Researcher receives $6 million to study cyber awareness

Wednesday, July 1, 2009

Peng Liu [1], associate professor in Penn State's College of Information Sciences and Technology [2] (IST), will be leading a research project on Cyber Situation Awareness (CSA) using a $6.25 million grant from the Army Research Office.

Liu and his team received a Multidisciplinary University Research Initiative Award (MURI) for his project, "computer-aided human centric cyber situation awareness." They plan to use the grant funding to further the research on cyber awareness and how it can be used to improve cyber defense.

"We plan to take an innovative multidisciplinary approach that will give analysts significantly improved cyber-situational awareness when fighting organized crime both in the U.S. and abroad," Liu said. "We're very grateful for this opportunity and we believe significantly improving cyber-situational awareness is essential for strengthening cyber defense."

Liu said the ideal CSA tools have yet to be created, which is why more in-depth CSA research needs to be conducted.

"With our current cyber defense capability still in its infancy, there is a big gap between the needs of analysts and what existing CSA software and hardware tools can do," Liu said. "Without addressing the CSA-specific cognition needs of analysts, existing tools could only be effectively used by highly experienced and knowledgeable analysts; newly-trained analysts often fail to use these tools properly."

Research goals include the development of tools that will help bridge the gap between analysts' capabilities and existing CSA software and hardware.

"This MURI project will leverage a set of technologies and tools the team has developed during the past decade," said Liu.

The grant will be disbursed over five years and will support a team of 10

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principle investigators, including IST's Professor-in-Charge Michael McNeese [3], Associate Dean for Research and Education John Yen [4], Professor David Hall [5] and several doctoral students.

Other researchers involved in the project include professors Nancy Cooke of Arizona State University, Coty Gonzlez of Carnegie Mellon University, Sushil Jajodia of George Mason University, Peng Ning and Michael Young of North Carolina State University, and V. S. Subrahmanian of the University of Maryland.

Links:
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[1] http://www.ist.psu.edu/ist/directory/faculty/?EmployeeID=164
[2] http://ist.psu.edu
[3] http://www.ist.psu.edu/ist/directory/faculty/?EmployeeID=39
[4] http://www.ist.psu.edu/ist/directory/faculty/?EmployeeID=79
[5] http://www.ist.psu.edu/ist/directory/faculty/?EmployeeID=68

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