JAVA™ 2 Platform, Micro Edition

The Market Need
In the post-PC era, the market for network-connected devices continues to grow at an enormous rate. While new classes of devices like smart cellular telephones, pagers, and PDAs proliferate, traditional consumer electronics including televisions, VCRs, CD players, and game machines are also becoming smarter and gaining new capabilities. Whether these devices are new or just more powerful versions of existing products, all are becoming increasingly interconnected across a network.

In the six years since Sun’s introduction of the Java™ platform, Java technology has become an essential component for getting work done on the network. With the advent of PersonalJava™, EmbeddedJava™, and other Java technologies, the benefits of the Java platform are being extended to screen phones, set-top boxes, and even deeply-embedded devices. In order to provide compelling Java technology solutions for manufacturers building devices across the spectrum from palmtops to desktops, Sun introduced Java™ 2 Platform, Micro Edition (J2ME™) software.

The Java 2 Platform, Micro Edition Solution
J2ME is a new, very small Java application environment. It is a framework for the deployment and use of Java technology in the post-PC world. Sun will provide J2ME software in configurations suitable for a variety of market segments.

Configuration
A configuration is comprised of a virtual machine, core libraries, classes and APIs. Currently, there are two J2ME configurations: the Connected Limited Device Configuration (CLDC) and the Connected Device Configuration (CDC).

CLDC is designed for devices with constrained CPU and memory resources. Typically, these devices run on either a 16- or 32-bit CPU and have 512 Kbytes or less memory available for the Java platform and applications.

Highlights
- Provides Java technology solutions for building devices across the spectrum — palmtops to desktops
- Simple for consumers to use, programmers to develop to, and service providers to deploy
- Delivers the foundation for intelligent and dynamic networked content
- Offers a technology framework focused on any device utilizing it
- Provides the networked consumer with a technology framework that crosses the device spectrum
- Enables anytime, anywhere deployment of services
CDC is designed for next-generation devices with more robust resources. Typically, these devices run on a 32-bit CPU and have 2 Mbytes or more memory available for the Java platform and applications.

Built into this core platform is the capability to receive not just application code, but libraries that form part of the Java 2 platform, itself. This enables a J2ME environment to be dynamically configured to provide the environment that the consumer needs to run an application, regardless of whether all the Java technology-based libraries necessary to run the application were present on the device when it shipped. Configuration is performed by server software running on the network. The network architecture and configurability of J2ME software, combined with Java technology's inherent ease of development, simplifies the creation and deployment of intelligent, dynamic Java content.

**Profile**

To further enhance the value of the J2ME environment and assure its ability to provide a focused solution to particular device categories and industries, Sun allows industry groups to define Java technology-based profiles specific to their industry. These profiles are specifications that define a Java technology-based platform suited to a specific industry or class of device. Industries benefit from the extensive flexibility in defining only what they need for a class of device.

A profile targeted at the wireless market and utilizing CLDC can retain a very small footprint, consume little power, and provide as much capability as is needed for handheld devices.

Devices that require more capable environments can receive profiles that provide additional functionality and are based on CDC. All profiles share a J2ME base as well as the ability to safely download code onto a device and configure the Java environment.

Profiles are defined through the Java Community Process℠, and may be initiated by industries without Sun's direct involvement. Tailored Java environments can be extended to diverse device types and industries not addressable by a single company or group of companies.

From PDAs to desktops, the reach of Java technology across the device spectrum and the simplicity of J2ME device-based deployment is key to Sun’s strategy of enabling anytime, anywhere service deployment.

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### Profiles

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