

# 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

# Wireless Architecture



Devices

Gateway

Wireless  
Server

Application  
Content

## 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](http://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

## WAP and WML (Cont.)

- The DTD for the current 1.1 version of the standard can be found at [http://www.wapforum.org/DTD/wml\\_1.1.xml](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 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>
```

# More Complex Example (Cont.)

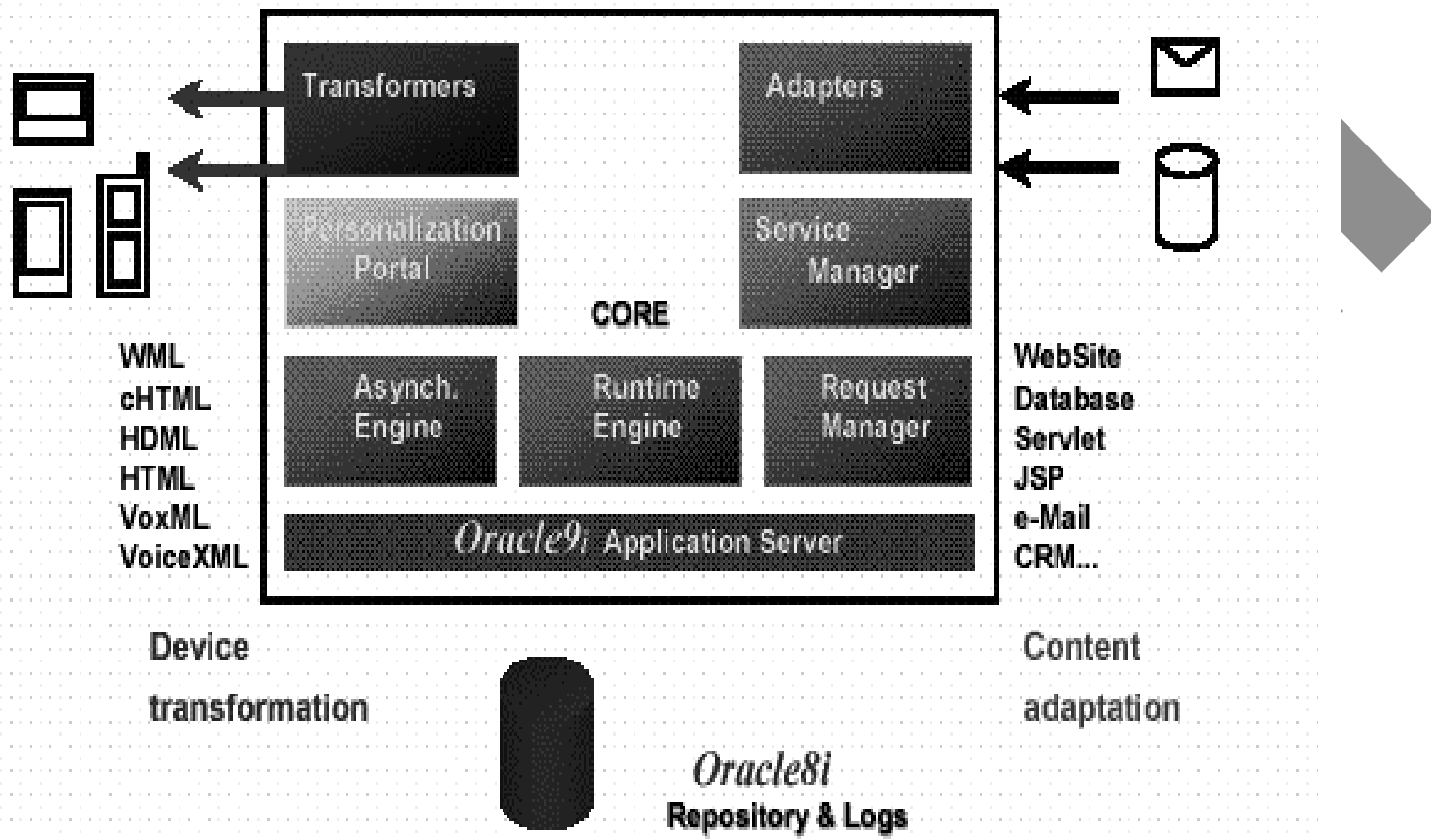
```
<p>What is your favorite food?
  <select name="Food">
    <option value="Lobster">Lobster</option>
    <option value="Steak">Steak</option>
    <option value="Veal">Veal</option>
  </select>
</p>
</card>

<!-- Card #3: Display the answers -->
<card id="card3">
  <p>Name: $(Name)<br/>
  Favorite food: $(Food)
</p>
</card>
</wml>
```

# 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](http://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](http://www.wapforum.org)**
- **Phone.com Developer - [updev.phone.com](http://updev.phone.com)**
- **Ericsson - [www.ericsson.com/developerszone](http://www.ericsson.com/developerszone)**
- **Nokia - [www.forum.nokia.com/main.html](http://www.forum.nokia.com/main.html)**