MOBILE OPERATING SYSTEMS AND APP DEVELOPMENT

PART 1

Ashish Agrawal
Indian Institute of Technology Kanpur
What is an Operating System?

- Collection of software components
  - Manage hardware resources
  - Provide common services for programs
Operating Systems

• For a PC

• For Smart Devices: Additional Support, more constraints
Some components of an OS

- **Kernel**
  - Basic control over hardware devices
- **Memory Management**
  - Independent memory for programs
- **Multi-tasking**
- **Disk Access**
- **User Interface**
- **Security**
- **Program Execution**
- **Networking**
Popular Operating Systems

- iOS
- Android
- Windows 8
- Blackberry OS
- Firefox OS
- Symbian
- Ubuntu Phone
Impact on M4D

• Market share
• Developer perspective
  – Freedom to modify OS, build applications
• Community support, release cycles
• Security
• Application repositories
• Functionality:
  – Multi-lingual Support
  – Supported hardware
  – Multi-user
Operating Systems Market Share

World-Wide Smartphone Sales (%)

- **http://en.wikipedia.org/wiki/Mobile_operating_system**

MOOC on M4D 2013
Developer Perspective

• Open Source vs Proprietary
  – Open Source: Android, Firefox OS
  – Proprietary: iOS, Window 8

• App development
  – Platform for app development: Window, Mac, Linux, All
  – Fee for app development
  – Fee to publish applications on app stores
Summary

• Mobile operating system
• Selection of a particular operating system
  – Functional concerns
  – Non-functional concerns
• Next lecture
  – Appify or not?
  – Different ways to develop applications on mobile device
THANK YOU