9807-04: Cricket: A Location Support System for Pervasive Mobile Computing

Hari Balakrishnan & John Guttag



- Long-term goal: Context-aware, mobile pervasive computing systems
- Cricket: Indoor location system based on RF and ultrasound
  - Scalable, autonomous, deployable, facilitates privacy
- Intentional Naming System: Resource discovery

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## **Progress Through December 2002**

- Progress on auto-configuration algorithm
  - Decentralized algo. with local node behavior to yield global configuration
  - Uses ball-and-springs model inspired by physics
- Cricket v2 design: will send to fab in two months
- Porting general-purpose sensor software platform (TinyOS) to Cricket

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## **Research Plan for the Next Six Months**

- Prove properties and conduct simulations of autoconf algorithms
  - Start implementation
- Monitoring and control applications for large-scale sensor information processing: Investigate energy-efficient routing
- Complete TinyOS port to Cricket