OpenCms Days 2011

Workshop Track:

Creating Mobile Templates with OpenCms 8

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Agenda

- Device dependent content presentation

- End-user demo

- The <cms:device>-tag

- Development strategies for mobile templates

- Developer demo

- OpenCms-FlexCache directives

- Implementation details

- **Motivation:**
  Increase the availability of web content on different devices:
  - Desktop based Browser (e.g. Firefox on Linux)
  - Mobile Phone (e.g. iPhone or Android Phone)
  - Other devices

- **Earlier Solution:**
  Create one template for each device.

- **Drawback:**
  Multiple templates must be maintained, the user may have to use different URLs for each device.

- **OpenCms 8:**
  Present the content device dependent in one single template, without knowledge of an extra URL!

DEMO

Demo

Demo

Demo

- For the device detection, the OpenCms tag library has been enhanced with an additional tag called `<cms:device>`

- The tag has only one attribute: `type` specifying the type of the output device(s).

  ```
  <cms:device type="mobile">
  ```

- The idea is to define sections in JSP templates that are only displayed if the user's device is in the option list of the given device types.

The `<cms:device>`-tag

```
<%@ taglib prefix="cms" uri="http://www.opencms.org/taglib/cms"%>

<html>
    <head><title>Simple Device Demo</title></head>
    <body>

        <cms:device type="mobile">
            <p>You are browsing with a mobile device!</p>
        </cms:device>
        <cms:device type="desktop">
            <p>You are browsing with a desktop device!</p>
        </cms:device>
        <cms:device type="desktop, console">
            <p>You are browsing with a console or a desktop!</p>
        </cms:device>

        <p> Other content displayed on all devices… </p>

    </body>
</html>
```

- With the help of the `<cms:device>`-tag you are able to develop a template that:
  - Selects different style-sheets (CSS)
  - Switches between other templates
  - Contains the code for all devices

- Disadvantage for selecting different CSS
  - Complex to maintain, because the same CSS classes have to be defined twice.
  - Data transfer overhead, because all the content will be transferred to the client even content that is not displayed ➔ Long waiting time for connections with small bandwidth.

Development strategies

	All-in-one Template	Switching Template
Performance	+	+
Maintaining	+	-
LOC	+ (less)	- (more)
Reusability	==	==
Caching	==	==
Readability	-	+

DEMO

Demo

Demo

Demo

- A JSP that uses the **`<cms:device>`**-tag should be cached for each device output.

- OpenCms supports to cache different variations of HTML-output for the device-tag.

- The template developer can simply set the property "cache" to the value "device" on JSPs that use the **`<cms:device>`**-tag.

- For the `<cms:device>`-tag a methodology to detect the current user's device dynamically is needed.

- Possible device detection methodologies:

  – Do nothing to detect different devices
  – Use JavaScript
  – Use CSS @media handheld
  – Use server-side code PHP, JSP, ASP, etc.
  – Use existing 3rd party libraries e.g. WURFL

- Alkacon decided to use a simple server-side implementation for detecting the devices.

- The device detection is based on the HTTP request header information:
  - HTTP-Accept
  - User-Agent

- Supported device types:
  - **desktop**   : desktop computers
  - **mobile**   : mobile devices
  - **console**   : game consoles

- In a future version of OpenCms the tag could also consider the clients resolution for a better detection.

QUESTIONS ?

Fragen?

¿Preguntas?

Questiones?

Thank you very much for your attention

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