Research Seminar Series

Monday, 30 January 2006, 2-2:50pm, Broun 238

Self-configuring Systems and Unmanned Aerial Vehicles

Abstract:
What does watching television have to do with robotic airplanes? Perhaps not that much, but in the 21st century both involve systems that are more complex to configure, upgrade, maintain, and use than their predecessors. Just as your parents may have difficulty setting up and using a multi-thousand dollar home theater system, soldiers in Iraq may have difficulty setting up and using a multi-million dollar unmanned aerial vehicle system. Both are often sparsely documented, and often the actual configuration information is not captured in a systematic nature. Post-deployment system changes can go completely undocumented. Critical operational information should not be maintained in the form of post-it notes taped to the front of the system. Yet, in practice, that is what we do in both of these types of systems.

This talk will present background on an Auburn CSSE project to develop wireless communication systems for Army unmanned aerial vehicles, discuss a recent project to develop a self-aware, self-configuring, self-healing framework for home media systems, and discuss the relationship between the two, and how the protocols and framework of the media system can be applied to military systems, providing a solution to the Department of Defense's search for condition-based maintenance systems. Graduate students are encouraged to attend, as there is the potential additional of research assistantships in the summer and fall semester to support this project.

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