forefront of science and engineering via the establishment of high performance (45mbits per second or greater) Internet connections to a national research network; (2) Prepare the next generation of scientists, engineers, and other researchers, especially individuals in traditionally underserved groups, to use advanced networking in support of discovery, learning, and innovation.

Institutions in EPSCoR (http://www.ehr.nsf.gov/epscor/) states, as well as minority serving institutions, are encouraged to submit to this program. During the last two years, NSF has funded nearly 75 percent of all proposals submitted. To assist in the proposal writing process, NSF will be sponsoring at least two proposal-writing workshops to assist PIs. Please contact Greg Monaco, gmonaco@nsf.gov for information about the workshops. OSTEER schools that would like to submit proposals should contact Linda Roos at lroos@oar.net for assistance.
OhioLINK Celebrates
10 Years of Service

OhioLINK, the nation’s leading academic library consortium, celebrated its 10th year of service by delivering to Ohio’s colleges and universities more than 25 million documents including traditional and electronic books, videotapes, online research, art images, journals, newspapers, and more. OhioLINK has 82 participating education institutions, and the State Library of Ohio.

OhioLINK begins its second decade of service by acquiring a collection of three hundred humanities and sciences educational video titles, comprised of 1000 VHS tapes, that range from 20 minutes to more than 2 hours in length. The first videos should appear online in March. OhioLINK is digitizing the videos and placing them on its Digital Media Center server. The VHS format of these videos has already been purchased for most of these titles throughout Ohio, and the number of titles available for digital use could double each year. The videos will be available for streaming using free software from Real Networks (www.realnetworks.com).

“What we will provide with a streaming video collection is consistent with what we have already been doing with our electronic journal collection. Each campus will have instant access to a much broader array of video titles than is possible through traditional approaches. We will expand this video collection over time as a cost efficient means to help Ohio higher education be more effective,” said Tom Sanville, Executive Director for OhioLINK.

Because streaming the videos can consume large amounts of bandwidth, OhioLINK wants to make sure users can plan accordingly. The videos average about ½ Gigabyte in size, and the video server will automatically deliver lower bandwidth video files in order to match the user’s available bandwidth. The impact on the campus network will be based on 3 parameters: Bit-rate (of each video stream expressed in bits per second), Campus Bandwidth (the current campus bandwidth capacity & utilization), and Simultaneous Views (the number of concurrently viewed video streams). For more information contact Charly Bauer at OhioLINK, charly@ohiolink.edu, (614) 728-3600 x.338.

New Project Manager for Dark Fiber Coming Soon to OARnet

In the coming months OARnet will be selecting a new Senior Project Manager for the Dark Fiber Initiative (Third Frontier Network). This position will be responsible for managing all aspects of planning, developing and implementing the Dark Fiber Initiative.

The Dark Fiber Manager will also work closely with the four committees charged with developing and deploying the new fiber network: 1) Last Mile Connectivity and Metro Rings Committee; 2) Pricing Strategies Committee; 3) Equipment and Architecture Committee; 4) Implementation Committee.

Now that the deadline for submitting applications has passed, OARnet will proceed with reviewing resumes and interviewing candidates. OARnet hopes to have this position filled by Spring 2003.