UNDP WaterWiki

WYSIWYG Extension Evaluation

Author: Rosie Ojo

Contents

1 Issue to be resolved

The Water Team in the UNDP Regional Centre in Bratislava initiated an innovative pilot project to capture and exchange knowledge on water-related project activities.

The motivation behind this project is to provide a valuable on-line tool which combines knowledge gathering, experience and on-line collaboration for water & sanitation experts and practitioners working in different projects and countries.

WaterWiki, implemented using MediaWiki software, is a free server-based software licensed under the GNU General Public License (GPL). It is designed to run on a large server farms and, hence, is an extremely powerful, scalable, and feature-rich Wiki software implementation, that uses PHP to process and display data stored in its MySQL database.

WaterWiki uses Media Wiki's WikiText format, so that users without knowledge of XHTML or CSS can edit them easily.

2 Wiki Mark-up Issues

There are many advantages and disadvantages of using Wiki mark-up. On one hand, restricting authors to Wiki mark-up:

- Maintains a consistent look and feel to the Wiki
- Makes it easier for new authors to join the Wiki
- Prevents the insertion of malicious codes, such as by using JavaScript
- Allows the use of Wiki mark-up to do things that html cannot, for example automatically insert footnotes, as in Wikipedia

Although Wiki mark-up is designed for ease of use and is easy to learn, it does provide a barrier to non-technical users. WaterWiki contributors may be unfamiliar wiki mark-up. This may impede users who want to add content, because the advantages of logical text production are not obvious to them at first.

Installing a what-you-see-is-what-you-get (WYSIWYG) extension to WaterWiki would provide a solution to these issues, in that it would provide a more intuitive set of editing features for those not versed in WikiText. Hence, the purpose of this document is to evaluate WYSIWYG editors on the market which can be installed as extensions to MediaWiki software.

We will therefore evaluate five WYSIWWG extensions and evaluate their suitability for use with MediaWiki software using a variety of criteria. The editors evaluated are TinyMCE, FCKeditor +Wikia, MeanEditor, Wikiwyg, and Mozile.

3 Installation: Test Environment

Windows Vista

WampServer 2.0g:

- Apache 2.2.11

- PHP 5.2.9 + PECL
- SQLitemanager
- MySQL 5.1.32
- Phpmyadmin

MediaWiki version(s) 1.13.5 and 1.14.0

- Wget – GNUWin32
- Patch – GNUwin32

4 WYSIWG Editors

4.1 TinyMCE - Javascript WYSIWYG Editor

TinyMCE is a platform independent, web-based, JavaScript and HTML, WYSIWYG editor control released as Open Source under LGPL by Moxiecode Systems AB. TinyMCE is not naturally a WikiText, but JavaScript WYSIWYG editor. With the WYSIWYG extension, one can integrate TinyMCE with MediaWiki and provide users with a toolbar editor which has an 'ms word' configuration theme, and follows the MS Office 2003 toolbar layout.

TinyMCE's msword theme can be called from LocalSettings.php. TinyMCE_MW was built and tested on MediaWiki-1.10.0, IE 6.

4.2 FCKeditor + Wikia

The FCKeditor + Wikia WYSIWG extension is being jointly developed by the FCKeditor authors and Wikia. This extension enables a more intuitive WYSIWYG editor when editing pages on MediaWiki software It uses a special version of the FCKeditor WYSIWYG editor that outputs Wiki text rather than the usual HTML that caused problems for MediaWiki integrations in the past. The toolbar also has an 'ms word' configuration theme

4.3 Wikiwyg

Wikiwyg is a WYSIWYG browser editor framework for Wiki software. It is designed to be installed with existing Wiki engines. Integration with MediaWiki requires changes to the Wiki engine's core software.

Wikiwyg is designed to be a modal editor. One can flip back and forth between WYSIWYG and WikiText and Preview modes in a single editing session. Other available/possible modes are Raw-HTML and Multi-User modes. Wikiwyg can also be configured to use just WikiText mode.

Wikiwyg currently supports WYSIWYG mode in Firefox and IE 6+. It supports WikiText mode in those browsers, and Safari as well. In unsupported browsers, Wikiwyg integration should fall back to the Wiki engine's regular edit interface.

4.4 MeanEditor

MeanEditor is a simple WYSIWYG editor, which does not implement the full MediaWiki language specification. If a page contains esoteric mark-up, MeanEditor warns the user and disables itself.

It integrates with the (1.13.*) release of MediaWiki, and it requires a patch to EditPage.php, since it uses XHTML and is written in PHP

The newly-released, MeanEditor which integrates with 1.14.* does not require patching or any changes to MediaWiki source code.

4.5 Mozile

Mozile is an open source project, and is distributed free of charge under the terms of its license. Mozile is implemented in JavaScript, and version 0.8 is designed to work in most browsers, including Mozilla Firefox and Internet Explorer. However, Mozile is still in development, and only Firefox and Internet Explorer are currently supported.

5 Evaluation Criteria

5.1 Installation and Distribution

This section describes the necessary steps to integrate the extension into MediaWiki version 1.13.5/1.14.0.

1. Outline steps required to install extension.
2. Highlight any necessary modifications to MediaWiki source code.

5.2 MediaWiki Compatibility

Statement of any specific restrictions concerning the version of the MediaWiki. If there are none, the extension is tested with MediaWiki version(s) 1.13.5 and the latest version 1.14. 0.

The extensions compatibility with MediaWiki version(s) is also discussed.

5.3 Usability

The Usability criterion gives a short description of the look and feel of the extension and the UI (user interface) components. Features which are frequently and are relatively inconveniently handled with the traditional mark-up are discussed.

5.4 Features

Lists the available features of the extension.

5.5 Support

Determine if the extension is still under development and how often it is updated. This is especially necessary as new features may carry new bugs and security holes and it is essential that such vulnerabilities are patched as soon as possible. This aspect also includes discussion about the development community.

5.6 Key Feature Comparison

At the end of the evaluation chapter, a table compares the key features of the extensions.

- Browser compatibility.
- Support for basic editing:
    - Bold/Italic/Underline.
    - Anchors/Links/References .
    - Bulleted Lists/Numbered.
- Assessment of table creation.
- Assessment of image insertion.

6 TinyMCE

6.1 Installation

1. Download latest version TinyMCE (3.2.2) from http://tinymce.moxiecode.com/.
2. Unzip into the MediaWiki extensions directory.
3. Copy and create TinyMCE_MW.php, http://www.MediaWiki.org/wiki/Extension_talk:TinyMCE_MW to the MediaWiki extensions directory.

Add the following source code to LocalSettings.php:

```
#### TinyMCE_MW.php: Easily implement Moxiecode's TinyMCE into MediaWiki
$wgUseTinymce = true;#Init needed for clicking on a new article link
$wgDefaultUserOptions ['showtoolbar'] = 0;  #new users get this default or modify DefaultSetting.php
$wgTinymceTheme = "msword";                #"simple", "advanced", "msword", else none
$wgMyWikiURL = "http://$wgDBserver/$wgScriptPath/index.php/";
$wgExt_valid_elements =
"data[table|template],repeat[table|sort],categorytree[mode|depth],inputbox[type|bgcolor|width|default|preload|edi
tintro|buttonlabel|searchbuttonlabel|break], big";
require_once("$IP/extensions/TinyMCE_MW.php");
```

6.2 LocalSettings.php Parameters

$wgUseTinymce	True to enable TinyMCE by default, False if not.
$wgDefaultUserOptions ['showtoolbar']	0 = MediaWiki edit toolbar disabled for new users, 1 = MediaWiki edit toolbar enabled for new users To disable the MediaWiki editor toolbar instantly, modify DefaultSettings.php
$wgTinymceTheme	"simple", "advanced", "msword", else none This tells TinyMCE which theme you want to use. You may see how things work by looking at TinyMCE_MW.php
$wgMyWikiURL	This is used to set default path so TinyMCE linking works.
$wgExt_valid_elements	Pass your extended_valid_elements using this global variable.

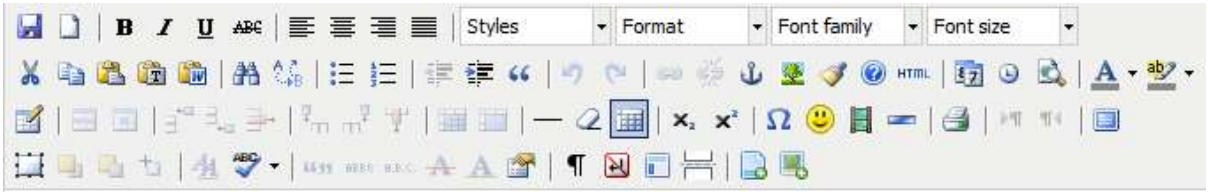
6.3 MediaWiki Compatibility

As of MediaWiki Version 1.12.0, the TinyMCE extension is broken. Prior to 1.12.0 release, TinyMCE worked very well. TinyMCE_MW.php may be flawed following changes to MediaWiki's parsing since version 1.10.*

Installation onto MediaWiki version 1.13.5 and 1.14.0 spawns the following error:

"Fatal error: Call to undefined method Parser::stripToc() in C:\wamp\www\waterwiki1140\extensions\TinyMCE_MW.php on line 257"

6.4 Usability



TinyMCE toolbar

TinyMCE uses a custom CSS file within the editor to produce an Office like user interface. TinyMCE functionality will be relatively familiar for anyone who has used MS Office toolbars. Additionally, it provides functionality which enables cutting and pasting formatted text from Word. Further, TinyMCE is capable of embedding images, as well as tables.

6.5 Features

- Font formatting: type, size, colour, style, bold, and italic.
- Text formatting: alignment, indentation, bullets list.
- Cut, Paste, and Paste as Plain Text, Undo and Redo.
- Paste from Word.
- Link and anchors support.
- Image insertion, with upload and server browsing support.
- Table creation and editing (add, delete rows).
- Table cells editing (size, colours).
- Form fields.
- Complete toolbar customization.
- Skins support.
- Plugin support.
- Spell checker.
- Image and file links upload and server repository browser.

6.6 Support

Unfortunately, as of MediaWiki version 1.12.0, the TinyMCE extension is broken. There are many requests asking its author for a fix, but he hasn't responded and so, at the time of writing this report, the extension is unsupported. No documentation of recent changes is available. The TinyMCE editor can be updated separately from the extension, if a new version is published.

The TinyMCE website offers a lot of support. The manual can be found as a Wiki and there is also a FAQ section and a crowded forum where one can find support from other users. TinyMCE supports skins, themes and plugin to extend its functionality.

7 FCKeditor

7.1 Installation

The latest version available in the SVN does not work with MediaWiki 1.14.0.

A working version can be found at http://rapidshare.com/files/205304883/FCKeditor.zip. This zip file contains all the files necessary for FCKeditor to work seamlessly - including the extension, the editor and all the necessary patches.

Installation instructions:

1. Unzip FCKeditor.zip into extensions directory.
2. Add following lines to LocalSettings.php

```
require_once( "$IP/extensions/FCKeditor/FCKeditor.php" );
$wgUseAjax = true;
```

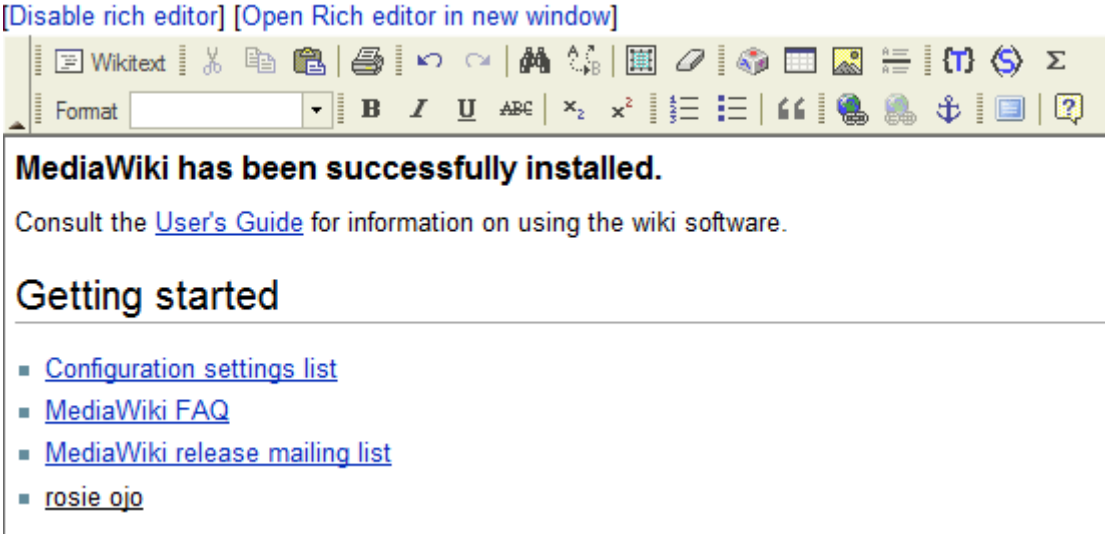
7.2 MediaWiki Compatibility

The FCKeditor version, available at RapidShare, is compatible with MediaWiki 1.13.5 and 1.14.0.

7.3 Usability

On installation, the user is given the option to switch from the default MediaWiki editor by clicking on the "enable rich editor" link. Once this link is invoked, the FCKeditor user-interface becomes visible. There exists the option to open the editor in a new window.

The "WikiText" button changes the view from WYSIWG mode to WikiText mode which displays Wiki mark-up, and allows users to edit content using WikiText. There is enhanced support for table creation and image insertion. Unlike TinyMCE, FCKeditor only allows pasting of plain text, so any text formations from Microsoft Word are lost.



7.4 Features

- Multi browser compatibility.
- Outputs XHTML 1.0.
- outputs Wiki mark-up.
- CSS support.
- Font formatting: type, size, colour, style, bold, italic.
- Text formatting: alignment, indentation, bullets list.
- Cut, Paste, and Paste as Plain Text, Undo and Redo.
- Paste from Word clean-up with auto detection.
- Link and anchors support.
- Image insertion, with upload and server browsing support.
- Table creation and editing (add, delete/amend rows).
- Table cells editing (alter size, and colours).
- Form fields.
- Right click context menus support.
- Complete toolbar customization.
- Skins support.
- Spell checker.
- Multi-language support with automatic user language detection. Includes Right to Left scripting.
- Complete page editing (from <HTML> to </HTML>) or just contents.
- Lightweight and fast.
- Automatic browser detection and customization.
- Integration with ASP, ASP.NET, Java, ColdFusion, Perl, PHP, JavaScript and more.
- Image and file links upload and server repository browser.

7.5 Support

The project site, http://www.FCKeditor.net is a Wiki installation which gives users a good overview about the project and what can be done with FCKeditor. The developers mainly focus on the development of the editor itself and not on the Wiki extension. Nevertheless the official site for the FCKeditor offers lots of information and has a well-frequented forum where one can get help. The FCKeditor can be updated separately from the extension if a new version is published.

8 Wikiwyg

8.1 Installation

1. Download the extension from the MediaWiki SVN at http://svn.wikimedia.org/svnroot/MediaWiki/trunk/extensions/wikiwyg.
2. Or http://openjsan.org/doc/i/in/ingy/Wikiwyg/0.12/
3. Copy all files into the /extensions folder on your Wiki.
4. Apply the patches from **/extensions/wikiwyg/share/MediaWiki/MediaWiki-1.10.1bleed.patch** by executing the following command:
   patch -p0 -i extensions/wikiwyg/share/MediaWiki/MediaWiki-1.10.1bleed.patch
   Note: you have to **cd** (change directory) to the MediaWiki root directory first.
5. Insert into LocalSettings.php the following line:

```
require_once ("$IP/extensions/wikiwyg/Wikiwyg.php");
```

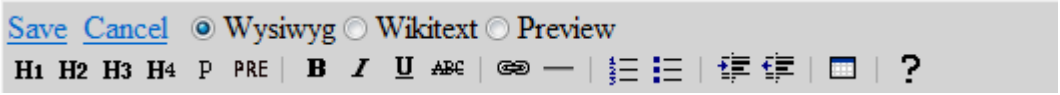
8.2 Parameters

$wgWikiwygEnabled	whether to enable Wikiwyg or not. Defaults to *true*.
$wgWysiwygEnabled	enable WYSIWYG editing. Defaults to *true*.
$wgInPageEnabled	required to be true in order for Wikiwyg to work properly. Defaults to *true*.
$wgYuiPath	path to YUI files. Defaults to *http://yui.yahooapis.com/2.3.0/build*.
$wgWikiwygPath	path to Wikiwyg extension files. Defaults to *$wgScriptPath . "/extensions/wikiwyg"*.
$wgWikiwygJsPath	path to Wikiwyg JavaScript files. Defaults to *$wgWikiwygPath/share/MediaWiki*.
$wgWikiwygCssPath	path to Wikiwyg CSS files. Defaults to *$wgWikiwygPath/share/MediaWiki/css*.
$wgWikiwygImagePath	path to Wikiwyg images. Defaults to *$wgWikiwygPath/share/MediaWiki/images*

8.3 MediaWiki Compatibility

This extension requires patches to the core MediaWiki code. Extensions implemented using patches may be disabled by or interfere with upgrades and security patches to the WaterWiki installation.

8.4 Usability



The toolbar provides limited features and functionality compared to that of other WYSIWYG extensions. Additionally, there is an option to edit/switch content to Wiki mark-up.

Tables are created by pressing the corresponding table icon in the toolbar. Wikiwyg doesn't allow specification of details (for example the amount of columns and rows). By pressing the table icon, Wikiwyg automatically inserts a 3x3 Table in the first row.

At present there is no support for images.

8.5 Features

- Can lay over any html div and be hooked into the existing edit buttons provided by the system.
- Font formatting: type, size, style, bold, italic.
- Text formatting: alignment, indentation, bullets list.
- Gracefully falls back to existing functionality if browser does not support Wikiwyg.
- Sub-classifiable to the environment it is being integrated into.
- Can edit multiple divs on the same page at the same time.
- Instantaneous switch from view to edit.
- Implemented as a clean OO library where each enabled div is a Wikiwyg object.
- Toolbar does the right thing in both Wysiwyg and Wikitext modes.
- Control key shortcuts apply styles without using the toolbar.
- Adding new modes is as simple as adding new classes to the modeClasses property.

8.6 Support

Extension appears to be broken completely as of MediaWiki 1.11.0.

9 MeanEditor

9.1 Installation

MediaWiki 1.13.*

1. Install MediaWiki 1.13.* in **/var/www/MediaWiki**.
2. Patch EditPage.php , navigate to /MediaWiki directory.

```
patch < EditPage.patch
```

3. Unpack http://allievi.sssup.it/jacopo/MeanEditor/MeanEditor.tgz in **/var/www/MediaWiki**. This will create the **jquery**, **wymeditor** and **extensions/MeanEditor** directories.
4. For image support: Disable $wgHashedUploadDirectory.
5. Add the following to LocalSettings.php:

```
$wgHashedUploadDirectory = false;
```

```
require_once("$IP/extensions/MeanEditor/MeanEditor.php");
```

MediaWiki 1.14.*

This version works without any alterations to MediaWiki Source Files.

1. Unpack http://allievi.sssup.it/jacopo/MeanEditor/MeanEditor.tgz in **/wamp/www/MediaWiki**. This will create the **jquery**, **wymeditor** and **extensions/MeanEditor** directories.
2. For image support: Disable $wgHashedUploadDirectory.
3. Add the following lines to LocalSettings.php:

```
$wgHashedUploadDirectory = false;
```

```
require_once("$IP/extensions/MeanEditor/MeanEditor.php");
```

9.2 MediaWiki Compatibility

MediaWiki 1.13.* MeanEditor extension requires patches to the core MediaWiki code. Extensions implemented using patches may be disabled by or interfere with upgrades and security patches.

MediaWiki 1.14.* MeanEditor extension does not require patch, and installation is straightforward.

9.3 Usability

MeanEditor is a simple WYSIWYG editor, which does not implement the full MediaWiki language specification. If a page contains esoteric mark-up, MeanEditor warns the user and disables itself. There is support for image insertion, and it is possible to paste content from word document into editor, but the output is often buggy and error prone.

MeanEditor Bugs:

- Squeezes multiple newlines in one, does not preserve redundant whitespace (*although, this may be a good thing*).
- The Javascript code contains hard-coded page and image URLs. Also, for some functions, URLs are shown in the interface. It will still need polishing.
- Requires `$wgHashedUploadDirectory` to be set to false.

- The context dialog doesn't work if you change the selection.
- Unsupported feature detection could be more expediently implemented.
- Unnecessarily escapes characters like tilde in URLs and converts HTML entities *(is it a WYMeditor or browser problem?)*.
- On IE6, WikiLink detection can fail.
- Unicode handling is untested.
- Preview passes HTML to the editor. When attempting to convert it to Wikicode, some hooks or preview functions may be confused.

9.4 Features

- Headlines (== and ===).
- Division in paragraphs.
- [[Page]]- and [[Page|text]]-style wikilinks.
- [url] and [url text]-style external links.
- Images (with selection of recently uploaded images) with default positioning.
- Bulleted and numbered lists.
- Basic headings.
- Bold and italic.
- References (write support is very limited).
- Undo/redo.
- Paste ms word documents.
- Anchors.

9.5 Support

Support for this extension is very good. Support website can be found at:
http://allievi.sssup.it/jacopo/mediawiki/index.php/Main_Page.

10 Mozile

10.1 Installation

Mozile 0.8

Install Mozile on your server by downloading: http://downloads.mozdev.org/mozile/mozile-0.8.0a1.zip, and unzipping it to a publicly accessible directory.

For each page you want to edit with Mozile 0.8 you need to add a <script> tag to the <head> of the page. For example,

```
<script type="application/x-javascript"
src="path/to/mozile.js"></script>
```

You can configure Mozile with a second script,

```
<script type="application/x-javascript" src="path/to/mozile.js"></script>
<script type="application/x-javascript">
  window.onload = function() {
    mozile.editElements("editor");
    mozile.useSchema("../lib/xhtml.rng");
```

```
  }
</script>
```

This example configuration makes all elements with **class="editor"** editable using the **xhtml.rng** RNG schema,

```
<div class="editor">
  <p>This paragraph is editable.</p>
</div>
```

Instead of using mozile.editElements("editor") you can set an element's contentEditable attribute to true,

```
<div contentEditable="true">
  <p>This paragraph is editable.</p>
      </div>
```

10.2 MediaWiki Compatibility

Compatible with 1.13.5 and 1.14.0

10.3 Usability

Mozile provides very basic editing capability.

10.4 Features

- view source as Wiki text
- shows debugging messages
- undo/redo
- copy selection to clipboard
- cut selection to clipboard
- show hidden elements
- move elements up and down

10.5 Support

Active developer community, support website located at: **http://mozile.mozdev.org**.

11 Conclusion

FCKeditor is an excellent choice for integration with WaterWiki. It offers a very intuitive, Office-style interface, with productive drag and drop functionality. A big advantage is that the FCKeditor outputs the latest Wiki markup. It can integrate with programmatic web technologies such as Java, PHP, ASP.NET, and JavaScript. The editor's capabilities are well documented at its official website and user forums.

TinyMCE is a very sophisticated HTML Editor. However, integration into MediaWiki is broken as of version 1.12.0. There is a lack of ongoing support, and future updates to the extension seem unlikely. Additionally, TinyMCE outputs HTML markup and saves it with the output, which means once integrated into a Wiki all content consist of HTML which makes it difficult to revert to Wiki mark-up.

MeanEditor provides basic editing capabilities, and works with the latest MeiaWiki's (versions 1.14.* and 1.13.*), but it lacks functionality required by WaterWiki users. Its simple WYSIWYG editor does not implement the full MediaWiki language specification, and is prone to buggy and erroneous output. MeanEditor has a relatively supportive website, but that may not compensate for the flaws in this product.

Wikiwyg cannot be recommended for MediaWiki integration as it has a lot of issues including installation problems, incompatibility with the latest MediaWiki, limited WYSIWYG features, no image support, and its handling of tables is awkward and unproductive.

Mozile is an open source project, and is distributed free of charge under the terms of its license. Mozile is implemented in JavaScript, and version 0.8 is designed to work in most browsers, including Mozilla Firefox and Internet Explorer. However, Mozile is still in development, and only Firefox and Internet Explorer are currently supported.

This evaluation report recommends FCKeditor is the most useful MediaWiki extension tool.

12 Key features comparison

WYSIWYG Editor	FCKeditor	TinyMCE	MeanEditor	Wikiwyg	Mozile
Alter MediaWiki source code	no	no	Yes (version 1.13.5)	yes	yes
Browser compatibility	Firefox 3.1x*, IE 7.*, Opera 9.64*, Chrome 2.8, Safari 4.0*	Firefox 3.1x*, IE 7.*, Opera 9.64*, Chrome 2.8, Safari 4.0*	Firefox 3.1x*, IE 7.*, Opera 9.64*, Chrome 2.8, Safari 4.0*	Firefox 3.1x*, IE 7.*, Opera 9.64*, Chrome 2.8, Safari 4.0*	Firefox 3.1x*, IE 7.*,
Basic editing	yes	yes	yes	yes	n/a
Word document (rtf)	yes	yes	Yes (limited rtf)	no	no
Tables and Images	yes	yes	yes	No image support	no
Output wiki mark-up	yes	no	Yes (limited implementation)	yes	no