Objective

- The Objective of this presentation is to introduce some mobile platforms and J2ME technology. After this presentation, you will know today’s mobile platforms and what the J2ME platform is.

Agenda

- Motivation
- Mobile Platforms
- J2ME Platform
  - Configuration
  - Profile
  - Virtual Machine

Agenda for Final Presentation

- Project
- Technology Overview
- Motivation
- Problems
- Programming
- ?

Motivation

- Motivation
- Mobile Platforms
- J2ME Platform
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There are over One billion cell phone users worldwide. They would like to use your applications.
**Motivation**

- Wireless Revolution
  - Growing number of wirelessly connected information appliances
  - But, how much?

**The Fact Sheets**

- Mobile phone makers are expected to sell 670 million handsets to distributors this year, up from around 530 million units in 2003 (IDC).
- Worldwide PC unit shipments in 2003’s 154.5 million units. IDC predicted shipments of 170 million units in 2004 (IDC).

**Mobile Platforms**

- Motivation
- Mobile Platforms
- J2ME Platform
  - Configuration
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**OS Independent**

- JAVA
  - Sun Microsystems
  - J2ME: http://java.sun.com/j2me/
  - Supported by Nokia, Motorola, Samsung, Sony Ericsson and 20+ companies
  - Supported devices: http://j2me.sun.com/webapps/device/device

- C/C++
  - Qualcomm
  - Supported by
    - Verizon Wireless: http://getbrew.verizon.com/
    - All(KDDI) in Japan: http://www.au.kddi.com/

- Flash
  - Macromedia
  - Flash Lite
  - Supported devices: http://www.macromedia.com/mobile/supported_devices/flashlite/
Mobile Platforms

- OS Dependent
  - C++
    - Symbian: Series60, Series90, 9200 Series, UIQ
    - Palm: Treo600
    - Windows Mobile: MIPx220

J2ME Platform

- Why J2ME and not other platforms?
  - Number of devices
  - Java based
  - End to end solution

J2ME Platform Components

- J2ME Platform Components
  - MIDP
  - CLDC
  - KVM
  - Additional libraries (GUL/Storage)
  - Smallest common libraries
  - The execution engine
What is a KVM?

The KVM (also known as the K Virtual Machine) is a compact, portable Java virtual machine intended for small, resource-constrained devices such as cellular phones, pagers, personal organizers, mobile Internet devices, point-of-sale terminals, home appliances, or other embedded devices.

What is a J2ME Configuration?

A configuration defines the minimum Java technology that an application developer can expect on a broad range of implementing devices (CLDC, CDC).

Configurations are specified via the Java Community Process (JCP) initiative (Sun Microsystems).

Connected, Limited Device Configuration (CLDC)

Targeted at devices with:
- 160KB to 512KB total memory available for Java technology
- Limited power (battery), connectivity (often intermittent), UI (small screen)
What Is a J2ME Profile?
- Java technology which supplements a configuration to provide capabilities for a specific vertical market or device type
- Defined through Java Community Process initiative
- Subject to compatibility tests
(Sun Microsystems)

J2ME Profiles
- **J2ME Mobile Information Device Profile (MIDP)**
  - Application runtime environment for wireless devices based upon CLDC
- **J2ME Foundation Profile**
  - Base profile for non-GUI networked devices based upon CDC

Thank you.