Enabling Mobile Web

WWW2005

W3C Track

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Outline

- Software Engineering Challenges
- Constraints
- Diversities
- Challenges for Mobile Profile Design
- Conclusion

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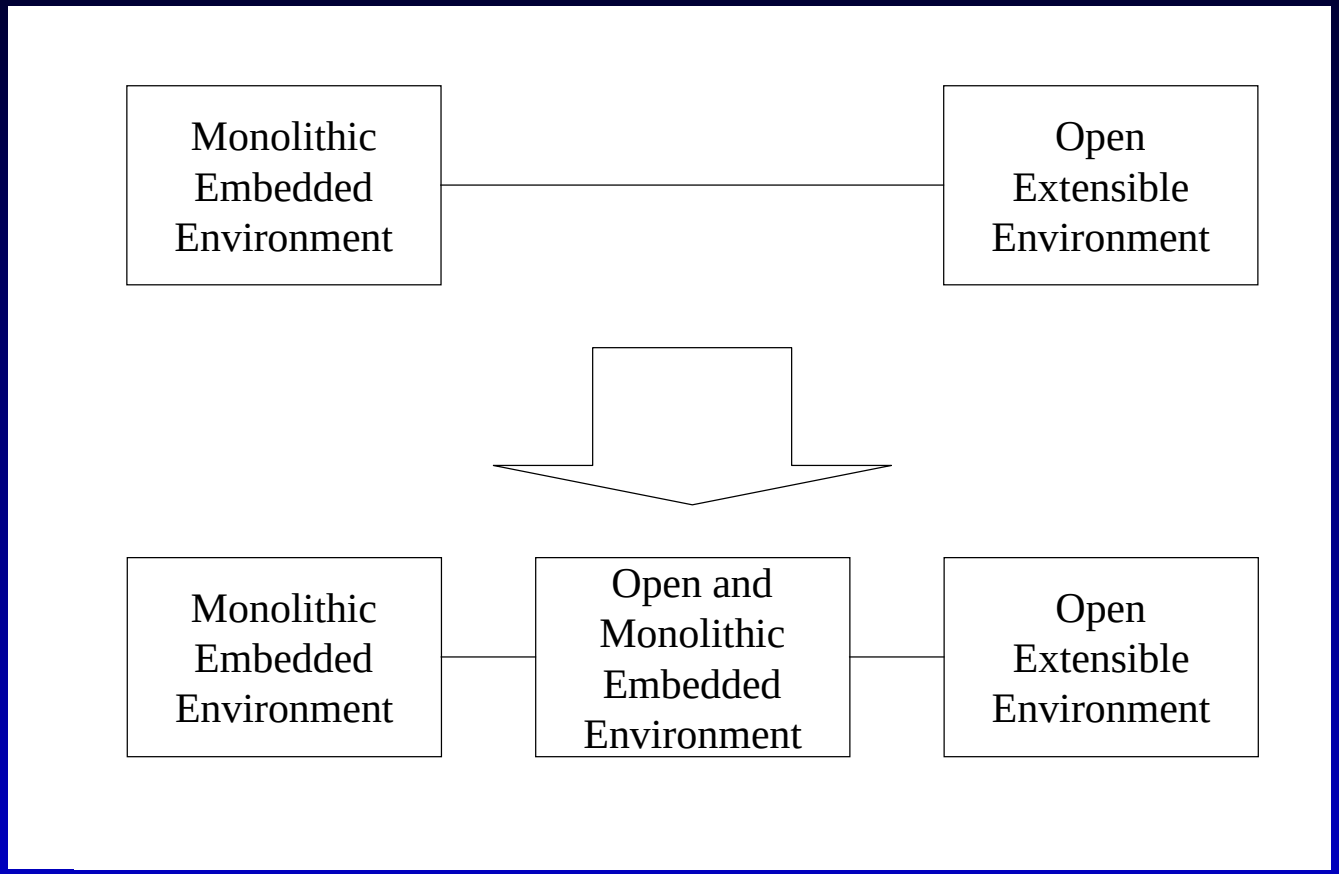
Open and Monolithic World



- Shift to the open and monolithic environment
- still constraints like battery

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Software Engineering Comparison

	Traditional Embedded App	Extensible Embedded App	Common Internet App
Memory Consciousness	High	High	Low
Memory Management	Predefined	On-the-fly	On-the-fly
Extensibility	Low	Medium	High
Auto-fault-recovery	High	Medium	Low
Fault-oriented Design	Low	High	Low

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Platform Diversity

SymbianOS/S60/UIQ

PalmOS

VxWorks

Linux

MS WinCE (PocketPC)

BREW/RexOS (Qualcomm)

uITRON OS

Evolution Trend

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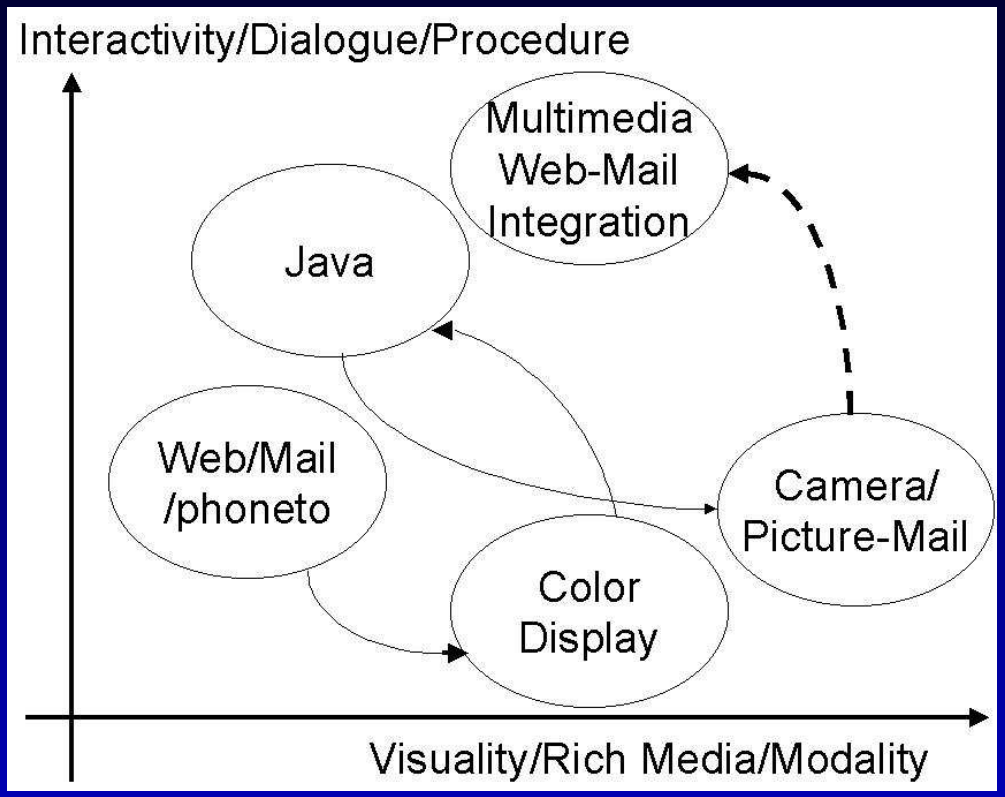
Spiral Evolution



Constraints in Mobile Clients

Display Size Limitation	Memory Capacity
CPU Horsepower	Local File Systems
Network Bandwidth	Battery Life Limitation
Appliation Environment	Diversity of components

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Diversity and Uncertainty

Device Capabilities	Underlying Network
Operating Systems	Application Environments
Business Models	Fast Market Cycle

Challenges for Mobile Profiles

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What, Fat?!

Conclusion

- New Challenges for Enabling Mobile Web
  - Beyond Convergence
  - Context Awareness
  - Evolution, Dynamics, Diversity
  - Increased Complexity
- More Business Engineering
  - Tight Relations to Politics and Business
  - Spiral Development: Social and Business Adoption
- Real Challenges for Standardization
  - New Mindset for Evolving Mobile Profiles and Integration
  - Vision, Experience, and Business Engineering Required