

# Context-aware adaptation for component-based pervasive computing systems

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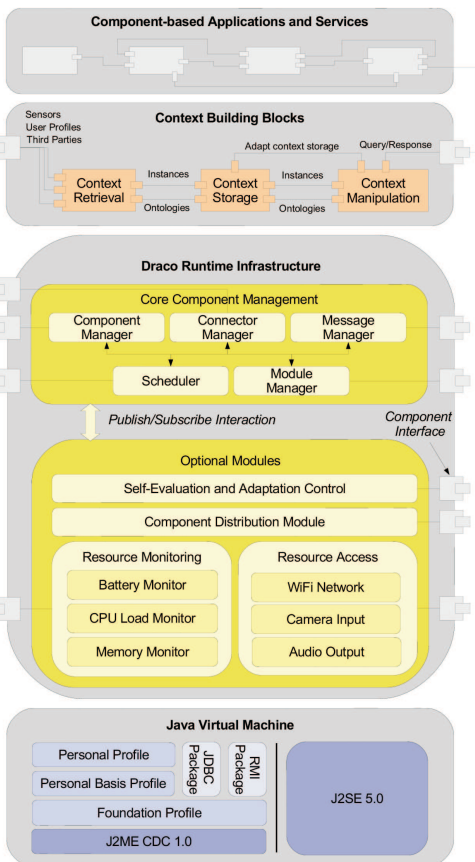
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## 1. Pervasive computing

- Shift from high-end systems to resource-limited mobile devices
- Middleware support for context-driven personalization and application adaptation

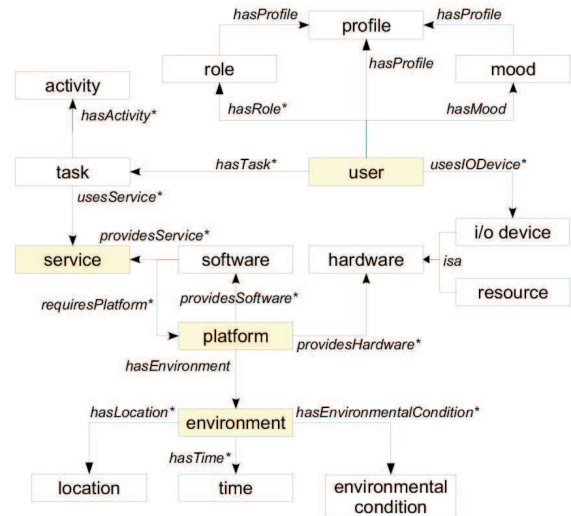
## 3. Middleware support

- Major application building blocks:
  - Components + ports
  - Connectors
- Adaptation = change component composition



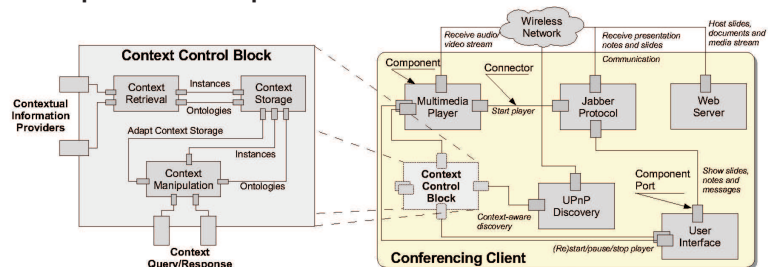
## 2. Context-awareness

- Context-driven adaptation:
  - Resource discovery
  - Location-awareness
  - User preferences

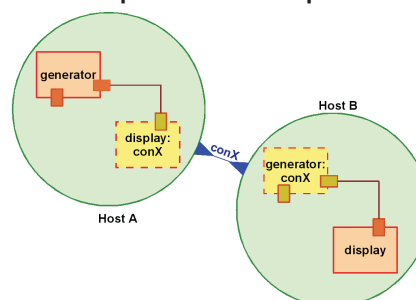


## 4. Component-based adaptation

- Enable/disable components
- Replace components + state transfer



- Transparent component relocation



1. Create proxies
2. Freeze connectors
3. Move component
4. State transfer
5. Rewire connectors
6. Unfreeze connectors
7. Continue