

# **CyberScout - Informationally Connected Machines**

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In this talk we will describe our research on distributed and informationally connected machines. The long term vision of our research is to create a robotic system that consists of several physically distributed robots that are connected by information and can be controlled and tasked by the user as "single logical machine". To achieve this objective we are developing robotic systems that range in size from a commercial All terrain Vehicle (about 4 feet by 6 feet footprint) to small millibots (about 5 cm footprint). We are also pursuing research on controlling and commanding this set of physically disconnected machine as a single logical machine. Specifically, we are developing algorithms for distributed tactical surveillance wherein multiple machines collaborate to track a single (or multiple targets). To control this set of heterogeneous machines we have built a Web-based simulation, tasking, and control environment called CyberRAVE. In this environment both virtual and real machines co-exist and interact with each other. In this talk we will give an overview of the project and describe some initial results in the above mentioned areas.

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