



# *Microsoft* **Mobility Overview**

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## **Overview**

- **Microsoft Mobility Strategy**
- **Pocket PC 2002**
- **Windows Powered Smartphone 2002**
- **Microsoft Mobile Information Server (MMIS)**
- **Microsoft Mobile Developer Tools**
- **References**



## Microsoft Mobility Strategy

- Mobility Vision
- Mobile Workforce Challenges
- Mobility Strategy
- Mobile Device Family



## Mobility Vision

### Vision in 1975

“A computer on every desk and in every home”

### Vision Today

“Empower people through great software any time, any place and on any device”

# Mobile Workforce Challenges

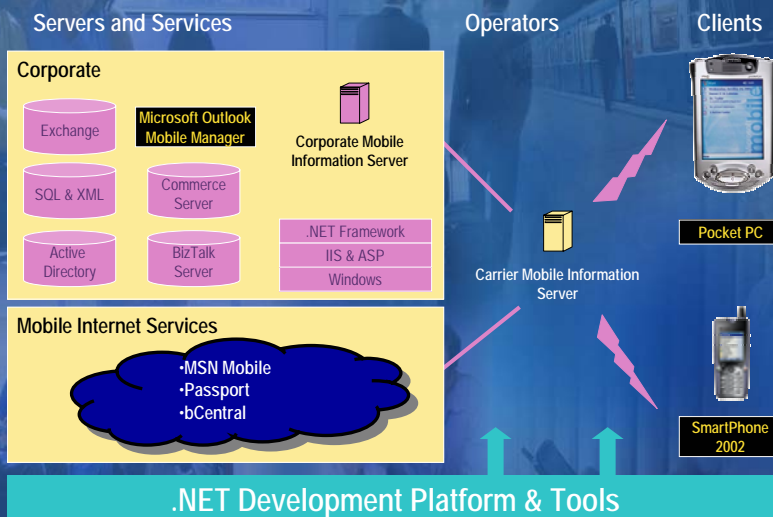
## User Needs:

- ◆ Access to the right information anywhere, anytime
- ◆ Help service customers faster
- ◆ Make the experience seamless with intelligent management of communications

## Enterprise / IT Require:

- ◆ Maintain high-level of security
- ◆ Manageability of devices on the network
- ◆ Smooth integration with existing systems
- ◆ Reliable infrastructure for 24 x 7 availability

# Mobility Strategy Overview



## Mobile Device Family

Data



Pocket PC 2002

- No One Ideal Device for Every User
- User Experience Optimized for Each Device

Smartphone 2002



## Goals of Pocket PC 2002

### A Better Pocket PC

- ✦ Incorporate customer requests
- ✦ Evolve (not overhaul) Pocket PC

### The Best Enterprise Device

- ✦ Deliver new functionality targeted to biz users

### The Most Connected PDA

- ✦ Offer the most connectivity choices
- ✦ Provide the best platform for wireless communications

# Pocket PC Overview

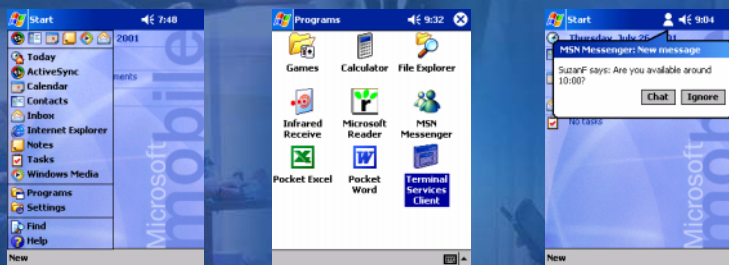
- Codenamed 'Merlin'
- Shipped 2001
- Color Screens
- Windows CE 3.0
- Simplified and Updated User Interface
- Easier Connectivity and Synchronization
- Wide Range of Software



# Refreshed User Interface

An Improved User Interface

- Refreshed Look and Feel
- Notifications
- Better Navigation
- Tap and Hold Animation



# Pocket Outlook

## Pocket Outlook (PIM functions)

- ✦ View Contacts by Company
- ✦ Re-Ordered Contact Fields
- ✦ “No” Category for Contacts
- ✦ View Meeting Attendees in Calendar
- ✦ Calendar View Buttons
- ✦ Calendar Week Numbering

## Pocket Outlook Inbox

- ✦ Better Performance
- ✦ Subfolder Synchronization
- ✦ Embedded HTML Mail Support
- ✦ ISP Mail Auto Configuration
- ✦ Edit Meeting Requests
- ✦ Email Reply by Dictation
- ✦ My Text
- ✦ Spell Checker



# Pocket Office, Media Player & Reader

## Pocket Office

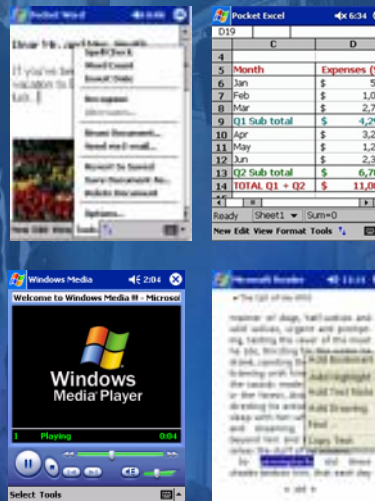
- ✦ Spell Checker and Word Counter in Pocket Word
- ✦ Pocket Excel Context Menus

## Windows Media Player

- ✦ Streaming Content
- ✦ “Skin-able” Screen
- ✦ Web Favorites

## Microsoft Reader

- ✦ Owner exclusive, digital rights management support
- ✦ New User Interface



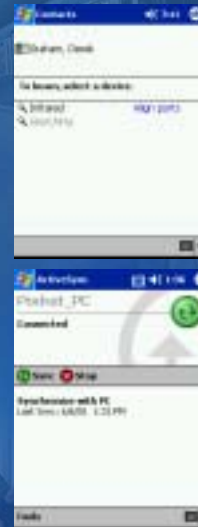
# Enhanced Beaming & ActiveSync

## Enhanced Beaming

- Universal OBEX support
- Improved Usability

## Improved and Enhanced ActiveSync

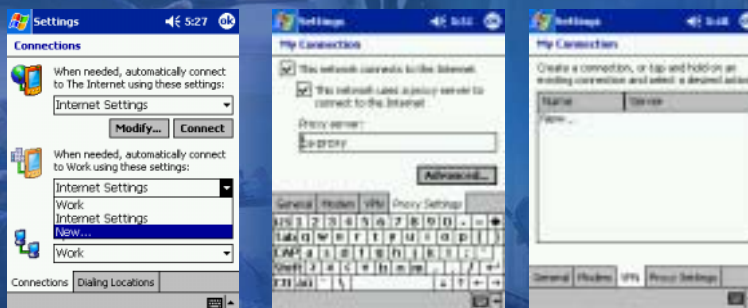
- Improved performance and reliability
- Device UI
- Desktop Passthrough



# Connection Manager

## New Connection Manager Application

- Automatically manage work and home connections
- Desktop Wizard for Initial Configuration



# Pocket Internet Explorer

## Pocket Internet Explorer

- ◆ Multi-Mode support for HTML, WAP
- ◆ Selective Text Downloading
- ◆ Priority Text Download
- ◆ File Download Management
- ◆ Increased Standards Support



# Pocket PC for the Enterprise

## Device Security

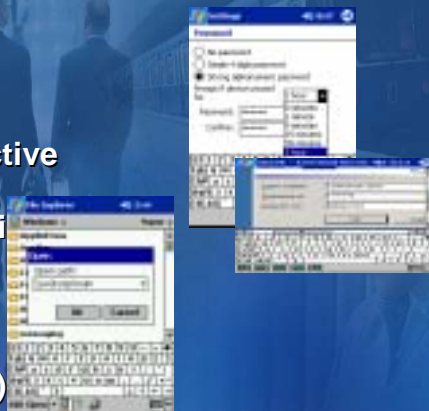
- ◆ Strong Password Support
- ◆ Customizable “Active Periods”
- ◆ Anti-virus Protection Enabled

## Corporate Network Access

- ◆ VPN Client (PPTP)
- ◆ Network Browse
- ◆ Auto Proxy Set

## New Terminal Server Client

- ◆ Windows 2000 and

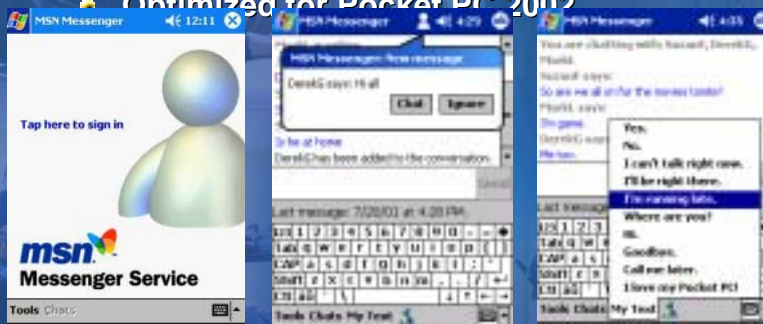




# The Most Connected PDA (Instant Messenger)

New MSN Messenger Client

- Passport and Exchange Support
- Similar to Desktop Experience
- Optimized for Pocket PC 2002



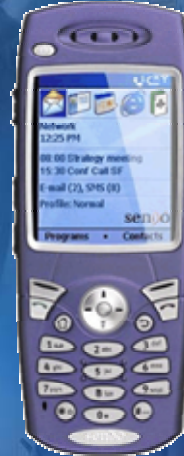
# Entertainment and Games

- Color Screen
- Intuitive Controls
- Stereo Sound
- Ideal Games Platform
- Plus the Reader
- And Audio/Video



# Windows Powered Smartphone 2002

What is the  
Smartphone 2002  
Home Screen  
Applications



# What is a Smartphone 2002?

## Vision

Smartphone 2002 is the best device for verbal and text communication while mobile

Smartphone 2002 excels at accessing up-to-date PIM and personally relevant Internet content

## Goals

- ✦ Be A Great Phone First
- ✦ Remote Control for Communications Management
- ✦ Up and Running in 5 minutes with No Support
- ✦ Over-the-Air Device Management from Web with No Support
- ✦ PIM and Mail Synchronization

# Home Screen

## Home screen is the device focus

- ✦ Operator and user information
- ✦ Device network and hardware status
- ✦ Call progress
- ✦ Updates: new messages, web links, etc.

## Central access point

- ✦ Minimize steps from here
- ✦ Data no more than two clicks away

## Customisable

- ✦ Customers are different: businessman / student
- ✦ Carrier can adapt home screen to suit customer
- ✦ Code plug-ins, layout is configurable



# Smartphone 2002 Applications

## Pocket Outlook

- ✦ Contacts
- ✦ Calendar
- ✦ Tasks
- ✦ Inbox (email, vmail, sms)
- ✦ IMAP 4, POP 3

## Telephony

- ✦ Integrated phone dialling
- ✦ Profiles

## Microsoft Smartphone 2002 Shell

- ✦ Win32 API platform
- ✦ One-handed navigation

## Instant Messenger

## Internet Explorer

- ✦ Scripting support
- ✦ XML
- ✦ HTML 3.2/WAP 1.2.1

## ActiveSync

- ✦ Desktop ActiveSync
- ✦ Server ActiveSync

## Media Player

## Game

## Device & Application Management



## **Mobile Information Server 2002**

**Extends Reach of .NET based  
Enterprise Applications**

**Launched Q1 2002**

**Make Your Organization Mobile**

**Outlook Mobile Access**

**Extensible Architecture for Developers**



## **Mobile Enable the Enterprise**

**Mobile Gateway Functionality**

**Notification Routing**

**High Security**

**Internet and Wireless Standards  
Support**

**Mobile Device Support**

**Integration with Windows 2000**

**Enhanced Security**

**International Support**

# Outlook Mobile Access

Ships with MIS Enterprise Edition Out of the Box Productivity

Tight Integration with Exchange

Rich Browsing from Mobile Devices

Push Notifications

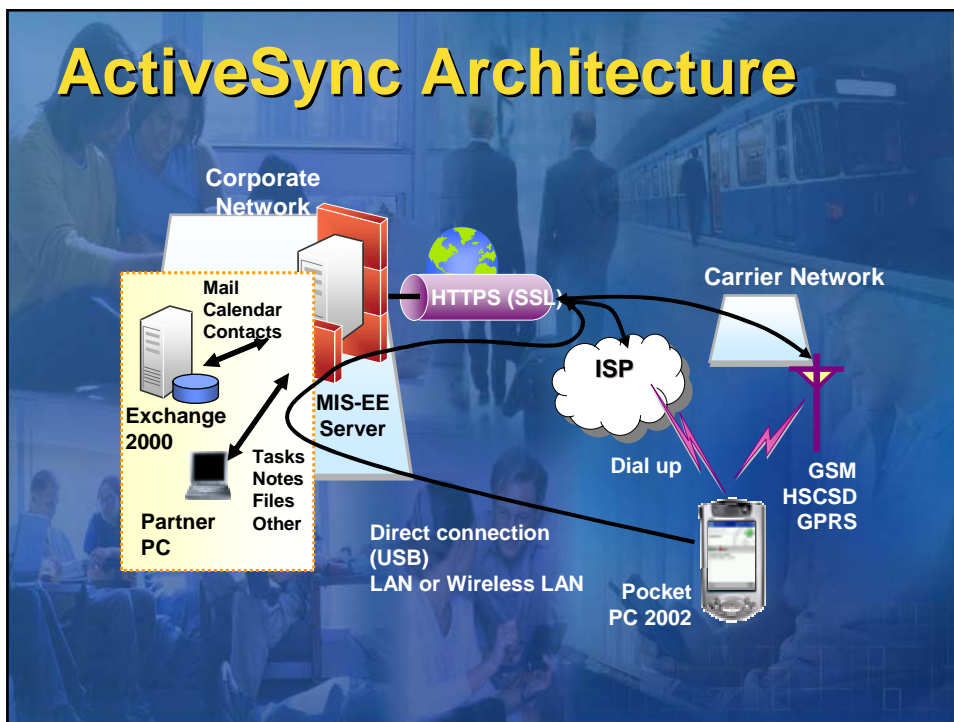
Microsoft Server ActiveSync

Voice Call Option

Worldwide Support

```
Main Menu
1 Inbox
2 Calendar
3 Contacts
4 Tasks
5 Configuration
Inbox
```

# ActiveSync Architecture



## **Mobile Solutions and Services**

**Access Mobile Web Forms Securely**

**Scalability and Performance**

**Management Tools**

**Administrative Tools**

**Updated Software Development Kit**

## **Outlook Mobile Manager**

**Desktop add-in for Outlook**

**Extends MIS Notification  
functionality**

- ◆ **Daily Summaries**
- ◆ **Meeting Reminders**
- ◆ **'Intellishrink'**
- ◆ **Prioritised message delivery**
- ◆ **Personal profiles – Work, Home, OOF etc**

# Outlook Mobile Manager

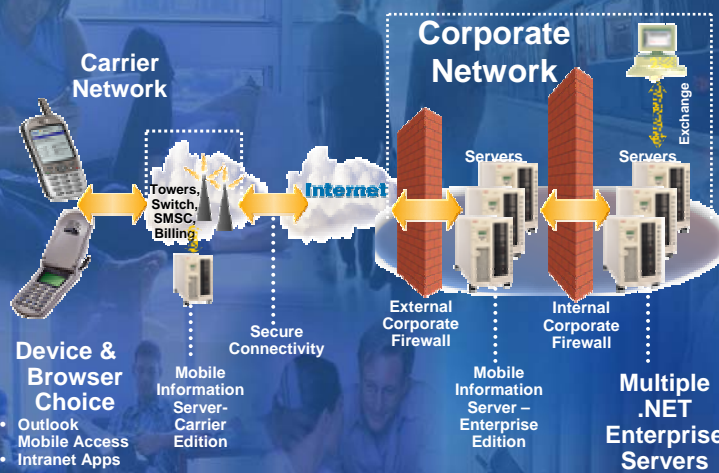
## Control Your Outlook Communications



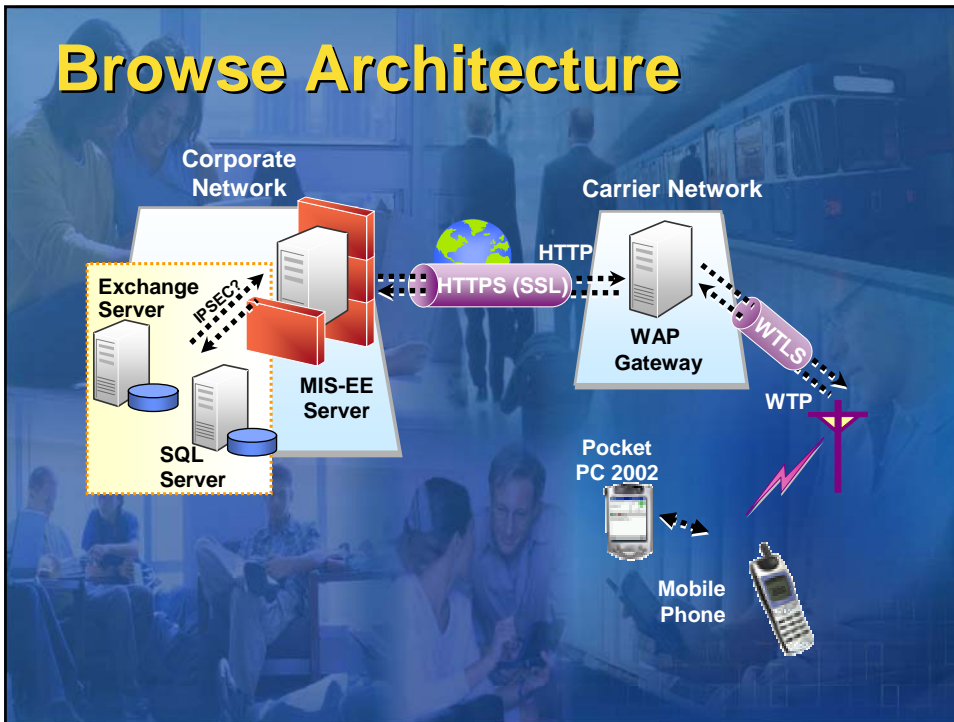
## Microsoft IntelliShrink



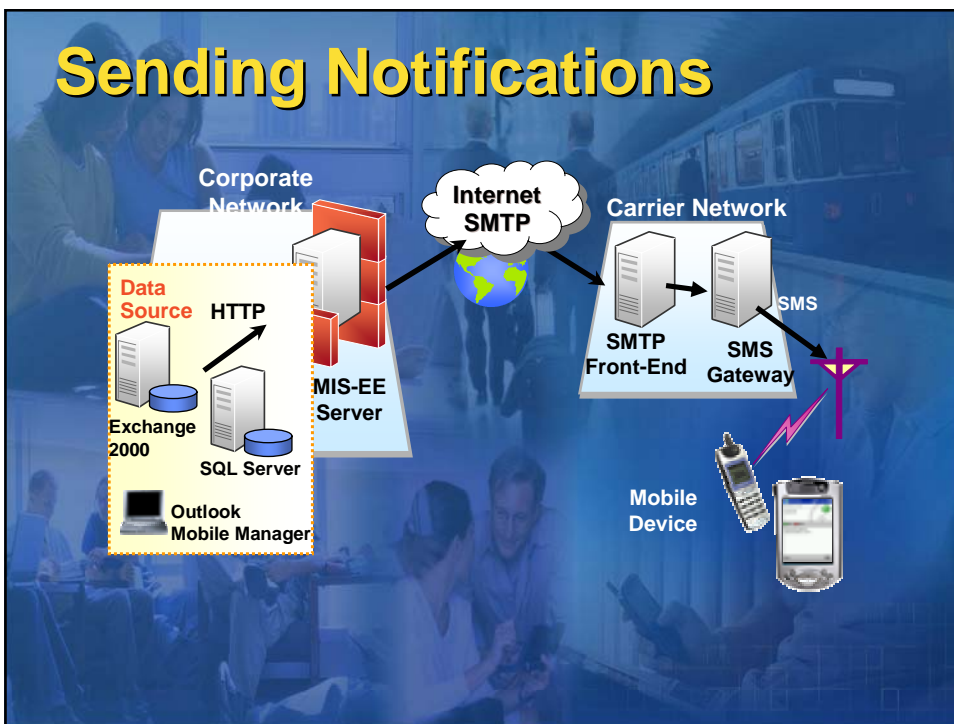
# Flexible Deployment



# Browse Architecture



# Sending Notifications





## Using Notifications

### Exchange 2000 Required

- ◆ Uses an Exchange Event Source to fire notifications
- ◆ User sets rule in Outlook to move items to a special folder

### MMIS-Carrier Edition role

- ◆ Using MMIS-CE, notifications sent as HTTP/SSL
- ◆ If no MMIS-CE available, notifications are SMTP

### SMTP

- ◆ Notifications are clear text mail sent over internet
- ◆ SMTP Header consumes valuable space in SMS payload

## Mobile Information Server Summary

### MIS is a platform for applications

- ◆ Outlook Mobile Access for Exchange
- ◆ Notifications from server applications
- ◆ Direct Synchronisation for Pocket PC

### Best experienced with ...

- ◆ Exchange 2000
- ◆ Your carrier's MIS-CE offering
- ◆ Pocket PC 2002

## Developing Mobile Applications

### Mobile Development Approaches Development Tools

- ◆ Embedded Visual Tools
- ◆ Visual Studio.NET for devices
- ◆ .NET Compact Framework
- ◆ Microsoft Mobile Internet Toolkit



## Mobile Development Approaches

Client  
Application

- App on device
- Device specific
- Fewer devices
- Offline options
- Richest UI
- Harder to deploy

Web  
Application

- App on Server
- Runs in browser
- Many devices
- Online only
- Less UI choice
- Easy to deploy

## Embedded Visual Tools

Desktop development environment for creating applications and system components for Windows® Powered devices

Software Development Kits (SDK) available for

- ✦ Pocket PC 2002 (Download from web)
- ✦ Pocket PC 2000
- ✦ Handheld PC

Two development languages supported

- ✦ Embedded Visual C++
- ✦ Embedded Visual Basic

Customer Benefits

- ✦ Greatly simplified setup, UI with embedded focus
- ✦ Ability to tailor IDE for platform-specific support
- ✦ Low cost - Tools are FREE, Web download, or order from Web.
- ✦ Also ships FREE with Platform Builder 3.0.

## Visual Studio.NET for Device

Same integrated development environment used for desktop development

- ✦ Extends VS.NET IDE
  - ✦ Targets the .NET Compact Framework
  - ✦ Mobile Internet Toolkit
- ✦ Enables full develop/debug/deploy scenarios



Take advantage of existing VS.Net knowledge

- ✦ IntelliSense™, Filtered Help
- ✦ Editor underlines (squiggles) code and frameworks that won't run
- ✦ Task List also shows compile errors

## Debugging, Visual Studio.NET

Same user experience as desktop

Supported features include

- ✦ File copy and run (F5) Emulation/Deployment mode
- ✦ Source code breakpoints & single-step
- ✦ Stack trace
- ✦ Variable inspection

Device Emulation

- ✦ Robust, accurate device emulation
- ✦ Runs Windows® CE operating system on Windows XP
- ✦ Emulates localized versions of the operating system

Multiple device transports

- ✦ TCP/IP, IrDA, Bluetooth, Serial ...

## .NET Compact Framework

.NET Framework for smart devices

Optimized for resource economy

Compatible:

- ✦ Same programming model
- ✦ Same binary file format

Device, CPU, OS independent

- ✦ Platform Abstraction Layer (PAL)

Enable rich client Web Services and line of business applications

Target devices without being a device guru

.NET Desktop Applications

.NET Windows CE Applications

.NET Mobile Phone Applications

## Microsoft Mobile Internet Toolkit

### Write-once mobile web pages

- ✦ From a single code base target multiple devices
- ✦ Separate code from presentation layer

### Support for a variety of devices

- ✦ Web enabled Cell Phones, PDAs and Pagers

### Support multiple mark-up languages

- ✦ WML1.1 (WAP); cHTML 1.0, and HTML 3.2

### Customizable and extensible framework

- ✦ Add new controls and support for new devices

### Integrates with Visual Studio.NET

- ✦ World-class development tool

## Review

Microsoft Mobility Strategy

Pocket PC 2002

Windows Powered Smartphone  
2002

Microsoft Mobile Information Server  
(MMIS)

Microsoft Mobile Developer Tools

References

# References

## General sites

- ✦ <http://www.microsoft.com/mobile/>
- ✦ <http://www.microsoft.com/mobile/developer/default.asp>
- ✦ <http://msdn.microsoft.com/vstudio/device/overview.asp>
- ✦ <http://www.microsoft.com/business/mobility/>

## Microsoft Mobile Internet Toolkit

- ✦ <http://msdn.microsoft.com/library/default.asp?url=/library/en-us/mw/sdk/html/mwstartpage.asp>

## Microsoft Mobile Information Server

- ✦ <http://www.microsoft.com/miserver/>

## Germany

- ✦ <http://www.microsoft.com/germany/ms/net-server/miserver/default.htm>
- ✦ <http://www.microsoft.com/germany/ms/mobile/>