m-Business
Oracle Mobile Technology

Oracle Korea
Mobile Lab.
Agenda

• m-Business

• Oracle Mobile Products

• Oracle Application Server Wireless
  – New Feature

• Oracle9i Lite
  – New Feature

• Demo
Universal Access

Many Servers

Consolidated Backend

Telephony
Telephony

802.11b
Voice

Wireless Browsing

Offline Synchronization

2 way Ask

Messaging

Browser

IM/Chat
Universal Access

Employees
- Mobile Office
- Field Sales
- Field Service
- Customer Services

Operations
- Inventory
- Logistics
- Transportation
- Asset Management

Customers
- Self Service
- Call Centers
- Commerce
- Content
Connectivity

Constantly Connected

Occasionally Connected

Disconnected

Application Types

• Mobile Database (Offline)
• J2ME

• Ask Applications

• Thin Client

• Intranet

Examples

• SFA (Expense)
• FFA

• Browser
• Voice
• Notifications

Functionality

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• Áß¼Ò±Ô¸ðµ¥ÀÌŸ
• °£´ÜÇѾÖÇø®ÄÉÀ̼Ç

• dzºÎÇѱâ´É
• º¹ÀâÇѾÖÇø®ÄÉÀ̼Ç
• Áß¼Ò±Ô¸ðµ¥ÀÌŸ
• °£´ÜÇѾÖÇø®ÄÉÀ̼Ç
Oracle Mobile Products

Oracle Mobile eBusiness Platform

Oracle9i Lite (Mobile Server)
- Self contained application
- Network independent
- Handheld or SmartPhone
- Wired or wireless enabled
- Replication and/or Messaging

OracleAS Wireless
- Browser based
- Network dependent
- Cell Phone
- Wireless data and voice
- Messaging (SMS, MMS)

Oracle9i Application Server
Complete Mobile Solution

Vertical Applications
- e-business suite
- Business Integration
- E-Business Integration
- Management & Security

Horizontal Applications
- COLLABORATION suite
- Wireless & Voice
- Portal
- Cache

Applications
- Oracle Application Server 10g
- Oracle Database 10g

Custom Application
Multi-Channel Server

• **Multi-Channel Runtime**
  – Markup Language: Oracle9iAS Wireless XML, XHTML MP + CSS, XHTML/XForms + CSS
  – Device
  – Virtual Browser: State Session
  – Web-Service Proxy

• **Multi-Channel Application Delivery Platform**
  – Network Adaptation: HTTP, SMTP, SMS, MMS
  – Device Adaptation: 200
  – Multimedia Adaptation: Images, Ringtones, Voice Grammars, Audio/Video
Multi-Channel Server

- Application Delivery
  - Network Adaptation
  - Device Adaptation
  - Multimedia Adaptation

- Application Runtime
  - Device Detection
  - Virtual Browser
  - Web-Service Proxy

Web Applications (HTTP)

Web Services (SOAP)

XML or XHTML

Web Service
Multimedia Adaptation

- **Image Adaptation**
  - WebView, Windows Media (pre-process)
  - BMP, GIF, JPEG, PNG, WBMP, ...

- **Ringtone Adaptation**
  - RTTTL, iMelody, MIDI, Nokia, ...

- **Voice Grammar Adaptation**
  - OracleAS Wireless XML → Any Voice Gateway

- **Audio/Video Adaptation**
  - Packet Video, Hello Network, Real Networks, Windows Media
ASK Application
(2-Way Messaging)

- e-Mail, pager, SMS
- Request

To: ask@oracle.com
Subject: parts

AS0543   Qty: 40
AS0922   Qty: 5
AS3982   Qty: 29
AS9284   Qty: 0

To: ask@oracle.com
Subject: tasks

9:00  Team Mtg
11:00 Verizon Call
15:00 Sales Call
ASK Application

1. ASW Application
2. 9iASW gateway (SMSC, Email Server, IM Server)
3. Messaging Gateway (XML, XHTML)
4. Messaging Device
5. Messaging Gateway
Notification

3. Messaging Gateway → device

2. 9iASW gateway (SMSC, MMSC, Email Server, Fax Gateway...)

1. SOAP/XML, Java API, XML, Binary, SMIL

4. 9iASW

Oracle9iAS Wireless

Application
1. MMS ¾ÖÇø®ÄÉÀ̼ÇÀº
   MIDI

2. ¾ÖÇø®ÄÉÀ̼ë¡°Ô
forward

3. MMS notification

4. MMS ¾ÖÇø®ÄÉÀ̼ÇÀº
   MIDI

5. 9iAS Wireless

6. MMS

MMS-C  MMS

Oracle9iAS Wireless

WAP Gateway (SAR)

Users

MM1 over GPRS/CSD

SMPP, UCP, CIMD2...

SS7

Oracle9iAS Wireless

Application
Content Syndication Service

• **Data Feeder**
  – notification
  – Publish-Subscribe model
  – Data Feeder:
    - HTTP, FTP, File, SQL, custom Java
    - XML, delimited file, fixed width, custom
    - :n

• **Web Clipping**
  – Web
  – WAP
  – WML
  – WML cHTML Transcoding
  – Web Clipping Studio

• **XML Content**
  – Multi-Channel Server
  – XML
Management Tools

- System Manager
- Application Manager
- Customization Portal
- Content Manager
- User Manager
Development Tools

• **Wireless Developer Kit (WDK)**
  - Multi-Channel Server Lite
  - J2ME SDK
  - Messaging & LBS client APIs

• **JDeveloper Wireless Extension**
  - IDE
Mobile Studio

- Feature 1
- Feature 2
- Feature 3
- Feature 4
Oracle Application Server Wireless

Demo
Oracle9i Lite

Mobile Device + Mobile Server + Developing + Packaging + Deploying

- Mobile Server: ilden App
- Oracle9i Lite DB: Mobile Device
- Mobile Development Kit (MDK): Mobile App

Mobile Server

Data Set

Oracle9i Lite

Mobile Device

Mobile Server
Oracle9i Lite

Oracle Mobile Server

- Security
- Application Provisioning
- Application Deployment
- Data Synchronization
- Messaging

Administration

Communication

e-Business Application
- Sales Force
- Field Service
- Warehouse
- Law Enforcement
- Logistic
- Self-Service

Repository

Any DB

Open Gateway

JDBC

MGP

9i

Oracle Mobile Client
## Oracle9i Lite Feature Load Map

<table>
<thead>
<tr>
<th>2002</th>
<th>2002 Q4</th>
<th>2003 Q4</th>
<th>2004 Q1</th>
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<td>5.0.2.9</td>
<td>10g</td>
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**Msync Java Interface**

**Msync Com Interface**

**ADOCE Support**

**Zlib Compression**

**9iAS Integration**

**Deploy on CD**

**Offline Instantiation**

**ADO.Net**

**SyncMon Tool**

**Pocket PC 2003**

**Consperrf Tool**

**Pocket PC 2002**

**Device Manager**

**Sync Manager**

**Database Workbench**

**Reliable Transport**

** Provisioning Manager**

**WinCE.Net**
SyncMon

- Configuration
- Application
- Java Language
- JDK 1.3.1
- JSP 1.1
- Web Server

SyncMon – Monitoring Center

SyncMon – Data View

SyncMon – Report

SyncMon – Log

SyncMon – Help

SyncMon – Options
Oracle9i Lite Offline Instantiation

Offline Instantiation - Mass Deployment

- Mobile (CPU, Memory, Network)
- CPU, Memory, Network
- System

Offline Instantiation

- MakeODB
- Lite ODB on CD
-
-
Oracle9i Lite Offline Instantiation

MakeOdb & Packaging

Deploy & Setup

Mobile Server

MakeODB, Package ODB Setup
Oracle9i Lite Offline Instantiation
**Con sperf**

- **Con sperf**
  - • [ ] [ ] [ ] MGP [ ] [ ] [ ]
  - • [ ] [ ] MGP [ ] [ ] [ ] SQL Execution Plan [ ]
  - • Mobile Server [ ] [ ] [ ] [ ] [ ] Analyze [ ]
  - • [ ] [ ] MGP [ ] [ ] Tuning [ ] [ ] [ ]

**Con sperf**

```plaintext
con sperf  MOBILESHEMA=mobileadmin  MOBILEPASSWD=manager  
SERVICENAME=webtogo.world  PUBLICATION=SALES_APP  
CLIENTID=emp01  TOUTFILE=tout.log  POUTFILE=pout.log
```
TOUT.LOG

<table>
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<th>NS</th>
<th>BS</th>
<th>SYNC_1</th>
<th>SYNC_2</th>
<th>AS</th>
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<td>39094</td>
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WTG PI_10291
| <6> | <0> | <1187>   | 153   | <0> |
WTG PI_10274
| <5> | <0> | <51>     | 81    | <0> |
WTG PI_10278

POUT.LOG

```sql
SELECT /*+ FIRST_ROWS */ C.* FROM S_EMPLOYEE A, S_POSTN_CON B, S_ADDR C
```

<table>
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<th>Operation</th>
<th>Name</th>
<th>Rows</th>
<th>Bytes</th>
<th>Cost</th>
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<td>198277</td>
<td>FIRST_ROWS</td>
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<td>TABLE ACCESS BY INDEX ROWID</td>
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<tr>
<td>NESTED LOOPS</td>
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<td>156K</td>
<td>26M</td>
<td>198277</td>
<td></td>
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<tr>
<td>NESTED LOOPS</td>
<td></td>
<td>98K</td>
<td>5M</td>
<td>335</td>
<td></td>
</tr>
</tbody>
</table>
Oracle9i Lite ADO.Net

- Database Connection, Transaction
  - IDbConnection conn = new Oracle.Lite.Data.LiteConnection("mydb");
  - conn.Open();
  - BeginTransaction()
- Thread –Safe
  - Thread-Safe IDbTransaction method
- Prepared statements
  - Prepared statement Parsing
- mSync Command Line Option
  - /noapp:(application) /nopub:(publication) /notable:(table)
  - /onlyapp:(application) /onlypub:(publication) /onlytable:(table)
Oracle 9i Lite Demo

- Mass User Registration
- How to Implement Offline Instantiation
- Browsing SyncMon Tool
Oracle is the Mobility Leader

Rated #1 by Top 4 Analyst Firms
- Giga Group, Gartner Group, IDC, Forrester Research
Standards

Industry Organizations

- World Wide Web Consortium (W3C)
- J2ME
- J2EE
- Open Mobile Alliance (OMA)
- SyncML
- Location Interoperability Forum (LIF)
- Mobile Payment Forum
- PayCircle
- Mobile Marketing Association
- VoiceXML Forum
- Parlay Group
- Brew
- Open Services Gateway Initiative (OSGi)
- Open GIS Consortium
Reference

• Merck, Nestle, McKesson Water, McGraw-Hill
• Swedish Post
• Cisco, EMC, Toyota Motors
• New York Life, Sumitomo Insurance …

• Public Portal
  – Oracle Mobile.com
  – Lycos ASIA, Halebop
• Telcos
  – TELIA Mobile, VIZZAVI
• Service
  – Go America, iBAZAR
• Energy
  – Fortum
• Bank
  – OVERSEAS UNION BANK
Reference

- LG
- KTICOM (KTF)
- Korea.com
- Lycos Korea
- U2U4
Reference

- [List of references]
- LG
- [Another list of references]
- KTICOM (KTF)
- Korea.com
- Lycos Korea
- U2U4