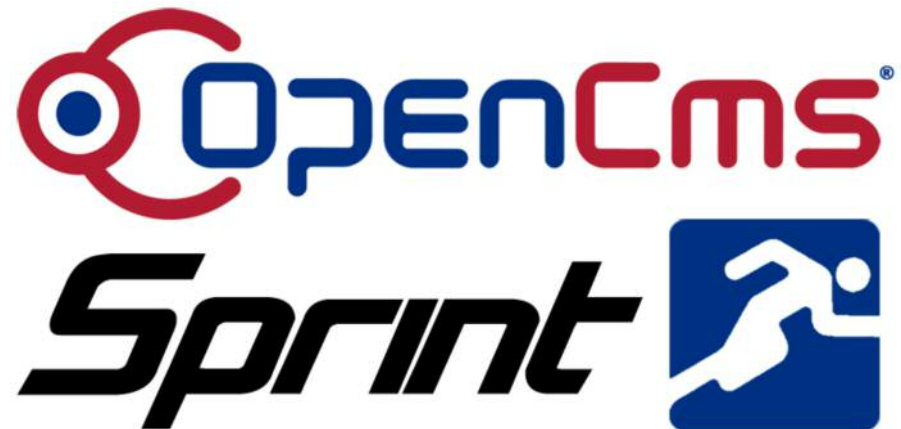# 1st OpenCms Developer Sprint

September 9 – 10, 2008

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2 Day Schedule

- Tuesday, September 9, 2008
  - 9:30h Start / Discussion of Topics
  - 13:00h Lunch Break
  - 17:00h End
  - 19:00h (Optional) Evening Activity

- Wednesday, September 10, 2008
  - 9:00h Start
  - 13:00h Lunch Break
  - 17:00h End

  - Coffee Breaks: 11:00h, 16:00h

How do we go ahead?

- Each participant picks a topic of interest
  - If 2 people want to work on the same topic, then we do Extreme Programming for this
- The topic should be good for the 2 days and probably beyond
  - We certainly hope to increase the level of outside contributions to the OpenCms core
- If we can not finish a topic within these 2 days, a "proof of concept" or "First Milestone" should be reached
- *Have fun working together*

Recording the Sprint proceedings

- We have set-up an OpenCms Sprint Server to record the proceedings of the sprint
  - This will later get published online at opencms.org
- We hope to have one or more pages describing the findings for a topic at the end
  - Proceedings could also contain code fragments or other material created during the Sprint
- OpenCms Sprint Server runs OpenCms with template^2, each team will have it's own folder

Suggestions for Sprint Topics

- Creating navigations with XML Content
- Using jQuery for the OpenCms Explorer
- Integrating JavaScript with OpenCms
- OpenCms with Google Chrome / Gears
- Integrating Workflow in OpenCms
- OpenCms database layer with JPA
- Integrating OpenCms with the Maven Plugin
- Updating OpenCms 3rd party libraries
- Using foreign key constraints in the OpenCms DB schema

Topic: Creating navigations with XML

- OpenCms navigation is usually created from properties attached to the individual pages
- An alternative method could be to store the navigation info in an XML content
  - Advantages: Change in Navigation does not require publishing of the content file, "Direct Edit" could be used to edit the navigation
- *In this sprint:* The existing API could be enhanced to support both approaches to provide maximum backward compatibility
  - OpenCms "CmsJspNavElement" instances could be created from default XML content in folders, if unavailable fallback to current properties

- OpenCms Explorer is using "Ajax like" technologies
- Modern Ajax APIs like jQuery are now quite stable and offer a range of potential new features that could be leveraged
- Using jQuery for the OpenCms Explorer could improve usability and user experience
  - Required changes to OpenCms core could be rather small
  - Data for explorer is already handled similar to JSON, maybe directly use JSON for the data transfer
- *In this sprint:* Create a POC for a jQuery based OpenCms Workplace explorer

- OpenCms 8 should include a scripting language interface to make it easier for non-Java developers to create standard templates and other basic functionality

- JavaScript seems a natural choice for the scripting language (?)

  - Script integration with the JS Rhino interpreter is already available in the Java JRE since version 6

- *In this sprint:* POC for integration of JavaScript enabled templates with access to simple OpenCms functions

Topic: Google Chrome / Gears

- OpenCms has so far not been much tested with Google Chrome
  - General functionality seems to work
  - External components (FCKeditor, Editarea) don't
- It would be interesting to investigate what can be done with Google Gears

- *In this sprint:* Test OpenCms on Chrome, check new versions of external components, evaluate possible use cases for Gears

Topic: Workflow in OpenCms

- **What is the general approach**
  - Alkacon has already done some initial work on the subject, it would be great if we could build on this basic infrastructure
- *In this sprint:* Define a minimal interface / API for the OpenCms core
  - Apparently, a "Workflow engine" could be somehow plugged into OpenCms
  - Adding Workflow will require some changes to the OpenCms Workplace GUI, e.g. in the Explorer view we should see a "status info"
  - General Triggers / Communication from the Workflow engine with the Core need API

Topic: Database layer with JPA

- JPA (Java Persistence API) is a JSR standard that aims to replace Hibernate, JDO and other "non standard" solutions
- OpenCms 8 should offer a JPA DB driver, either as replacement or alternative to the individual DB drivers
  - We would like to drop individual drivers where performance of JPA is close enough
- Georgi Naplatanov has already developed full JPA support for OpenCms
- *In this sprint:* Testing and potentially enhancing his work

- A Maven plugin has already been developed for OpenCms

- To my knowledge, it is so far not compatible with the standard OpenCms core but requires patches to work

- *In this sprint:* We should find a way to make the plugin work on a future release of the OpenCms core by changing / adding the required APIs in either the Maven plugin or the core

- OpenCms uses a number of external libraries
- Not all libraries are of the current version
- In rare cases we use a non-standard patched version
  - Example: commons-email.jar has been patched to remove dependencies to other .jars we don't want to ship
- *In this sprint:* Try to replace patched libraries with newer standard versions, update external libraries in general

Topic: Foreign key DB constraints

- OpenCms does so far not make of "foreign key" constraints in the OpenCms DB schema
- Adding foreign key constraints could improve DB consistency
- Alkacon has tried this some time ago but found that this will also require changes to the OpenCms core
- Moreover, the OpenCms DB Schema needs to be adjusted for the properties
- *In this sprint:* Try to add foreign key constraints to the DB, find out where changes to the core are required and try to fix these issues if possible

Evening activity (optional)

- You are invited for a Dinner at the "Osman^{30}" Restaurant
- Start at 19:00h

- http://www.osman-cologne.de for more info

Thank you very much for your attention

Alexander Kandzior

Alkacon Software

http://www.alkacon.com

http://www.opencms.org