

• William Caban • Guy Cormier • Corporation for Education Network Initiatives in

University • Wasim Shomar • John Silvester • David Staudt • University of Puerto Rico • University of Southern California

California • Susan Estrada • Juan Figueroa • Hispanic Association of Colleges and Universities • Greg Monaco • National

Catalyze, Connect, Collaborate

Creating the Vision for
an Education Regional
Network in Puerto Rico

An NSF-funded
Workshop Series

February 6-7, 2003

University of the Sacred Heart

San Juan, Puerto Rico

agenda

• Science Foundation • Alex Ramirez • José Jaime Rivera • Rita Rodriguez • Sacred Heart

9:00–9:30 a.m.

**Creating the Vision:
Forming the Technology**

José Jaime Rivera
Sacred Heart University

9:30–10:30 a.m.

**The Bones of a Network: Routers
& Circuits & NOCs, Oh My!**

Susan Estrada
Aldea Communications
William Caban
University of Puerto Rico

10:30–10:45 a.m.

Break

10:45 a.m.–12:00 p.m.

Working Groups

**Backbone & Network Operations:
A Checklist**

**Organizational Structure:
What Works?**

**Applications:
The Need for Networks**

Speaker Bios

Since 1995, **William Caban** has been working with networks, network programming, network monitoring and network security at University of Puerto Rico.

In 1999, he became the coordinator of operations and services of the High Performance Computing facility of University of Puerto Rico.

Mr. Caban is a member of the Internet2 IPv6 working group and member of the Association for Computing Machinery (ACM). He is a participant in the Internet2 multicast working group and the Internet Engineering Task Force (IETF) Internet Measurement Research Group. He is also a strong supporter of the Open Source Software initiative since he started using and developing for Linux in 1995.

William Caban has a BS in Computer Science from University of Puerto Rico and is working towards his MS.

Dr. Guy Cormier is the founding Director of the High Performance Computing facility of the University of Puerto Rico system. He has held this position since opening the facility in 1997. Since this time, the HPCf has evolved to include a Center for Numerical Supercomputing, a Visualization Laboratory and the Puerto Rico Bioinformatics Resource Center. Furthermore, under his guidance, the HPCf has been involved with advanced networking since 1998, being the development center of the Internet2 Project for Puerto Rico, culminating in the inauguration of the Puerto Rico Internet2 Services Alliance (PRISA) GigaPoP in August of 2001.

Prior to his joining the staff of the Vice Presidency for Research and Academic Affairs of the University of Puerto Rico system, Dr. Cormier was a researcher at the Chemistry Department of the University of Cambridge, U.K. during the period 1995–1997, and a post-doc fellow at the Physics Department of the University of Padua, Italy, in 1994.

Dr. Cormier holds a B.Sc. (Honours) in Chemistry from the University of Québec in Montréal, which he obtained in 1986 and a Ph.D. in Chemistry from Concordia University, obtained in 1993. Both these universities are located in Montréal, Québec, Canada. During his Ph.D. studies, he was involved with research in laser spectroscopic studies of lanthanide-doped inorganic glasses and crystalline solids as well as molecular dynamics modeling of these materials. Since his stay in Cambridge, his research interests are in

the field of computational glass science, investigating the glass transition phenomenon in silicon and silica based materials.

Susan Estrada is an Internet pioneer. Named a “thinking nerd” by colleagues, she has a deep interest in emerging Internet technologies and making those technologies work to solve real-world problems. She has a proven track record of success in the Internet arena.

Seeking to support growth of the Internet, Susan founded Aldea Communications, Inc. in July 1993. Aldea’s focus is on strategic Internet communications strategies. In addition to client services, Aldea’s areas of interest include allocating, accounting, and billing in a QoS-enabled Internet.

Giving practical advice on getting the best Internet service, Susan wrote *Connecting to the Internet, An O’Reilly Buyer’s Guide*, in August 1993 (a Barnes and Noble best-seller.) Always forward thinking, Susan founded CERFnet, an Internet service provider, in 1988. During her five-year tenure as the CERFnet executive director, she was instrumental in CERFnet’s user growth from 25 university members to hundreds of corporate members and thousands of individual users.

Susan is an appointee to the U.S. Federal Communications Commission Technological Advisory Council. She was an elected Trustee of the Internet Society and an appointed member of Pacific Telesis’s Telecommunications Consumer Advisory Panel (TCAP). Susan was a founder of the Commercial Internet Exchange (CIX), on the U.S. Federal Networking Council’s Advisory Committee (FNCAC), and a former area director for the Internet Engineering Software Group (IESG) and the Internet Engineering Task Force (IETF). She is listed in the Millennium Edition of *Who’s Who in Executives and Professionals*.

Dr. Alex Ramírez is the executive director for information technology initiatives for the Hispanic Association of Colleges and Universities (HACU). In this capacity, he also serves as the Hispanic-serving institutions (HSI) community leader for the Advanced Networking with Minority Serving Institutions (AN-MSI) project; a strategic partnership between HACU and Educause, the premier IT support organization in higher education. The National Science Foundation (NSF) funded AN-

MSI project is a collaboration among HSIs, Tribal Colleges, and Historically Black Colleges and Universities (HBCUs) to work together to enable Hispanics and other minority communities to be full participants in the Internet-based Information Age. Dr. Ramírez has spoken at national conferences on IT in the HSI community, and has prepared testimony on behalf of HACU on IT issues for congressional committees and commissions as well as for the NSF Blue Ribbon Panel on Cyberinfrastructure.

Dr. Ramírez has been in the information technology field for more than 20 years. Following completion of his Ph.D. at the University of California, Riverside, Dr. Ramírez continued at UCR in computing support becoming the Director of Academic Computing. He then joined the University of Texas at San Antonio, an HSI, as the Director of the Center for Academic Technology before joining HACU.

José Jaime Rivera, president of the University of the Sacred Heart, throughout his thirty-plus years in higher education, has held key administrative and faculty positions in Puerto Rican and North American universities and has served as a consultant in the areas of academic development, institutional assessment, strategic planning, and university accreditation in Puerto Rico, the United States, Central and South America.

Dr. Rivera has consistently promoted and supported innovation in education. As president of the University of the Sacred Heart, he has created a unique educational project for students that includes mandatory service learning in a discipline to provide students professional experience while contributing to the improvement of the surrounding community; the development of a distance education model for the Hispanic community; a language across the curriculum initiative to improve student language skills in English and Spanish; and the expansion of student exchange opportunities. He is the author of numerous education publications and collaborator in specialized publications.

Dr. Rivera is a member of the Higher Education Committee of the Middle States Association of Colleges and Schools; president of the Executive Committee of the Metropolitan Alliance for School Reform, an initiative he helped establish jointly with the Puerto Rico College Board, ASPRA and the Institute

for the Reform of Intermediate Schools with the support of the Ford Foundation; and cofounder and copresident of the Center for the Freedom of the Press in Puerto Rico at the University of the Sacred Heart. Since September of 2001, he presides over the Puerto Rico Association of University Presidents. He is a member of the Puerto Rico Academy of the Spanish Language.

In 2002, Dr. Rivera was named Educator of the Year by the Third International Exchange of Education and Thought in recognition of his unique initiatives in Puerto Rican Higher Education.

Wasim J. Shomar is the Interim President of the Wolfson Campus of Miami-Dade Community College, which employs close to 2,000 individuals and serves more than 27,000 students a year. The Wolfson campus is home to the Emerging Technologies Center of the Americas (ETCOTA), a 40,000 square foot, 25-classroom, state-of-the-art Information Technology/Telecommunications training facility. ETCOTA serves as the primary education and training site with the latest equipment and broadband access to the Internet allowing for classes, seminars and international conferences.

Dr. Shomar's focus in providing a highly skilled and highly trained work force is his vision to the success and growth of the information technology and telecommunication industry in South Florida. Prior to his present appointment, he served as director of the School of Design Technology. He led the college-wide school, which encompassed the disciplines of architecture, engineering, electronics, interior design, building construction, and graphics for the six-campus college. During his tenure, Dr. Shomar implemented new programs in biomedical engineering, computer engineering, graphics Internet technology, multimedia presentation, and telecommunications engineering.

Dr. Shomar received his Ph.D. in Electrical and Computer Engineering from the University of Miami in Coral Gables, Florida. He received a Post-Doctorate in Applied Marine Physics specializing in Underwater Acoustical Imaging from the Rosenstiel School of Marine and Atmospheric Science. Dr. Shomar completed a management post-graduate program at Harvard and served as a faculty of engineering at University of Miami, University of Central Florida, and Miami-Dade Community College.

As a research scientist, he conducted research for the National Science Foundation on the topics of robotic/computer vision and neural networks as well as designed acoustical imaging and intelligent systems for underwater mine detection for the Office of Naval Research. He then entered the private sector at IBM Corporation's Department of Custom Adapter Products as a development staff engineer. During that time he attained several United States and European patents on methods for performing intelligent network services with ISDN network terminators located at a subscriber's premise.

Dr. Shomar is the author/editor of twelve publications including books, journals, and conference proceedings in the areas of telecommunications, robotic vision, artificial intelligence, and computer architecture, and he is the developer of the LoJack car recovery concept.

Dr. John Silvester, an authority on high-speed computer networks, was appointed vice-provost of academic computing at USC in 1994 and vice-provost of scholarly technology in 1997. As vice provost of scholarly technology he serves as the faculty/administration interface for the development of strategic plans for the effective use of information technology. He is chair of the board of the Corporation for Education Network Initiatives in California (CENIC), the organization that is building CalREN, California's next generation internet for the education and research community.

Silvester joined the USC faculty as an assistant professor of electrical engineering/systems in 1979, became an associate professor in 1985 and was appointed a full professor in 1994. While at USC, Silvester was director of the School of Engineering's computer engineering division and chaired the university's academic computing advisory committee, the School of Engineering's computer environment committee, the departmental committee on educational policy and the computer engineering curriculum committee. He also teaches courses in computer networks, broadband networks, queueing theory and computer system performance evaluation. An expert on protocols for multimedia communication and video/voice data integration, Silvester has served as a consultant to corporations and governmental agencies and was director of consulting for the Technology Transfer

Institute in Santa Monica, California from 1985 to 1986.

Dr. Silvester is the author of more than 100 journal and conference papers and has lectured both in the United States and abroad. He is a member of the Association for Computer Machinery (ACM) and served as associate editor of the Institute of Electrical and Electronic Engineers' journal, *IEEE Transactions on Communications*. Dr. Silvester has also been active in the Technical Committee on Computer Communications since 1981, acting as conference coordinator from 1983-85 and chairman from 1985-87. He was program chairman of the First IEEE Computer Communications Workshop (1986); is on the Infocom conference board, was vice chairman of Infocom 1989 and general chair for Infocom 1990; and has served on the program committees of Infocom, the Data Communications Symposium and the International Conference on Computer Communications.

David A. Staudt is project director for the Advanced Networking with Minority-Serving Institutions (AN-MSI) project. He came to EDUCAUSE from the National Science Foundation, where he served for twelve years in the Connections to the Internet Program, which helped more than 2,000 higher education institutions connect to the Internet. His entire career has been in information technology, including computer programming, systems requirement analysis, directing computer centers at the National Science Foundation and the Naval Research Laboratory and, prior to his Federal service, selling computers to Federal Government installations.

AN-MSI is a \$6 million, four year National Science Foundation grant to EDUCAUSE, an association of 1,800 colleges, universities and companies advancing the use of information technology in higher education. The purpose of the grant is to assist minority-serving institutions in improving Internet connectivity, campus networks, network technical support, training and advanced use of the Internet for teaching and research. The minority-serving institutions are Hispanic-Serving Institutions, Tribal Colleges and Universities, and Historically Black Colleges and Universities. Roughly one-third of the over 100 institutions initially involved are from each community. More information on AN-MSI is available at www.anmsi.org.

