Developing Oracle Wireless Applications

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AGENDA

- The Move to Wireless
- Wireless Architecture
- The WAP Forum and WML
- Oracle 9i Application Server, Wireless Edition
- The OracleMobile Subsidiary
The Move To Wireless

- Wireless devices like cell phones and handheld PDAs are becoming ubiquitous
- The world of the Internet and wireless computing are converging
- Wireless Internet protocols like WAP and iMode are now available to provide access
- Browsers are beginning to be built into wireless devices
- The next generation of bandwidth protocols (3G) are emerging as well
The Wireless Challenges

- Why do people want to use wireless devices with their applications?
  - To send messages
  - To conduct eBusiness
  - To access information

- User input on a cell phone or a PDA is much more limited than on a PC

- Display using the same code differs from device-to-device

- Supporting different Internet protocols
Components

- Wireless devices (clients) with built-in Microbrowser
- Gateway
- Wireless Application Server
- Application Content
Processing a Wireless Request

1. Transmitting a wireless request
2. Recognizing and authenticating the device
3. Establishing a wireless session
4. Translating the request over the Internet
5. Connecting to the Application Server
6. Identifying the user
7. Processing the request
8. Personalizing the content
9. Transforming the content for the device
WAP and WML

- WAP and WML is a major contender for standardizing wireless application development. In Japan, i-mode is the standard.
- Standard written and maintained by the WAP Forum (www.wapforum.org). Consortium of Phone.com, Nokia, Motorola and Ericsson
- WAP content is developed using the Wireless Markup Language, which is an XML vocabulary
The DTD for the current 1.1 version of the standard can be found at http://www.wapforum.org/DTD/wml_1.1.xml

The MIME type associated with WML documents is typically text/vnd.wap.wml

WML documents can also contain images known as “WBMP”, wireless bitmaps that are black-and-white 1-pixel images
A Simple WML Example

```xml
<?xml version="1.0"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
 "http://www.wapforum.org/DTD/wml_1.1.xml">

<wml>
  <card>
    <p>Hello, world!</p>
  </card>
</wml>
```
A More Complex Example

<?xml version="1.0"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml_1.1.xml">
<wml>
<!-- This deck contains three cards -->
<!-- Card #1: Prompt for Name -->
<card id="card1">
  <do type="accept" label="Name?">
    <go href="#card2" />
  </do>
  <p>What is your name?:<input name="Name" /></p>
</card>
<!-- Card #2: Select a food from the list -->
<card id="card3">
  <do type="accept" label="Food?">
    <go href="#card3" />
  </do>
</card>
</wml>
More Complex Example (Cont.)

<p>What is your favorite food?</p>
<select name="Food">
  <option value="Lobster">Lobster</option>
  <option value="Steak">Steak</option>
  <option value="Veal">Veal</option>
</select>

<!-- Card #3: Display the answers -->
<card id="card3">
  <p>Name: $(Name)<br/>
     Favorite food: $(Food)</p>
</card>
Oracle 9i AS, Wireless Edition

- Formerly known as “Portal-to-Go”
- Installs along with Oracle 9i AS and Oracle Portal
- Makes use of same portlet technology as Oracle Portal
- Use 3 basic concepts:
  - Adapters
  - Services
  - Transformers
- Provides support for advanced wireless concepts (Push, e-mail, GPS, secure)
Oracle 9i AS WE Architecture
OracleMobile

- As a subsidiary of Oracle, they act as a wireless ASP (application service provider) (www.oraclemobile.com)
- OracleMobile provides facilities for hosting wireless websites
- They also provide services on a consulting basis for building wireless application
- Provide an Online Studio which allows you to easily develop wireless application
Wireless References

**Books**
- WAP and WML Development with WML by Ben Forta
- Professional WAP by Chris Arehart et al.

**URLs**
- WAP Forum - www.wapforum.org
- Phone.com Developer - updev.phone.com
- Ericsson - www.ericsson.com/developerszone
- Nokia - www.forum.nokia.com/main.html