

Simplifying Development of Context-Aware Applications

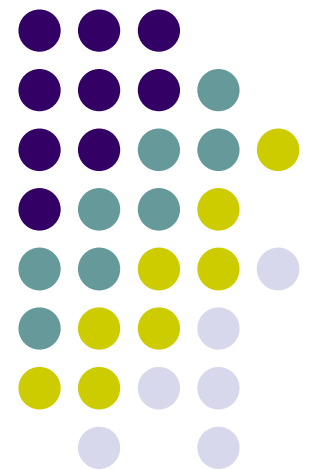
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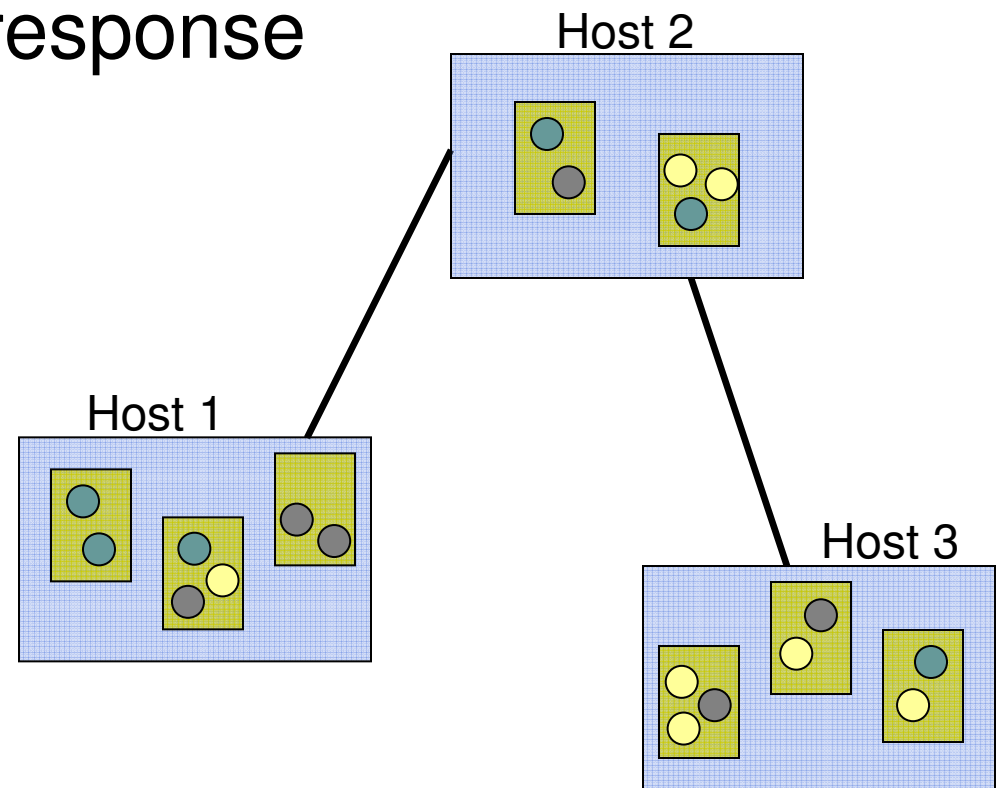
Washington University in St. Louis



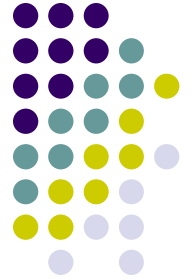


Ad Hoc Network

- Forms opportunistically
- Changes rapidly in response to mobility
- Relies on no fixed infrastructure
- Provides transient interactions

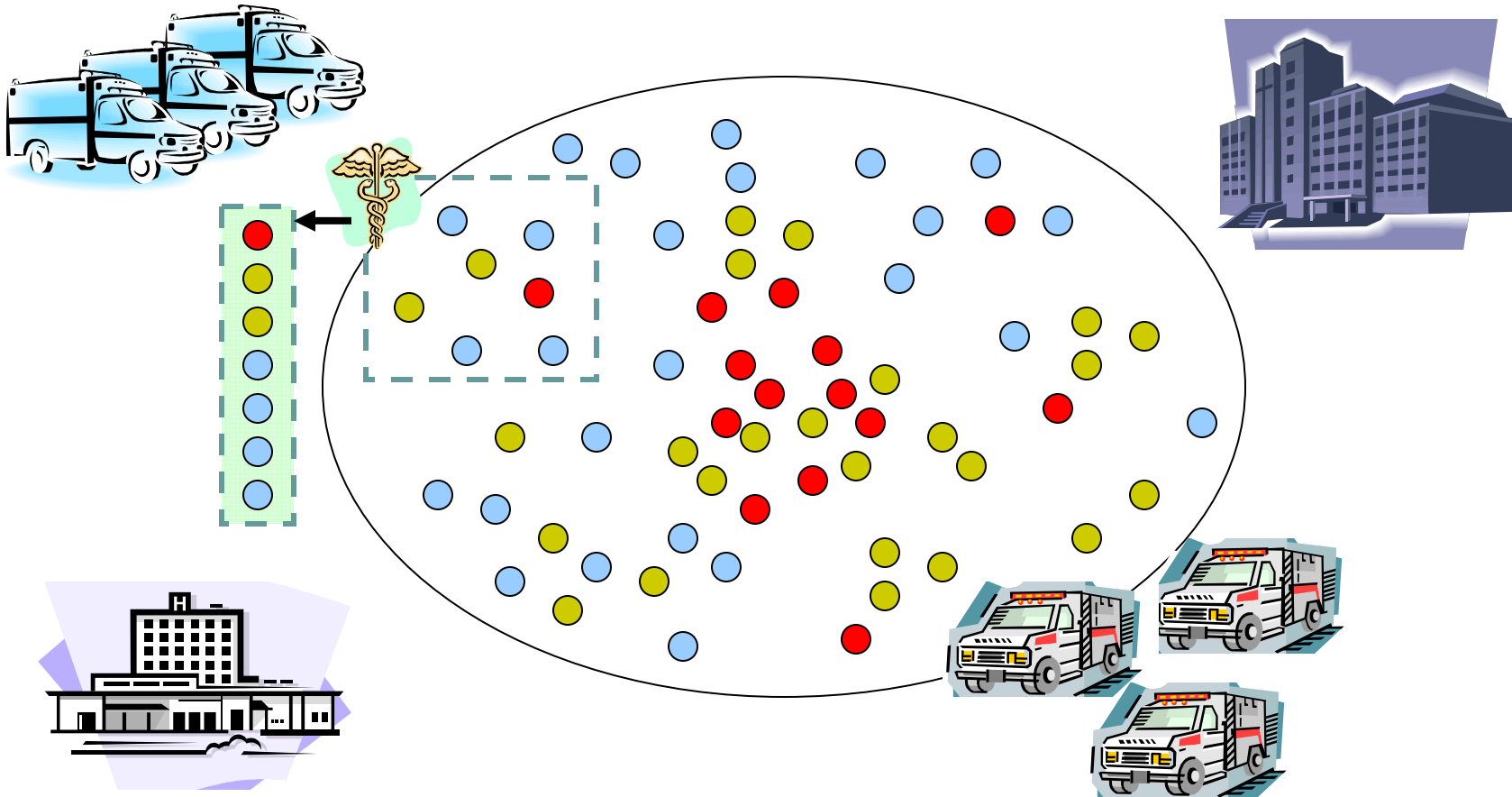


Context-Awareness



- Both software and hardware components constantly move and change
- Applications adapt behavior to these changes
- Perception of context varies by task and situation
- Scope of context extends beyond the local host

Context-Sensitive Data Structures





Research Issues

- Library of context-sensitive data structures for novice programmers
 - Minimal, familiar interfaces
- Infrastructure support for context-sensitive data structure developers
 - Maintaining structure over an ad hoc network
 - Consistency guarantees for ad hoc networks
 - Context-scoping protocols
 - Data structure operation protocols
 - Partially-maintained data structures
 - Access control

Questions?

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