



Netted Sensors Community 2005 Workshop

Distributed Computing and Processing – Round Table Discussions

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Towards a Networked Robotic Laboratory

- **Gaurav talked about using robots to map a building's interior, detect and track intruders, and communicate their findings to an outside operator**
 - The more capable (Tier 2) robots establish an occupancy grid (a “blueprint”) of the building
 - The less capable (Tier 1) robots are guided into place by the Tier 2 robots and establish a network to perform detection, classification, and tracking operations
- **What precludes us from implementing this vision today for battlefield surveillance and urban operations?**
 - Possible examples being: autonomous vehicle Mote deployment, UGS augmented by Motes, and emergency communications installations



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Distributed Tracking in Sensor Networks

- **What is the role of tracking for dense sensor grids?**
 - Is it merely “connecting the dots” or are there deeper resource management issues at play?
 - For single target tracks, why wouldn’t a simple centroid-based approach work just as well?
 - Is there a role for feature-based tracking at Tier 1 or Tier 2?
- **Could you comment on the distinction between “detect before track” and “track before detect” methods in the context of netted sensors?**



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Grid Technologies for Netted Sensors

- **Ian's criteria for a "Grid":**
 - Coordinates resources not under centralized control
 - Uses common/standard protocols and interfaces
 - Delivers nontrivial Quality of Service (QoS)
- **Can Netted Sensors be considered an enterprise grid?**
 - If not, what are the issues impeding progress?
- **Could you contrast the differences between Netted Sensors and actual grids such as DOE Science Grid, DISCOM, and TeraGrid?**



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