Carnegie Mellon Collaborates With Minority-Serving Institutions on Internet Security

By Ronald Roach

A collaboration between Carnegie Mellon University and minority-serving institutions may prove instrumental in preparing a generation of Black and Latino computer professionals who are highly skilled in Internet security.

This summer, the Pittsburgh-based research university began working with historically Black colleges and universities and Hispanic-serving institutions on an Internet security program. Carnegie Mellon’s academic partners in the program, funded by the National Science Foundation (NSF), include Howard University, Morgan State University and the University of Texas at El Paso.

Carnegie Mellon is providing educational resources and instruction to prepare doctoral computer scientists to teach survey-level courses in information security to undergraduate and first-year graduate students at their universities.

A four-week program that ended August 2 was conducted by staff members of Carnegie Mellon’s Software Engineering Institute (SEI) and its CERT Coordination Center, the nation’s first and best-known computer emergency response team.

Other faculty members from Carnegie Mellon’s H. John Heinz III School of Public Policy and Management (Heinz School), School of Computer Science, and Department of Electrical and Computer Engineering also participated in the course. Nine faculty members and officials from the three schools participated in the summer session at Carnegie Mellon, according to university officials.

Dr. Stephen E. Cross, director of the Software Engineering Institute, says the program is providing participants with the knowledge and expertise to develop and deliver curricula in information security, and should help increase the number of doctoral-level researchers in information security at historically Black colleges and universities and Hispanic-serving institutions.

"We are very excited to be partnering with these educational institutions," says Cross. "The training and experiences shared in this program lay the foundation to help create a new generation of Internet-security experts."

In Virginia, Hampton University officials and faculty members have been collaborating with information technology administrators and faculty members at James Madison University in Harrisonburg to develop Internet security studies curricula and degree programs for information technology students enrolled at Virginia institutions. The work has been based at the campus of James Madison University over the past two years, according to Virginia officials.

"We think Internet security is a critical issue from the operational perspective and from the instructional side," says Debra S. White, the chief information officer of Hampton University.

Among historically Black schools, Hampton has taken the lead of working with HBCUs on computer and Internet security issues. The campus hosted a computer security conference for neighboring Hampton Roads schools in June 2001 and a national conference on computer security issues this past April that attracted more than 300 attendees. White says Hampton officials are planning a network security training session for schools participating in the Advanced Networking-Minority Serving Institution program that is being coordinated by Educause for sometime in October. A second national conference on network security at Hampton is being planned for the fall of 2003, according to White.

Although Hampton is not involved in the Carnegie Mellon initiative, White says the school is open to participating. "We’re very interested in building our capacity to protect our network as well as having our faculty develop further expertise," White notes.
“Once you build a network, you have to secure it,” she says.

The need for qualified information security personnel and educators is tremendous. A June 1999 U.S. Department of Commerce report, “The Digital Workforce,” estimates that the United States will require more than 1.3 million new highly skilled information technology workers between 1996 and 2006. The National Plan for Information Systems Protection also addresses this critical shortage and further highlights the acute shortage in the number of trained information-security personnel. The National Plan recognizes training and education as key solutions in defending America's cyberspace.

The Software Engineering Institute is a federally funded research and development center sponsored by the U.S. Department of Defense and operated by Carnegie Mellon University.