

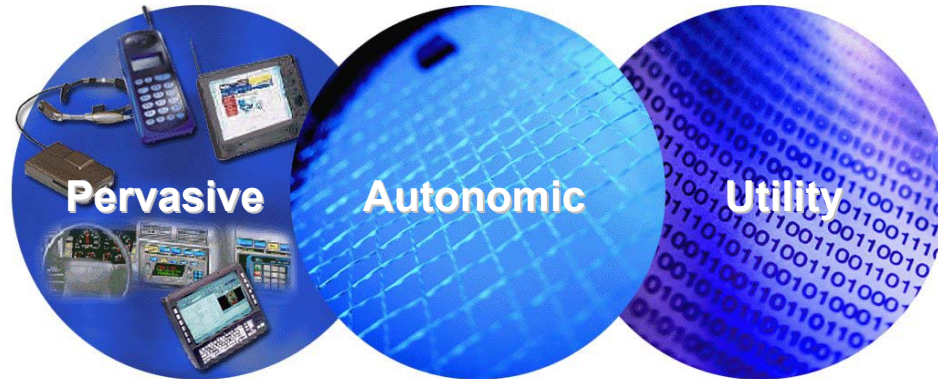
Introduction to Pervasive Computing

for Business Partners

March 1, 2003

Limitless Computing - Ultimate Freedom

e-business on demand



Pervasive

Unlimited Access

- Any Device
- Any Info
- Any Network
- Any Interaction Style

Autonomic

Ultimate Reliability

- Self Configuring
- Self Tuning
- Self Healing
- Self Managing

Utility

Unlimited Supply

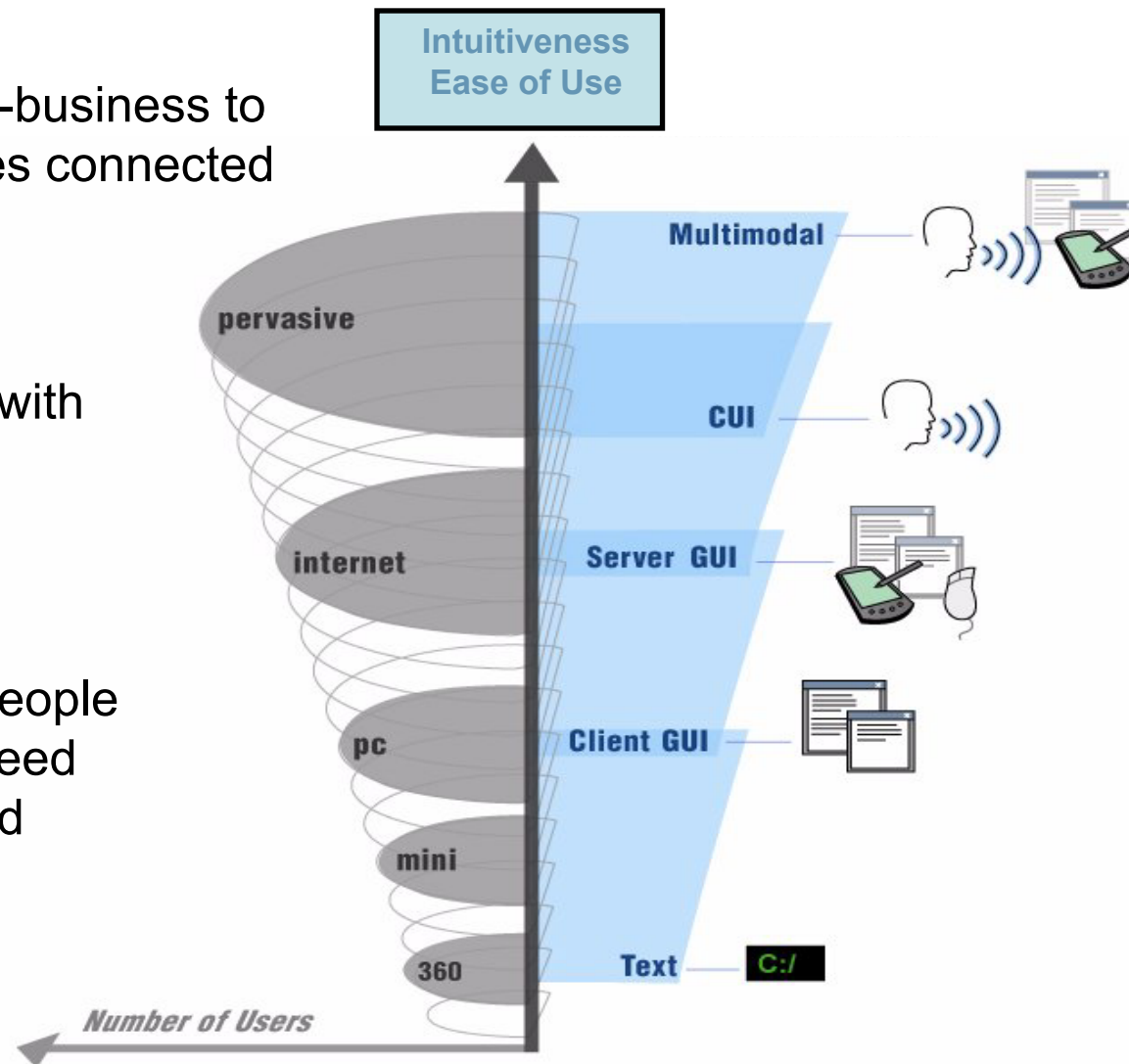
- QoS on Demand
- Cycles on Demand
- Storage on Demand
- Security on Demand

Extending WebSphere as the end-to-end software infrastructure for e-business

What is Pervasive Computing?

It's about access ... to applications, information and services

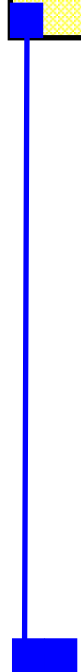
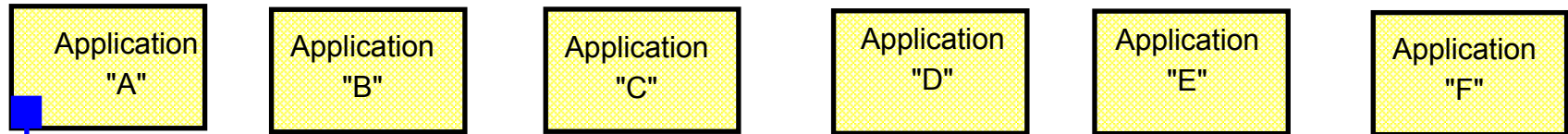
- Pervasive computing extends e-business to nontraditional computing devices connected to data networks, providing...
 - New access to data
 - New methods of interaction with information
- Today:
 - ➔ 10 times more connected people
 - ➔ 100 times more network speed
 - ➔ 1,000 times more connected devices
 - ➔ 1,000,000 times more data



What Enterprise Customers See (and Fear) Today

How do you solve an expanding "M x N" matrix?

M Applications...

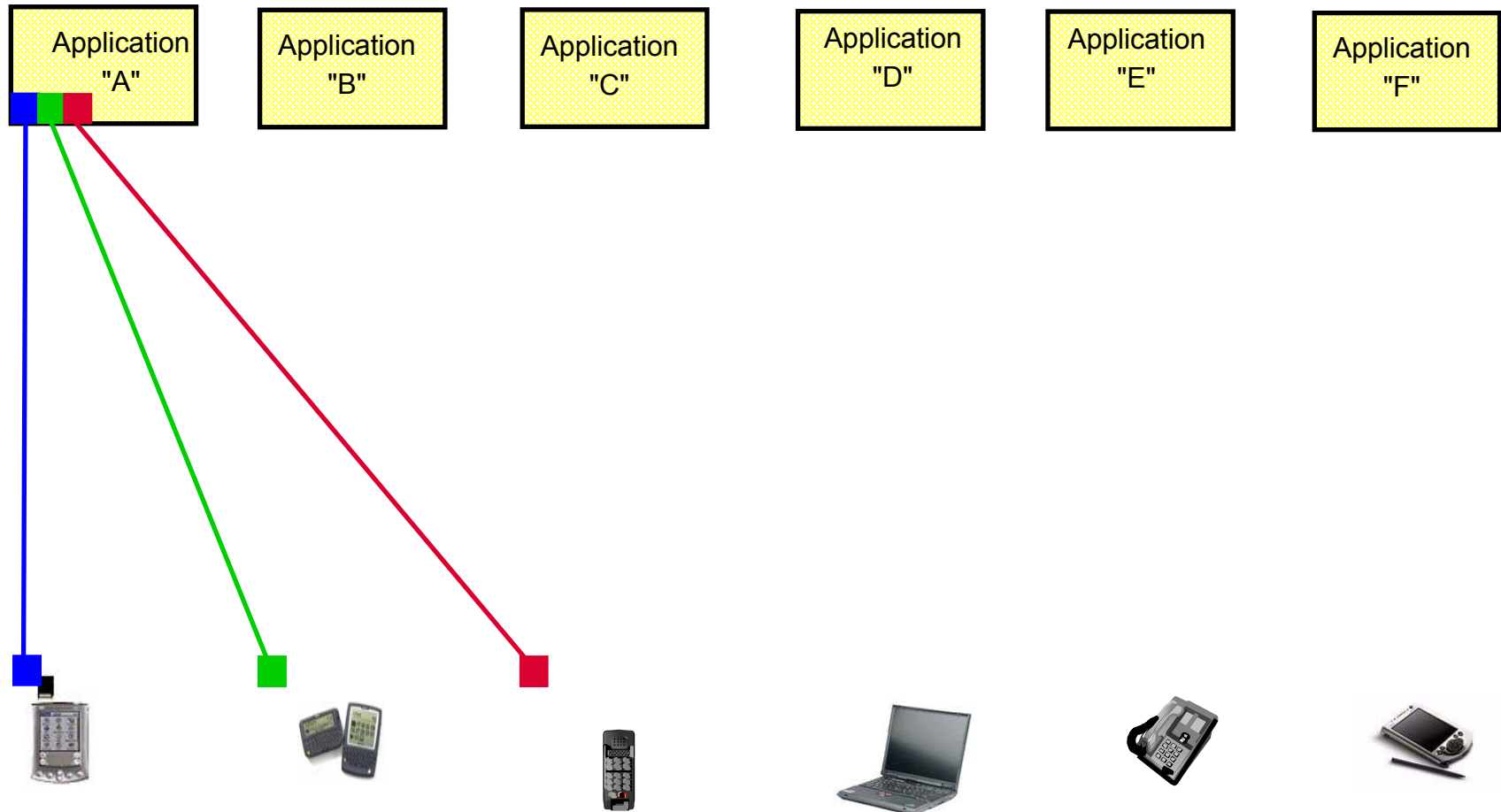


N Devices

What Enterprise Customers See (and Fear) Today

How do you solve an expanding "M x N" matrix?

M Applications...

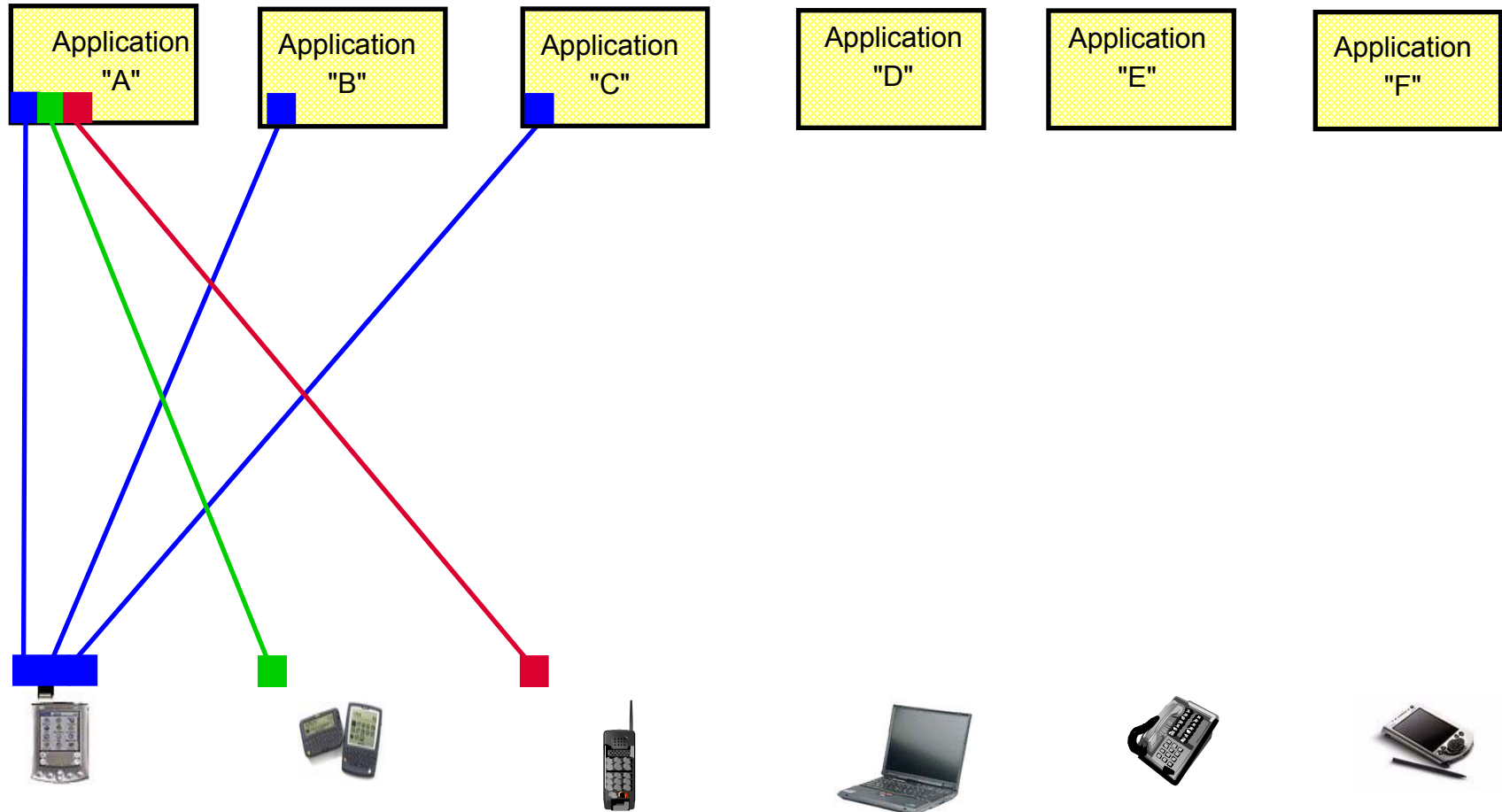


N Devices

What Enterprise Customers See (and Fear) Today

How do you solve an expanding "M x N" matrix?

M Applications...

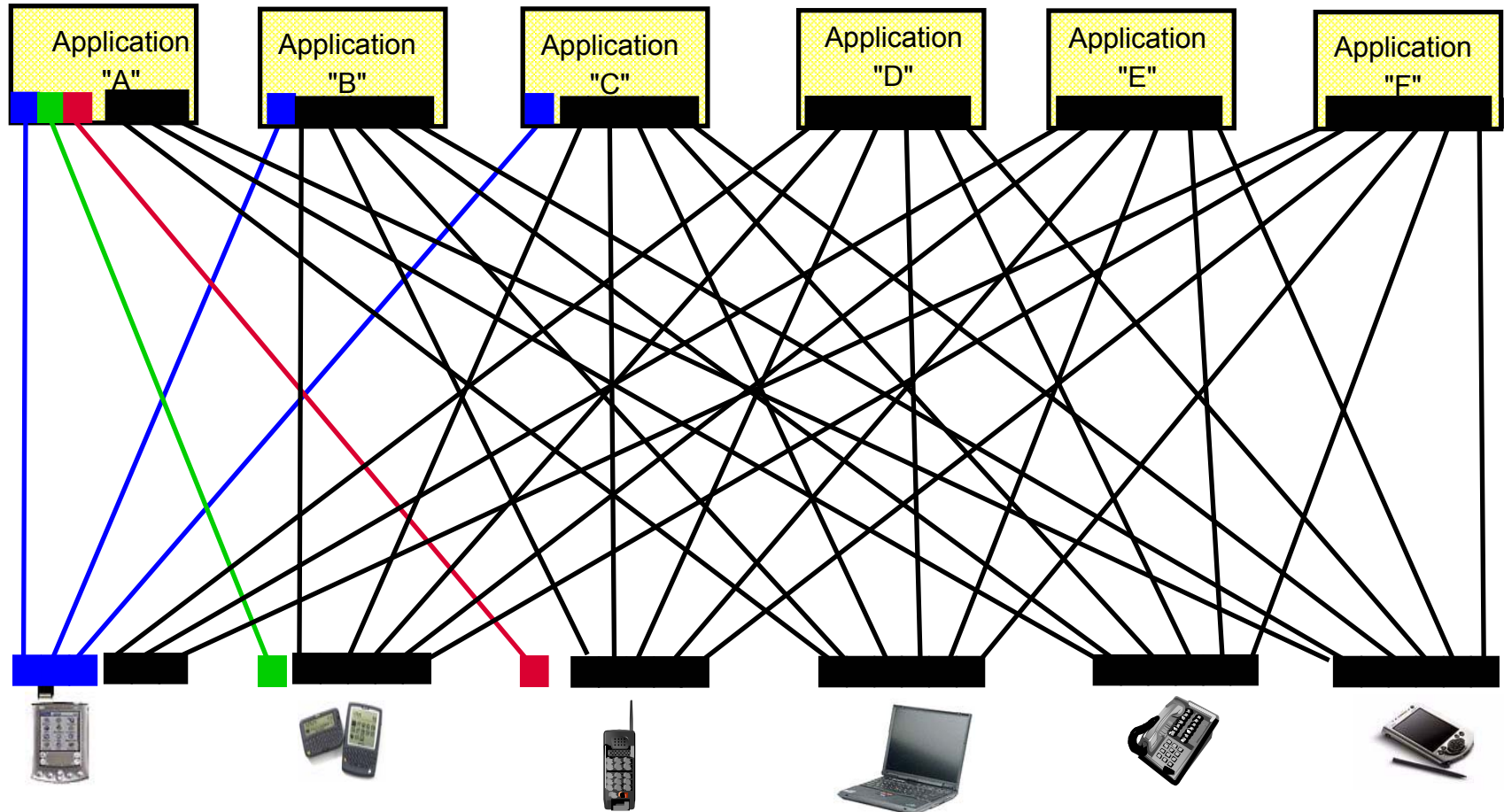


N Devices

What Enterprise Customers See (and Fear) Today

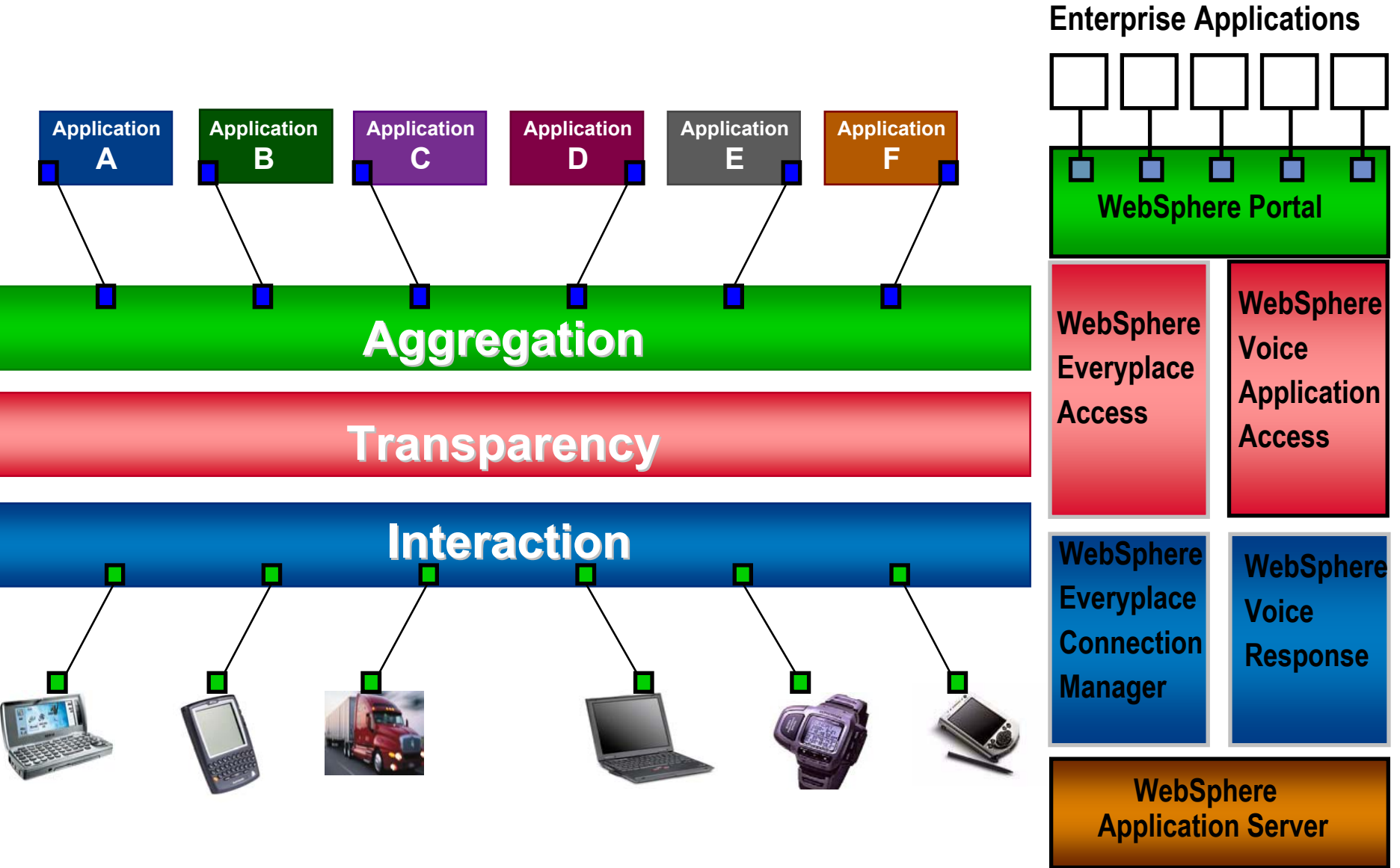
How do you solve an expanding "M x N" matrix?

M Applications...



N Devices

A Mobile Application Platform



Introduction to Pervasive Computing

- *The Marketplace, The Opportunity and IBM's Pervasive Computing Vision*
- *Solutions and Offerings*
- *The Value of an IBM Partnership to Your Company*

IBM's Commitment to Pervasive Computing

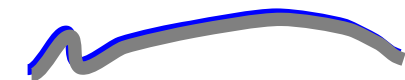
- ▶ **Thousands of IBM employees are deployed on Pervasive Computing**
 - **Over 25 % are developers and researchers worldwide**
 - **6 continents and 150+ countries**

- ▶ **IBM has invested over \$1.5 billion in**
 - **Product development**
 - **Sales and marketing**
 - **Expanding skills in services**

Evolution in Use of Pervasive Technology

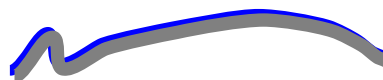
Dramatic new functionality

2001



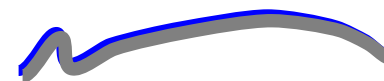
Enterprise data access
Content adaptation
News
eMail
Short Messaging

2002 - 2006



Mobile Enterprise Apps
CRM, Supply Chain
Mgmt
Intelligent Notification
Telematics, e-care
Field automation and
control
Location-based services

2007 -



Ubiquitous Enterprise
Workflow
Community Portals
Rich, interactive media
Multi player, real-time games
Personal life management

Pervasive Computing Challenges

Complexity of applications, connectivity options and devices create challenges for our customers

Mobility Challenges

- ✓ Connected, intermittent, disconnected
- ✓ Authentication and authorization
- ✓ Security
- ✓ Voice/data access
- ✓ Device management
- ✓ Scalability
- ✓ Services
 - Messaging services
 - Location awareness
 - Intelligent notification
 - Context awareness



Device Challenges

- ✓ Unique device capabilities
- ✓ Varying programming models
- ✓ No dominant standard
- ✓ Wide range of target environments
- ✓ Multimodal interaction



Application Challenges

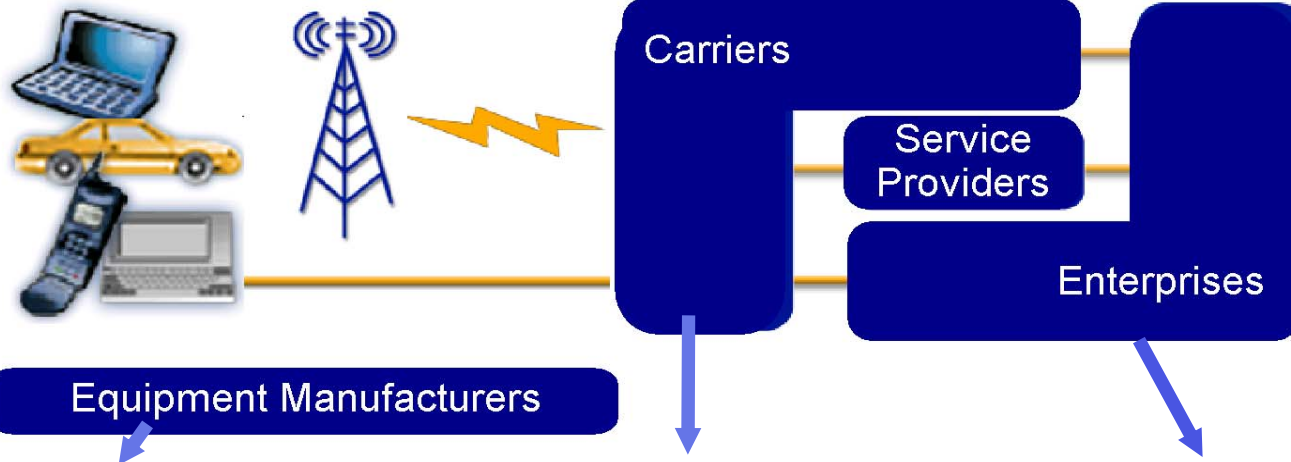
- ✓ Content aggregation
- ✓ Customization and personalization
- ✓ Multi-device capability
- ✓ e-mail & PIM
- ✓ Business Apps, Custom Apps
- ✓ Web Content & Web Apps



IBM's Pervasive Computing Strategy

To complete the "whole product", we engage and enable Business Partners, and provide go-to-market support once the enablement is done.

Development Community



Open Device Infrastructure

Pursue OEM strategy to enable devices for client access to the enterprise

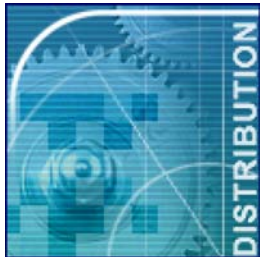
Pursue partnerships to jointly develop mobile and messaging solutions for IBM's Service Provider Delivery Environment

Open Platform

Pursue solution partnerships to solve enterprise needs for applications, services, and legacy data

Open Standards

Winning Applications



Retail..

- mobile shopping
- personal shopper
- merchandising
- retail content delivered to wireless devices
- in store employee applications



Transportation..

- flight confirmations, rapid check-in, etc.
- airline / airport operations
- route track and trace
- rail car management



Financial Services..

- on-line financial services
- wealth management
- customer loyalty
- insurance claims

Brokerage Services..

- CRM
- alerts, news feeds



Healthcare..

- physician practice management
- pharmaceutical sales force automation
- electronic clinical trials
- hospital information systems



Utilities..

- field worker access to information
- customer account access
- supply chain anywhere
- machine-to-machine

Key IBM partnerships



- Honda and IBM are producing a "hands-free" voice-activated navigation system for select 2003 Accords
 - 150 English-language commands:
 - find the nearest gas station or ATM
 - find the nearest Italian restaurant

Nokia and IBM will provide Digital Content Delivery for Mobile

Devices

- Useful/fun content to mobile terminals (ringtones, screen savers, images and games)
- Broader selection of new digital content based services
- Preview, purchase, download content

Palm and IBM are extending capabilities of WebSphere Everyplace

Access to Palm handheld devices

- Unified Synchronization Services
 - PIM, email
 - Instant messaging using Lotus Sametime



Evolution in Use of Pervasive Technology

Developing new functionality

2001



Established Market

2002 - 2006



Evolving Market

2007 -



Future Market

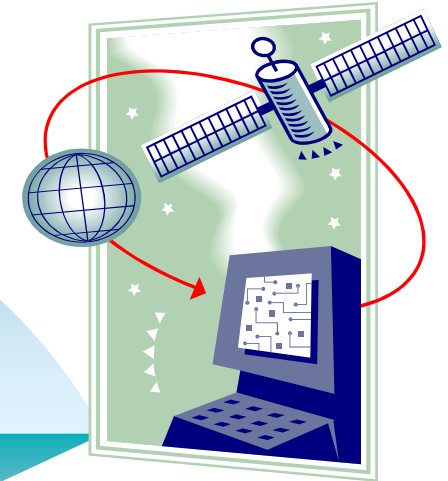
User Experience	Voice, Text, Rudimentary interfaces	Conversational interfaces, Rich graphics	Natural interfaces, Adaptive form factor
Application Services	Device-specific and adapted applications	Adaptable application framework	Fluid applications
Infra Middleware	Connectivity server, Secure access, Transcoding	Context, Location, Multimodal, Integrated notification, Unified messaging	Privacy, Web Services Infra, Metadata/Mobile digital content mgmt.
Access	WLAN, 2G, DSL	2.5/3G, Bluetooth, Ultra Wideband RF, VoIP, Seamless roaming	Mobile broadband, Autonomic connectivity

Market Outlook

By 2003... 45% of online users will connect to the Internet via more than one device

-Forrester

By 2003... number of pervasive computing devices exceeds 6 billion
-IDC

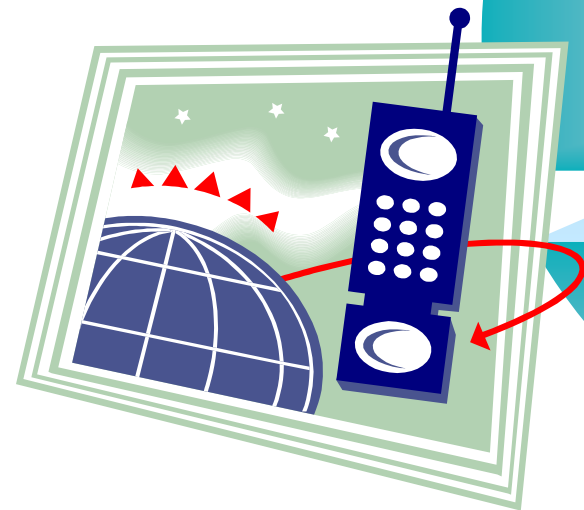


Pervasive computing is a \$121 billion market in 2003

Sales of devices used in home automation systems will increase from \$1.3 billion in 2001 to \$2.5 billion in 2005.

By 2004, 80% of new consumer applications will permit Internet access from mobile devices

-Gartner

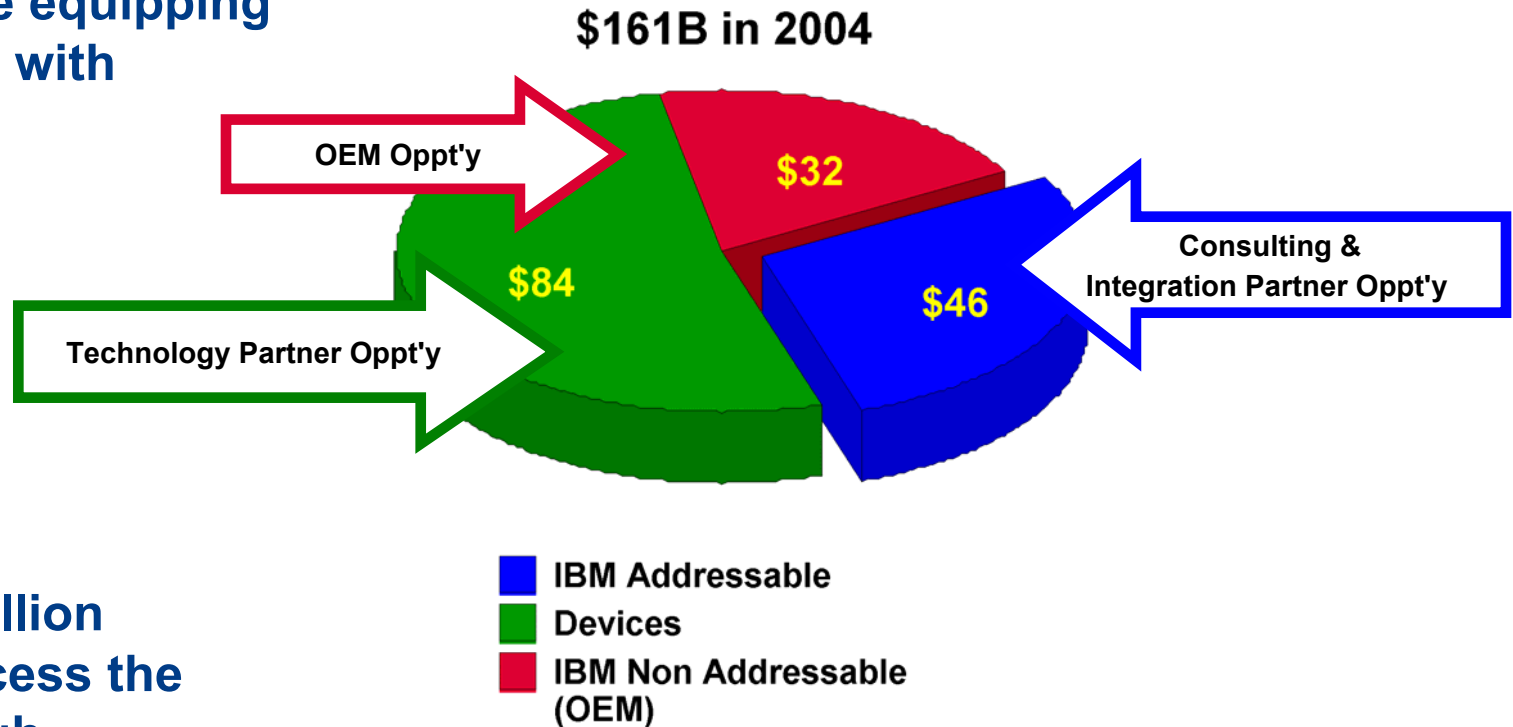


The Opportunity

40% of the Fortune 2500 businesses in US have equipped or are equipping their workforce with wireless tools

Source: Forrester Research

IBM must build strong partnerships to address this opportunity



By 2004, 1.4 billion people will access the Internet through wireless phones

Source: International Data Corp. Ovum

Partner Value Proposition



*The pervasive computing marketplace is growing at 31% CGR
Projected to reach \$208 billion in 2005*

- Business Partners worldwide report that every dollar in sales of IBM middleware generates nearly \$ 8 in sales of their own services.
- For every dollar invested in IBM software-related education, training and certification, Business Partners generate \$ 345 in software and services revenue from their IBM practice.
- Business Partners investing in IBM middleware experience a 9-to-1 ratio of profit dollars to investment dollars.
- Every \$1 of IBM middleware generates nearly \$12 in sales of Business Partner services at an average 33% profit.

Source: Reality Research Consulting
White Paper - 2002

Analysts predict that 2003 will be the year when the ultimate winners make their investments and begin to reap the rewards.

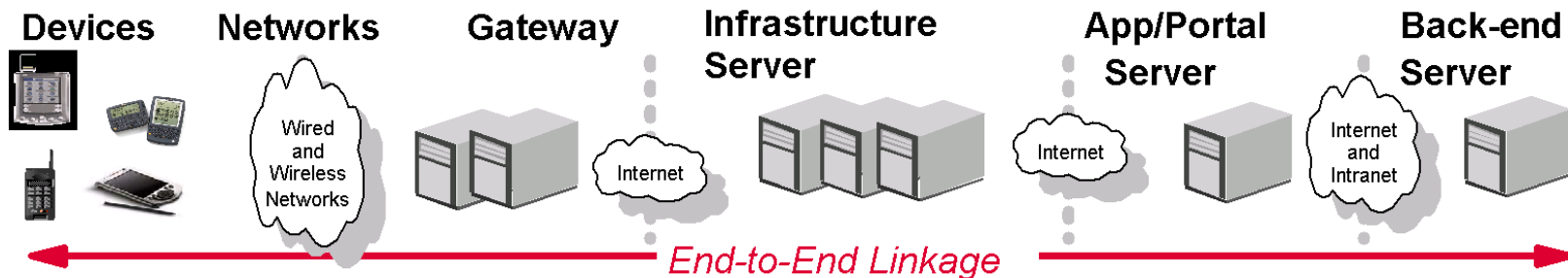
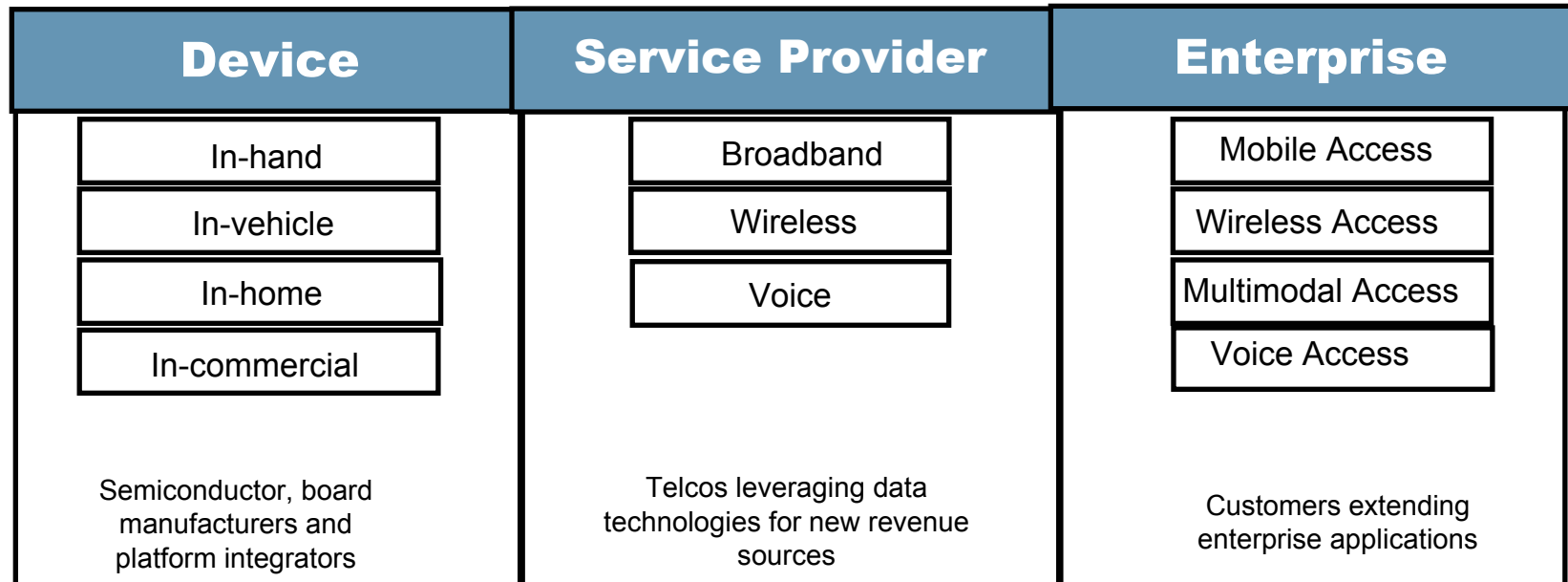
Offerings and Solutions

- ***The End-to-End Solution***

- ***Offerings for:***
 - ***Device-side***
 - ***Server-side***
 - ***Service Providers***
 - ***Components***
 - ***Voice Systems***
 - ***Development Tools***

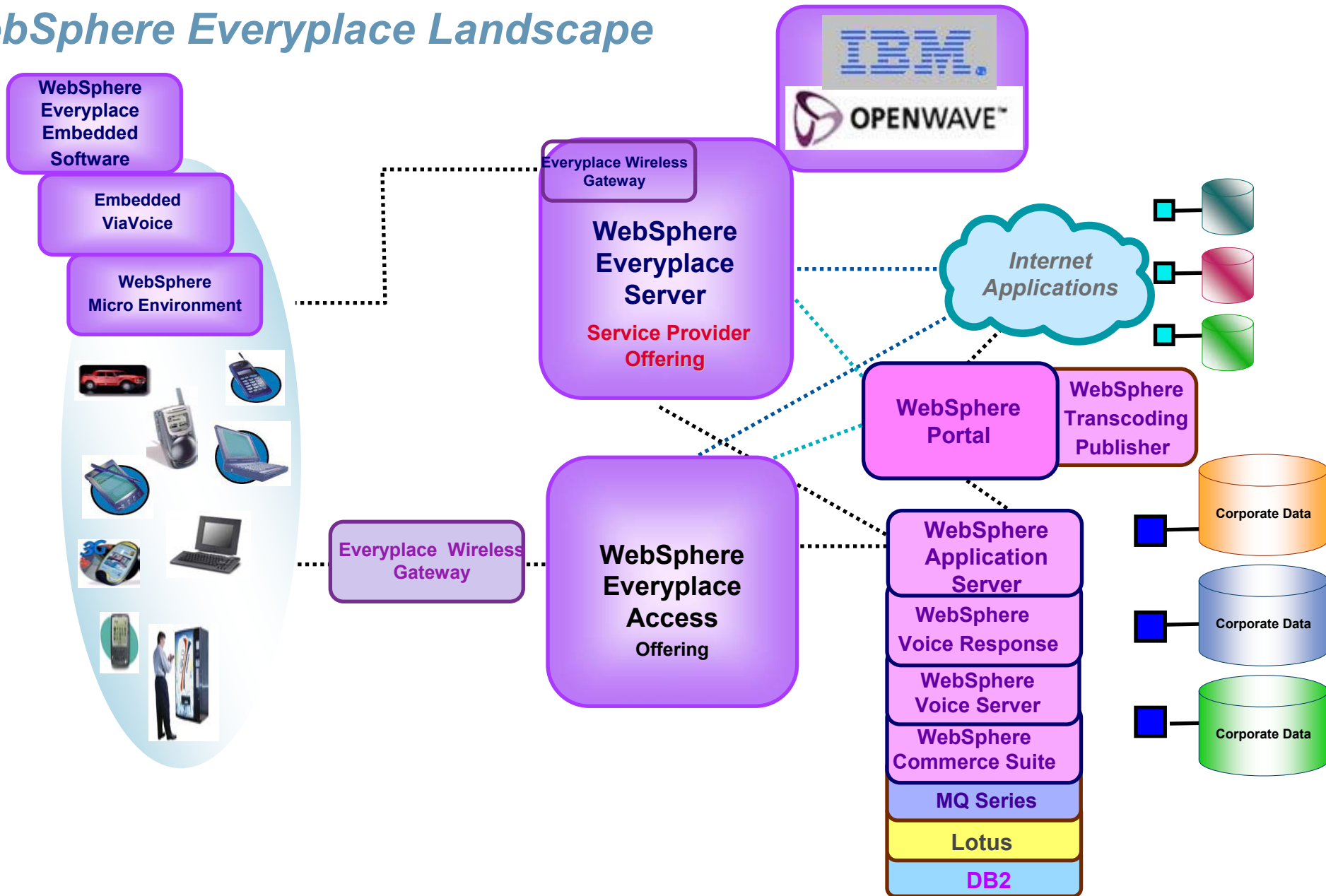
Required: An End-to-End Solution

The pervasive computing opportunity involves leveraging non-traditional embedded computing technologies – both wired and wireless – to enable, integrate and extend e-business and new applications.



IBM Pervasive Computing

WebSphere Everyplace Landscape



Offerings and Solutions

The End-to-End Solution

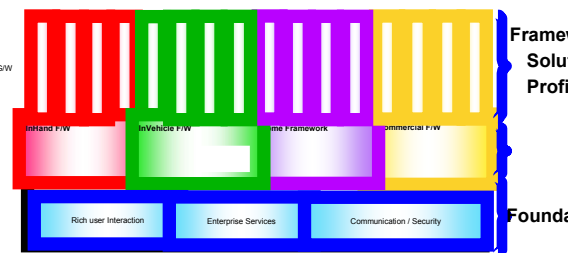
Offerings for:

- ***Device-side***
- *Server-side*
- *Service Providers*
- *Components*
- *Voice Systems*
- *Development Tools*

Device Software Family at a Glance

- Complete set of offerings; components to solutions
- Server and Portal connectivity services
- Affinity to WebSphere family

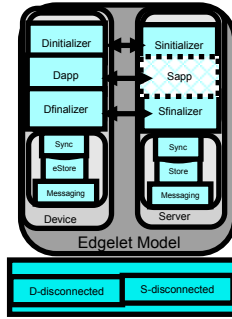
Fully Integrated Solutions



- RSG/STB SDK & RT
- PDA/WWP SDK & RT
- Mobile Phone SDK & RT
- Telematics SDK & RT

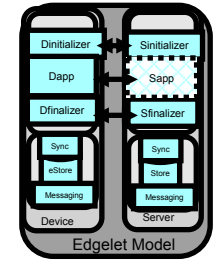
- One stop shopping
- WebSphere Everyplace embedded Foundation
- Device Specific frameworks
- Application & Platform development tools
- Industry specific solution profiles

Bridge Products



WME Enterprise Edition

- Device/Server bridge components
- Java Programming model
- Supports connected and disconnected modes
- Device management
- Data management
- Transaction management



Universal Client

- Device/Server bridge components
- Supports connected and disconnected modes
- Device management
- Data management
- Transaction management

Component Products

Smart Cards



WebSphere Micro Environment



Embedded Via Voice

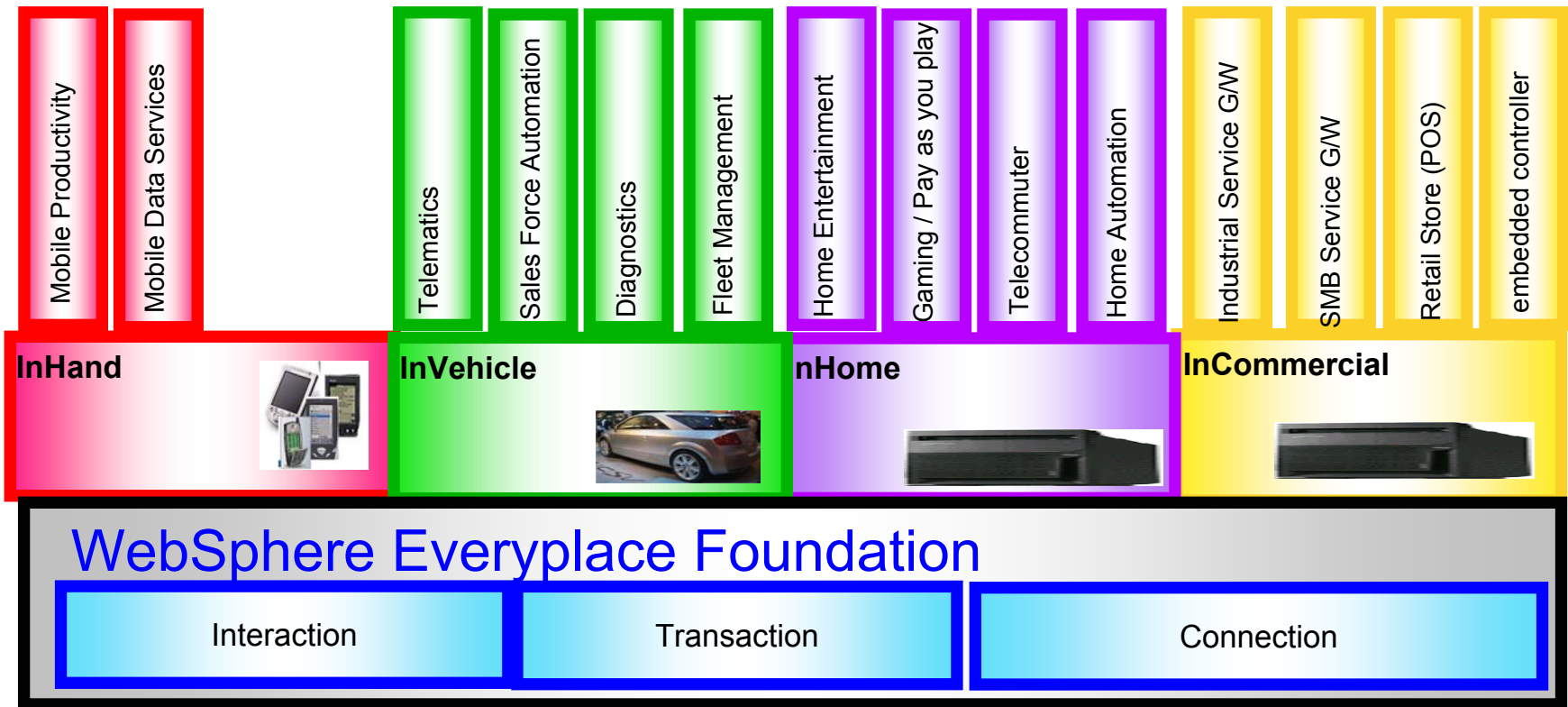


Availability - Reliability - Scalability - Security

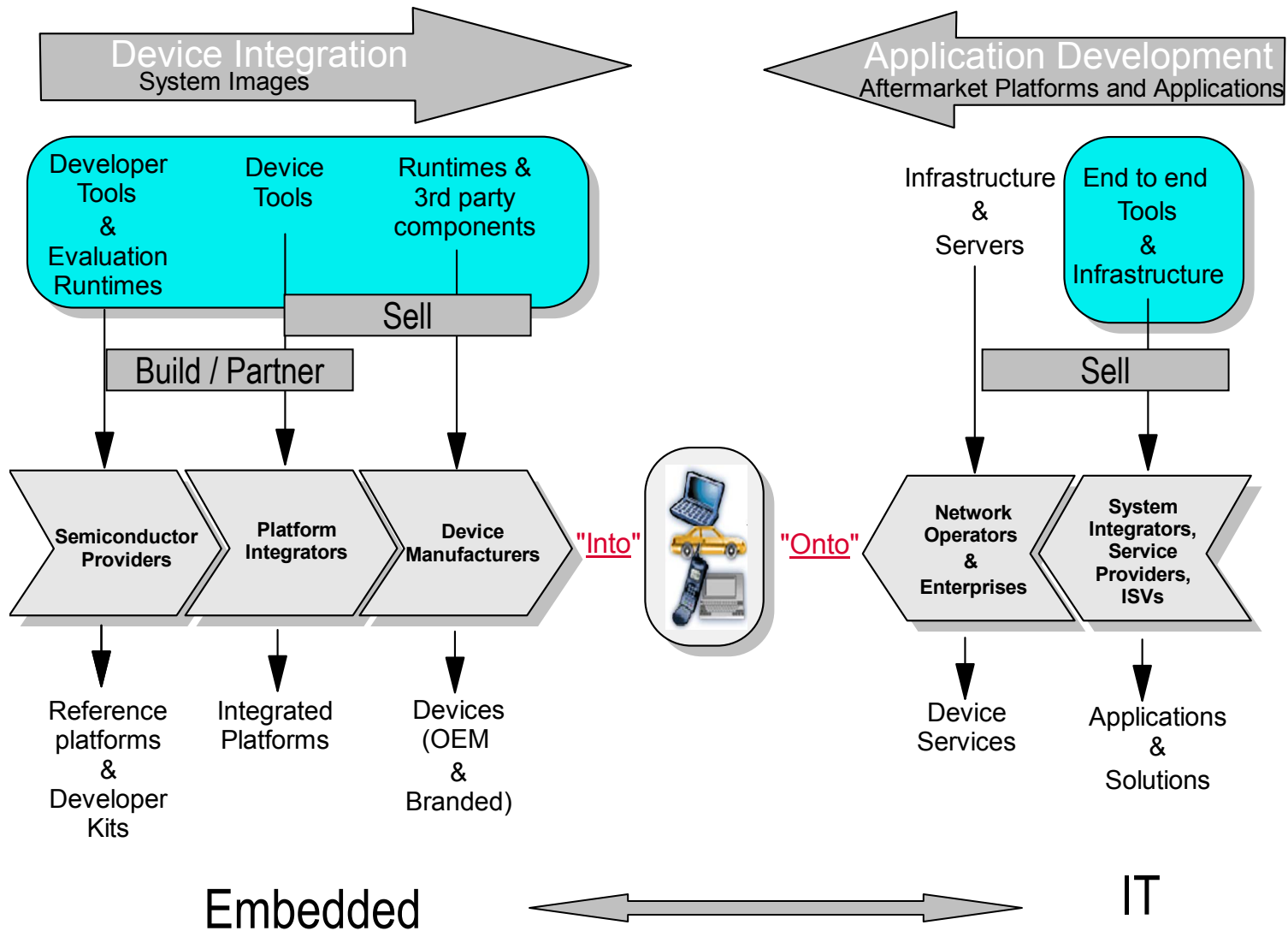
Device Software Family Strategy

enable Device Manufacturers, Service Providers, Tier 1s, Integrators to build the next generation of devices

- ✓ Open standards-based architecture allows Integrators to add value
- ✓ Devices become platforms for transactional e-business applications
- ✓ Higher value applications can be deployed



Device Software Value Chain



Offerings and Solutions

- *The End-to-End Solution*
- *Offerings for:*
 - *Device-side*
 - ***Server-side***
 - *Service Providers*
 - *Components*
 - *Voice Systems*
 - *Development Tools*

Start Simple and Grow

Modular Structure

One Enterprise

Extending to B2B, B2C

Start with
field work order application

Start with email
+ PIM

+
Time recording system &
weather reports

+
Next work order system

+
Contact the expert
system



Field Engineers

(Hardened PDA)

+
External stock feeds

+
News reports &
finance reports

+
Divisional level
performance metrics



LOB Executives

(RIM or PDA or Smartphone Device)

+
Sales Force Automation system - for northern region only

+
Employee Directory Lookup

+
Expense report system (web based application)

+
HR Policy Document access



Sales Force

(Smartphone or PDA)

mobile application platform (e.g. WEA) is essential

Because it will provide...

- the core services necessary to build, deploy, and manage pervasive applications
- the unique characteristics of pervasive solutions
- a robust development environment tuned to the new application models
- Allows you to:
 - Push the information to the edge of the network where it is needed
 - Initiate action at the point of greatest efficiency and effectiveness
 - Maintain end-to-end transactional integrity and security
 - Leverage and extend existing IT assets

Mobile Application Platform

Mail

PIM

Database

LDAP
Directories

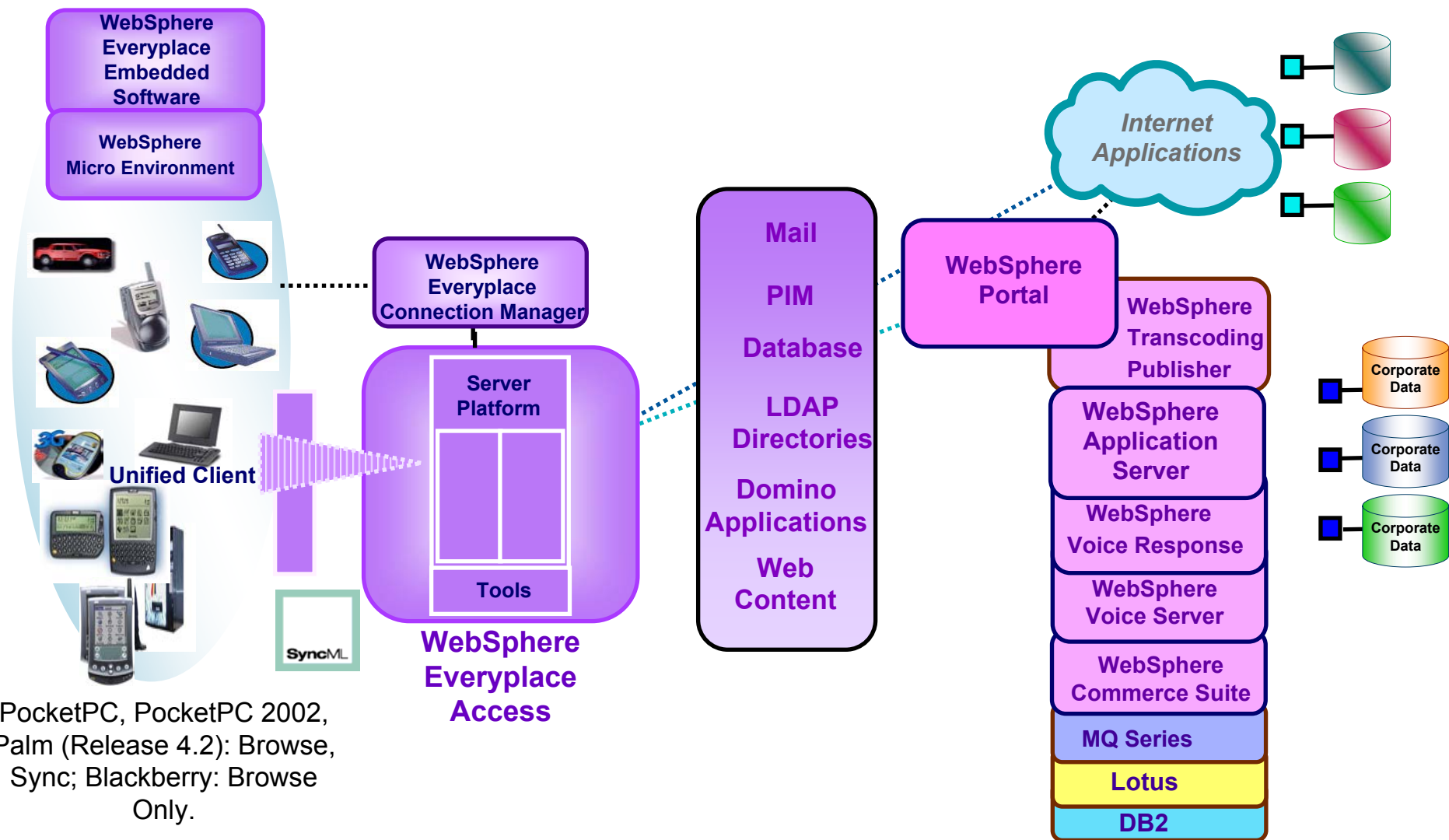
Domino
Applications

Web
Content

- Delivers key personal productivity capabilities
- Provides a scalable, secure, extensible application development, deployment platform for existing e-business and core LOB applications
- Extends IBM's software framework for e-business
- Allows enterprise to start small, quickly deliver POCs and easily expand the scope
- Leverages proven IBM technologies such as WebSphere Application Server, WebSphere Portal technologies, DB2, Lotus and Tivoli
- Embraces key industry standards such as SyncML, OMA, LDAP, web technologies
- Enhances developer productivity by extending IBM's WebSphere Studio Workbench to support pervasive computing application development
- Provides a common programming model and rich set of feature/function that enables ISVs and developers to quickly deliver integrated solutions

IBM Pervasive Computing Software

WebSphere Everyplace Access Environment



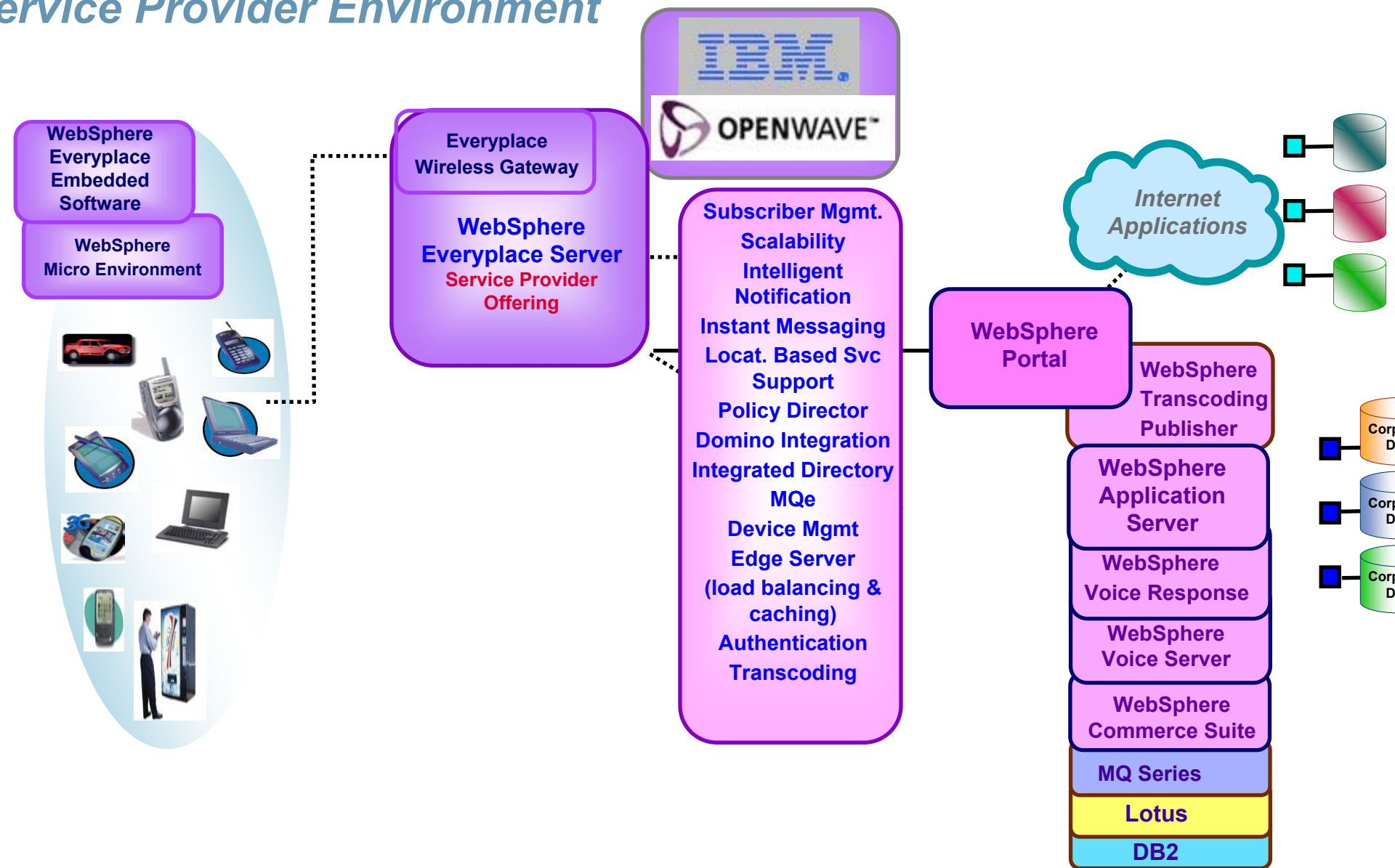
Offerings and Solutions

- *The End-to-End Solution*

- *Offerings for:*
 - *Device-side*
 - *Server-side*
 - ***Service Providers***
 - *Components*
 - *Voice Systems*
 - *Development Tools*

IBM Pervasive Computing Software

Service Provider Environment



At a glance...

Subscriber Management.
Scalability
Intelligent Notification
Instant Messaging
Locat. Based Svcs Support
Policy Director
Domino Integration
Integrated Directory
MQe
Device Mgmt
Edge Server (load balancing & caching)
Authentication
Transcoding

•Description:

- Service Providers can build/launch data services for multiple devices & networks, wireline and wireless.
- Built on a secure, reliable, flexible & scalable infrastructure, reducing development risk and improving time-to-market.

•Key Differentiators:

- All functionality for value added services
- Scalability to millions of users/devices
- Predictable, subscriber-based, one-time-charge pricing
- Ability to integrate with existing accounting/billing systems & 3rd party gateways
- Support for all popular device/network options and end-to-end security
- Common management & delivery of applications, content & services

•Target Market:

- Wireless carriers, ISPs, ASPs
- Subscriber-based business model builders

•Components:

- *Everyplace Intelligent Notification*
- *Everyplace Location Based Services*
- *Everyplace Authentication*
- *WebSphere Transcoding Publisher*
- *WebSphere Edge Server*
- *MQSeries Everyplace*
- *Lotus Sametime Everyplace*
- *Tivoli TPSM and Policy Director*
- *Secureway LDAP Directory*
- *DB2*
- *WebSphere Application Server*
- *Everyplace Wireless Gateway (optional)*
- *Everyplace Synchronization (optional)*
- *WebSphere Voice Server (optional)*

IBM and Openwave Alliance

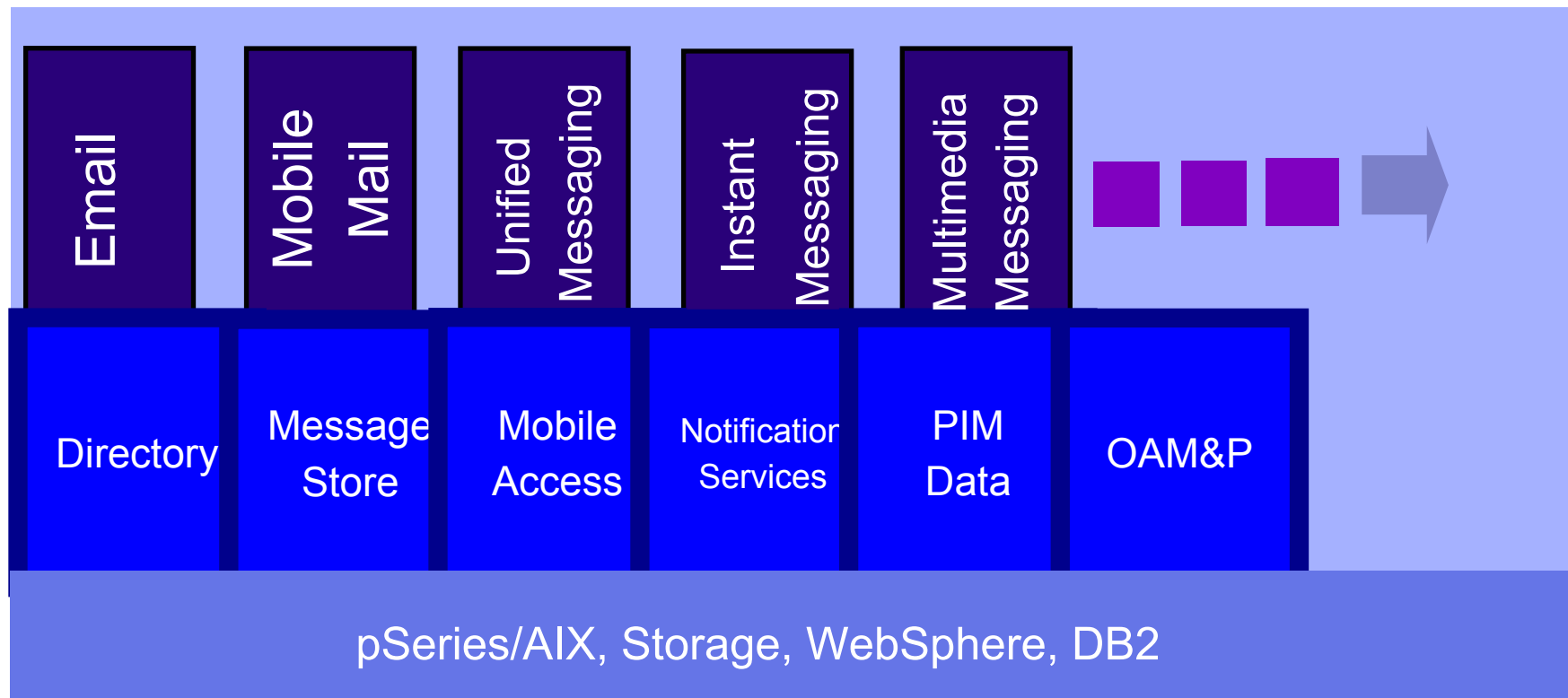


- A ten-year worldwide strategic alliance to deliver open, comprehensive, turnkey solutions to the wireless telecom industry
 - Combines IBM's leadership in e-business infrastructure with Openwave's strength in messaging and mobile software
 - Initial solution: Mobile Portal
 - New solutions every 3-6 months
- Already collaborating on an open, joint reference architecture
 - Leading components of IBM's Service Provider Delivery Environment (SPDE)
 - Installed in demo centers worldwide
- Service provider benefits:
 - Grow revenue through rapid introduction of innovative data services
 - Reduce cost of managing an increasingly complex operational environment

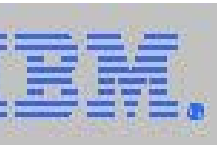
IBM and Openwave Alliance

Why Openwave?

Messaging on a Proven, Carrier-Scale, Open Platform



- Lower cost with pSeries Servers and Shark Storage
- Rapid deployment by simply adding new applications and services
- Improved end user experience with integrated applications



Offerings and Solutions

The End-to-End Solution

Offerings for:

- *Device-side*
- *Server-side*
- *Service Providers*
- ***Components***
- *Voice Systems*
- *Development Tools*

WebSphere Everyplace Connection Manager

Feature	Function	Benefit
Remote Access	Extends IP applications to mobile devices over a wide variety of wireline and wireless networks. Key features include - Network optimization. and Security (authentication, and encryption)	Enables Carriers and SPs to offer IP applications to their customers over wireline and wireless networks.
Network Optimization	Improves network response time and reduces the amount of data transmitted using data compression, protocol optimization, TCP header reduction, clustering and load balancing	Optimizes data exchange between mobile devices and gateway server leading to lower transmission fees.
Security	Provides end-to-end security, two-way user authentication, data encryption using Wireless Optimized Linked Protocol (WLP), Digital encryption standard (DES) and 3DES.	Lets authenticated users access data securely over unsecured networks
Messaging	Supports WAP PUSH and SMS messaging	Enables a Web app server to send messages to a client (phone/pager) using several modes - SMS, WAP Push, e-mail.
WAP support	Allows standards based support for WAP 1.1 and 1.2 client devices. Fully supports WAP Wireless Session Protocol. Performs HTTP protocol conversion to WAP devices.	Enables users to access information using WAP enabled mobile devices via HTTP web servers.
Roaming between IP-based networks	Allows seamless access between 802.11b WLAN and GPRS/CDMA1X WWAN	An insurance claims agent has a laptop with both a GPRS and CDPD modem installed. Neither network covers the entire territory. With roaming, he/she can stay connected while driving throughout the territory without losing connection.
Windows XP Support	Laptops with Windows XP are supported	Increases addressable market

WebSphere Transcoding Publisher v4.0

Reaches more devices, transcodes across more formats and has improved flexibility and administration capability

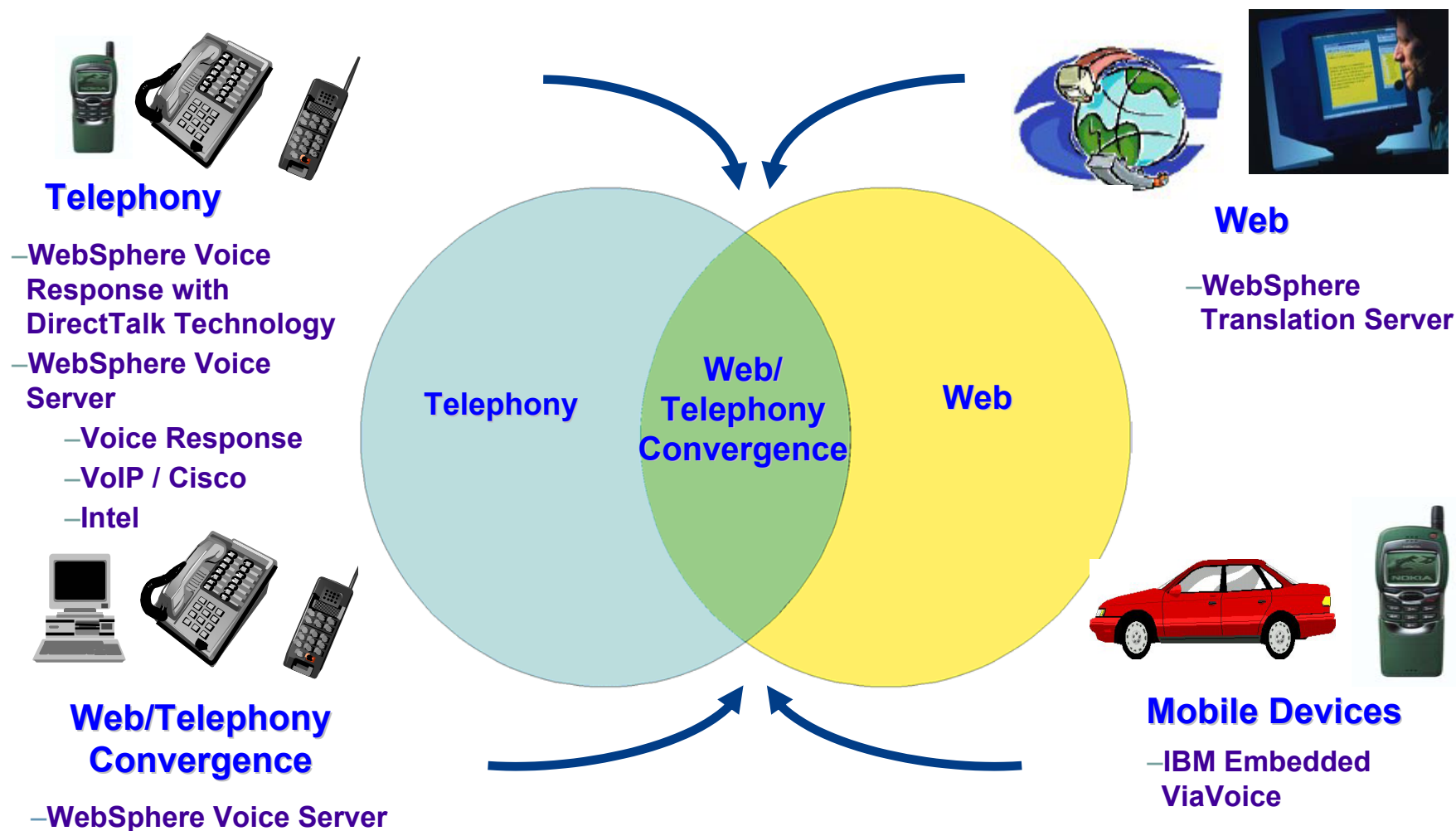
	WTP 4.0
Operating Systems	<ul style="list-style-type: none">-AIX 4.3.3 and 5.1-Windows NT 4.0-Windows 2000-Solaris 7-Linux (Red Hat 7.1, SuSE 6.4, Turbo Linux 6.5, Caldera eServer 2.3)-iSeries 5.0
Tools	<ul style="list-style-type: none">-Annotation Editor-XSL Stylesheet Editor-Profile Builder-Request Viewer-Transform Tool
Deployment Options	<ul style="list-style-type: none">-Forward Proxy-Reverse Proxy-WAS servlet plug-in-Edge Server caching proxy plug-in-JavaBean transcoders
Transcoders	<ul style="list-style-type: none">-WML 1.x-iMode (compact HTML)-HDML-image-VoiceXML 1.0-ClipperML (Palm.net)-XML support thru stylesheets

Offerings and Solutions

- *The End-to-End Solution*
- *Offerings for:*
 - *Device-side*
 - *Server-side*
 - *Service Providers*
 - ***Voice Systems***
 - *Development Tools*

Voice Systems Solutions

Giving WebSphere multi-channel access



Voice Systems Solutions

IBM Strategy for Voice

- **Creating voice solutions to solve business problems**
 - Embedded offerings for automotive, mobile and PDA manufacturers
 - Offerings created to address contact centers, service providers, and voice portals
 - Solutions developed by IBM and its network of business partners

- **Support of open standards, leading the industry to standards-based environment**
 - IBM is the founding member of the VoiceXML Forum
 - IBM is leading X+V activity in W3C

- **Infrastructure to provide a solid foundation to build integrated, innovative voice solutions**
 - The only end-to-end voice integrated solutions through the WebSphere platform

Voice Systems Offerings

Contact Centers

Self-service access to enterprise data through an IVR system. Callers can elect to transact through the IVR system or transfer to a live agent. A CTI gateway provides intelligent call routing & voice/data integration regardless of point of origin.

IBM Solution
WebSphere Voice Response & WebSphere Voice Server
Genesys CTI solutions
VoiceXML & Java

Voice Web Access

Voice access to web content from any device, anytime, anywhere, using speech processing software on a VoIP gateway or telephony platform.

IBM Solution
WebSphere Voice Server
WebSphere Everyplace Access
WebSphere Portal Server
VoiceXML & Java

Enhanced Telecom Services

Value-added network services such as 411, voice activated dialing or unified messaging to businesses or consumers using an IVR system and optional software components

IBM Solution
WebSphere Voice Response/Resource Mgr. Message Center
Telecom App Server
WebSphere Everyplace Suite SPE
VoiceXML & Java

Language Translation

Breaks the language barrier for enterprise by providing quick, inexpensive language translation of e-mail, web pages or chat content .

IBM Solution
WebSphere Translation Server

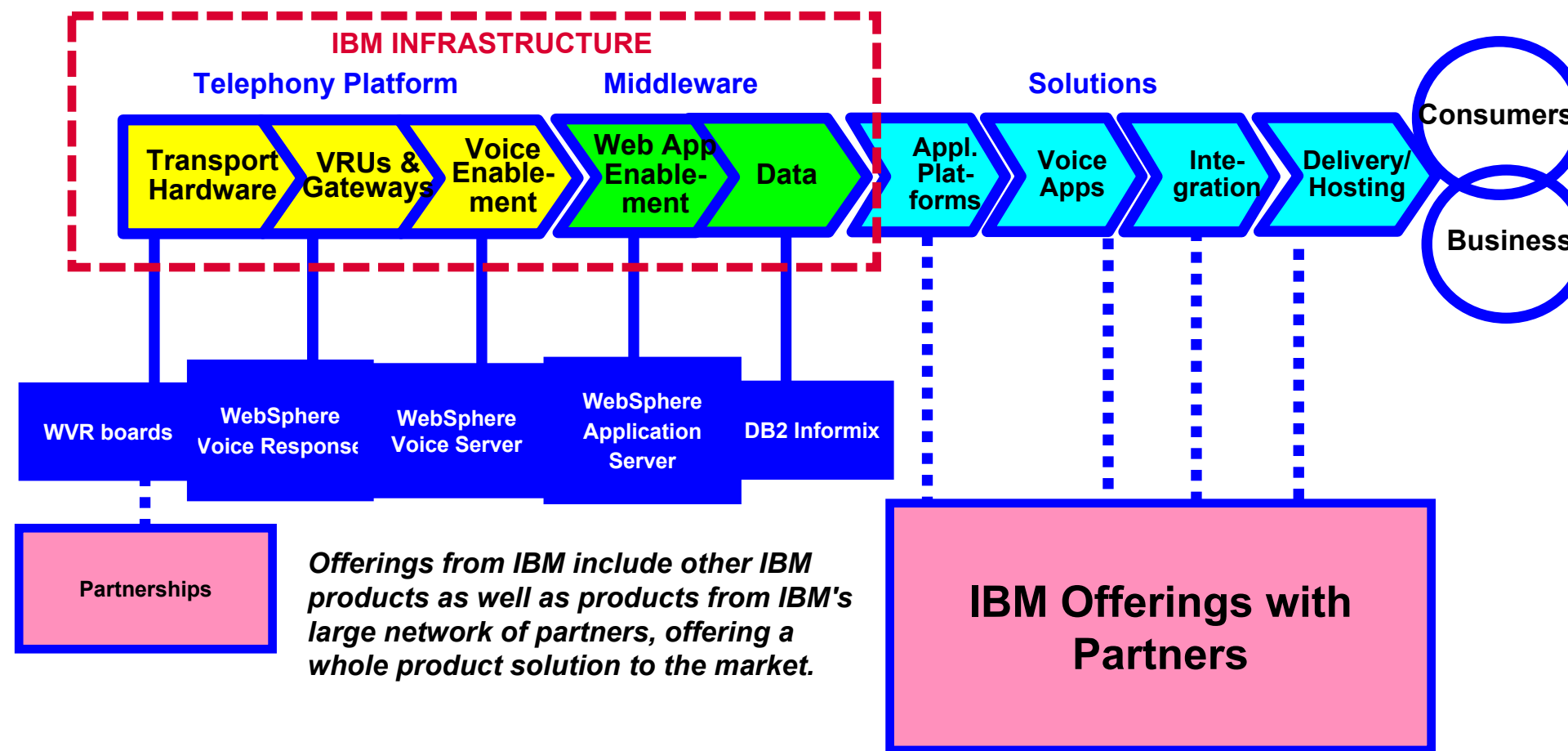
Key decision influencers:

- ★ Contact Center Manager
- ★ Line of Business Executive
- ★ CIO
- ★ Emerging Technology Executive

Voice Systems Value Chain

complete solution for this market is comprised of many components

- *IBM is the only vendor providing the individual components and a solid foundation on which to build voice solutions.*
- *These solutions improve the reach and user experience for consumers and businesses.*



Offerings and Solutions

The End-to-End Solution

Offerings for:

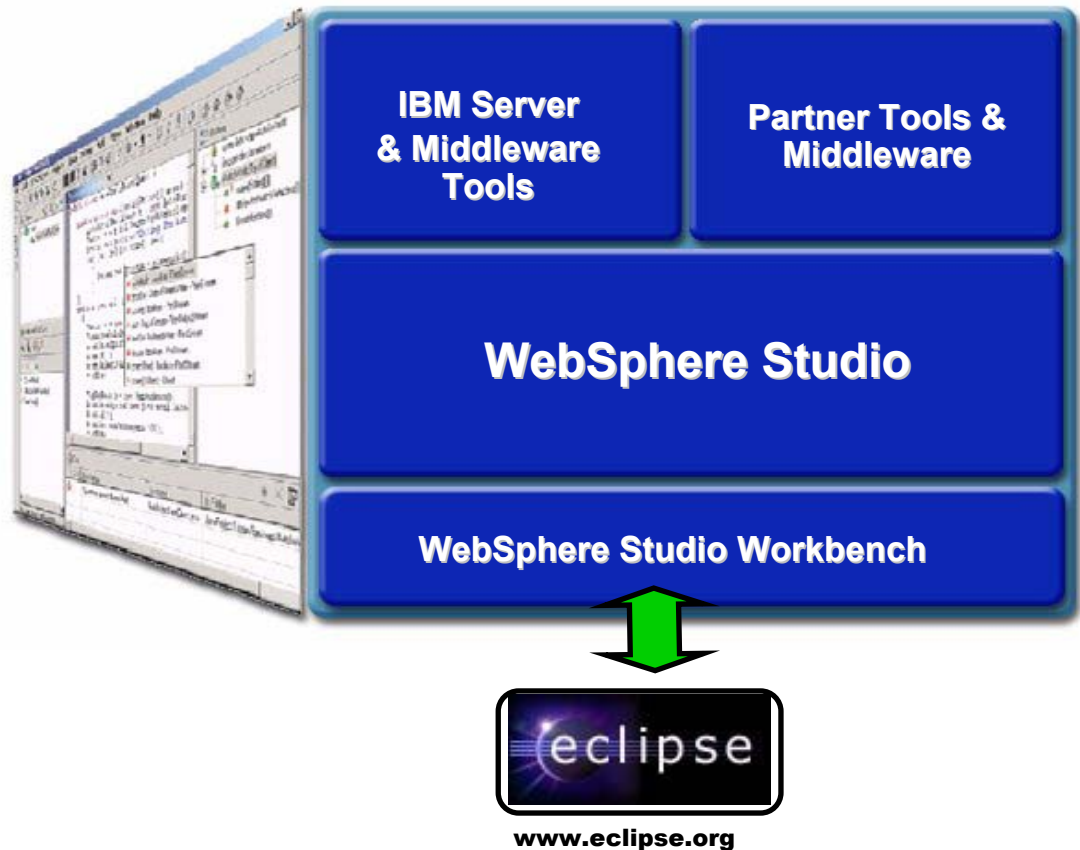
- *Server-side*
- *Device-side*
- *Service Providers*
- *Voice Systems*
- *Development Tools*

WebSphere Studio Family

Application Development

- Flexibility & extensibility
- Configuration for developer roles & application models
- Client and server side tools
 - ▶ visual editor
 - ▶ templates, samples and examples
 - ▶ Wizards
 - ▶ Client models:
thin client, disconnected, sync'd data, etc.
- Value
 - ▶ Flexibility
 - ▶ Support multi-modal / multi-channel dev.
 - ▶ Responsive to technology evolution challenges

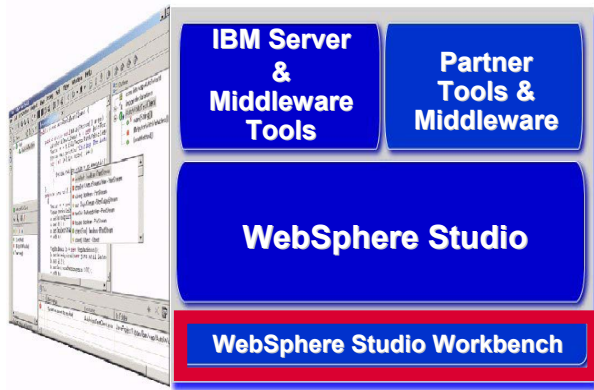
WebSphere Studio Family



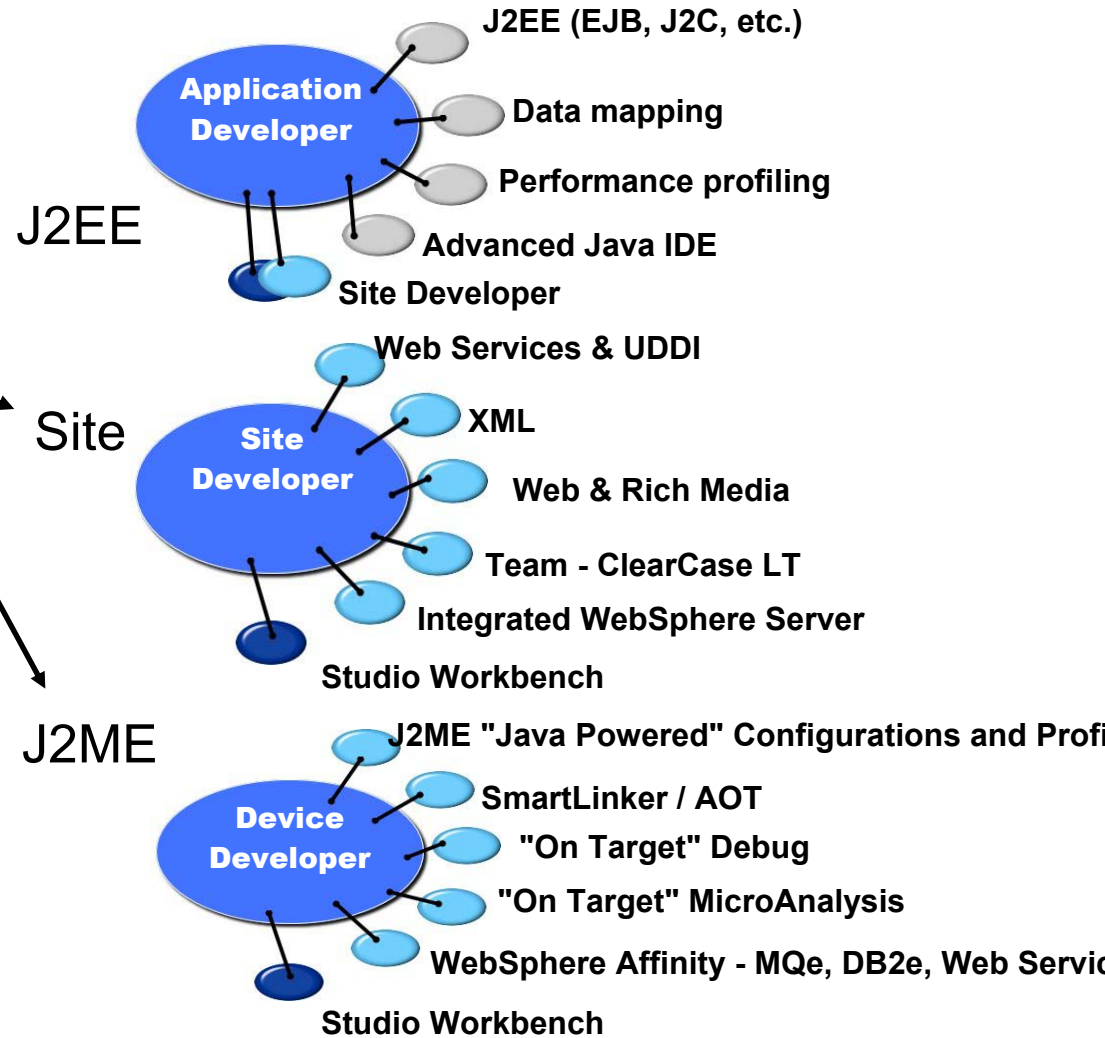
WebSphere Studio: App Dev Products

Strategic Fit and Positioning

- ✓ Open Standards / Open Community - based
 - ✓ Productivity through integration
 - ✓ Multi-vendor buy in



www.eclipse.org

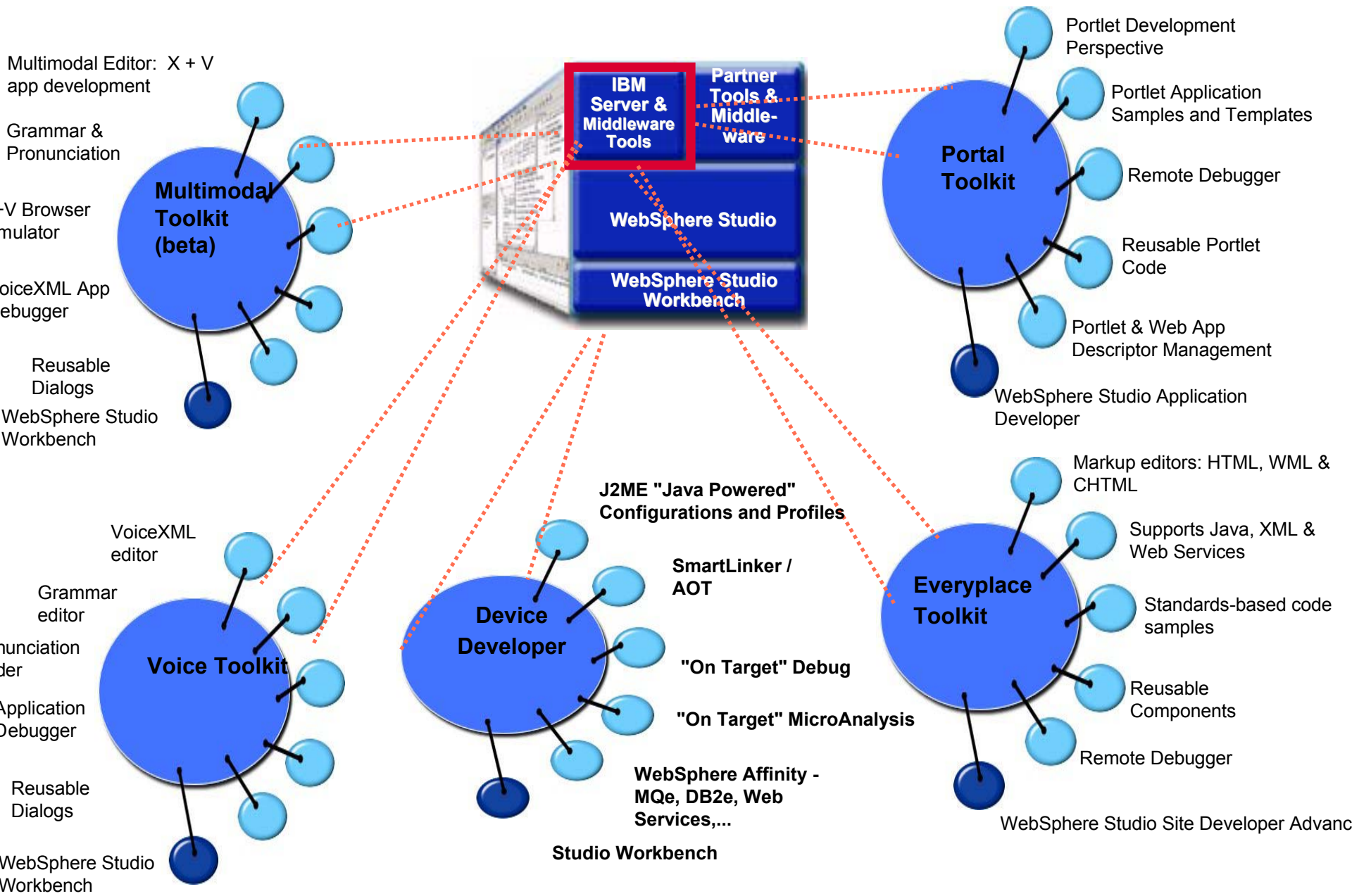


Pervasive Tools - Part of the WebSphere Family

Based on WebSphere Studio

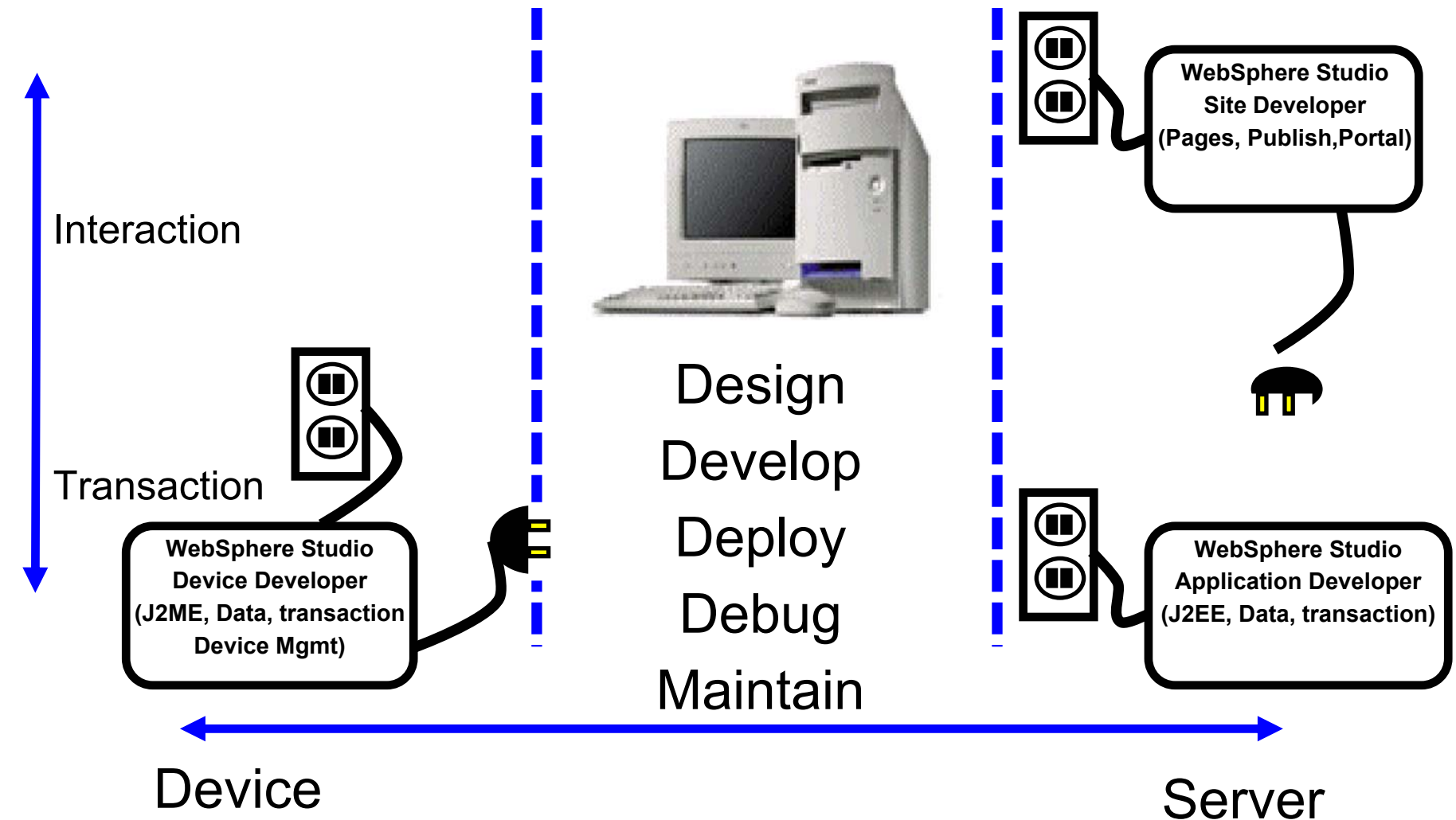
- ★ **WebSphere Studio Device Developer:** create, test and deploy applications to devices
- ★ **Portal Toolkit:** create, test, debug and deploy Web applications as portlets
- ★ **Everyplace Toolkit:** create wireless e-business applications and portlets with HTML, Wireless Markup Language (WML), and Compact HTML (CHTML)
- ★ **Voice Toolkit:** write and debug voice applications by pinpointing where the VoiceXML code needs to be modified to match the required application flow
- ★ **Multimodal Toolkit (beta):** create voice and data interactions within the same application to use with pervasive devices

Pervasive Tools - Part of the WebSphere Family



The Right Tools - Productivity Through Integration

End-to-End Application Development / Deployment



- *Types of Relationships*
- *Services and Support*
- *Resources*
- *Next Steps*

We're actively looking for...

SVs, Integrators & Consultants, Resellers, Solution Providers, OEMs, Application Service Providers, Value Added Distributors

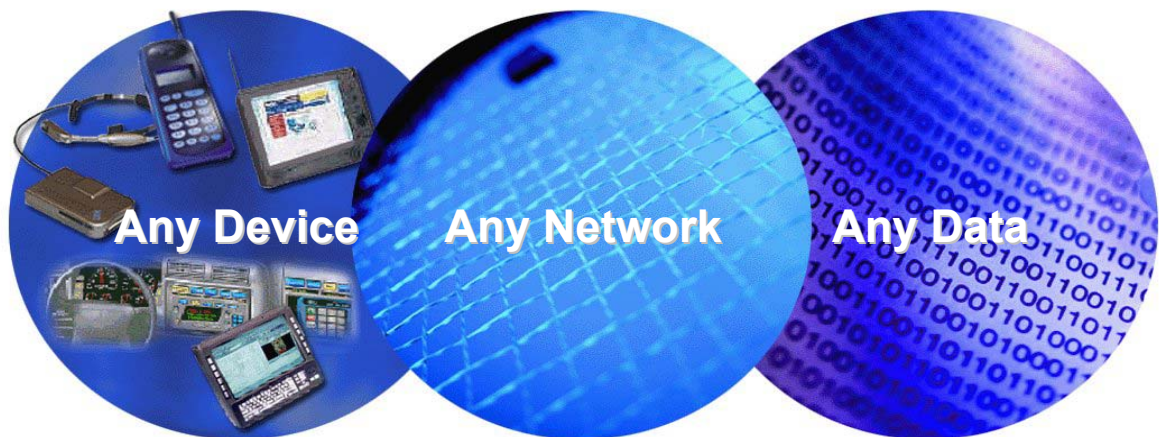
We are looking to develop relationships with companies who are:

Experienced in wireless, mobile or voice technologies, and in helping customers implement solutions

Developing solutions to extend e-business applications to wireless/pervasive devices

Voice-enabling applications or web sites

Developing mobile device hardware or software



Programs & Services

PartnerWorld®



an umbrella marketing & technical program for IBM Business Partners that provides:

Member Services:

- General Business Discounts
- Newsletter/Information via Web sites
- IBM Software Mall for Evaluation Software
- IBM Hardware Mall for IBM hardware discounts
- Global Solutions Directory listing

Education:

- Fee and Free Technical/Sales Education
- Web lectures, classroom courses, hands-on
- Selected Tuition Discounts

Certification Program:

- Product Certification for IBM Voice Products

Technical Support and Services:

- IBM Technical Centers
- Developer Support Program
- Solution Partnership Centers
- Product Introduction Center

■ Sales and Marketing:

- Sales Executive Relationship /Support
- Business Development Resources
- Pervasive Web Site Listing for IBM Business Partners
- Application Briefs for IBM Business Partner Installation
- Pervasive Market Development Funds
- IBM Business Partner Software Discounts
- PartnerInfo Data on the Web
- PartnerLine for Phone Access to PartnerWorld
- TechLine Pre-Sale Support
- Sales Leads

■ Events and Conferences:

- PartnerWorld Conference
- Marketing Events Participation
- Business Show Invitations
- developerWorks Live! Conference

Note: Some programs have additional eligibility requirements

IBM Business Partner Programs

PartnerWorld®



for Developers

REMOTE TEST FACILITY

No charge, internet-accessible Facility

Provides uncompromised access to fully operational systems with no overhead maintenance, or costs

- WebSphere Everyplace Access (WEA)
- WebSphere Everyplace Connection Manager (Gateway)
- WebSphere Portal
- WebSphere Studio tools

Benefits

- Stable environment for porting of function/system testing
- Any location worldwide
- Complete, up-to-date Pervasive products

For complete instructions on using the Remote Test Facility, go to <http://www.developer.ibm.com/spc/pvc/>

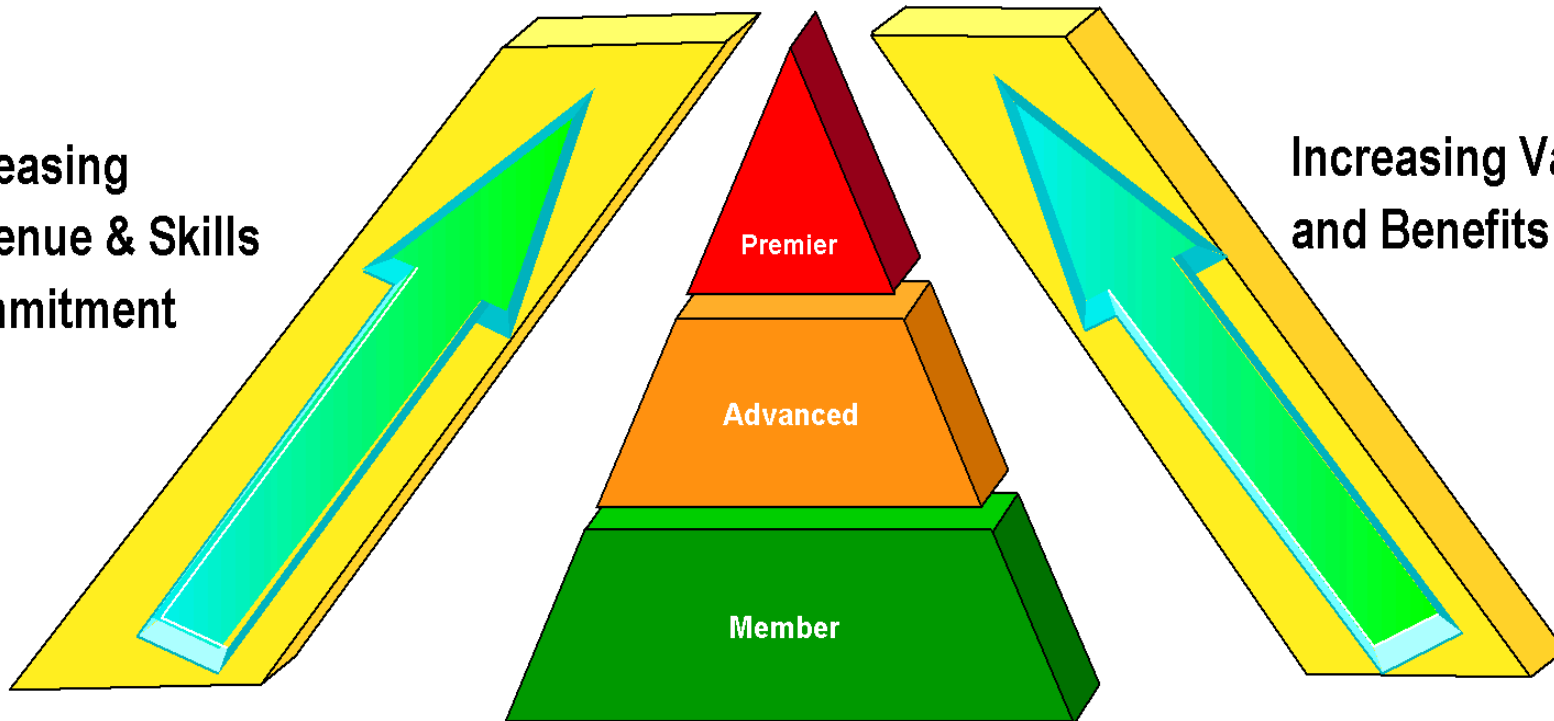
IBM Business Partner Programs

IBM Invests in Business Partners who:

- Are committed to IBM
- Deliver business results
- Maintain current skills
- Lead with IBM solutions



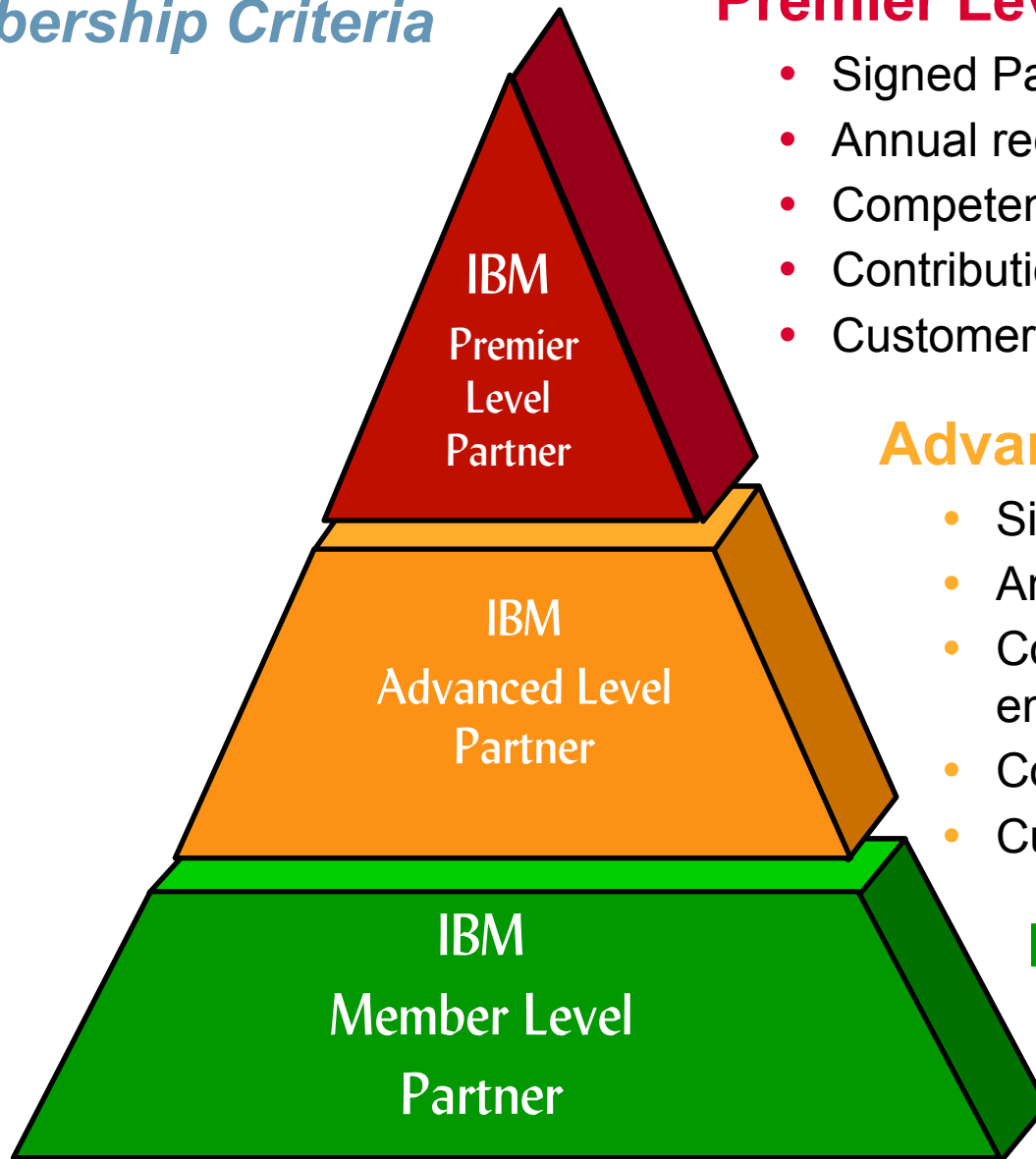
**Increasing
Revenue & Skills
Commitment**



**Increasing Value
and Benefits**

IBM PartnerWorld for Software

Membership Criteria



Premier Level:

- Signed PartnerWorld agreement
- Annual requalification
- Competency - Eight certified/skilled employees
- Contribution - \$150 K annual software revenue
- Customer satisfaction

Advanced Level:

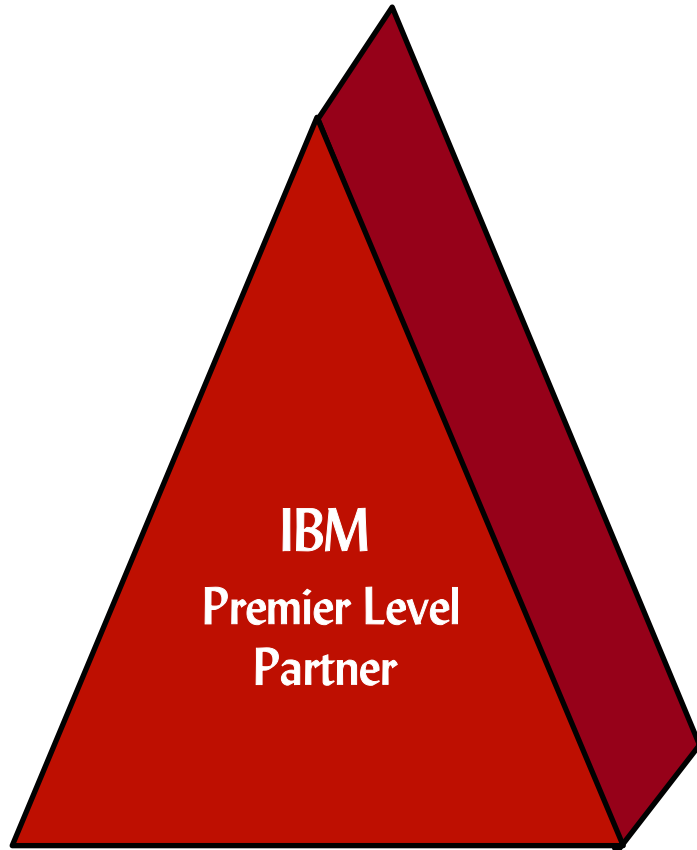
- Signed PartnerWorld agreement
- Annual requalification
- Competency - Three certified/skilled employees
- Contribution - \$100 K software revenue
- Customer Satisfaction

Member Level:

- Signed PartnerWorld agreement
- Annual requalification

IBM Business Partner Programs

Membership Benefits



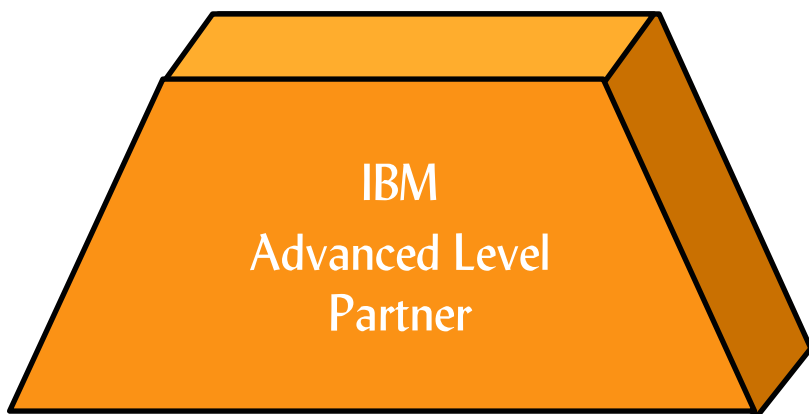
Premier Level:

- Sales executive support
- Sales Tools
- Marketing Tools
- Partner Directory
- Connecting Business Partners
- Access to Software
- Technical education and certification
- Tuition reimbursement
- Sales education
- Distance learning
- Business/executive education
- Technical support
- Sales Incentives
- Special Events
- Recognition

Some benefits listed are available for a charge within the Value Package for Software offering (contents differ by level)

IBM Business Partner Programs

Membership Benefits



Advanced Level:

- Sales executive support subset
- Sales Tools subset
- Marketing Tools subset
- Partner Directory
- Connecting Business Partners
- Access to Software
- Technical education and certification
- Tuition reimbursement
- Sales education
- Distance learning
- Business/executive education
- Technical support subset
- Sales Incentives
- Special Events
- Recognition

Some benefits listed are available for a charge within the Value Package for Software offering (contents differ by level)

IBM Business Partner Programs

Membership Benefits



Member Level:

- Sales Tools subset
- Marketing Tools subset
- Partner Directory subset
- Connecting Business Partners subset
- Access to Software
- Technical education and certification
- Tuition reimbursement
- Sales education
- Distance learning
- Business/executive education

Some benefits listed are available for a charge within the Value Package for Software offering (contents differ by level)

Web Lecture Series of overview courses on IBM PvC offerings

Free web-based audiovisual courseware

Fee-based multi-day classroom courses

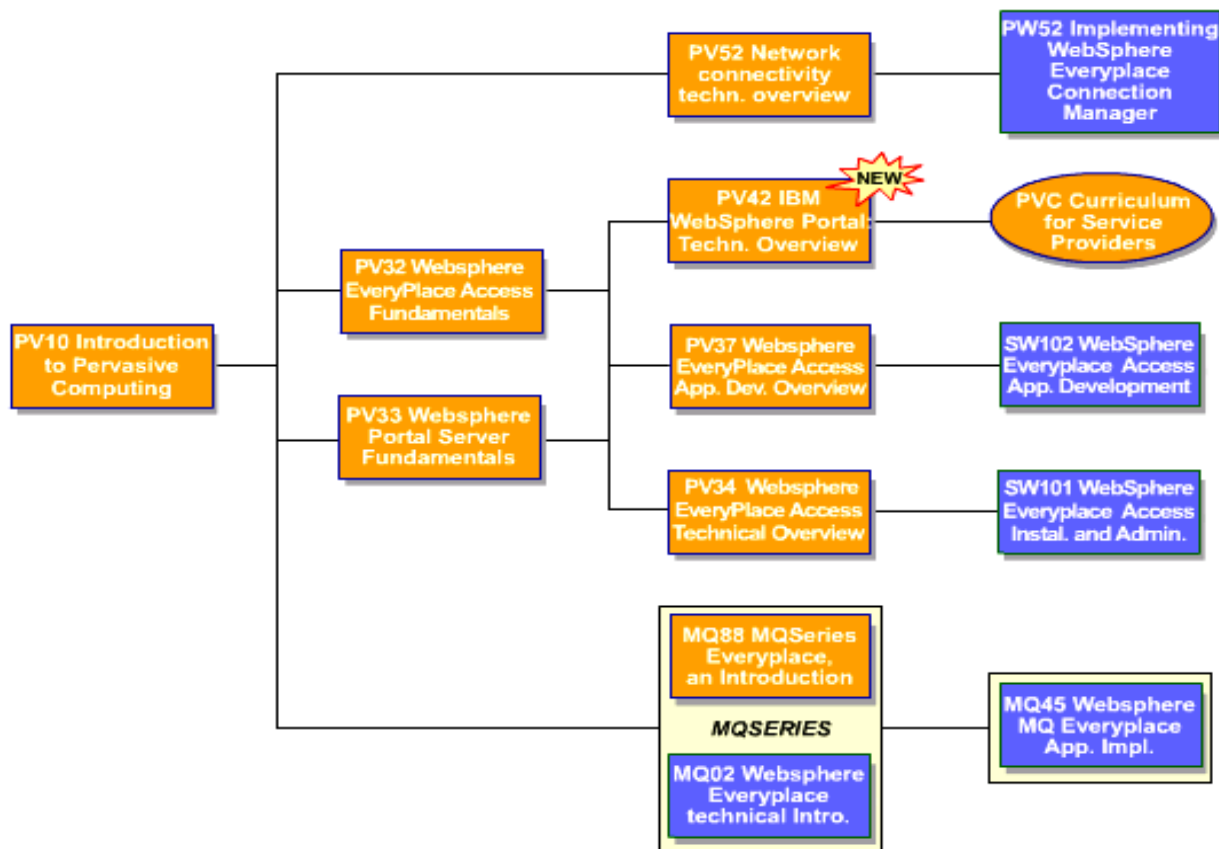
Wireless/Device Workshops for architects, system integrators and developers

Signature Selling Method (SSM) Workshops that teach proven sales techniques

Skills Certification Program for Voice Products



Wireless e-business University Pervasive Computing for the Enterprise Roadmap



Pervasive Enablement Workshops



- 4-day WebSphere Everyplace Access workshops
- 3-day WebSphere Studio Device Development workshops
- Intensive hands-on training and technical skill transfer
- Admission to qualified BPs
- No charge
- Available worldwide

Technical Enablement

Solution architecture support

- ◆ Design assistance
- ◆ Skill transfer

On-line PvC community forum

Access to Solution Partnership Centers for:

- Briefings
- Consultation
- Integration testing

Development copies of IBM products

Electronic Technical Support

Techline pre-sales telephone support to help you sell IBM solutions:

- Solution design, development of sales strategies
- Technical recommendations
- Product research and positioning
- Configuration and pricing support
- Upgrade alternatives
- Benchmark data from published resources

Free and fee-based education offerings



WebSphere Portlet Provider Program

Benefits Provided by IBM at No Charge to Business Partners

- To help you build portlets for WebSphere Portal
 - ✓ Free IBM Portlet Development Class for 5 developers
 - ✓ 90 days no-charge technical support from Developer Relations
 - ✓ Support from IBM Solution Partnership Centers
- Generate awareness with IBM customers
 - ✓ Portlet(s) are posted in WebSphere Portlet Catalog
 - ✓ Partner frequently asked questions (FAQ) and sales kits posted online
 - ✓ Referenced in press releases, on Portal Business Partner page and in IBM presentations as a portlet provider

Business Partner Provides

- At least 1 portlet on Portlet Catalog within 60 days of signing the attachment
- (May be packaged with other things such as services)
- Hosting of portlets on your website for customers to download

Pervasive Resources

IBM Pervasive Web sites

Pervasive Computing Products, Education, & Business Partner Information

<http://www.ibm.com/pvc> > **Business Partners**

Pervasive Resource Center

<http://www.developer.ibm.com/pvc>

Pervasive public web site for Wireless Workshop registration

http://www-1.ibm.com/partnerworld/pwhome.nsf/news/news_feature_stories_wireless.html

Pervasive public web site for WebSphere Everyplace Access code requests

http://www.developer.ibm.com/pvc/eas_req.html

Pervasive Newsgroup

<news://news.software.ibm.com/ibm.software.websphere.everyplace>

Support Lines

Information about IBM Pervasive Products

1-800-Talk2ME

IBM PartnerWorld Member Services Line

1-800-426-9990

IBM Voice Systems Software Defect Support

1-888-624-6875



Other Web sites

IBM PartnerWorld for Software Criteria and Benefits

<http://www-100.ibm.com/partnerworld/software/pwswpub1.nsf>

IBM PartnerWorld Resources and Enrollment

<http://www.ibm.com/partnerworld>

IBM Tools and Education

<http://www.ibm.com/developerworks>

IBM Technical Redbooks

<http://www.redbooks.ibm.com/>

IBM Software License Agreement Information

<http://www-3.ibm.com/software/sla/sladb.nsf/viewb>

Global Solutions Directory

<http://www.software.ibm.com/solutions/isv>

Emerging Technology Tools and Information

www.alphaworks.ibm.com

VoiceXML Forum

www.voicexmlforum.org

"powered by WebSphere"

www.developer.ibm.com/websphere/pbw.html

IBM Business Partner Sales Contacts

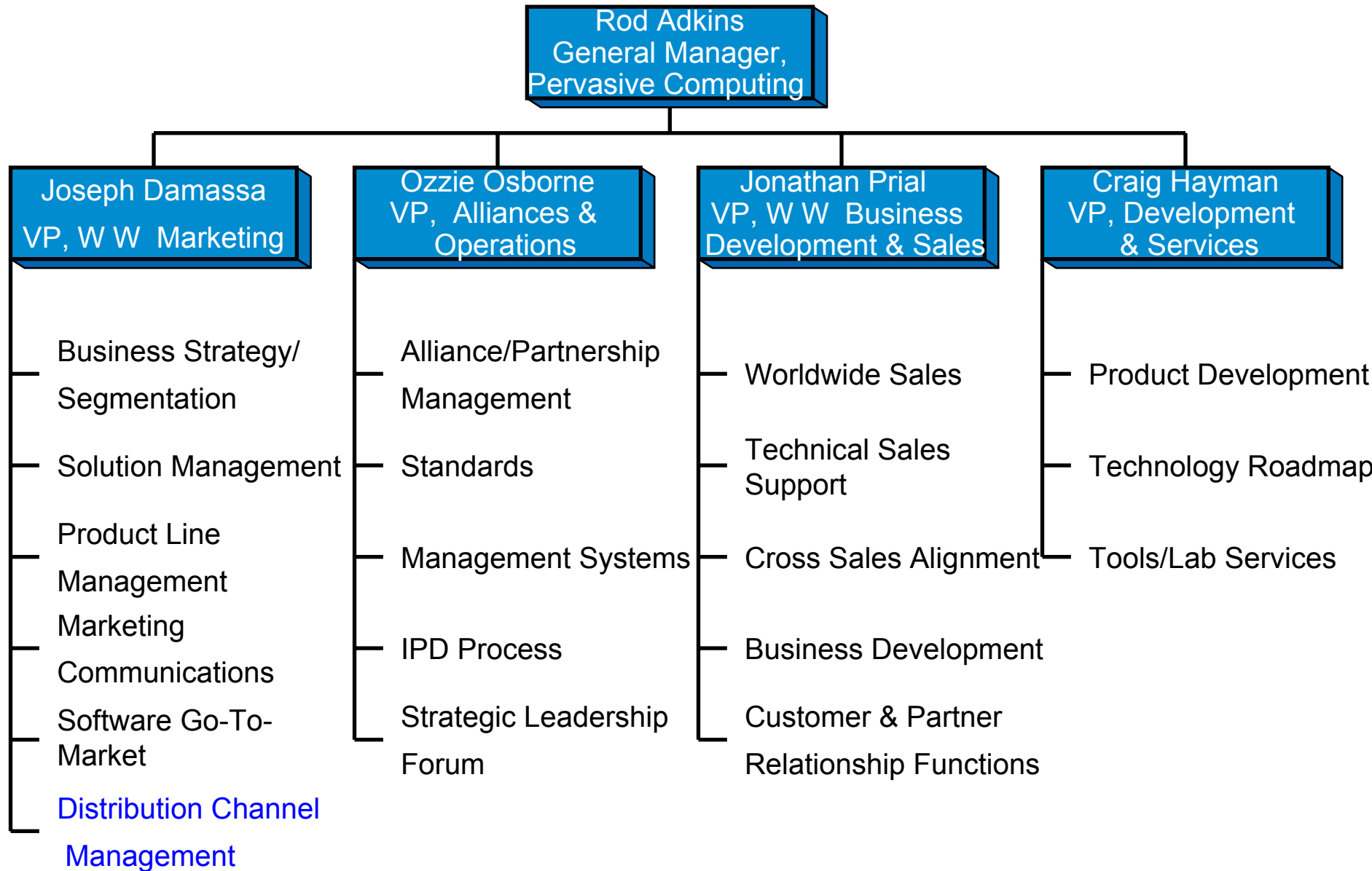
Business Partner Sales Managers:

Mark Guss - Americas	203-938-5221	guss@us.ibm.com
Derek Sanders - EMEA	44 20 88184884	derek_sanders@uk.ibm.com
Lawrence Sellin - EMEA WeB Alliance	358-40-5013784	lawrence.sellin@fi.ibm.com
Jason Lau - Asia Pacific	852-2825-6002	laujason@hk1.ibm.com
Michael Garbett - WW Technology Sales	714-438-5332	mgarbett@us.ibm.com

Sales Situation Contacts: (both Voice and Wireless)

Paula Hough - Americas	303-773-5559	pdhough@us.ibm.com
Sally Johnson - Americas	207-695-8996	sjohnson@us.ibm.com
Lynn Wise - Americas	561-463-0474	alwise@us.ibm.com
Pat Philips - Americas	305-442-3854	patrisa@us.ibm.com
Derek Sanders - EMEA	44 20 88184884	derek_sanders@uk.ibm.com
Jason Lau - Asia Pacific	852-2825-6002	laujason@hk1.ibm.com
Kevin Swiss - Americas	303-773-5722	swiss@us.ibm.com
Cynthia Davis - Americas	602-217-2655	crdavis@us.ibm.com

BM Pervasive Computing - Who We Are



Next Steps

Becoming an IBM Business Partner

- **Tell us your business model:**
 - Providing solutions and/or devices that are enabled on Pervasive middleware or integrating, reselling or distributing Pervasive offerings?
 - Early interest, still defining wireless opportunity or committed, with ability to meet IBM's partner selection criteria and jointly execute a business plan?
- **Join the Pervasive team**
 - Enroll in IBM PartnerWorld for Developers and/or IBM PartnerWorld for Software
 - Submit an IBM External Submissions Questionnaire describing the relationship you'd like to pursue with IBM (optional)
- **Gain further knowledge of Pervasive offerings**
 - Attend wireless and/or voice classes
 - Attend a Wireless/Device Workshop
- **Get started**
 - Test/evaluate PvC product(s)
 - Begin enabling your applications and/or services
 - List your solution(s) in the IBM Global Services Directory

Backup Charts

For More Information on Tools . . .

- **WebSphere Studio Information and Web Demo**
 - www.ibm.com/software/ad/adstudio
- **Application Developer Multimedia Tutorial**
 - <http://webspherecentral.com/> (will move to <http://www-3.ibm.com/software/ad/studioappdev/library/#demos>)
- **WebSphere Portal V4.1 Information is available on the Portal Website**
 - <http://www.ibm.com/websphere/portalfamily>
- **Additional portlet programming information is available on IBM DeveloperWorks**
 - <http://www.developerworks.ibm.com>
- **WebSphere Studio Developer Domain (WSDD)**
 - www.ibm.com/websphere/developer/zones/studio/transition.html
 - [Transitioning to the New WebSphere Studio Development Products](#)
- **Redbooks/Redpieces**
 - [Web Services Wizardry with WebSphere Studio Application Developer](#)
- **WebSphere Studio Partner Program**
 - www.ibm.com/partnerworld
- **Education**
 - <http://www.ibm.com/software/ad/studioappdev/education>
- **Eclipse**
 - www.eclipse.org

IBM Passport Advantage

Business Partner pricing structures are coordinated with the IBM Passport Advantage customer purchasing program.

Passport Advantage offers IBM customers the opportunity to leverage product purchases across a broad range of products to receive discounts. Benefits to the customer of this program include:

- Aggregation of all IBM Passport Advantage products purchased
- Annual Revaluation of Relationship Suggested Volume Pricing Level (Based on Purchases)
- Point Values Assigned by Product
- Simplified Renewal Process
- Perpetual Agreement
- All Licenses include Software Maintenance (Subscription & Technical Support)

Passport Advantage Reseller Discount Table

Enhanced Profitability

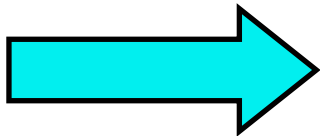
Relationship SVP Table

Point Value	10	100	250	500	1,000	2,500	5,000	10,000	25k	50k
Relationship SVP Band	A	B	C	D	E	F	G	H	I	J
Relationship SVP Discount %	16%	15%	15%	13%	11%	11%	10%	10%	Spec Bid	Spec Bid



Transaction SVP Table

Point Value	250	500	1,000	2,500	5,000	10,000	Spec Bid	Spec Bid
Transaction SVP Band	E	F	G	H	I	J		
Transaction SVP Discount %	15%	13%	11%	11%	10%	10%	Spec Bid	Spec Bid



Top Contributor Qualifications (Resellers)

Criteria	Advanced Level	Premier Level
Annual Revenue Attainment	\$300K (USD) of Enterprise plus Midmarket Revenue or \$100K of Midmarket Revenue	\$450K (USD) of Enterprise plus Midmarket Revenue or \$150K (USD) of Midmarket Revenue
Skills Attainment	<u>3 Skilled Individuals</u> 2 Technical Certifications 1 Sales Skill Certification	8 Skilled Individuals 5 Technical Certifications (min 2 Power Brands) 3 Sales Skills Certification
Customer References	3 Customer References	5 Customer References
Demonstration Skills	Demo minimum of one Power Brand	Demo minimum of one Power Brand
Business Relationship	Approved Business and Marketing Plan Monthly Forecasts & Quarterly Reviews Sponsorship by IBM Sales Mgmt	Approved Business and Marketing Plan Monthly Forecasts & Quarterly Reviews Sponsorship by IBM Sales Mgmt

Top Contributor Initiatives for 2002 (Resellers):

- Market Growth Fee Program
- Co-Marketing Programs
- Now You! Program

Top Contributor Programs

Market Growth Fee Payments:

Based on level of attainment of Passport Advantage revenue targets
Ranges 6-18% based on attainment of target and exceeding target attainment

Co-Marketing Payments:

Based on level of attainment of Passport Advantage revenue targets
Funds for approved co-marketing programs with IBM
Range 5% (minimum 5K) of revenue target

Now You! Rewards Program:

Recognizes Sales Contribution & Rewards Loyalty
Accumulate points based on Passport Advantage sales (calendar year)
Awards include travel prizes such a trip to China (2002 program)

WEA Positioning Table

Product
Portal

Buy "Other" Product

Buy Portal alone:

To provide online access to Business Applications, web content with a portal user experience, personalisation, single-signon, search, collaboration

Have WEA - Buy Portal:

To provide the portal experience - collaboration, personalization, content management

B2E

To mobilize and synchronize your Notes/Domino Email, PIM and applications

B2e

To mobilize and synchronize your Relational Database Application

WTP

To Provide Content adaptation only

MC

To provide rich synchronization function
User based pricing

Buy Everyplace Access

Buy WEA alone:

To provide online & offline/disconnected access to one or of the following - Email, PIM, any business applications and wireless access to web content.

Have Portal - Buy WEA:

To provide the pervasive portal experience, that means extend the portal experience - Offline and to non-PC devices.

To mobilize email, PIM, Domino application and Business applications that are not based on Notes/Domino as well as support for Offline Browsing, notification, etc.

To mobilize Email, PIM and applications beyond Relational Database applications as well as support for offline browsing, notification

To provide synchronization function in addition to transcoding

To provide basic synchronization function
Processor based pricing

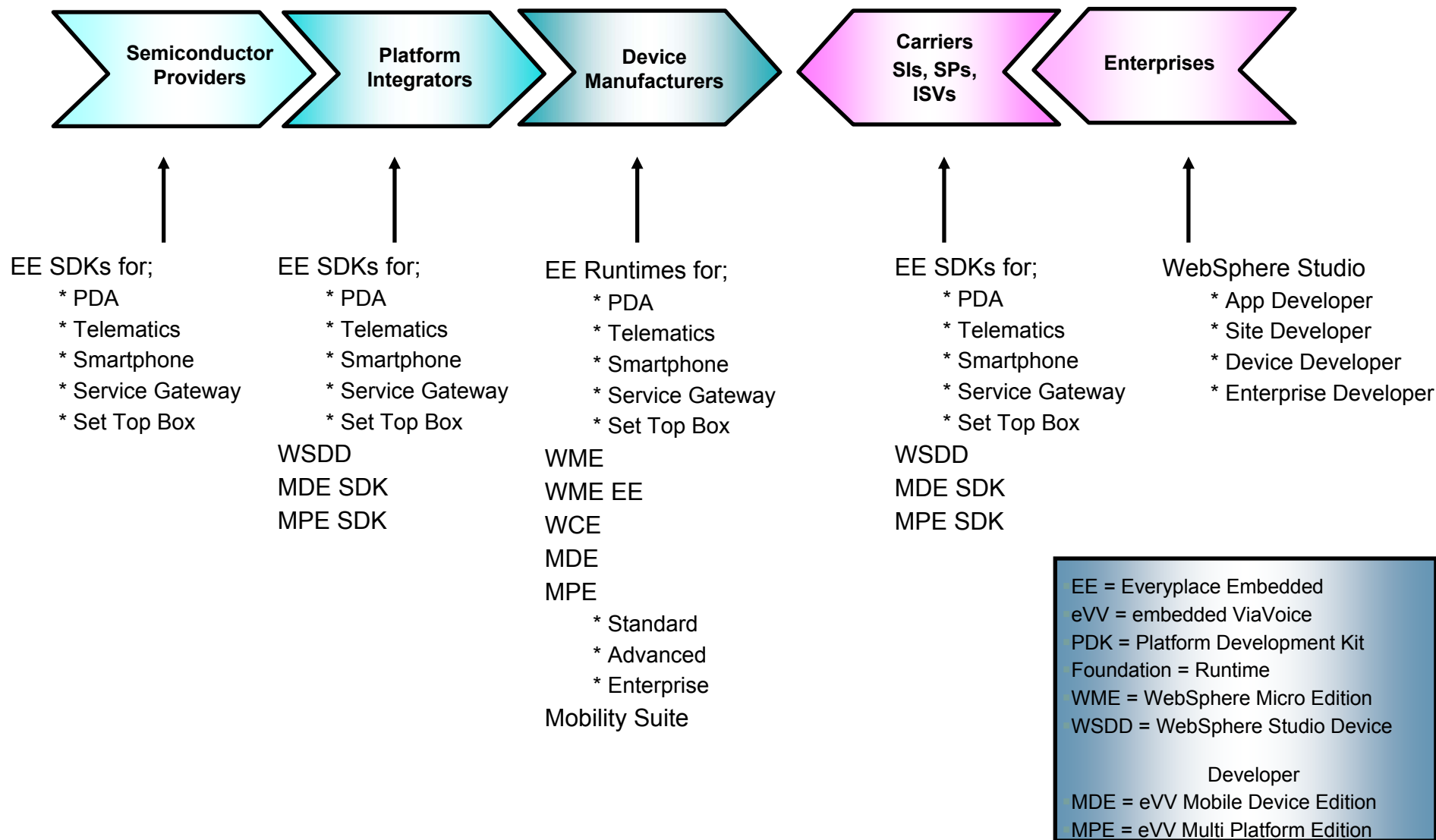
Web Services Cost-of-Deployment Leadership

Core Differentiators

Capability	WebSphere	Microsoft.Net
Extend existing programming model, programming skills and tools	Yes Extends existing J2EE assets	No Need to rewrite existing assets
Multi-platform deployment, allowing you to preserve your existing infrastructure investments	Yes Windows NT/2000, Linux, AIX, HP/UX, Solaris, Os/400, z/OS	Deploy on Windows.net only
Deploy on current HW & OS platform	Yes	No Requires upgrade to Windows.net
Re-purpose legacy applications directly as web services	Yes	No
Secure & manageable service gateway with rules based routing and caching as part of system base	Yes Native WebSphere App Server	No Requires BizTalk addition. Biztalk is currently not enabled for .Net
Enables Web Services over multiple communications protocols	Yes Several network protocols	No Limited to HTTP & COM

Device Software Value Chain

Positioning IBM's Offerings



IBM's Leadership in Web Services

Broadest
Support
Across
Platform

Web services is a key element of the roadmap to on demand

- Leadership position in Forrester Wave Web Services Platform
- Positioned in Gartner Magic Quadrant for Web Services
- “The clear leader in this race to deliver Web services functionality is IBM ...” ZDNet, Dec. 2002

Value to
Your
Business

Solution providers can reduce costs and maximize opportunity

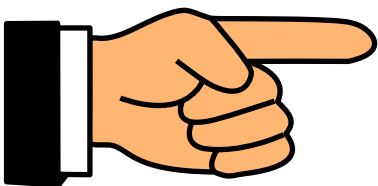
- Speed portlet development with IBM's Web services capabilities
- Accelerate portal application development and simplify business integration with web services
- Leverage existing assets and developer skills

Start Today
with IBM

What IBM announced in February 2003

- General availability of the “Next Generation” development and deployment platform with leading support for Web services
 - WebSphere Application Server Enterprise V5
 - WebSphere Studio Application Developer Integration Edition V5
- 4 new IBM programs to enable skills and accelerate adoption

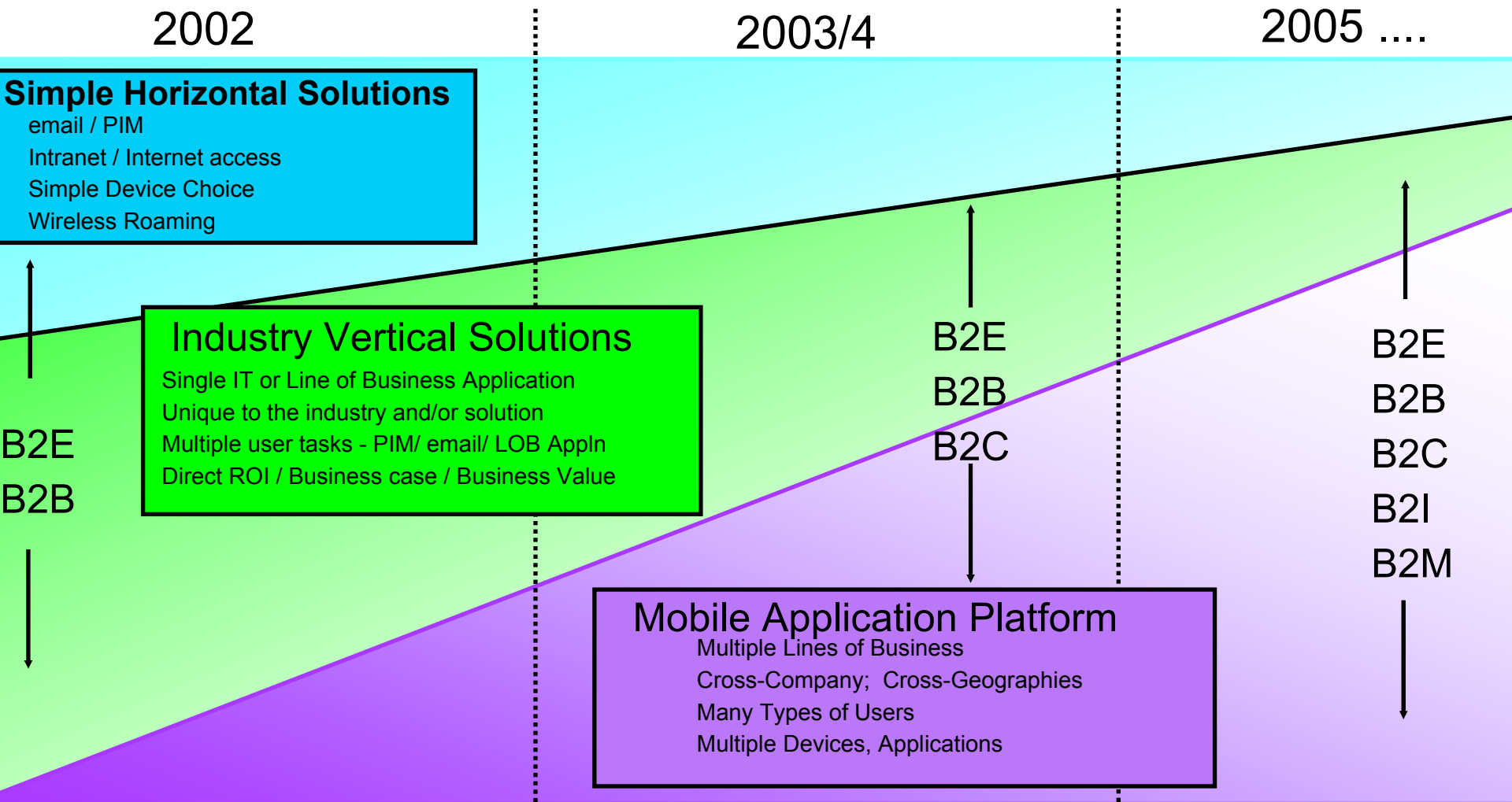
Partner Value Proposition



Business Partners starting to sell IBM can increase productivity by selling more IBM Brands with a higher number of IBM Certifications.

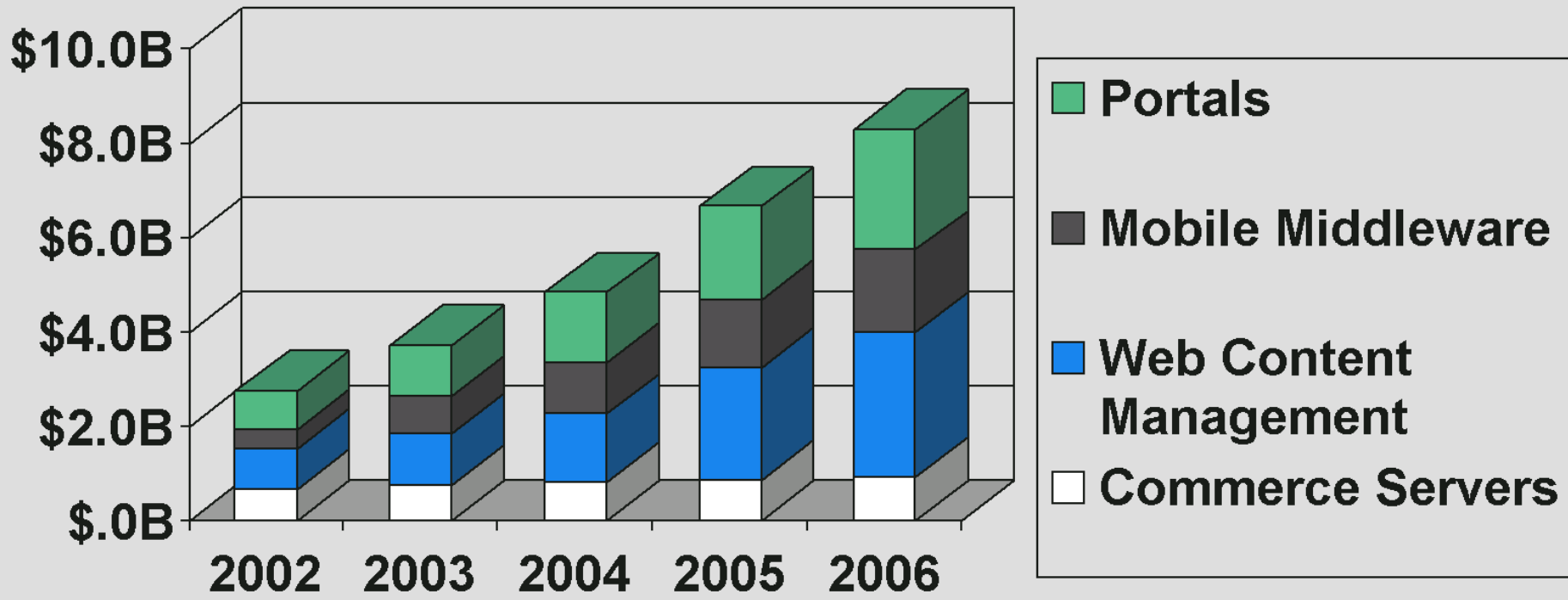
IBM middleware revenue	Partner selling only 1 IBM brand	Partner selling 3-4 IBM brands	Partners with < 5 IBM certified emp.	Partners with > 5 IBM certified em
1st \$ 100 K sold	8.4 months	7.2 months	8.5 months	6.6 months
2nd \$ 100 K sold	9.5 months	7.7 months	9.0 months	7.3 months
1st \$ 200 K total	17.9 months	14.9 months	17.5 months	13.9 months

Evolution of the Pervasive Market



The Opportunity

Software Revenue



Source: IDC and Giga, 2002

IBM Mobile Connect V3.0

- **An end-to-end solution that corporations can use to successfully deploy vital information to mobile professionals via hand-held wireless devices**
- **Users can synchronize with:**
 - **Microsoft Exchange and Lotus Domino**
 - **ODBC-compliant databases**
- **And can access/update:**
 - **e-mail**
 - **Calendar**
 - **Address book**
 - **To-do list**
 - **Memos**
 - **Database**
 - **Back-up recovery**