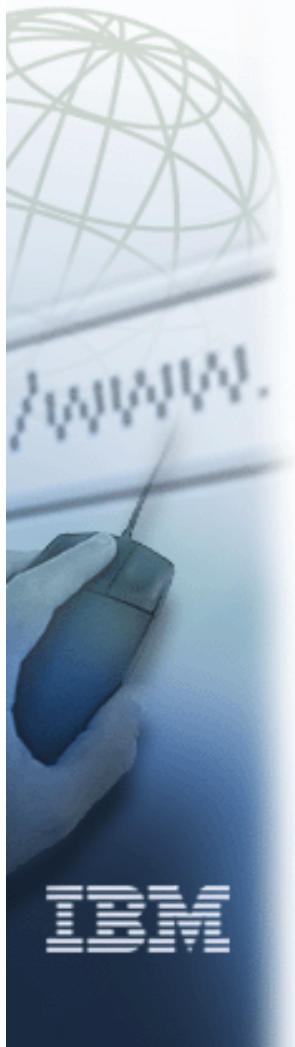e-business

Notes from the Beach

DP18

ITSO iSeries Technical Forum

John Taylor, Typex

Redbooks

International Technical Support Organization

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Abstract

- What are the options for remote and mobile working? What comes with Notes and Domino? What can IBM iSeries add? What about connectivity? What else do I need? Can I really work from the beach at last, including 'surfing' the Web? Where do 'Palms' fit in? What are 'Island' settings? Do I need to 'shell' out a fortune?
- Level: Basic
- Prerequisite: A dream

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Agenda

- An overview of 'eMobility'
  - aka 'flexible working', teleworking', 'telecommuting'
  - Benefits and Costs
- Range of approaches & devices
- IBM/Lotus/AT&T product set
  - Sample IBM/Lotus/AT&T 'Starter Pack'
- Technical Issues (optional)
- Heading for the Beach
- Implementation issues
- Summary
- Appenices
  - Glossary
  - Wireless Application Enablement (Basics)

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What we will not cover

- m-commerce
- B2C (other than as end user)
- non-IBM/Lotus/AT&T products
- detailed technical aspects

eMobility Overview

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A Growing Trend

- According to a recent IDC report, the worldwide market for software that allows companies to send out key information from their computer systems to employees' wireless devices will grow at 61 percent a year, and the number of mobile professionals is expected to reach 27 million in the next three years.
  - Lotus
- 50m US tele-workers in 2001. 100m in 2003.
  - Gartner
- Over a billion cell phones are in use today with over 2 billion forecast by 2006
- As a result the number of Internet users will double and 2/3rds will be accessing it wirelessly

Business Benefits

- Real estate savings
- Employee retention
- Productivity
- Lower absenteeism
- Increased revenue

Issues

- **Employee Resistance**
  - Why? How will I be kept in the loop? How will I stay visible and get promoted?

- **Management Resistance**
  - How do I know they are working? How will I foster team spirit? How will I communicate consistently?

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Who is doing it?

- ► Examples
  - ◆ worker on the factory floor
  - ◆ real estate agent showing and bidding on homes
  - ◆ insurance agent at the site of an accident
  - ◆ salesman at the customer's office
  - ◆ civil engineer on a construction site
  - ◆ repair man
- ► Most common today
  - ◆ Sales
  - ◆ Mobile professionals
  - ◆ Key executives.

IBM's Own Experience

- **Business**
  - Costs $20M pa
  - Savings $100M pa
    - Real estate (buildings, parking, security, janitors, etc)
  - Broke even in Year 1
- **Employee (survey)**
  - Improved work, committment, productivity, morale, job satisfaction,
  - Little change to communications and teamwork
  - Negative feelings on career advancement
- **Customers**
  - Increased Cust Sat. More face-to-face time. Faster response to enquiries.

IBM Categories of Remote/Mobile

- ◆ Mobile/Telecommuter
  - on the move and uses shared workspace i.e. mobility/visitor centers etc. No dedicated workspace
- ◆ Customer Location/Alternate Location
  - no dedicated workspace
- ◆ Work at Home
  - works the regular work period from home
- ◆ Traditional Office
  - dedicated office space or cubicle
- ◆ Traditional Non-Office
  - housed within a location but by the nature of their work, does not require dedicated office space
- ◆ Frequent Traveler/Transition to Mobility
  - dedicated workspace and may require full mobility tools. Mainly traveling, working at home or will transition to mobile

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Offline Work Requirements

- Most office-based processes
  - Email
  - Calendars
  - To Do
  - Directory
  - Web browsing
  - PC office files
  - Conferencing
  - Telephone
- Optional specialist items
  - data capture

Devices

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Device Types

- PC
  - Desktop, Laptop
- PDAs
  - Palmtop
- Mobile (cell) Phones
  - WAP phones
  - SMS devices
  - Smart Phones/'Hybrid' Devices
- Pagers

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PC Applications

- Office applications
  - WP, spreadsheet, etc.
  - MS Office, Lotus SmartSuite, ...
  - PC File Serving
  - fax
- Windows My Briefcase
  - offline edit
  - offline print
- Collaborative applications
  - email, calendar, PIM, conferencing

IBM ThinkPad (example)

- ◆ Range of screen sizes
- ◆ TrackPoint mouse
- ◆ UltraBay
  - – Floppy/DVD
  - – Spare battery
  - – WorkPad cradle
- ◆ InfraRed & wireless
- ◆ Camera and microphone
- ◆ Power Settings
- ◆ Carrying case
- ◆ Keyboard light

Palm Devices (PDAs)

- Personal Digital Assistant
- Hand/Palm-held PC
- Personal Information Management (PIM)
  - diary, address book, to-do, alarm, calculator
- Synch Web downloads
  - e.g. newspaper
- Applications
- Games

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PDA OS Choices

- Palm OS
  - Palm, IBM, Sony and others
  - easy to use, usually mono, hence long battery life
  - Griffiti handwriting recognition
- MS PocketPC
  - HP, etc
  - more PC feel, usually colour, 'pocket' version of MS pgms, poor battery life
- Psion/Symbian/EPOC
  - Psion/Symbian only
  - inbuilt keyboard, good software

Optional PDA Devices

- Keyboard (wireless or connected)
- Wireless modems
- Digital camera
- Projector
- GPS navigation and voice-guided directions
- Scanners
- Headphones

IBM WorkPad (example)

- ◆ **Based on Palm**
  - – Currently c500 or c505
- ◆ **WorkPad Software**
  - – Palm OS v4.0
  - – IBM Mobile Connect
    - • directly transfer data from multiple devices to corporate systems without a PC
- ◆ **Optional features**
  - – Lotus EasySync Pro
  - – IBM DB2 Everyplace Personal Edition
  - – Add-on software from other manufacturers
    - ► Financial Applications, Database, Forms, Games

Mobile (cell) Phones

- ► Cellular phone network with connection to PSTN
- ► Geographic variations
  - ◆ GSM, Tri-band, CDPD, i-mode, etc.
  - ◆ check coverage
- ► What can they do apart from voice?
  - ◆ Modem
    - – connect your PC or PDA
  - ◆ SMS
    - – text messaging
  - ◆ WAP
    - – mini Web browser

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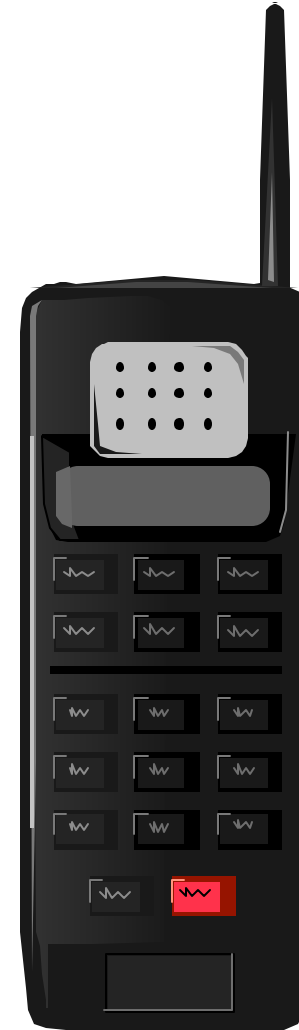
Hybrid Devices

- ▶ What are 'hybrid' devices?
  - ▬ Combination of:
    - PDA
    - Mobile (cell) phone
  - ▬ aka
    - 'All-in-One'
    - Wireless communicators
    - Smartphones
- ▶ Why 'hybrid' devices?
  - ◆ Only one bit of kit
  - ◆ Access emails via Internet
  - ◆ Single contact list

Connectivity Options

- ◆ Wired WAN
  - – Landline Telephone
  - – Direct or via Internet
- ◆ Wireless WAN
  - – Cellular/Mobile phone telephone
    - 2G (current). SMS & WAP. 9.6K
    - 2.5G/GPRS: Replaces WAP. 56K. 'Always on'.
    - 3G: 3rd Generation. Broadband speeds.

Connectivity Options, contd.

- ◆ **Wireless 'LAN'**
  - – Infrared
    - ● device to device
  - – WLAN/Wi-Fi.
    - ● Integrates to LAN via base station bridge. Security issues. Two main standards:
      - ▶ 802.11b. 11Mbps.
      - ▶ 802.11a/h/g/etc. 54Mbps. Successor to 11b
    - ● Use WEP for 128bit encryption.
  - – Bluetooth
    - ● Personal 'LAN'. Device to peripheral. 10m+ Low power drain, hence PDAs and mobile phones. Low corporate acceptance.

Wireless Issues

- Internal
  - Works for historic bldg, classroom, meeting room, temporary site, small group, hostile environment.
- External
  - ' Hot spots' in airports, hotels, coffee shops, conferences, etc.
- Plane 'Pilot' Experiences
  - Plane connection can be slow
  - Involves PC reconfiguration
  - Expensive (£30/flight or $1/email)
  - Different logon and billing for terminal, lounge, coffee shop and plane.
    - USA Today, 11/2/03

Example

- IBM PartnerWorld (BPs) 2003 Conference
  - Complimentary Palm i705 Wireless PDA
  - Loaded with all the conference details
  - Replaces the hardcopy conference guide
  - Create your own calendar
  - Send and receive messages from other attendees
  - Provide immediate feedback on each session
  - Set up meetings and locate people.
  - Handy "PDA Tips" card in registration materials.
- Expensive?
  - Think about the cost of producing and then processing the paper alternatives

How do Notes & Domino help?

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Lotus Domino

- Mail & Collaborative Applications
    - see other sessions
- Notes/Domino Database (NSF)
    - collection of data and code for an application
    - like an OS/400 library
- Replication
    - 'Copies' of databases on clients or servers.
    - The foundation of mobility
    - A full replica is a fully functional copy of code and data. A selective replica is a fully functional copy of code and a subset of the data
    - Replicates changes at field level

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Domino Clients

- Lotus Notes
- iNotes
- Web
- Mobile Notes

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Lotus Notes - Mail

- ► Mail
- ► Calendars
- ► To do
- ► Directory
- ► Use for task management

Notes on the Road

- Replication
  - Principles
  - Replicating over dialup
  - 'Office' vs. 'Island'
  - Using mobile phone for dialup
  - Selective replication
- Directory Assistance
  - Lightweight directory

What's New in Notes 6?

- Roaming User
    - Attribute of the user
    - Same Notes desktop experience on multiple machines
        - Welcome Page, Preferences, ID file, Bookmarks, Dictionary, etc)
        - Home, work, remote, multiple in office, moving to new hardware, etc.
- Multi-User
    - Attribute of the machine
    - Multiple users share the same PC for Notes
        - Part-time and job share, office for visitors, kiosk for factory floor
- Combine Roaming with Multi-User

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What's new in Notes 6, contd

- Replication Improvements
  - small items first
  - documents added to Inbox during replication
    - work on mail while replicating
  - restart after failure
  - replication of partial docs - truncate option
- Multi-threading
- Delegate support
  - a delegate creates subset of docs and sends them to the person they are delegating for as an email with doclinks - speeds up mobile users as they don't need access to all their new mail

What's New in Domino 6?

- Policies
  - Enables central management of user options
    - registration, desktop, replication, security, archiving
    - makes support of remote users easier
- Network Compression
- Intent is:
  - To shorten the network connectivity time
  - To minimize the amount of data needed locally
  - To give acess to info from anywhere
  - To constantly provide an up to date Notes environment

Domino and PIM Info Synch

- ▶ **Synch Domino & PIM info to Mobile**
- ▶ **Lotus EasySync Pro**
  - synchronization between Notes databases and PDA
  - Client-side Synch (to PC)
  - Palm OS, Win CE, iPAQ Pocket PC
  - Email, Cals, ToDos, PAB, Journal
- ▶ **IBM Mobile Connect**
  - Server-side synch (to Domino)
  - Palm OS, WinCE & EPOC
  - Email, Cals, ToDos, PAB
  - ODBC, file transfer & remote install
  - Opt. DB2 Everyplace on client

Lotus Sametime

- ► Instant Messaging
  - ◆ online awareness
  - ◆ 'chat' one-to-one or many
  - ◆ much faster than email
- ► Web conferencing
  - ◆ whiteboard, screen takeover, video
- ► Sametime on Domino server
- ► Sametime Connect on PC

New in Sametime 3.0

- ► File transfer
- ► Announcements
- ► Alerts - specific tones for specific people
    - ◆ (like the Boss)
- ► Improved messaging and logging
- ► Single sign-on
- ► Outlook/Exchange integration
- ► QuickPlace3 Integration

Sametime on the Road

- ► **Sametime only**
  - – 'chat' while logged on with only one phone line
- ► **Sametime Everyplace (STEP)**
  - – An add-on to Sametime. Provides awareness and instant messaging for mobile phone users.
    - ◆ Mobile phone users can:
      - – log onto Sametime by telephone
      - – see who is online (same contacts list)
      - – send instant messages or initiate text chat
      - – click a 'call me' button
      - – chat and use quick text (predefined short msgs)
      - – save chat transcript
      - – edit their user profile
      - – schedule a mobile presence

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STEP, contd.

- ◆ Desktop users can:
  - see which mobile users are online
  - see which is the best way to communicate with them (instant message, phone call or e-mail)
  - send Instant Messages or chat
  - have access to mobile users' phone nos
  - save chat
- ◆ Client Support available on:
  - Pagers/SMS
  - Microbrowsers
  - Java enabled phones
  - Native clients
    - Palm, Pocket PC
    - next-generation PDAs and mobile phones.

EveryPlace & AT&T Wireless

- ◆ AT&T Wireless
  - ▶ 20.2 million subscribers. Largest GSM/GPRS network in the West.
  - ▬ AT&T Wireless Business Solutions (ATTWS) for IBM
    - • AT&T will enable over-the-air configuration of Sametime Everyplace and Lotus Domino Everyplace.
      - ▶ e.g. "Smart notifications": instant messages sent to a wireless device when a certain criterion is met.
      - ▶ e.g. access to corporate directories: A STEP 3 user might send a simple query to the corporate directory, such as "Who is John Smith", and get back his directory profile on the mobile device.
    - • IBM Software Services for Lotus (ISSL) consultants and AT&T Wireless Systems Engineers will provide deployment resources to ensure quick, seamless integration for any large enterprise.

Lotus QuickPlace

- Rapid Extranet deployment
  - file download
  - shared calendar
  - shared tasks
  - Domino-based security option
- QuickPlace on the Road
  - Mobile option
  - Take it off-line.
    - Establish a local copy on a desktop and seamlessly read, author and edit documents while disconnected.
    - Synchronize changes made to the local copy when reconnected to the network.

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Domino Unified Communications Services (DUCS)

- Unified Messaging
  - convergence of voice mail, e-mail, and fax
  - all messages are stored in a single location and can be accessed from a variety of devices, including telephones and PCs

- Unified Communications (UC)
  - extends message access to mobile phones, pagers, PDAs, and browsers
  - provides notification features that alert subscribers when they receive a message that meets certain criteria.

- Lotus has formed partnerships to deliver complete solutions. DUCS provides the platform and services on which partners can build UC solutions that use Domino store.

Domino Off-Line Services (DOLS)

- Provides browser users "off-line" access to Domino Web applications. Includes:
  - developer and administrative tools
  - server-side Domino add-on task for developers to convert existing Domino applications
- Client is iNotes
- Changes are synchronized
  - Greater productivity
  - Decreased network traffic.
- Disconnected users interact as if online
  - Compose forms; edit, delete or categorize data; perform searches; trigger applets; even use business workflows.
  - Full Domino security model remains in place.
- Integrated (free) with the Domino Enterprise and Utility Servers

How does iSeries help?

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A Domino Server

- Premier Domino Server
- Partitioning (subsystems)
- Most scalable (150K users)
- Fastest (<1/10th sec)
- Lowest costs (really!)
  - Dedicated (aka cheap) Domino servers
  - New 'non-dedicated' option
  - See also Zero Interactive models

A Client Connectivity Server

- OS/400
  - Free file & print serving
    - Work offline, optimised for download
    - IP printing, remote OutQ,
  - free POP3 email serving
- iSeries Access
  - free iSeries Navigator
  - free iSeries Navigator for Wireless
  - 5250/Telnet Emulation (not free)

A Mobile Middleware Server

- Servers play a key role in wireless solutions
- iSeries:
  - supports wireless middleware and componentry
  - supports key technologies like XML and Java (built into the operating system)
  - has strengths in availability, reliability and scalability
  - will not require new, standalone servers for each component
  - hosts existing business applications

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A Mobile Application Server

- ► History of wireless LAN apps
  - ◆ especially warehousing and retail
  - ◆ application base
    - – can be wireless-enabled
- ► Partner support
  - ◆ Advanced Business Link
  - ◆ ClientSoft
  - ◆ Jacada
  - ◆ Lansa
  - ◆ Seagull
  - ◆ etc...

A Directory Server

- ► Directory is required as a bsais
  - ◆ IP-based name, email and telephone lookup
- ► The Internet standard is LDAP
- ► iSeries has two options
  - ◆ IBM Directory Server (was Tivoli SecureWay)
    - – free, integrated part of OS/400
  - ◆ Domino Directory
    - – LDAP-capable

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A Remotely Managed Server

- ◆ **V4R5: Management Central - Pervasive**
  - ► allows users to remotely monitor system performance and status using an internet phone, a PDA with a wireless modem or a web browser

- ◆ **V5R1: Management Central - Pervasive**
  - ► allows users to work with and manage their systems from anywhere. With your wireless device, you can:
  - ► Run commands across multiple systems
  - ► Start and view system, job, and message monitors
  - ► Work with jobs and messages from the monitors (hold, release, end, reply, get details, ...)
  - ► Manage integrated xSeries servers

- ◆ **V5R2: iSeries Navigator for Wireless**
  - ► Start and view File and B2B Activity monitors
  - ► Work with all iSeries Navigator tasks (not just command tasks)
  - ► View a summary report off-line
  - ► Control access to functions via Application Administration
  - ► Use Setup scripts to configure web application servers

OS/400 Wireless Setup

- **Install software**
  - V5R1 Management Central - Pervasive (part of the base)
  - V5R2 5722-XP1 iSeries Access for Wireless
- **Set up a web server on your central system**
- **Enter the URL into your internet phone, PDA, or web browser**
- **Monitor**
  - Check the availability of your systems and any active iSeries Navigator monitors, e.g.
    - check to find out if one of your systems finished restarting
    - check an active monitor to see if any thresholds for CPU were exceeded
- **Control**
  - e.g. job is taking up too much CPU, you can hold or end it.

IBM Toolbox for Java 2 Micro Edition

► ToolboxME for iSeries

- ◆ Java 2 Platform, Micro Edition (J2ME) standard
- ◆ Classes enable Java programs on wireless devices
- ◆ includes ME Server & JdbcMe for DB2
- ◆ "Inner Plumbing" support via Connected Limited Device Configuration (CLDC)
- ◆ Runtime support via Mobile Information Device Profile (MIDP) APIs, built on CLDC
- ◆ JVM support via a Java virtual machine for wireless devices
  - IBM J9 Virtual Machine
  - Sun K Virtual Machine (KVM)
  - MIDP

What other software is useful?

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Office Suite

- MS Office
- Lotus SmartSuite
- Star Office

Remote DB2

- ► **DB2 Personal**
  - ◆ Windows, OS/2, Linux
- ► **DB2 EveryPlace Personal Edition**
  - ◆ local data store on the PDA for local or enterprise data
  - ◆ Palm OS, Win CE, EPOC
  - ◆ free download

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WebSphere

- **WebSphere Everyplace Suite**
  - Wireless enablement. Gateway. Management. Load balancing. Includes:
- **WebSphere Transcoding Publisher**
  - adapts, reformats, and filters content to make it suitable for pervasive computing.
- **WebSphere Portal Server**
  - aggregation of infomation. Personalisation. Predefined portlets. Customisable.

WebSphere, contd.

- WebSphere Web Facing
  - Internet-enable existing apps incl 5250
- WebSphere Studio Tookit
  - wizards to build:
    - HTML pages for standard browsers
    - compact HTML pages for handheld devices
    - WML pages for WAP phones
- MQSeries EveryPlace
  - guaranteed message delivery

BlueNotes Suite

- ► **IBM 5620-FHM BlueNotes Document Warehouse**
  - ◆ offline Notes index of file server documents
  - ◆ subset for mobile users
  - ◆ no 'drill-down' when you connect
- ► **BlueNotes Task Manager**
  - ◆ remote, scheduled, managed To Do's
  - ◆ for simple project management or task scheduling
- ► **BlueNotes Taxonomy for Domino**
  - ◆ structures the Domino Directory into hierarchies for fast lookup, e.g. by department, geography, etc.

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How do ISP's fit in?
AT&T Example

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AT&T Global Network Services

- Was IBM Global Network/Advantis
- Office: Leased Line
  - Connects LAN to:
    - Internet (with VPN options), and/or
    - private wide area network
- Remote: Dial-Up Internet Access
  - Home use or:
  - Global Roaming
    - International numbers, local call rates
    - 2400+ POPs, 59 countries
    - e.g. Antigua, Aruba, Australia, Bahamas, Barbados, Bermuda....
    - Also works from a yacht via satellite phone

AGNS, contd.

- ◆ Connects to
  - – Internet or
  - – office LAN connection
  - – or both
- ◆ Secure access (ID & pwd)
- ◆ Internet Corporate Dialler and VPN software
  - – automated software and phone list updates
  - – Credit Card or corporate invoice options
- ◆ Main benefits
  - – saves cost of long distance call
  - – avoids hotel premium rates
 - – no need for bank of modems and RAS

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Remote/Mobile/B2B

- ► **Requirements**
  - – Office LAN
  - – PCs at remote locations
  - – home or mobile worker, server monitoring, email, partners
 - – minimise modem pool
  - – reduce call costs
- ► **Solution**
  - – AT&T MultiProtocol Network leased line
  - – AT&T PC dialup - local rate call worldwide
  - – POP3 or Notes on PCs

Remote SSL Client

Internet

Secure Network

DSL Access

ASgateway
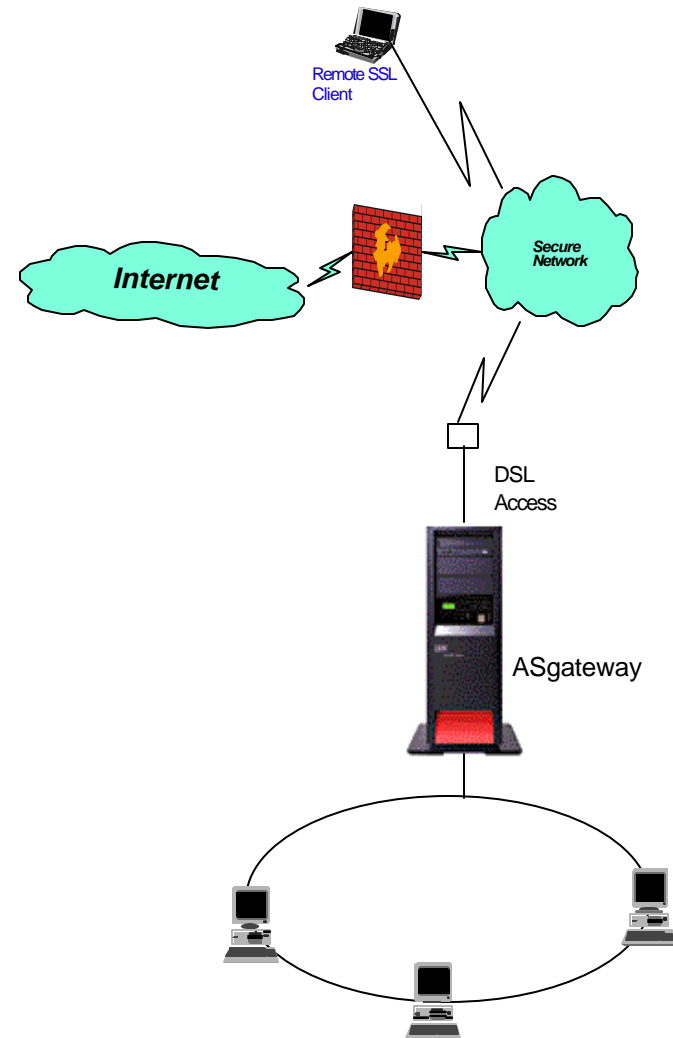
Web Serving

- ▶ Requirements
  - – Office LAN
  - – iSeries server
  - – Public access to server
  - – user access to Web
- ▶ Solution
  - – OpenNet Leased Line
  - – IBM Web serving (HTTP, Domino, Websphere)
  - – Firewall function (physical or sofware)

Remote SSL Client

Internet

Internal network

Bastion host

User   User   Admin
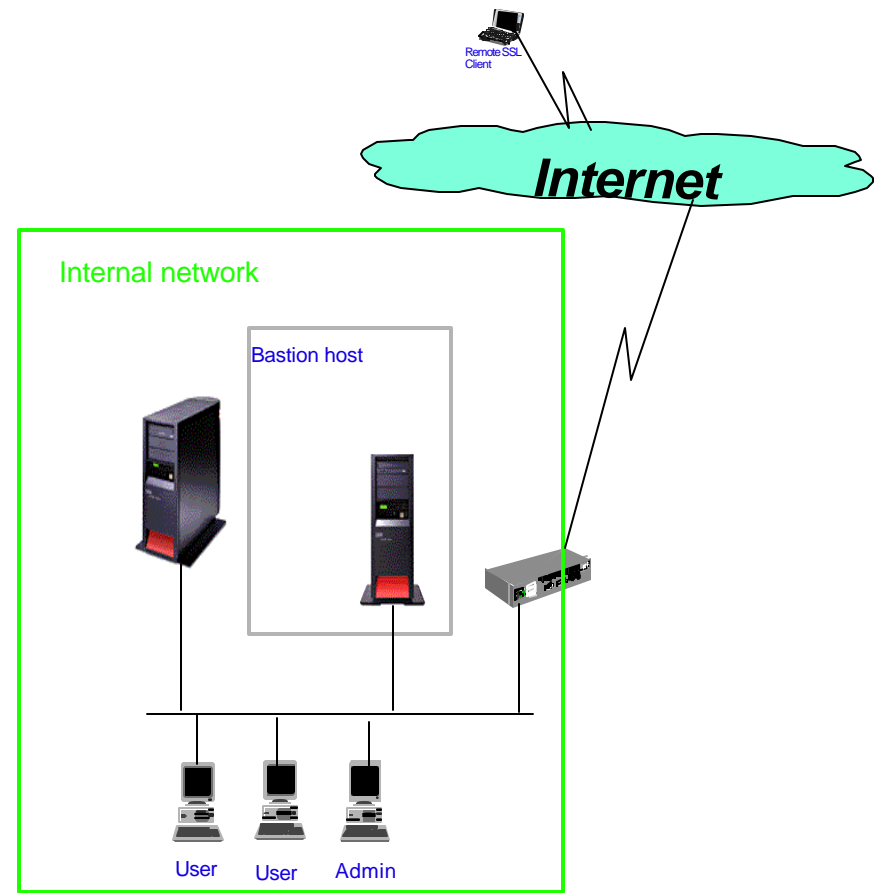
Branch/Site Office Server

► **Requirements**
  - light use/temporary site
  - light Web browsing
  - file transfer to centre

► **Solution**
  - iSeries Domino server
  - clients include Notes, iNotes, POP3, Outlook
  - 'ECS' connection
  - Dial-on-demand
  - AT&T dialup, SMTP option & Messaging
  - AT&T as your mail domain
  - no firewall required

AT&T Global Network

Login Server

SMTP Servers

Firewall

Internet

Dial Access

iSgateway
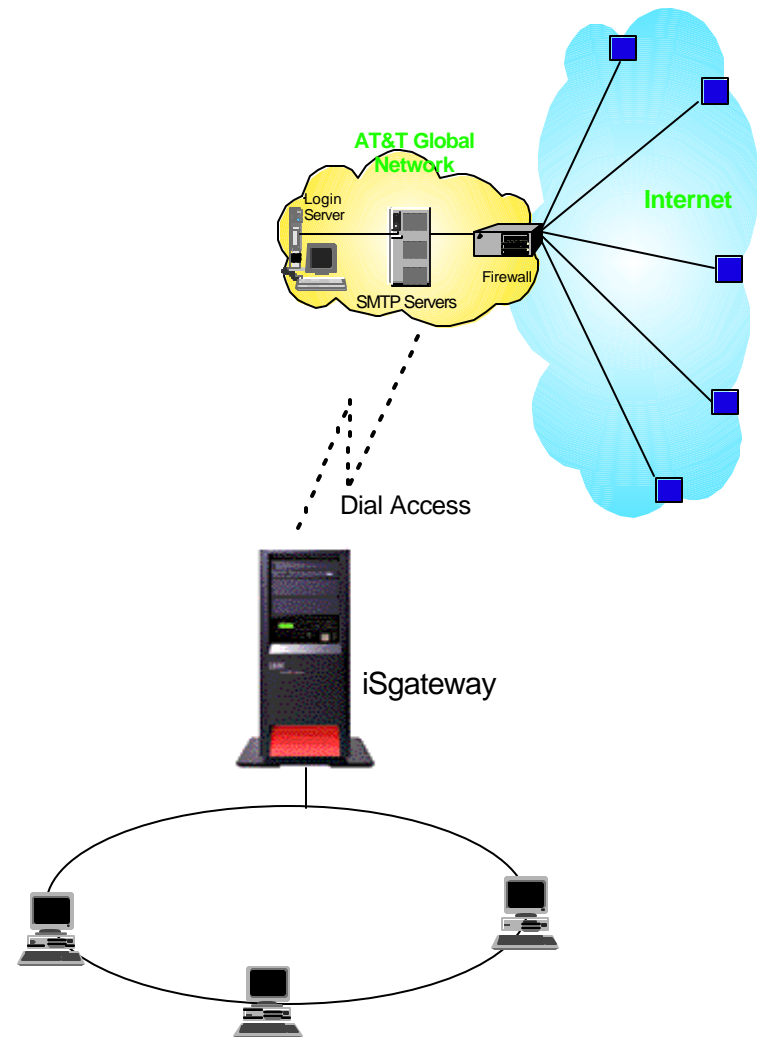
Remote Hosted Services

- ► Hosting providers include IBM and AT&T
- ► Sample Hosted Applications
  - ◆ WAP-based email
    - – read 'stubs' of large email
  - ◆ Have email read to you over phone
    - – prompts to delete, etc.
  - ◆ CRM
    - – popular hosted service
  - ◆ Sametime
  - ◆ IBM Courses-on-Request
    - • Course delivered via digital satellite to storage device at location. Can be downlaoded to a laptop for remote access.

Heading for the Beach

BLUENOTES

Story Theme

- ► Before you go
- ► Getting there
- ► Working there
- ► Playing there
- ► Calling home
- ► Getting back
- ► All using IBM & AT&T product examples

Before you go

- Preparation
  - Airline timetables
    - Web download
    - PDA version
  - Hotels
    - Web booking
- On departure
  - Weather
  - Flight status and check-in (Web or phone)
- Getting there
  - work offline on planes
  - connect at airports
  - SatNav in rental car

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Working at the Beach - 'Dem'

- ThinkPad
- OS/400 file & print serving
- AT&T Dialer
- Lotus Notes replication
- BlueNotes
- IBM WorkPad
- EasySynch Pro

Working at the Beach - Advanced

- ► Collect Voicemail
  - ◆ nobody need know where you are
- ► Instant messaging
  - ◆ chat when you like - the time difference makes them think you are working late
- ► Video conferencing
  - ◆ avoid 'Hawaiian' shirts

Playing at the Beach

- And near the beach...
  - ◆ hotel, Tiki Bar, yacht, ...
  - ◆ DVD player on laptop
- Take photos and email them home
- Personal assistant support
  - ◆ is your 'niece' a Roaming Notes user? (so that she can share your laptop, of course)
- Suggestions?

You made it!

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Implementation

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Have you done it yet?

► Almost half (47%) of organisations have implemented PDAs yet less than a quarter (24%) have deployed mobile data access mechanisms to date.

- InformationAge, July 2002

Implementation Issues

- Synchronisation
  - Ensuring accurate and timely data
- User Issues
  - Training. Changing passwords.
- Software Updates
  - via network
- Security
  - loss or theft of data
    - 250K pa handhelds and mobiles left in US airports

Soft Issues

- Employees organise their own working day
- You can locate all employees at all times
- Employees are 'always on'
  - can't say they didn't get the message
  - "By the time your PDA and phone shrink to being an earring you won't be switching it off at 5pm."
    - Bernt Ostergaard, Giga
- Employees all alone
  - IBMer's change from
    - "**I**'ve **B**een **M**oved" to
    - "**I**'m **B**y **M**yself"

Implementation Tips

- ► Focus on B2E
- ► Technology is still evolving
    - ◆ one standard product set will not be possible
    - ◆ but standardise to start
- ► KISS
- ► Expect support to cost 1/4 to 1/3 of total cost

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Implementation Services

- IBM Global Services & partners
- Consulting and implementation for:
  - wireless e-mail
  - database access
  - Mobile Notes deployment
  - mobile office hosting
  - WorkPad enablement
  - Bluetooth & wireless LAN
  - RIM Blackberry integration

Personal Experiences

- ► Take country power and phone adapters
- ► People can read laptop screens on planes
- ► Check the hotel phone tarriff
  - ◆ e.g. Marriott local call. $1 in US. $50/hr in UK.
- ► WorkPad gets out of synch
- ► You can chat and replicate over slow line
  - – If you get a slow connection, dial again
- ► I save most Web work for later
  - – downloads, printing, etc.
- ► Don't treat office staff as a secretaries
  - – "I am running late. Can you call the customer?"
- ► Maybe stay on home time
  - – Avoid jetlag. Enables chat. Works in Rochester, MN.

Don't go too far...

- ► Harry Knowles, film commentator
  - ◆ Launched AintItCool.com when sick in bed
  - ◆ Stayed there when he recovered
  - ◆ Staff of 5 telecommuters
  - ◆ Logs 17 hours/day
    - – '"The computer screen is so close it's the predominant image. The moment I wake up I roll over and start checking email.... There are days when I have food brought in and I don't leave here until 9 at night - and that's to go to a screening. It's a lot of work to be the slacker I am."
      - • Wall Street Journal, 12/2/03

Summary & Close

BLUENOTES

Summary

- Huge business benefits
- The technology is ripe
- The costs are low
- Pick devices to match requirements
- You can start small and simple

Sample Shopping List

- IBM iSeries plus...
- IBM ThinkPad
- IBM WorkPad
- Lotus Notes
- EasySynch Pro
- AT&T dialup
- 2nd home phone line
- Home printer

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Future: One Device?

▸ One device will replace:
  - desktop PC
  - notebook/laptop
  - palmtop
  - mobile (cell) phone
  - Minidisc player
  - digital recorder
  - MP3 player
  - Gameboy
  - portable DVD player
  - digital watch

▸ plus your non-electronic:
  - filofax
  - A-Z

Future: One Device?, contd.

- All that is required is a PDA/phone with an expansion module for USB, monitor, etc.
- Handhelds will evolve to use the same keyboard, monitor, PCMCIA, drivers and printers as PCs
- You will work offline. Then, at the office, plug into a keyboard and monitor for access to WP and the Web, run productivity apps via Remote Desktop Protocol on NT or X-Windows on Linux.

More Info: Documentation

- ◆ IBM Redbooks
  - AS/400 Internet Security Scenarios: A Practical Approach, SG24-5954
  - AS/400 Remote Access, SG24-6058
  - Lotus Mobile and Wireless Solutions, SG24-6525
  - Domino Designer 6: A Developer's Handbook, SG24-6854
  - Mobile Applications with IBM WebSphere Everyplace Access Design and Development, SG24-6259
  - End-to-End Management with Tivoli Managing PDAs, SG24-6001
  - IBM Replication Solutions for Pervasive Computing with DB2 Everyplace and DB2 Satellite Edition, SG24-6217
  - iSeries IP Networks: Dynamic!, SG24-6718

More Info: Web Sites

- IBM Mobile/Pervasive Computing
  - www.ibm.com/pvc
  - www.developer.ibm.com/pvc/index.html
  - www-106.ibm.com/developerworks/wireless/
- IBM iSeries
  - www-1.ibm.com/servers/eserver/iseries/software/wireless/
  - www.iseries.ibm.com/developer/ebiz/handheld/index.html
  - www-1.ibm.com/servers/eserver/iseries/navigator/pervasive.htr
- IBM Lotus
  - www.lotus.com/products/wireless.nsf
- IBM Redbooks
  - www.redbooks.ibm.com
- BlueNotes
  - www.bluenotes.com

More Info: Web Sites, contd.

- AT&T
  - www.att.com/globalnetwork
- Microsoft
  - www.microsoft.com/mobile/developer
- Palm OS Platform Technologies
  - www.palmos.com/dev/tech
- AvantGo
  - www.avantgo.com
- WAP
  - www.wapforum.org
  - www.wap.net
- Wireless Developers Network
  - www.wirelessdevnet.com

Close

- ► Email us
  - ◆ info@typex.com
- ► Feedback forms please, while you think about ...
- ► Questions

Glossary

BLUENOTES

Glossary

- 2G. 2nd Generation mobile phone telephony.
- 2 1/2 G. Interim generation. See GPRS.
- 3G. 3rd Generation mobile phone telephony. Broadband speeds.
- 802.11b. WLAN standard. 11Mbps.
- 802.11a/h/g/etc. 54Mbps. Successor to 11b
- Always-On. More or less permanently connected to the network.
- Bluetooth: Personal 'LAN'. Speed? Device to peripheral. 10-150m. Low power drain, hence PDAs and mobile phones. Minimal corporate acceptance.
- CLDC. Connected Limited Device Configuration
- ECS. Electronic Customer Support.
- EPOC. Operating system for Psion PDAs.
- GPRS. General Packet Radio Service. Replaces WAP. 56K. Always on.

Glossary, contd.

- GSM. Global System for Mobile Communications. A digital cellular phone system based on TDMA2 that is widely deployed throughout the world.
- iSeries. The artist formerly known as AS/400
- ISP. Internet Service Provider
- Management Central: GUI system management function of iSeries Access
- m-commerce. Electronic commerce via mobile devices.
- MIDP. Mobile Information Device Profile
- POP. Point of Presence. An ISP's dial-in connection points..
- RAS. Remote Access Server
- TDMA. Time Division Multiple Access. Satellite and cellular phone technology. Interleaves multiple digital signals onto a single high-speed channel.
- Tier 0. An extension of the three-tier computing model, tier 0 refers to the next level down from PCs. Predominantly Web-enabled cell phones and PDAs.

Glossary, contd.

- ToolboxME: IBM Toolbox for Java Micro Edition. The primary goal is to allow access to iSeries data from a tier 0 device.
- Universal Connection: ECS over TCP/IP
- WAP. Wireless Application/Access Protocol. Communications standard for digital mobile phones. WAP allows mobile phones to access the Internet and retrieve information on simplified display screens or through a voice interface. A mini-Web browser for mobile phones.
- WEP. Wireless Equivalency Protocol. Useed for encryption.
- Wi-Fi. Another name for WLAN.
- WLAN. Wireless LAN.
- WTLS. Wireless Transport Layer Security. Encryption and authentication for WAP.

Wireless Application Enablement (Basics)

BLUENOTES

General Considerations

- Device Types
  - PC
  - PDA
  - Mobile phone
- Application Types
  - Live connection-based
  - Synchronisation-based
- Basic Roadmaps
  - Leave apps and data unchanged. Deploy your own gateways or translation products.
  - As above, but outsource gateways or translators.
  - Build and deploy device-specific applications and data

Domino Everyplace Family

- Domino Everyplace Access Server (DEAS)
  - Real time access to Domino applications
    - Mail (Email, cals, ToDo) and Directory are WAP-enabled
    - e-mail, calendars, to-do lists, directories from:
  - WAP-enabled devices
    - Digital cellular phones, PDAs, pagers
    - Mobile Notes for WAP is the client
- Domino EveryPlace Design tool
  - Mobile-enable other apps

Domino Everyplace, contd.

- Domino Everyplace SMS (DESMS)
  - Notes users can:
    - Send messages directly to a mobile device from Notes mail or any Notes/Domino application
    - Send messages from a two-way device to Notes mail or a Notes application
    - Control the length and formatting of messages received on a mobile device
      - Receive data that exceeds the device limitations
      - Address and send messages to a mobile device'smanae users who have multiple devices.
    - number (PIN) or the device owner's name.
    - Receive reports on the status of messages

Domino Everyplace Enterprise

- ► Mobile Notes Application Sync and Development
- ► Disconnected access to apps and data on PDAs
- ► Three components
  - ◆ The Domino Everyplace Enterprise Mobile Application Designer
  - ◆ The Domino Everyplace Enterprise Server
  - ◆ The Mobile Notes client
- ► Supports Palm OS, Pocket PC and Symbian (EPOC)

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