

Former Presidential Advisor Captures Audience at The Rosa Parks Library and Museum on Internet Security

Professor Eugene Spafford, IEEE Fellow, recipient of National Computer Systems Award 2000, and an internet security advisor to former President Clinton, captivated a full auditorium at Rosa Parks Library and Museum on February 27, 2001 with his stunning yet highly informative remarks on "The Challenge of Secure Software." His morning lecture to the Chamber of Commerce audience of 200, including attendees from Maxwell and Gunter AFB and software engineering related companies with interest on software security, was also successful. Dr. Terry Dixon, vice president for academic affairs, introduced Dr. Spafford's and praised him for his contributions to the field.



Dr. Spafford first cited a brief history of where the secure software 12 years ago, with only 75,000 machines connected, has developed into a non-secure one today, with an excess of 250 million users over 150 countries with a volume of traffic doubling every 90 days. In 1989, there were a handful of security breaches. In 2001, this figure is estimated to reach 65,000. The state of security is poor. DOD reported 22,000 attacks on Pentagon Systems in 2000. Real losses exceed billions of dollars. In March 1999, "Melissa," caused \$300 million in approximately four days affecting 150,000 systems, and in May 2000, "ILOVEYOU," in one day affecting more than 500,000 systems, caused a shocking \$10 billion in damages. Average losses for the Internet connected companies are \$1 million per year. Moreover, 50-60 incidents per day on the Internet, 10-12 incidents per day on DSL and 5-6 incidents per day on dial-up still prevail. For defenses the following are needed: (a) virus prevention on largely pattern based methods need updates, (b) firewalls largely pattern based as well need updates as we can't control users, and (c) security scanners should look for known flaws and misconfiguration. At this rate, the world in 2004 will face 100,000 computer viruses causing an estimated loss of \$100 billion per year. Dr. Spafford added that a typical user is an open target since he has less than one year on line with no background in computer science, has a major OS with 1 Ghz machine but uses only 3 applications, does not take back ups and he is on-line constantly surfing the net. He said COTS (Commercial Products over the Shelf) have poor quality and consumers should push for quality and assurance not for extra features they do not ever use. Wireless technology even enhances eaves dropping and unsafe environments. New technology is needed where stronger encryption is required and automated self-defenses are required with a greater reach from far away. How about the law? He said, a new law UCITA (<http://www.4cite.org/>; <http://www.acm.org/usacm/IP/>) is pro-commercial-companies, not protecting the poor defenseless end-user. Law enforcement on software assurance and security is handicapped. National and international laws have to be unanimously passed and enforced. Dr. Spafford focused on the importance of the university education to help resolve the big picture. He said he was happy to see that software quality based engineering courses were offered at TSUM/CIS. He concluded that better security is certainly possible if the users demand for it. Dr. Spafford also responded to questions from the audience ranging from Linux Security to security education at colleges. His closing thought was: "There is more to life than increasing its speed" by Mahatma Gandhi. Dr Spafford's journey to Montgomery was co-sponsored by TSUM/CIS and ICS, a local software security company.

TSUM/CIS is grateful to Professor Spafford, TSUM administration, Montgomery Chamber of Commerce's business, military, and civil audience for making this event a memorable and unforgettable learning experience for all involved.