



IBM Pervasive Computing Division



IBM / Palm Webcast September 8 & 9, 2003

<http://www.ibm.com/software/wireless/wme/palmevent.html>



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Agenda

- Welcome & Introductions
- Developers Update
 - ▶ Deliverables & Roadmaps
 - ▶ Targeting Embedded Java on Palm
- PartnerWorld™ for Developers
- Q & A

Angus McIntyre, IBM

Nathan Freitas, Palm

Bill Russell, IBM

Robb Verna, IBM PWD



Extending Enterprise Applications to Palm Devices

- Partnership combines the Power of WebSphere with the convenience of Palm Devices
 - ▶ Database – DB2e
 - ▶ Messaging – MQe
 - ▶ Collaboration - Notes
 - ▶ e-business infrastructure – WebSphere Everyplace Access
 - ▶ J2ME™ Programming Model – WebSphere Micro Environment

- In this session, you will interact with the development teams
 - ▶ Roadmap of what will become available - Nathan Freitas (Palm Solutions)
 - ▶ How you can use the toolkits to build test and deploy applications – Bill Russell (IBM PvC)
 - ▶ Information on how to join IBM's developer community – Robert Verna (IBM PartnerWorld)
 - ▶ Details of where to get – tools, runtimes, help and education

- June 2003: “Palm Solutions Group has licensed IBM WebSphere Micro Environment ... Java-technology applications will soon run directly on Palm Tungsten handhelds.”
 - ▶ ... the story continues ...



IBM Pervasive Computing Division



Developers Update: Deliverables & Roadmaps

Nathanial Freitas
Senior Manager, Java
Palm Solutions Group



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J2ME Now on Tungsten Handhelds

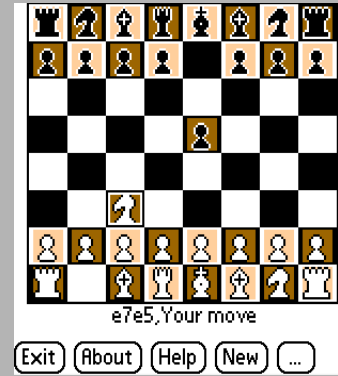
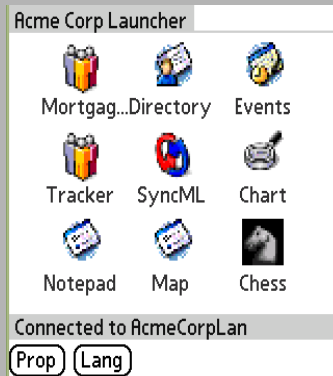
Tungsten handhelds now include IBM's WebSphere® Micro Environment, a Java (J2ME) software runtime

Tungsten line can now run thousands of existing J2ME applications

Tungsten developer community expands with more than 3 million Java developers

Developers can use existing J2ME-compatible development environment (IDES) with free standalone developer toolkit

*thanks to Spruce Technologies and Markus Goldkamp



Bronx Borough, NY	Estimate	Lower	Upper
Total:	33,967	31,76	36
Mortgage, contrac	21,800	19,86	23
Second mortgage	2,911	2,112	3,
Second mortgage	1,371	728	2,
Home equity loan	1,540	1,019	2,
Both second mortg	103	4	20
No second mortga	18,786	17,03	20
Housing units witho	12,167	10,68	13



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Why Java?

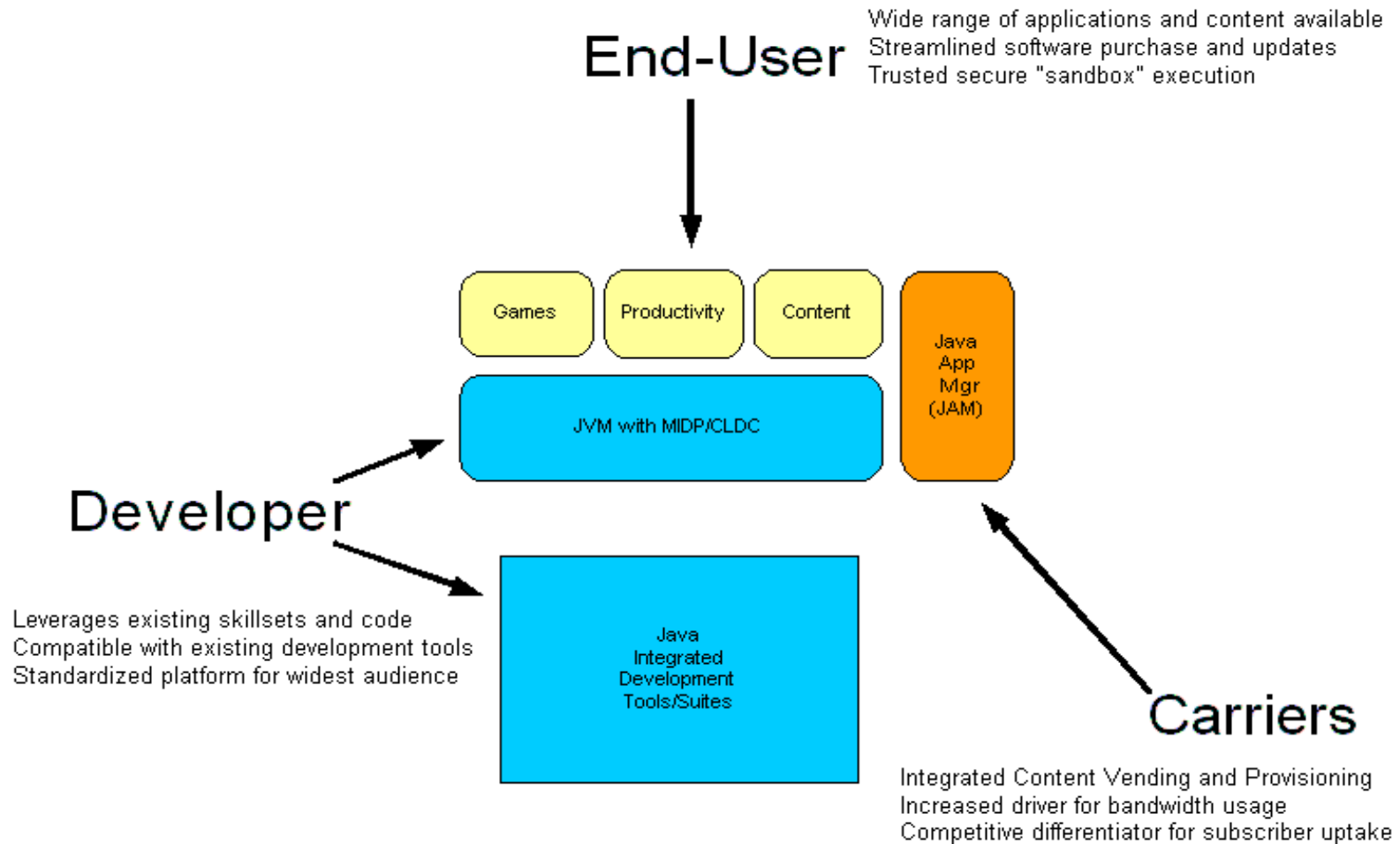


- **STANDARDS:** Java technology is on 100 percent of the standards lists of Fortune 500 companies
- **PLATFORM:** 78 percent of executives view Java technology as the best platform for Web services (source: Giga, Computerworld).
- **LEVERAGED:** More than 150 Java technology-enabled models are available from 22 manufacturers
- **CONNECTED:** The Java platform is the leading platform for mobile applications and services, with more than 53 carrier deployments and 11 trials around the world

*data from JavaOne 2003 Keynotes



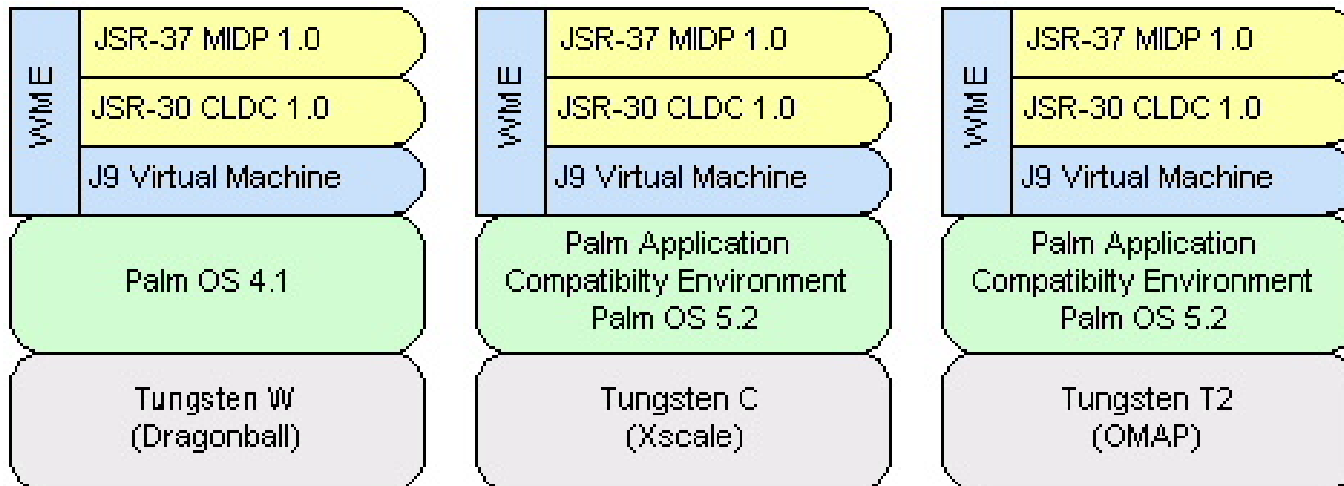
Benefits for Many Segments





WebSphere Micro Environment on Tungsten Handhelds

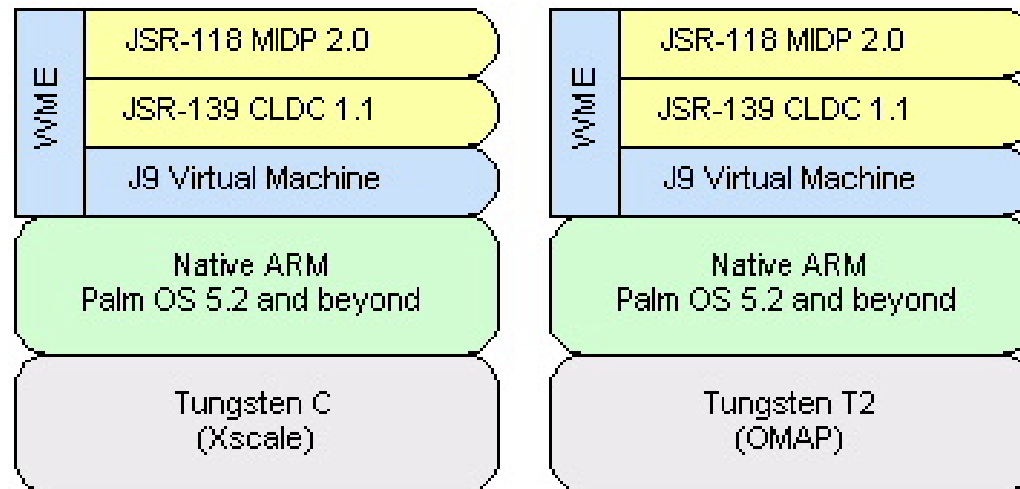
- Initial release, CLDC 1.0/ MIDP 1.0 certified
 - Tungsten-enabled version of existing WebSphere Micro Environment; focus is on providing support for base JSRs and developer tools
 - Support for Palm OS 4.1 and Palm OS 5.2 (PACE), Tungsten W, C and T2 handhelds
 - Available to developers from www.palm.com/java on to begin developing and testing Java apps on Tungsten handhelds





WebSphere Micro Environment on Tungsten Handhelds

- Subsequent release will be CLDC 1.1 and MIDP 2.0 certified
 - ▶ Support for Palm OS 5.2 (native ARM): Tungsten C, T2 and future handhelds
 - ▶ Focus is on performance optimizations
 - ▶ Will be broadly available for end users to deploy J2ME-based applications and solutions





MIDP Possibilities on Tungsten

- Enhanced user experience with rich multimedia capabilities and high resolution screen, able to render complex tables, charts, and PNG images
- Superior usability and options for data entry
 - ▶ Five-way navigation, integrated keyboard, Graffiti® 2, and optional portable keyboards
- Multiple wireless network support (Bluetooth, GPRS, 802.11b)
- Greater memory and storage than most handsets. For example:

	Tungsten W	Tungsten C	Tungsten T2
Dynamic Heap	1 MB	4 MB	1 MB
Storage Heap	14.8 MB	51MB	29.5 MB

- MIDlet application can launch from and utilize an external Secure Digital (SD) storage card (with sizes up to 1GB)



Richer User Interfaces with MIDP

Acme Corp Launcher

Connected to AcmeCorpLan

Prop Lang

Palm OS Launcher – in Java!

Name	Information
Accessories	www.palm.com
Smith, Marvin	(646) 555-9876W
Freitas, Franco	franco@freitas.co
Accessories	www.palm.com
Oaktree, Jon	(415) 555-1212W
Rinpoche, Tenzin	tr@tibet.org
PalmOne Support	www.palmone.com
Johnson, Pat	(917) 555-1212W
Patukey, George	gov@gotham.gov

Close

AddressBook Look-a-Like

S	M	T	W	TH	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Week Close

DateBook Look-a-Like

Name John Smith

Email john@smith.com

Organization Smithies

How satisfied were you with:

the show content

▼ Somewhat Satisfied

the diversity of the speakers

▼ Extremely Satisfied

showcase exhibits

New Save Settings ...

Survey Form built with LCDUI

Pen Close Line Rect ...

MacDraw Reborn!

Fps: 32.5

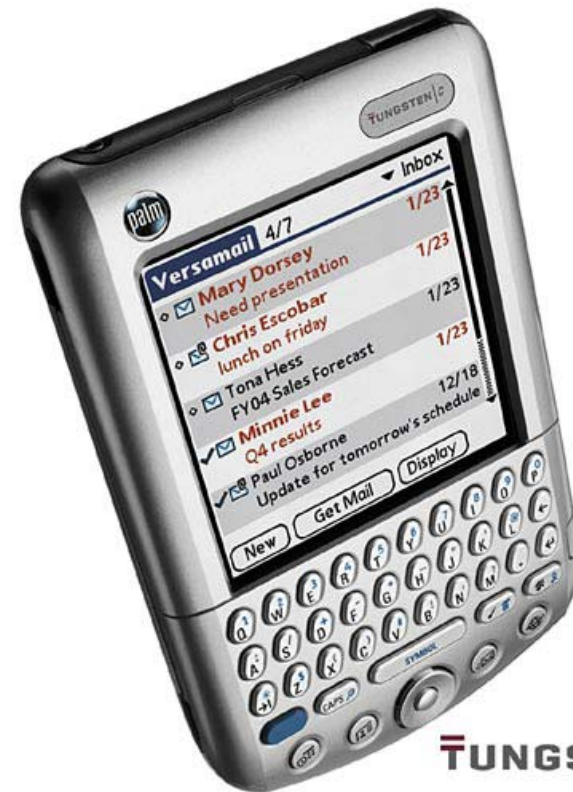
Exit Restart Upload result ...

3D Cube Test in JBenchmark



Tungsten Design Advantages Over Mobile Phones

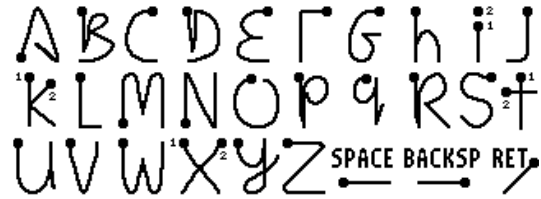
- **High resolution screen**
(320x320 pixels, 16-bit color) makes text, numbers and images ultra-sharp
- **High capacity battery**
A full day of work with wireless active
- **Thumb keyboard and Five-Way Nav**
rapid data entry and control
- **Expansion cards** can add memory, software, and SD/IO devices like digital cameras



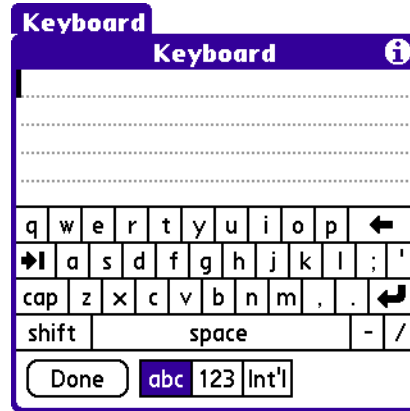
TUNGSTEN | C



Differentiator: Advanced Data Capture, Entry, Acquisition



Graffiti®2 Software



On-screen keyboard



Synchronize with PC



Beam via infrared



Ultra-slim keyboard



Integrated keyboard



What Palm Is Making Available and When?

- **WebSphere Micro Environment Toolkit for Palm OS Developers**
 - Available NOW at no charge through <http://palm.com/java>
 - Includes development-licensed WebSphere Micro Environment runtime, JarToPRC utility, and support for standards-based debuggers
 - Standalone utility, for use with any J2ME-compliant development environment

- **WebSphere Micro Environment Runtime (End-User License)**
 - Available soon for End-User Downloads in through Palm Support site
 - No-Charge download for any Tungsten handheld purchased after release date
 - Bundled with all future Palm Tungsten devices



PluggedIn and Palm.com/java

Palm's PluggedIn website (pluggedin.palm.com) supports developers working with Palm-branded handheld devices, and provides toolkit and device simulator downloads.

The Java section (palm.com/java) provides Java-specific content, articles, examples, and links.

The WebSphere Micro Environment Toolkit for Palm OS Developers is available from either of these websites starting today.

The screenshot shows the PalmOne developers website. The header includes the PalmOne logo, navigation links for 'home' and 'developers', and an 'INTERNATIONAL' link with a globe icon. The main content area is titled 'PluggedIn: Java' and includes a breadcrumb trail: '< Home < Developers < PluggedIn Program < Java'. Below the title are links for 'Background', 'Runtime Rundown', 'Development Details & Tips', 'J2ME Standards', and 'Resources'. The main text states: 'Create Java applications on the world's leading handheld! Palm has licensed IBM's WebSphere Micro Environment (WME), a fully compliant J2ME runtime. WME will be available for all future Palm Tungsten handhelds. WME passed the Java Community Process Technology Compatibility Kit (TCK) certification, and is compliant with the Connected Limited Device Configuration (CLDC) and Mobile Information Device Profile (MIDP) specifications. It will be fine-tuned specifically for maximum performance on Palm Tungsten handhelds. Java Developers can use their existing development environment. Palm will make available a free standalone developer toolkit for use with any J2ME-compatible development environment. Availability of the J2ME platform for Palm Solutions Group devices expands the capabilities available to mobile application and solutions developers.' On the left side, there is a search box with a dropdown menu set to 'Developers' and a 'start search' button. On the right side, there is an 'Announcements' box with the text: 'On September 8, 2003, IBM and Palm will co host a web event, where we invite the Palm and IBM development communities to interact with the our development teams'. Below the announcement is the IBM WebSphere Micro Environment logo and a small Java logo.

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Palm's Future Plans for Java

- Palm Solutions Group and Handspring merging to become palmOne (pending shareholder approval)
- Supporting J2ME application developers through PluggedIn program and Java developer and marketing events
- Working internally and with partners to expand Java support
 - ▶ PDA Optional Extensions, Bluetooth, Web Services, Wireless Messaging, Mobile Media....
 - ▶ Other IDE vendors to integrate toolkit
- Continuing to plan our long-term Java roadmap
 - ▶ New devices, New OS (Palm OS 6), New JSRs (CDC, Personal Profile)



IBM Pervasive Computing Division



Developers Update: Targeting Embedded Java on Palm

Bill Russell
Embedded Java Solutions Team Lead
IBM Pervasive Computing Division



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What Is Available Now

- WebSphere Micro Environment
 - ▶ CLDC 1.0
 - ▶ MIDP 1.0
 - ▶ Palm OS 4.1 and Palm OS 5.2 (on PACE)
 - ▶ Included with both packages below
- WebSphere Studio Device Developer
 - ▶ Wizard-based MIDlet suite development
 - ▶ Integrated Palm application packaging
 - ▶ Integrated launching and debugging
 - ▶ Get it from IBM
- WebSphere Micro Environment Toolkit for Palm OS Developers
 - ▶ Application packaging utility ("JarToPrc")
 - ▶ Debug-enabling utility
 - ▶ Get it from Palm



What You Can Do With It

- Develop, package, and test:
 - ▶ Standard MIDlets
 - ▶ CLDC main() applications
- Features
 - ▶ High-performance graphics
 - ▶ HTTPS connector
 - ▶ Custom application icons
 - ▶ Fast PNG decoding
 - ▶ Image pre-translation
 - ▶ Five-way navigation



WebSphere Micro Environment Target Runtime

- Two production components
 - ▶ J9_vm_bundle.prc – the CLDC VM
 - ▶ Midp21.prc – the MIDP/CLDC class libraries
- Two debugging components
 - ▶ J9_vm_debug_bundle.prc – the VM's debug module
 - ▶ J9pref.prc – Palm preferences panel for configuring debug sessions

- Where in the distribution?

Toolkit:

IBM/WebSphere Micro Environment/prc

Device Developer:

wsdd5.0/ive-2.1/runtimes/palmos/68k/ive/bin

Info	
Device:	▼ Handheld
Palm OS® software v. 4.1	
IrDA Library	v. 4.0
J9 Java VM	v. 0.0
J9 MIDP Bundle	v. 1.0
J9 VM Bundle	v. 1.0
J9 VM Debug Bundle	v. 1.0
Loopback NetIF	v. 1.0
Lz77	v. 4.0
Done	Version Size Records



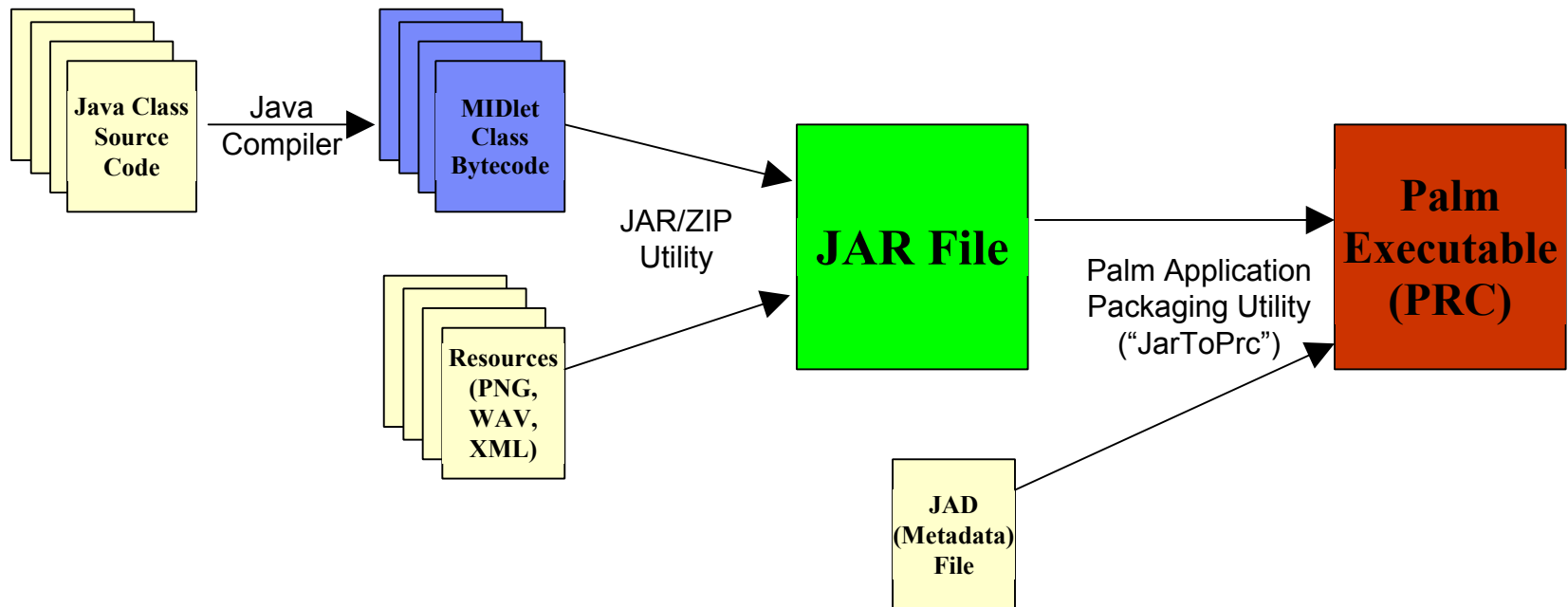
WebSphere Micro Environment Toolkit for Palm OS Developers

- If you already have a J2ME IDE you like, use the Toolkit to easily integrate support for WebSphere Micro Environment
 - ▶ Create your MIDlet suite as usual
 - ▶ Add a step to the end of the automated build process to convert JAR/JAD to WebSphere PRC

- Enables developers to perform two functions:
 1. Package apps for WebSphere on Palm OS
 2. Debug apps on WebSphere on Palm OS using standard Java debugger



Toolkit: From .java to .prc





Toolkit: App Packaging – “JarToPrc” Graphical Interface

Standard JAR
and JAD go in
here

Specify a name for your
Palm application, or let
us find it in the JAD file

Add custom application
icons for Palm Launcher
icon and list views

Put your
registered Creator
ID here, or leave
blank for testing

IBM WME Palm Developer's Toolkit : PRC Builder

Fill in the JAR and/or JAD File field. The JAD file may be omitted if it is included in the JAR, or the JAR file may be omitted if the JAD contains a URL pointing to the JAR. You may find the file using the Browse button, or type in a URL (http://...).

Optional: The Application Name is the name that appears under the icon in the Palm Application Launcher. This may be omitted if it is already specified in the JAD file.

Optional: The creator ID is the 4-character unique ID that the Palm OS uses to group an application and its data files together.

JAR File or URL: Browse...

JAD File or URL: Browse...

Application Name:

Large Icon File: Browse...

Small Icon File: Browse...

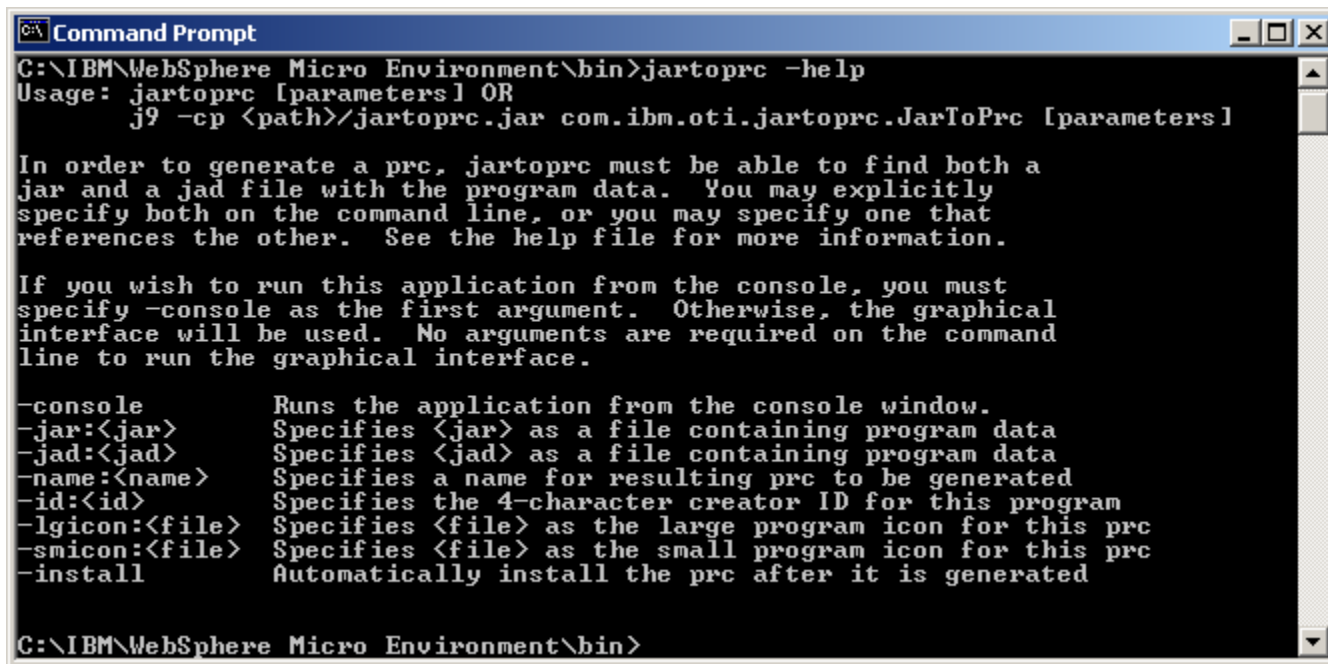
Creator ID:

Generate PRC Generate and Install PRC Close



Toolkit: App Packaging – “JarToPrc” Command-Line

Same functionality in graphical and command-line modes:



```
Command Prompt
C:\IBM\WebSphere Micro Environment\bin>jartoprc -help
Usage: jartoprc [parameters] OR
       j9 -cp <path>/jartoprc.jar com.ibm.oti.jartoprc.JarToPrc [parameters]

In order to generate a prc, jartoprc must be able to find both a
jar and a jad file with the program data. You may explicitly
specify both on the command line, or you may specify one that
references the other. See the help file for more information.

If you wish to run this application from the console, you must
specify -console as the first argument. Otherwise, the graphical
interface will be used. No arguments are required on the command
line to run the graphical interface.

-console      Runs the application from the console window.
-jar:<jar>    Specifies <jar> as a file containing program data
-jad:<jad>    Specifies <jad> as a file containing program data
-name:<name>  Specifies a name for resulting prc to be generated
-id:<id>     Specifies the 4-character creator ID for this program
-lgicon:<file> Specifies <file> as the large program icon for this prc
-smicon:<file> Specifies <file> as the small program icon for this prc
-install     Automatically install the prc after it is generated

C:\IBM\WebSphere Micro Environment\bin>
```

Use command-line mode to integrate with your IDE or build-script



Toolkit: App Packaging – JarToPrc Files

- Input:
 - ▶ Sample.jad
 - ▶ Sample.jar

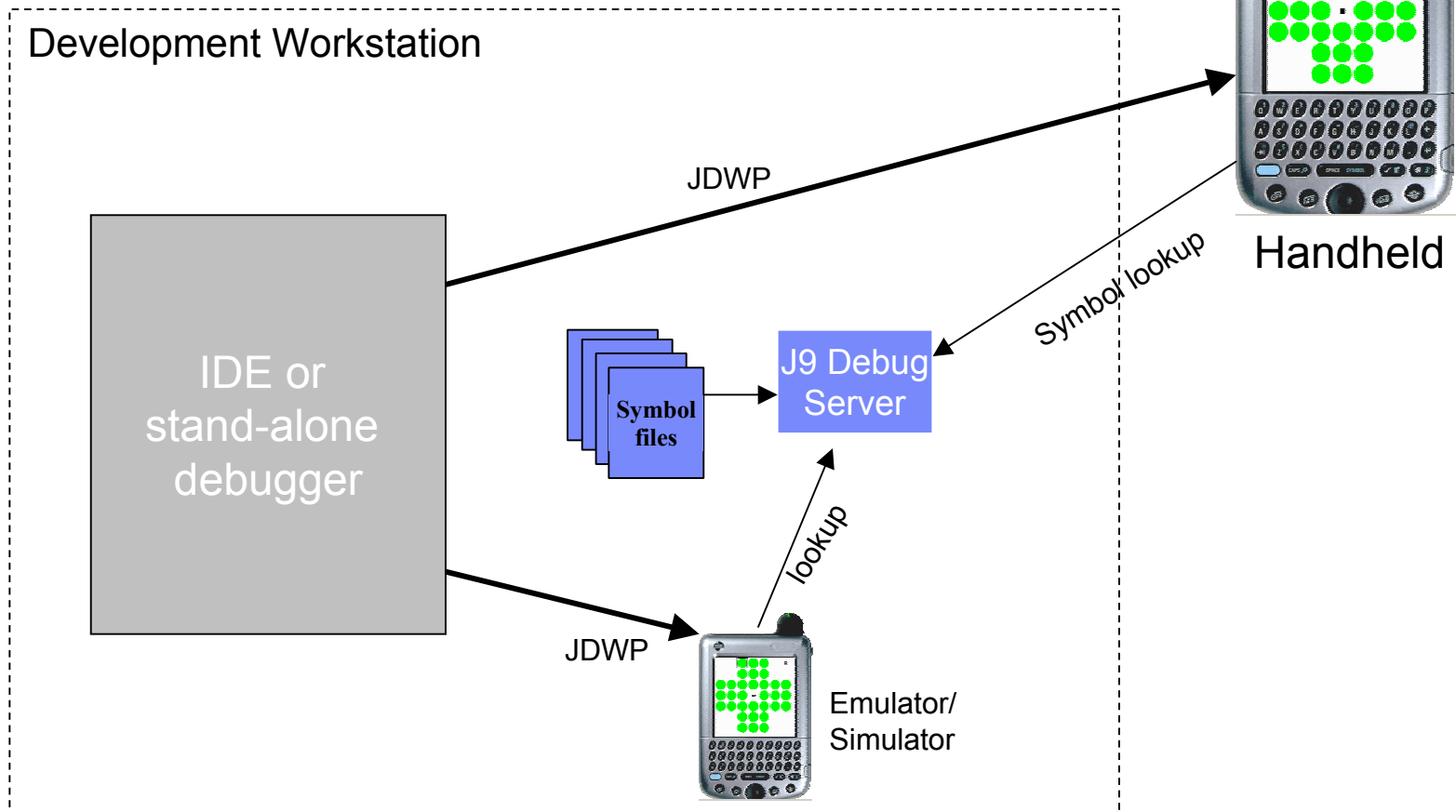
- Output
 - ▶ Sample.prc
 - ▶ Sample.sym
 - ▶ Sample1.sym
 - ▶ Sample2.sym
 - ▶

Sample.prc: your application, ready for installation on handheld
Sample(n).sym: off-target symbol files for debugging



Toolkit: Debugging

Use your preferred JDWP-compliant debugger

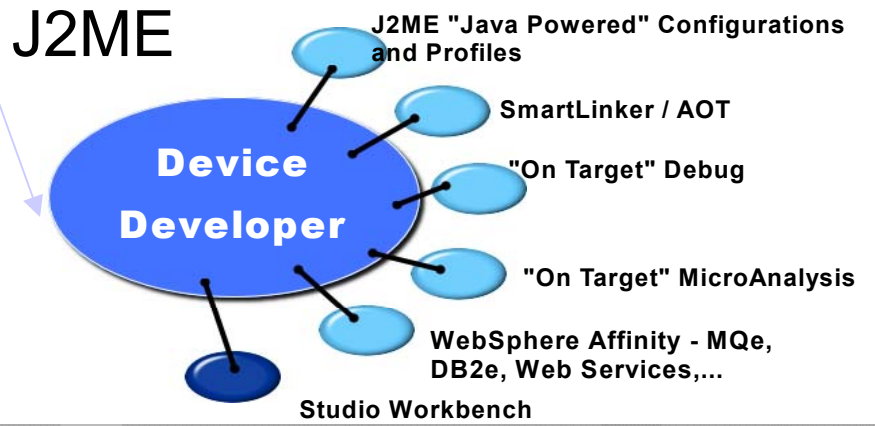
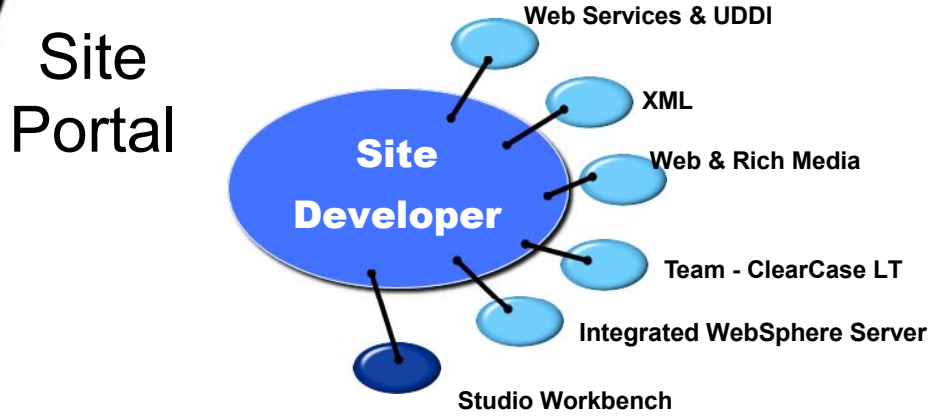
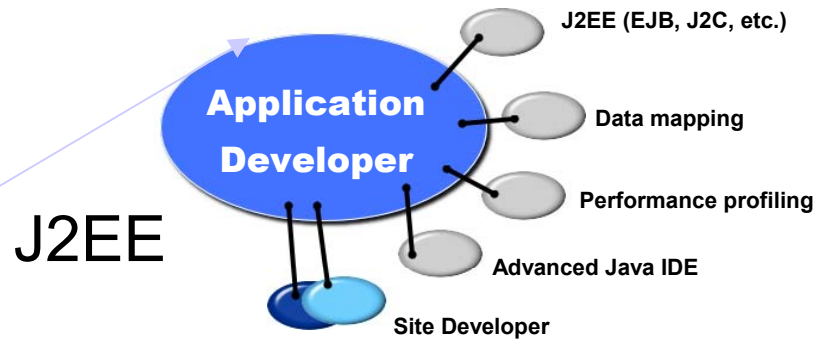




WebSphere Family of A/D Tools



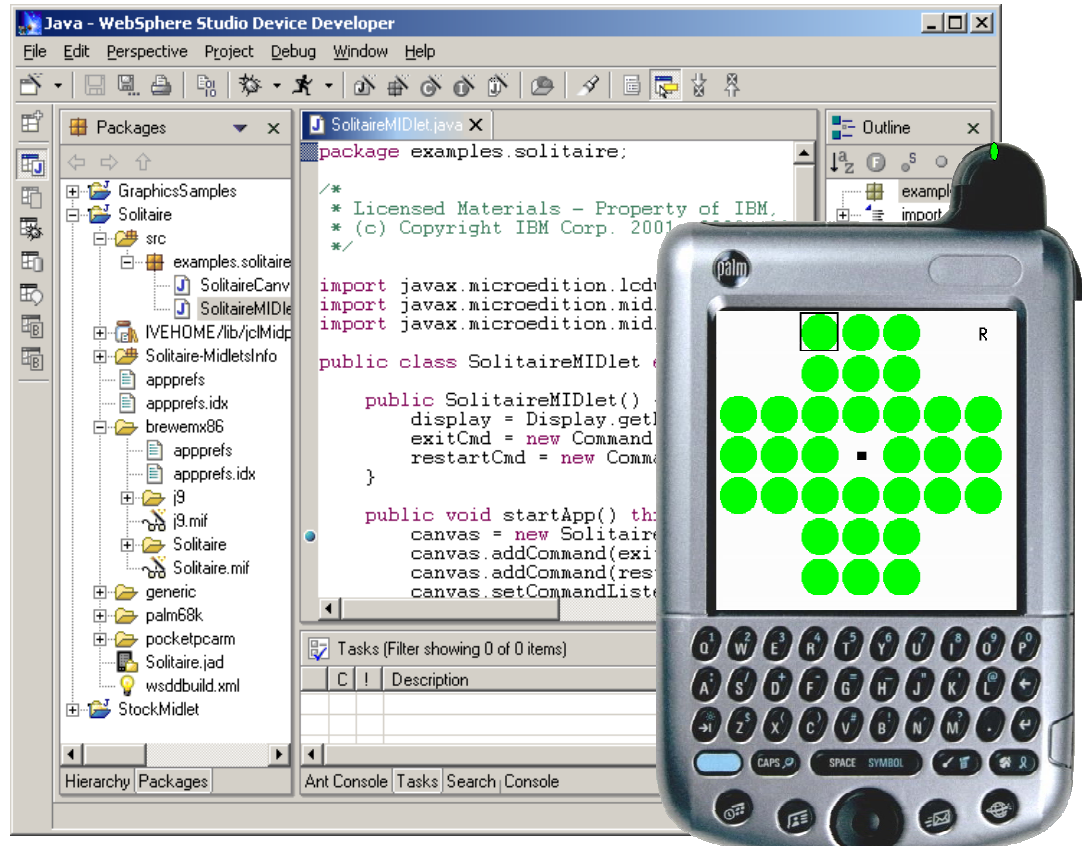
- Open standards based
 - ▶ Powered by Eclipse technology
- Productivity through integration
 - ▶ Tools plug into each other
 - ▶ IBM, OEM and ODM
- Strong version control





WebSphere Studio Device Developer

- Complete IDE
 - ▶ Create, edit
 - ▶ Optimize
 - ▶ Debug / Test
 - ▶ Emulation
 - ▶ Integrate
 - ▶ Version Control I/F
- Tool Plug in interface
- Runtime Library updates from web





Configure a Device

Menu: Devices → Configure...

The screenshot shows the WebSphere Studio Device Developer interface. The main window displays a Java IDE with the following components:

- Package Explorer:** Shows a project named 'WME-Example-MIDP-Solitaire' with a source folder 'src' containing sub-packages 'examples.solitaire' and 'palm68k'. Files include 'SolitaireCanvas', 'SolitaireMIDlet.java', 'SolitaireHelp.txt', 'jxeLink.rules', 'Solitaire.jad', and 'wsddbuild.xml'.
- Code Editor:** Displays the source code for 'SolitaireMIDlet.java'. The code includes package declarations, imports for 'java.io.*', 'javax.microedition.lcdui.*', and 'javax.microedition.midlet.*'. It defines a 'public class SolitaireMIDlet extends' and includes a constructor 'public SolitaireMIDlet()'.
- Log Console:** Shows a message: 'jxeLink target is up to date: smartlink.palm68k\Solitaire'. Below it are several file paths related to the build process.
- Device Configurations Dialog:** A modal dialog titled 'Device Configurations' is open. It has a 'Devices' tree on the left with 'Palm Tungsten W Emulator' selected. The 'Device name' field contains 'Palm Tungsten W Emulator'. The 'Palm emulator executable' field is set to 'E:\TungstenW\Emulator_Internal.exe'. The 'Emulator run arguments' and 'Emulator debug arguments' fields are empty. The 'Connection properties' section includes fields for 'Host' (localhost), 'Port' (8096), 'Debug timeout (ms)' (3000), and 'JRE (used for debug proxy)' (Default). The 'Proxy options' field is also empty. Buttons for 'New', 'Delete', 'Apply', 'Revert', 'OK', and 'Cancel' are visible at the bottom.



Configure a Build

Double-click on project build script (wsddbuid.xml)

The screenshot shows the 'Create New Ant Build Target' dialog box in the WebSphere Studio Device Developer IDE. The dialog is titled 'MIDP build' and contains the following fields:

- Jad file: Solitaire.jad (with a 'Browse...' button)
- Platform: J9 for Palm 68k (dropdown menu)
- Buildname: Solitaire (text field)

The background shows the IDE interface with the Package Explorer on the left, displaying the project structure. The wsddbuid.xml file is selected in the Package Explorer. The main editor area shows the wsddbuid.xml file content. The 'Builds' and 'Tasks' panels are visible at the bottom of the IDE.



Configure a Launch

Menu: Run → Run...

The screenshot shows the WebSphere Studio Device Developer interface. The Package Explorer on the left displays a project named 'WME-Example-MIDP-Solitaire' with a source folder containing files like 'SolitaireCanvas', 'SolitaireMIDlet.java', and 'SolitaireHelp.txt'. The main editor shows the 'SolitaireMIDlet.java' file. The 'Launch Configurations' dialog box is open, showing a list of configurations with 'Solitaire on Tungsten W Emulator' selected. The configuration details are as follows:

- Name: Solitaire on Tungsten W Emulator
- Launch Configurations: MIDlet Suite (selected), Java Application, JUnit, Micro Analyzer Configure, Remote Micro Analyzer C
- Project: WME-Example-MIDP-Solitaire
- MIDlet Suite: palm68k\Solitaire.prc
- Device or JRE: Palm Tungsten W Emulator

Buttons at the bottom of the dialog include 'Apply', 'Revert', 'Run', and 'Close'. The 'Run' button is highlighted.



Developers' Next Steps

WebSphere Studio Device Developer users and others:

- Download and install Device Developer 5.5 (if you don't already have it):
<http://www.ibm.com/embedded/>
- Use *Software Updates* feature to upgrade to 5.6 Tech Preview
 - ▶ Installation instructions at
http://www.ibm.com/software/wireless/wsdd/upgrades_migrations.html
- Load the Solitaire example:
 - ▶ File → New → Project...
 - Examples → J2ME for J9 → CLDC/MIDP → MIDP – Solitaire
- Or create your own MIDlet:
 - ▶ File → New → Project...
 - J2ME for J9 → Create MIDlet Suite
- Create Device, Build, and Launch configurations (previous three slides)
- Run and debug application!
- Participate in developer community at:
 - ▶ <news://news.software.ibm.com/ibm.software.websphere.studio.device-developer>
 - ▶ <http://pluggedin.palm.com>



Developers' Next Steps

WebSphere Micro Environment Toolkit

If you already have an IDE you like:

- Download WebSphere Micro Environment Toolkit for Palm OS Developers:

<http://palm.com/java>

- Read the User Guide:

- ▶ IBM/WebSphere Micro Environment/UserGuide.doc

- Follow the User Guide to package, run, and debug the sample

- Integrate the Toolkit with your development environment

- Package, run, and debug your MIDlet!

- Participate in developer community at:

- ▶ <http://pluggedin.palm.com>

- ▶ <news://news.software.ibm.com/ibm.software.websphere.studio.device-developer>



IBM Pervasive Computing Division



PartnerWorld Programs & IBM Resources for Developers

Robb Verna

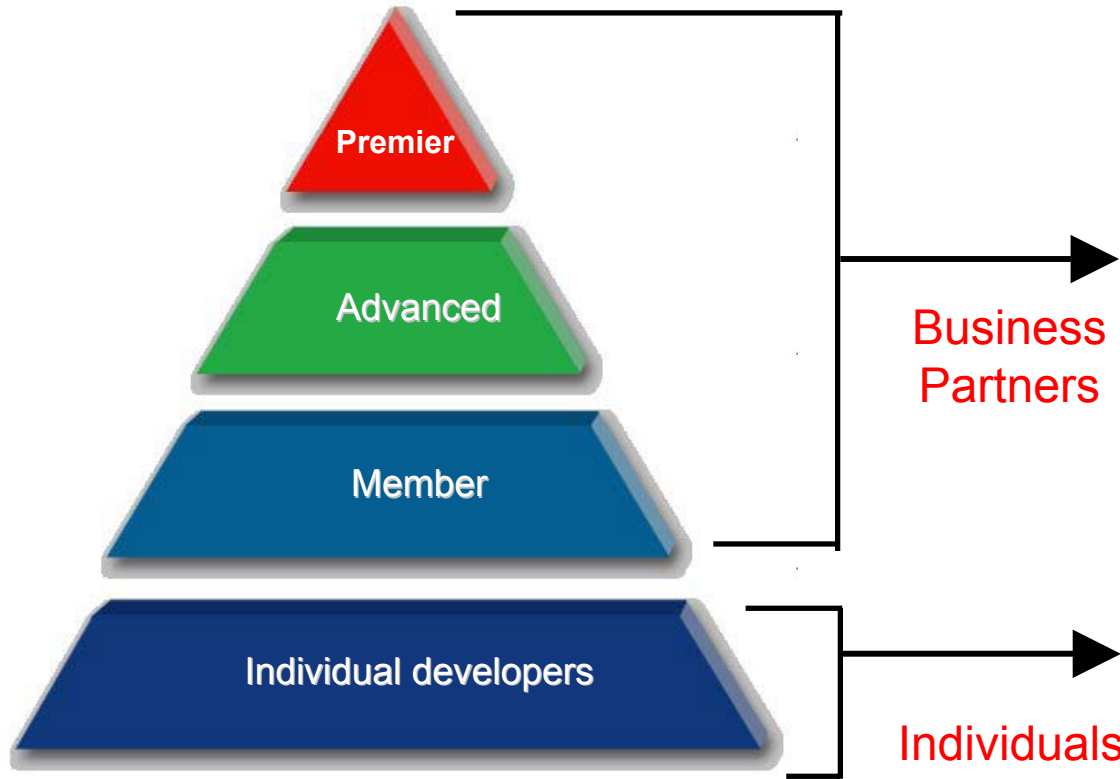
Program Manager, PartnerWorld for Developers



@.business on demand software



Developer Resources From IBM



The screenshot shows the IBM PartnerWorld website. The navigation bar includes 'Home', 'Products & services', 'Support & downloads', and 'My account'. The main content area features a sidebar with categories like 'Selling resources', 'Marketing resources', and 'Technical resources and support'. The main content area has a headline 'PartnerWorld moves to simplify IDs and passwords' and a section titled 'About PartnerWorld membership' with links for 'Benefits', 'Join to become an IBM Business Partner', and 'User IDs and passwords, or update your profile'. There is also a 'Shortcuts' section with links for 'Selling and marketing', 'Technical resources', 'Products and technologies', and 'Other resources'.

The screenshot shows the IBM developerWorks website. The navigation bar includes 'IBM home', 'Products & services', 'Support & downloads', and 'My account'. The main content area features a sidebar with categories like 'Technology zones' and 'Product domains'. The main content area has a headline 'Unraveling spaghetti code' and a section titled 'Cyber guerilla networking' with a link to 'Tutorials and training'. There is also a 'Newsletters' section with a link to 'Subscribe to dw's FREE weekly newsletter'.



developerWorks Resources

IBM's technical resource for individual developers:

- Tutorials
- Articles
- Tools
- Development tips
- White papers
- Forums
- Downloads
- developerWorks Journal newsletter *

The screenshot shows the IBM developerWorks website interface. At the top, there is a search bar with the text "Search for:" and a dropdown menu set to "within All of dw". Below the search bar is a navigation bar with links for "IBM home", "Products & services", "Support & downloads", and "My account". The main content area features a "Technology zones" sidebar with categories like Grid computing, Java™ technology, Linux, Open source projects, Security, Web architecture, Web services, Wireless technology, and XML. The main content area displays an article titled "Unraveling spaghetti code" with a red abstract image. Below the article are several links to other resources, including "Cyber guerilla networking", "UI development with JSF", "Roll your own graphs with Perl/Tk", and "Go-ForIt performance and capacity". A "Newsletters" section offers a subscription to the "dw's FREE weekly newsletter" with an email input field and a "Go" button. At the bottom, there is a "What's NEW in" section.

Technology info:

- Java
- Linux
- Web development
- Wireless
- XML

IBM Product info:

- WebSphere
- DB2
- Lotus
- Tivoli
- Rational

* Developers can contribute articles & earn money!



PartnerWorld for Developers

- IBM's technical resource for commercial solution developers.
- Objectives:
 - ▶ Faster time to market
 - ▶ Lower cost of doing business
 - ▶ Broader business opportunities
- Benefits & offerings:
 - ▶ Marketing & sales
 - ▶ Technical support
 - ▶ Education & training
 - ▶ Business incentives
 - ▶ Financing
 - ▶ Relationship management

The screenshot shows the IBM PartnerWorld website interface. At the top, there is an IBM logo and a search bar. Below the navigation bar, the main heading is "PartnerWorld". The left sidebar lists various resource categories. The main content area includes sections for "About PartnerWorld membership" with links to "Benefits", "Join", "User IDs and passwords, or update your profile", and "Business Partner strategies". There is also a "Shortcuts" section with a grid of links categorized into "Selling and marketing", "Technical resources", "Products and technologies", and "Other resources". On the right side, there are buttons for "Work with Business Partners", "Find a solution", and "Team with other Business Partners", along with a "Regional PartnerWorld" section featuring a "Select a country" dropdown and a "Remember this choice" checkbox.



Benefits for PartnerWorld for Developers Participants

- Marketing & Sales:
 - ▶ Global Solutions Directory
 - ▶ Business Partner Connections
 - ▶ Campaign Designer
 - ▶ Media Kits
- Technical Support:
 - ▶ IBM Developer Resources
 - ▶ Email & Voice tech support
 - ▶ Development tools & support
 - ▶ Brand sponsored offerings
- Education & certification:
 - ▶ Developer Learning Center
 - ▶ SPC events & workshops
 - ▶ Webcasts
- Other BP resources:
 - ▶ Newsletters
 - ▶ Business services discounts
 - ▶ IBM Financing



Programs of Interest to Palm Developers:

- **WebSphere Studio Device Developer Workshops**
 - ▶ 3-day hands-on sessions, WW venues, free to qualified partners
 - ▶ Learn Eclipse-based tools, WebSphere Micro Environment, WebSphere Programming Model
 - ▶ New labs target Java Midlets to run on Palm Tungsten devices
 - ▶ More information at: www.ibm.com/software/pervasive/education/workshop_a.shtml
- **Visibility on IBM Pervasive Computing website**
 - ▶ Opportunity to showcase Palm MIDP applications
 - ▶ Links to Palm developer websites for additional information, demo's, etc.
- **Exposure to IBM Pervasive Sales**
 - ▶ IBM "Lunch & Learn" sessions preview partner companies/applications
 - ▶ Opportunity to focus on enterprise-enabling Palm MIDP applications
 - ▶ Potential for direct contact with IBM Pervasive Sales
- **IBM Pervasive Computing Embedded Summit for Business Partners**
 - ▶ Invitation-only event in advance of Embedded System Conference
 - ▶ Meet the embedded JVM and tools developers
 - ▶ Network with other embedded developers using IBM device software



Questions?

- For questions in follow-up to today's meeting, please contact:
 - ▶ Pervasive Computing
www.ibm.com/software/pervasive/support/questions.shtml
 - ▶ PartnerWorld: Robb Verna rhverna@us.ibm.com



IBM Pervasive Computing Division



Questions & Answers



@business on demand software



For Additional Q&A:

Web Resources:

- Palm Java information www.palm.com/java
- Palm Pluggedin developer's program <http://pluggedin.palm.com>
- IBM WebSphere Micro Environment www.ibm.com/software/wireless/wme
- IBM WebSphere Studio Device Developer www.ibm.com/embedded
- WebSphere Studio Device Developer newsgroup
news://news.software.ibm.com/ibm.software.websphere.studio.device-developer
- IBM Pervasive Computing www.ibm.com/pvc
- IBM developerWorks www.ibm.com/developerworks
- IBM PartnerWorld www.ibm.com/partnerworld
- IBM PartnerWorld, Pervasive www.developer.ibm.com/pvc/index.html
- IBM PartnerWorld for Developers (registration)
www.developer.ibm.com/member/register/registration.html

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THANK YOU!





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