Application for Google Summer of Code 2007

CCK JavaScript Package

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Synopsis

This project consists of two main parts. The first deals with the development of a JavaScript API for CCK and the second is about some useful implementations.

- Developing a CCK JavaScript API, this allows developers to add custom JavaScript code to CCK Fields.
- Implementing useful tools to provide form handling with high usability.

Detailed project description

CCK provides a great set of fields and widgets. For JavaScript developers it's difficult to work with them, as things change as soon as a field's widget changes. Furthermore currently it's difficult to determine the DOM-objects which represent the field.

The task of this project is to create the necessary API, so that JavaScript developers can easily work on top of CCK fields. On top of this API some implementations of JavaScript additions to CCK will be programmed.

The API will allow developers

- to easily add custom JavaScript to a CCK-field
- to identify the DOM-objects of other CCK fields, e.g. identify the surrounding div tag
- to access and modify the data (values, options) of fields through JavaScript independent from the used widget

Currently planned feature implementations are

- field-validation through AJAX for immediate response
- optionally display field descriptions with layers on hover
- active form enabling: activate fields in dependence on values of other fields
- active data fetching: provides a widget independent way to modify the possible options of selects, autocomplete fields
- active data setting: allows to set values in dependency to other fields (selects, checkboxes,…)

All of this implementations will be configurable through the CCK admin interface.

The API and implemented features will work as close to the Drupal formAPI as possible, so that the reuse of the tools without using the CCK is possible. In

the project start phase it will be evaluated which functions will be how close to the formAPI. For example the validating process should be developed as independent as possible. (A layer would be created to map the CCK fields to the formAPI)

Timetable

- *Study the existing JavaScript support for CCK fields*
- **MILESTONE** Finished preparations
- *Coding API*
- **MILESTONE** API complete
- **MILESTONE** Starting develop implementations
- *Coding Field Validation*
- **MILESTONE** Finished 'field validation'
- *Coding optionally display field descriptions*
- **MILESTONE** Finished 'optionally display field descriptions'
- *Coding active form enabling*
- **MILESTONE** Finished 'active form enabling'
- *Coding Data fetching*
- **MILESTONE** Finished 'data fetching'
- **MILESTONE** Finished 'develop implementations'
- *Testing, documentation*
- **MILESTONE** Project complete, ready for submission

Short CV

Name: Dominik Kiss
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Current education

I'm a student at a Technical College, primarily specializing in Internet and Media technologies, in Austria. My current main focus is the developing of desktop-like Web applications with AJAX and JavaScript.

Furthermore I'm working on different Web projects to improve my knowledge in all kinds of Web technologies and tools.

Technical knowledge

PHP: excellent knowledge, through developing different kinds of web applications, for example: file administrating systems, image galleries, forum applications, sites to administrate and coordinate project work
JavaScript: very experienced, many scripts written in the past 4 years
ActionScript: very experienced, though developing many interfaces for Flash <> PHP applications
SQL: very experienced, though maintaining mySql and oracle database servers
CVS: moderately experienced, through work at some Sourceforge projects
XML, XSLT: very experienced through lessons at high school
Java: very experienced, developing simple network games and a system which provides a cost charging accounting for printer usage
C++: moderately experienced, trough lessons at high school
VB: moderately experienced, through some little applications to split up complex *.xls files, and prepare them for web usage

Why is this project perfect for me?

The last few years I have been involved in several projects dealing with web applications and usability. In my opinion a web application has two main parts; on the one hand there is the technical side with database connections and program code and on the other hand there is the more intuitive part. Websites are getting more complex and in the future they will provide a huge amount of features we can't think of yet. Concentrating on the user, the target group of our web applications, it is important to provide easy handling of complex tools.

All this requires a client based technology to provide methods for an easy and intuitive handling. At the moment I am writing two research papers dealing with AJAX (full title: Ajax != Ajax, Kritische Betrachtungen zur „Revolutionierung des Internets") and user interaction.

A few years ago I started to work on Mambo and Typo3, a short time ago I also began to work on Drupal. And it's just great. So I can say that I'm familiar with the main concepts of Drupal and other open source CM systems.

Profit for Drupal

Web applications get more and more desktop-like, as you can see at many famous websites. The traditional way of the server – client communication brings up many disadvantages which we are able to solve with the actual technologies. Most of the Client based applications are implemented in JavaScript. The main part of this project is the integration of a CCK JavaScript API into Drupal. This is a great step to guarantee a user friendly enhancement.

For example the AJAX library jQuery (http://jquery.com) is a very powerful and smart solution for an asynchronous data transmission which provides a data validating without a page reload.

With this project it would be possible to add JavaScript code to CCK/form Fields; this would allow many useful actions like field-validation with the above mentioned AJAX library.