

Web 2.0 for R scripts & workflows: Tiki & PluginR - *UseR 2011*

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Slides: <http://ueb.ir.vhebron.net/2011+UseR>

Keywords: GUI, Web 2.0, Free/libre Software, Tiki Wiki CMS Groupware, PluginR.

1. Introduction: Our goal

1. Web interfaces for R scripts (& reports)
(~ Sweave or org-mode: mixing templates with R code but with simpler syntax, for the crowds)
2. Using some multipurpose-versatile tool: for Bioinformatics and for anything
 1. free/libre open source software (FLOSS)
 2. multi-platform & multi-browser
 3. mature & maintained software
 4. documented
 5. standard technology & programming languages
 6. extend-able by us or by others easily
 7. versatile enough for multi-purpose with single learning curve,
 8. quick & easy web output or reports

2. Web GUIs for R (i): many but (apparently) unreliable

- A few listed in R FAQ's, but...
 - most seem either unmaintained (= risky in the mid term)
 - or doesn't work anymore,
 - or too difficult (for an averaged researcher or technician)

Reinvention of the wheel (once more)?

- diversity of designs: let evolution rule...
(we ended up extended a previous development branch in php)



The screenshot shows a web browser window with the address bar containing the URL `cran.r-project.org/doc/FAQ/R-FAQ.html#R-Web-Interfaces`. Below the address bar, there are navigation links: "Next: [R Add-On Packages](#), Previous: [R and S](#), Up: [Top](#)". The main heading of the page is "4 R Web Interfaces". The text below the heading states: "Rweb is developed and maintained by [Jeff Banfield](#). The [Rweb Home Page](#) provides access to all three versions of Rweb—a simple text entry form that returns output and graphs, a more sophisticated JavaScript version that provides a multiple window environment, and a set of point and click modules that are useful for introductory statistics courses and require no knowledge of the R language. All of the Rweb versions can analyze Web accessible datasets if a URL is provided."

3. Web GUIs for R (ii): similar conclusions by others*

Software	Brief notes
Rweb	Page last updated 1999. Of the 3 example links on the page one ran very slowly, the second not at all and the third is broken.
R-Online	Or rather, not online. Unless this CGI form is the same thing. I tried Example 1, it returned a server error.
Rcgi	Links to several CGI forms, none of which worked for me.
CGI-based R access	Link did not load.
CGIwithR	Package now maintained at Omegahat. Did not attempt installation. Last updated 2005.
Rpad	I could not connect to this URL.
RApache	The pick of the bunch. Provides server-side access to R through an Apache module. I was able to install RApache on 32-bit (but not 64-bit) Ubuntu 9.10 and get it running. Could use more documentation.
Rserve	Serves R via TCP/IP. Last updated 2006.
OpenStatServer	Broken link. No longer exists, so far as I can tell.
R PHP Online	Link out of date (but you can follow it to the newer page). Last updated 2003, so unlikely to be much use.
R-php	Last updated 2006; the example that I tried gave a server error.
webbioc	A Bioconductor package. Did not investigate further.
Rwui	An application to create R web interfaces. My browser hung at 'waiting for cache'. I gave up.

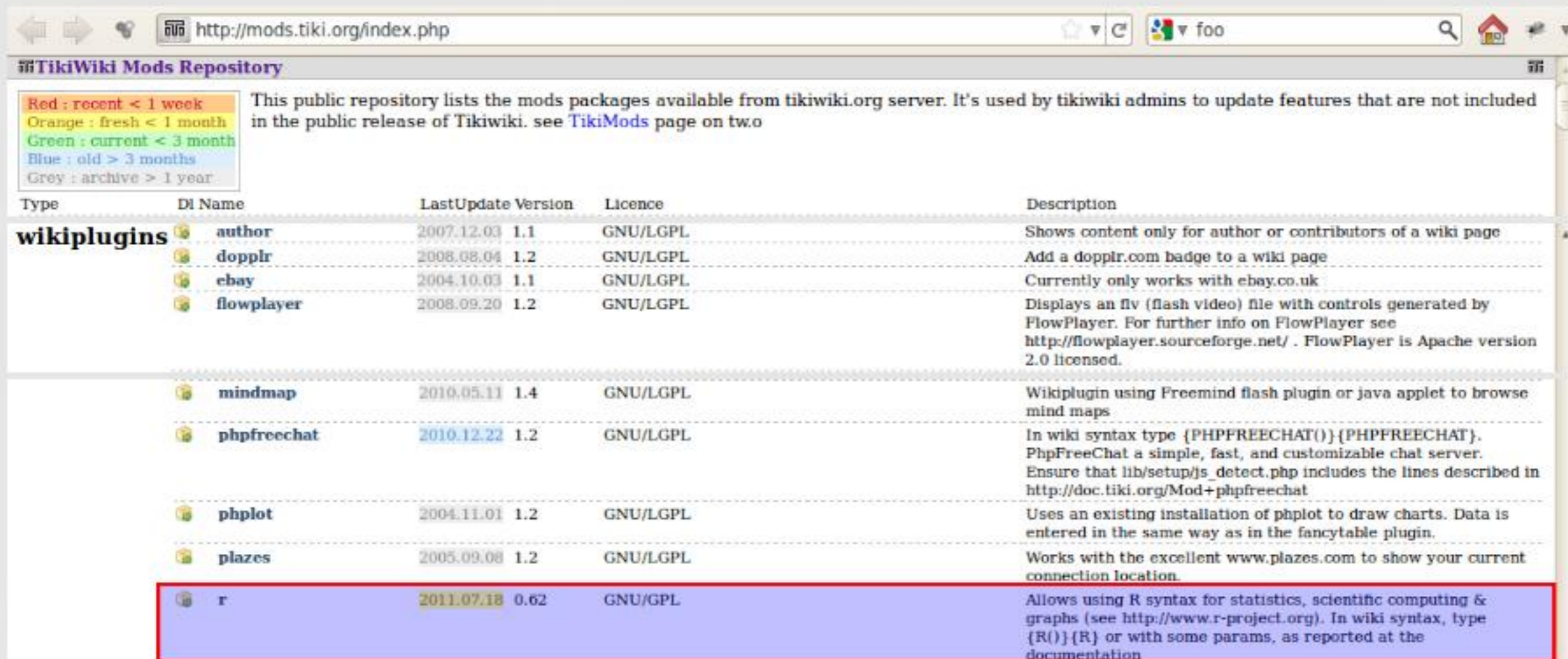
* Table 1. From Neil Saunders, personal communication in his blog

4. Our choice (i): "Tiki" as a base application & framework

Tiki: "Tightly Integrated Knowledge Infrastructure" (tiki.org)



5. Our choice (ii): Tiki + PluginR (external mod)



http://mods.tiki.org/index.php

TikiWiki Mods Repository

This public repository lists the mods packages available from tikiwiki.org server. It's used by tikiwiki admins to update features that are not included in the public release of Tikiwiki. see [TikiMods](#) page on tw.o

Red : recent < 1 week
Orange : fresh < 1 month
Green : current < 3 month
Blue : old > 3 months
Grey : archive > 1 year

Type	DI Name	LastUpdate	Version	Licence	Description
wikiplugins	author	2007.12.03	1.1	GNU/LGPL	Shows content only for author or contributors of a wiki page
	dopplr	2008.08.04	1.2	GNU/LGPL	Add a dopplr.com badge to a wiki page
	ebay	2004.10.03	1.1	GNU/LGPL	Currently only works with ebay.co.uk
	flowplayer	2008.09.20	1.2	GNU/LGPL	Displays an flv (flash video) file with controls generated by FlowPlayer. For further info on FlowPlayer see http://flowplayer.sourceforge.net/ . FlowPlayer is Apache version 2.0 licensed.
	mindmap	2010.05.11	1.4	GNU/LGPL	Wikiplugin using Freemind flash plugin or java applet to browse mind maps
	phpfreechat	2010.12.22	1.2	GNU/LGPL	In wiki syntax type {PHPPFREECHAT()} {PHPPFREECHAT}. PhpFreeChat a simple, fast, and customizable chat server. Ensure that lib/setup/js_detect.php includes the lines described in http://doc.tiki.org/Mod+phpfreechat
	phplot	2004.11.01	1.2	GNU/LGPL	Uses an existing installation of phplot to draw charts. Data is entered in the same way as in the fancytable plugin.
	plazes	2005.09.08	1.2	GNU/LGPL	Works with the excellent www.plazes.com to show your current connection location.
	r	2011.07.18	0.62	GNU/GPL	Allows using R syntax for statistics, scientific computing & graphs (see http://www.r-project.org). In wiki syntax, type {R()} {R} or with some params, as reported at the documentation

6. Examples

A few examples of usage follow after the parameter list.

PluginR params

Parameters	Accepted Values	Description	Default
<i>attId</i>	int	AttId from a tracker Item attachment. ex: 1. (Optional)	
<i>type</i>	text/csv text/xml	Choose the source file type in the appropriate mimetype syntax (Optional). Options: csv xml. ex: csv. (default). For xml, see documentation for more details on the additional R packages required	
<i>wikisyntax</i>	0 1	Choose whether the output should be parsed as wiki syntax (Optional). Options: 0 (no parsing, default), 1 (parsing)	
<i>width</i>	int	Width of the graph (Optional). Options: an integer number in pixels (default) or in units specified. If omitted but height is set, width will be proportional to keep aspect ratio	
<i>height</i>	int	Height of the graph (Optional). Options: an integer number in inches (default) or in units specified. If omitted but width is set, height will be proportional to keep aspect ratio	
<i>units</i>	alpha	Choose units for the width and/or height parameters (Optional). Options: px (default) for pixels, in (inches), cm or mm	
<i>pointsize</i>	int	The default pointsize of plotted text, interpreted as big points (1/72 inch) at res dpi (optional). Options: interger number such as 12 or bigger	
<i>bg</i>	any string except for HTML and PHP tags	The initial background colour (optional). Options: white, yellow, grey, ... and transparent	
<i>res</i>	int	The nominal resolution in dpi which will be recorded in the bitmap file (if any). Also used for units other than the default, and to convert points to pixels (Optional). Options: a positive integer (default: 72 dpi). Values higher than 150 usually seem to be too much	
<i>x11</i>	int	Choose whether the server can use X11 to produce graphs in R, or alternatively use dev2bitmap instead (Optional). Options: 1 (R has support for X11, default), 0 (no support for X11 thus using dev2bitmap). These capabilities can be checked in the server with the command in the R console: capabilities()	
<i>loadandsave</i>	0 1	Load a previous R session (.RData, if any) for the same wiki page so that R object will be used while you work within the same page. For pretty trackers are used (wiki pages with itemId), the R session data (.RData) will be shared for the same itemId across wiki pages	

Example 1a - "Hello world" (Basic R syntax)

This code:

```
{R()}  
# Foo  
cat(1:10)  
{R}
```

Produces:

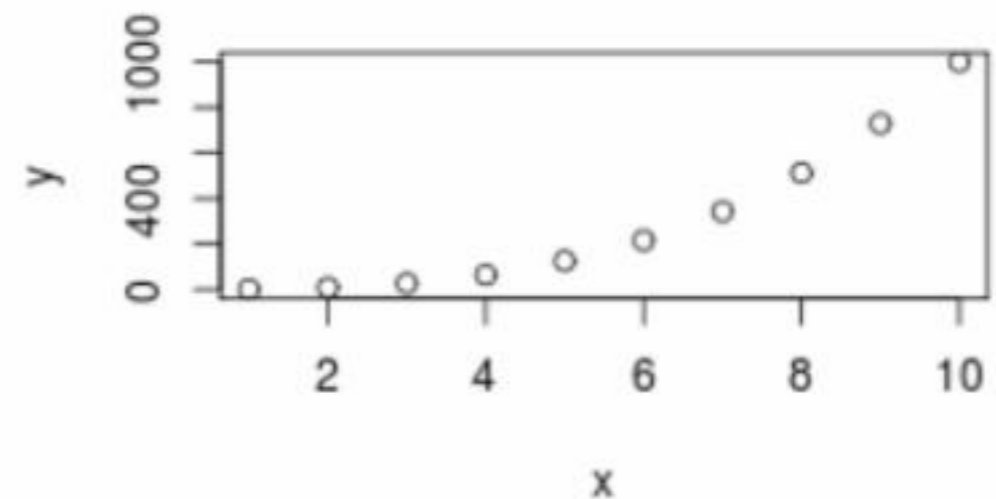
```
1 2 3 4 5 6 7 8 9 10
```

Example 1b - "Hello world" (Basic R syntax)

This code:

```
{R(width="300", height="200")}  
# A plot  
x<-1:10  
y<-x*x*x  
plot(x,y)  
{R}
```

Produces:



Example 1c: "Risky" calls?

This code:

```
{R(width="300", height="300")}  
# A plot with custom location  
for image on disk  
x<-1:10  
y<-x*x*x  
png("/home/xavi/tmp/foo.png")  
plot(x,y)  
{R}
```

Produces:

^Blocked commands found: png.

Use Plugin RR instead and validate your plugin call, or contact a site admin to have the plugin call validated for you^

Example 1c: "Risky" calls - only after RR & admin validation

This code (using an **RR** call):

```
{RR(width="300", height="300")}  
# A plot with custom location  
for image on disk  
x<-1:10  
y<-x*x*x  
png("/home/xavi/tmp/foo.png")  
plot(x,y)  
{RR}
```

Produces:

Plugin execution pending approval

This plugin was recently added or modified. Until an editor of the site validates the parameters, execution will not be possible. You are allowed to:

- View arguments
- Execute the plugin in preview mode (may be dangerous)
- Approve the plugin for public execution

[View Details](#)

Example 2 - PluginR with (optional) params

a using loadandsave=1

```
{R(loadandsave="1")}  
rm(list = ls());  
ls();  
a<-12;  
cat("\na = 12\n");  
{R}
```

character(0)

a = 12

b using loadandsave=1

```
{R(loadandsave="1")}  
ls();  
b<-a*3;  
cat("\nb = a*3 = ");  
cat(b);  
{R}
```

[1] "a"

b = a*3 = 36

c using loadandsave=0

```
{R(loadandsave="0")}  
ls();  
cat("\nc = b*2 = ");  
c<-b*2;  
cat(c);  
{R}
```

character(0)

c = b*2 =
Error: object 'b' not found
Execution halted

Example 3 - R Scripts: Web-based Easy Heatmaps



HIV sequence database

DATABASES SEARCH ALIGNMENTS TOOLS PUBLICATIONS GUIDES Search Site

Heatmap

Purpose: A heatmap is a graphical way of displaying a table of numbers by using colors to represent the numerical values. For example, low values might tend towards cool blue tones while higher values tend to hotter orange and red tones. Heatmaps also re-arrange the rows and columns of the table so that similar rows, and similar columns, are grouped together, with their similarity represented by a dendrogram (separate dendrograms for rows and for columns). This web tool uses the heatmap tool, "heatmap.2" of the gplots package of the statistical environment [R: A Language and Environment for Statistical Computing](#).

For more details see the [Heatmap Explanation](#).

Input

Paste your data here

BB8	BB12	BB28	BB55	BB70	BB106	Pool_B		
Du123.6_C_SA		207	352	165	84	147	198	182
Du151.2_C_SA		196	1555	2529	818	241	487	518
Du156.12*_C_SA		369	426	238	336	406	258	231
Du172.17*_C_SA		429	884	499	196	549	550	315
Du422.1*_C_SA		134	354	193	91	51	63	114

Or upload a data file No heu s... fitxer.

Use log data? Natural Base10 No log

Cluster Method:

Output Format: Dendrogram (Clustering) Rows only Columns only Both None

Heatmap

Palette:

Bottom Margin:

Right Margin:

(Ex. 3) What we have, need & do.

We have

1. Heatmaps R package (local or remote *.tgz)
2. R script to use functions from the package and to produce some figure and/or report

We need

1. Table describing parameters which need to be fed to R by the web interface
2. Tiki (FLOSS Web 2.0 engine) + PluginR set up on a server.

We do

1. Convert html table and its rows into a Tiki tracker and its fields (web database with forms and reports).
2. Create a simple Wiki page to
 1. display a form to collect the data from the user for the Tracker
 2. display a list of items already created in that tracker
3. Validate the potentially unsafe R calls from wiki pages (admin or user with enough permissions required)
4. Create a Smarty template (~ Sweave template but for web pages) to combine Tracker data (input from the user stored in a tracker)
5. Edit the simple wiki page to convert it into a Pretty Tracker page for the report display (instead of simple table with tracker data)
6. Feed the web interface and see the results

(Ex. 3) Web HeatMaps (i): descriptive table

PARAMETER LABEL	PARAMETER NAME (* = mandatory)	INPUT FIELD TYPE	OPTIONS & DEFAULT VALUE	TRACKER FIELD ID
Expressions file name:	expresFileName *	file upload		
Expressions file type:	fileType	selection list	txt, csv, csv2	
Name for this plot:	comparisonName	text		
Title to show in plot:	Title	text	Heatmap	
Distance function to group rows	rowDistance	selection list	cor, euclidean, manhattan, maximum, canberra, binary, minkowski	
Distance Function to group columns:	colDistance	selection list	euclidean, manhattan, maximum, canberra, binary, minkowski, cor	
Group rows and plot dendrogram?	RowVals	checkbox	TRUE	
Group columns and plot dendrogram?	ColVals	checkbox	TRUE	
Scale data by	row	selection list	row, column, none	
Color palette to use	colorsSet	selection list	redblue(64), heat.colors(64), topo.colors(64), rainbow(36)	
File with color names for columns	colsForGroupsFileName	file upload		
Type of information about density	densityInfo	selection list	density, histogram, none	
Expansion coeficient for fonts in columns	cexForColumns	selection list	0.8, 0.7, 0.9, 1.0, 1.1, 1.2, 1.3	
Expansion coeficient for fonts in rows	cexForRows	selection list	0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3	

(Ex. 3) Web HeatMaps (ii): Tracker & fields

localhost/6x/tiki-admin_tracker_fields.php?trackerId=2

Admin Tracker: HeatMap Generation

[List Trackers](#)
[Admin Trackers](#)
[Edit This Tracker](#)
[View This Tracker's Items](#)

[Tracker fields](#)
[New tracker field](#)
[Import/Export Trackers Fields](#)
[No Tabs](#)

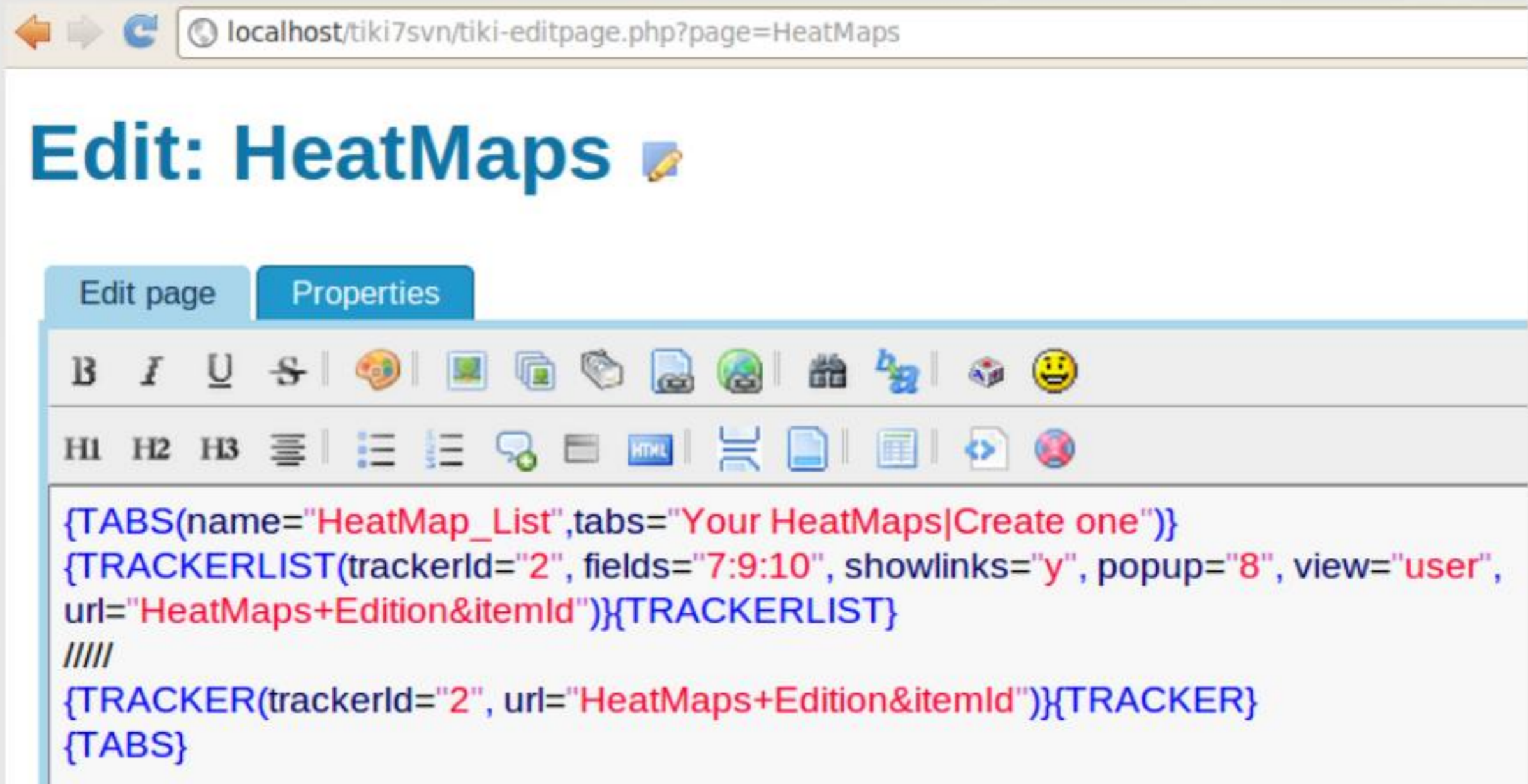
Find [Find](#) 25 Rows

Id	Name	Type	Options	Pos	Req.	List	Main	Multi-lingual	Search	Public	Hidden	Descr.	Validation
7	Name	text field		10	*		y	n		y	n	Some name...	
8	Description	textarea	0	20	-	-	n	n	-	y	n		
9	Added by	user selector	1	30	-		n	n		y	n		
10	Expressions file name	attachment	ntsu	40	-		y	n		y	n		
11	Expressions file type	drop down	txt,txt,csv,csv2	50	-	-	n	n		y	n		
12	Name for this plot	drop down with other textfield	My Plot,My Plot	60	-		n	n		y	n		

6.1. Web HeatMaps (iii): descriptive table with *tracker field ids*

PARAMETER LABEL	PARAMETER NAME (* = mandatory)	INPUT FIELD TYPE	OPTIONS & DEFAULT VALUE	TRACKER FIELD ID
Expressions file name:	expresFileName *	file upload		{ \$f_10 }
Expressions file type:	fileType	selection list	txt, csv, csv2	{ \$f_11 }
Name for this plot:	comparisonName	text		{ \$f_12 }
Title to show in plot:	Title	text	Heatmap	{ \$f_13 }
Distance function to group rows	rowDistance	selection list	cor, euclidean, manhattan, maximum, canberra, binary, minkowski	{ \$f_14 }
Distance Function to group columns:	colDistance	selection list	euclidean, manhattan, maximum, canberra, binary, minkowski, cor	{ \$f_15 }
Group rows and plot dendrogram?	RowVals	checkbox	TRUE	{ \$f_16 }
Group columns and plot dendrogram?	ColVals	checkbox	TRUE	{ \$f_17 }
Scale data by	row	selection list	row, column, none	{ \$f_18 }
Color palette to use	colorsSet	selection list	redblue(64), heat.colors(64), topo.colors(64), rainbow(36)	{ \$f_19 }
File with color names for columns	colsForGroupsFileName	file upload		{ \$f_20 }
Type of information about density	densityInfo	selection list	density, histogram, none	{ \$f_21 }
Expansion coeficient for fonts in columns	cexForColumns	selection list	0.8, 0.7, 0.9, 1.0, 1.1, 1.2, 1.3	{ \$f_22 }
Expansion coeficient for	cexForRows	selection list	0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3	{ \$f_23 }

(Ex. 3) Web HeatMaps (iv): Wiki page1 "HeatMaps" (code)



The screenshot shows a web browser window with the address bar containing `localhost/tiki7svn/tiki-editpage.php?page=HeatMaps`. The page title is "Edit: HeatMaps" with a pencil icon. Below the title are two tabs: "Edit page" and "Properties". A rich text editor toolbar is visible, containing various icons for text formatting (bold, italic, underline, strikethrough), alignment, lists, tables, and other editing functions. The main content area displays the following code:

```
{TABS(name="HeatMap_List",tabs="Your HeatMaps|Create one")}  
{TRACKERLIST(trackerId="2", fields="7:9:10", showlinks="y", popup="8", view="user",  
url="HeatMaps+Edition&itemId")}{TRACKERLIST}  
////  
{TRACKER(trackerId="2", url="HeatMaps+Edition&itemId")}{TRACKER}  
{TABS}
```

(Ex. 3) Web HeatMaps (v): Wiki page1 "HeatMaps" (output)

Quick Admin:

Statistics & Bioinformatics Unit UEB KB

UCTS
UNIVERSITAT DE VALÈNCIA
CENTRE D'INVESTIGACIÓ TECNOLÒGICA
DE BIOMÈDICA

Vall d'Hebron
Institut de Recerca
VHIR
Log out

Home Resources Seminars Teaching Contact us

English

UEB » Cursos Seminaris i Congressos » 2011 UseR » HeatMaps

Your HeatMaps Create one No Tabs

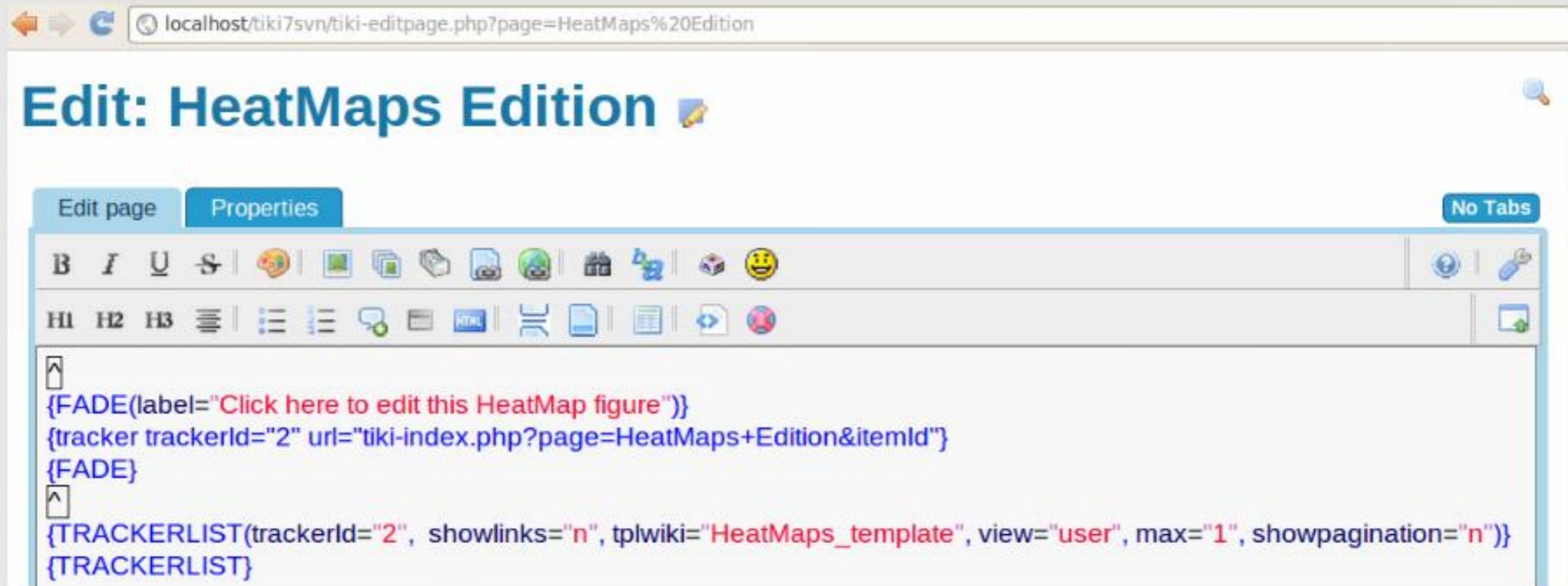
Name	Added by	Expressions file name	LastModif
Another heatmap	Xavi	expres.filtered.ALL.txt [70.08 Kb]	2011-08-16 19:41
A third one	Xavi	expres.filtered.ALL.txt [70.08 Kb]	2011-08-16 19:42

Messages
You have 0 new messages

Menu

- Home
- Search
- Contact Us
- Categories
- Freetags
- Calendar
- MyTIKI
- Wiki

(Ex. 3) Web HeatMaps (vi): Wiki page2 "HeatMaps Edition" (code)

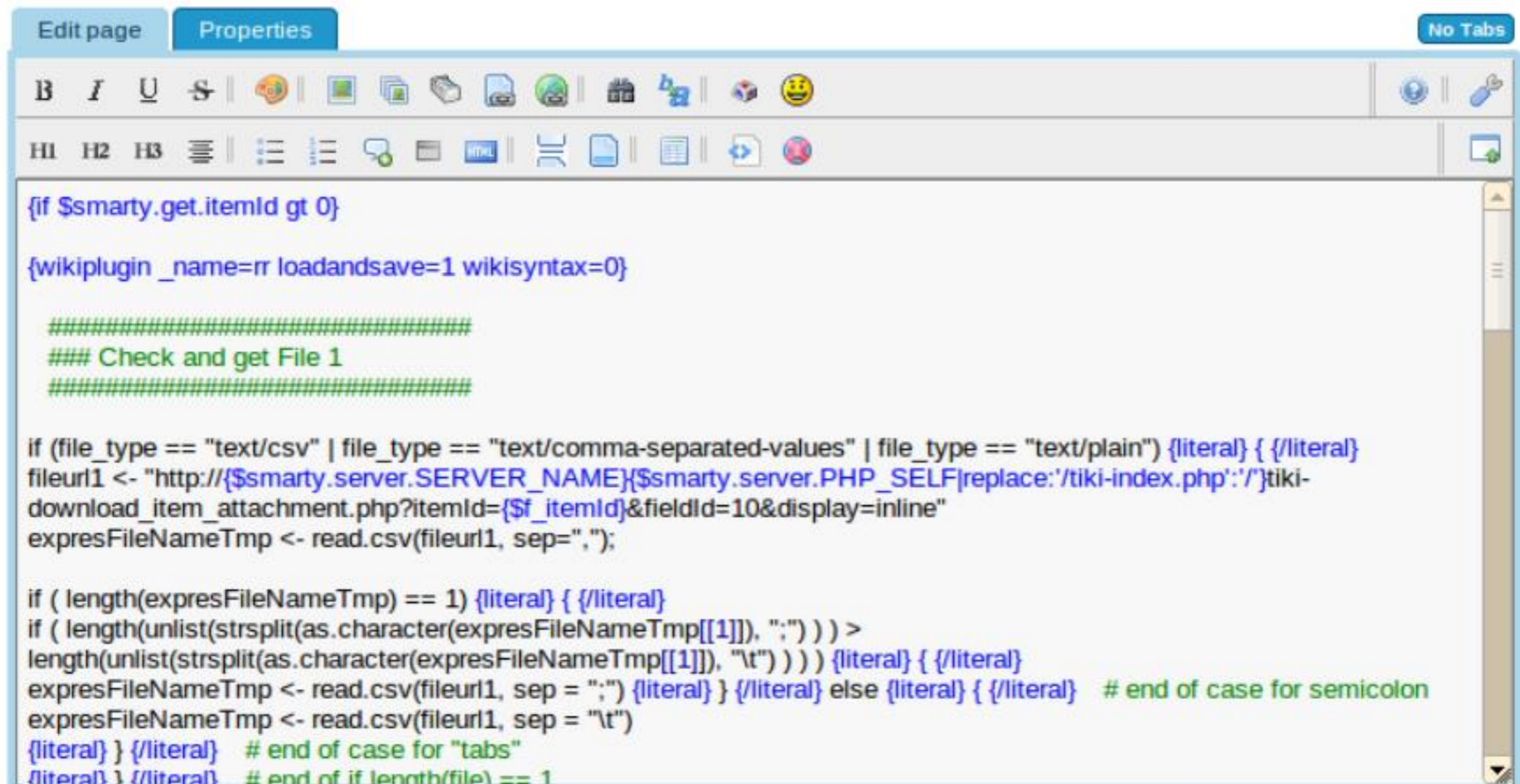


The screenshot shows a web browser window with the address bar containing the URL: `localhost/tiki7svn/tiki-editpage.php?page=HeatMaps%20Edition`. The page title is "Edit: HeatMaps Edition". Below the title, there are two tabs: "Edit page" (selected) and "Properties". A "No Tabs" button is visible in the top right corner. The editing toolbar includes various icons for text formatting (bold, italic, underline, strikethrough), alignment, list creation, and other editing functions. The main content area displays the following source code:

```
{FADE(label="Click here to edit this HeatMap figure")}  
{tracker trackerId="2" url="tiki-index.php?page=HeatMaps+Edition&itemId"}  
{FADE}  
{TRACKERLIST(trackerId="2", showlinks="n", tplwiki="HeatMaps_template", view="user", max="1", showpagination="n")}  
{TRACKERLIST}
```

(Ex. 3) Web HeatMaps (vii): Wiki page3 "HeatMaps Template" (code)

Edit: HeatMaps_template



The screenshot shows a Wiki edit interface with a toolbar containing various icons for text formatting (bold, italic, underline, strikethrough), list creation, link insertion, and media uploads. The main editing area contains the following code:

```
{if $smarty.get.itemId gt 0}

{wikiplugin _name=rr loadandsave=1 wikisyntax=0}

#####
### Check and get File 1
#####

if (file_type == "text/csv" | file_type == "text/comma-separated-values" | file_type == "text/plain") {literal} { /literal}
fileurl1 <- "http://{ $smarty.server.SERVER_NAME } { $smarty.server.PHP_SELF [replace: '/tiki-index.php:/' ] tiki-
download_item_attachment.php?itemId={ $f_itemId } &fieldId=10 &display=inline"
expresFileNameTmp <- read.csv(fileurl1, sep=",");

if ( length(expresFileNameTmp) == 1) {literal} { /literal}
if ( length(unlist(strsplit(as.character(expresFileNameTmp[[1]]), ";")) ) >
length(unlist(strsplit(as.character(expresFileNameTmp[[1]]), "\t")) ) ) {literal} { /literal}
expresFileNameTmp <- read.csv(fileurl1, sep = ";") {literal} { /literal} else {literal} { /literal} # end of case for semicolon
expresFileNameTmp <- read.csv(fileurl1, sep = "\t")
{literal} } { /literal} # end of case for "tabs"
{literal} } { /literal} # end of if length(file) == 1
```

(Ex. 3) Web HeatMaps (viii): Creating a figure

UEB » Cursos Seminaris i Congressos » 2011 User » HeatMaps » HeatMaps Edition

[Click here to edit this HeatMap figure](#)

Name:

Some name to identify (and potentially recall in a later stage) this Heatmap from others in this site

Description:

Added by:

Expressions file name:

Expressions file type:

Name for this plot:

Title to show in plot:

Distance function to group rows:

Distance function to group columns:

Group rows and plot dendrogram?: TRUE FALSE

Group columns and plot dendrogram?: TRUE FALSE

Scale data by:

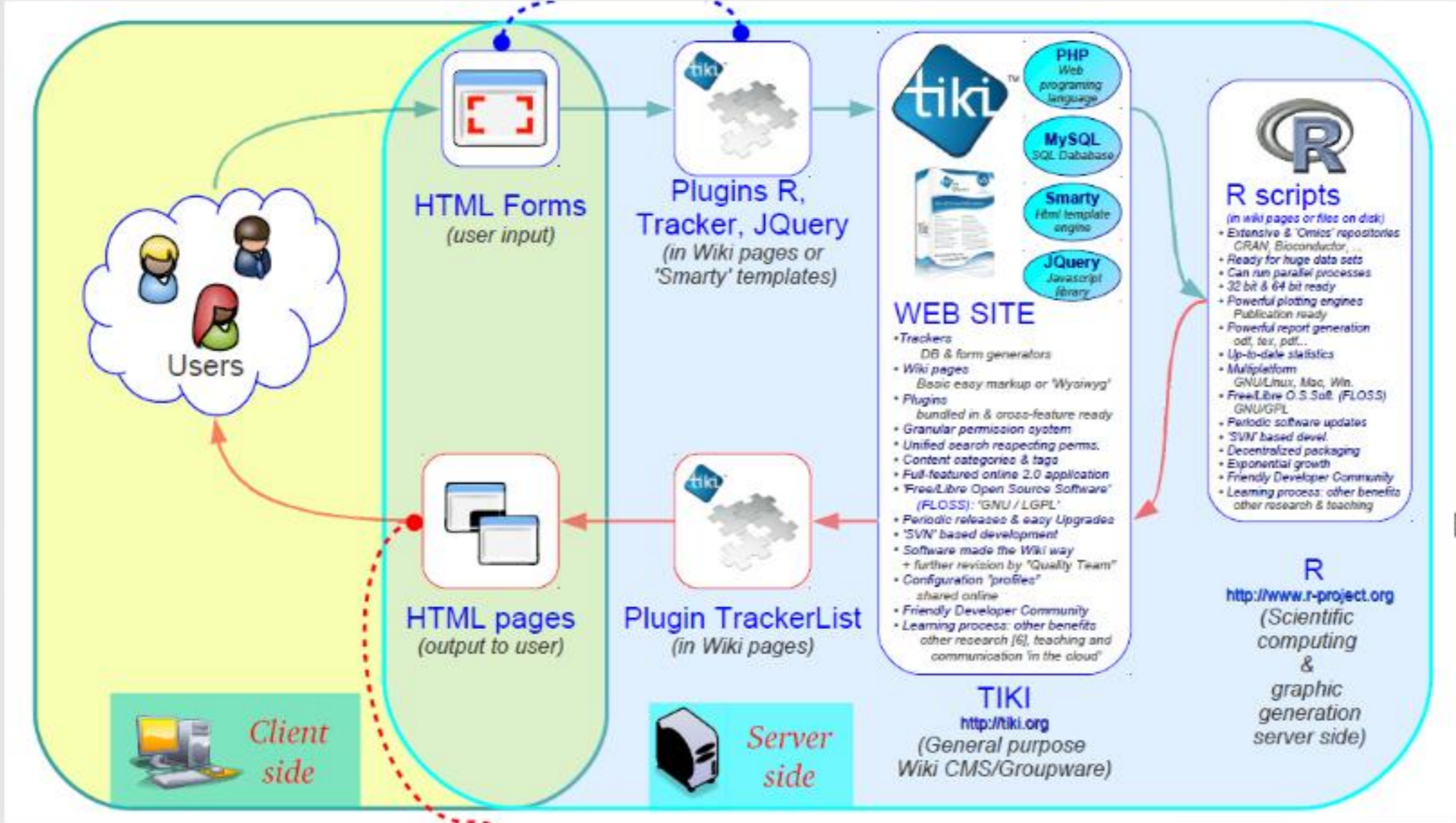
(Ex. 3) Web HeatMaps (ix): Results and edition

The screenshot displays a web interface for editing a heatmap. At the top, there is a navigation bar with a search box, a 'Child' checkbox, and an 'Add Page' button. The breadcrumb trail reads: UEB » Cursos Seminaris i Congressos » 2011 UseR » HeatMaps » HeatMaps Edition. A pink button labeled 'Click here to edit this HeatMap figure' is prominently displayed. Below this, the title 'My first HeatMap: Testing HeatMap generation and edition through a GUI' is shown.

The main content area features a heatmap titled 'My Heatmap'. To its left is a 'Color Key and Histogram' showing a distribution of 'Row Z-Score' values from -4 to 4, with a peak around 0. The heatmap itself is a grid of colored cells (red, white, blue) with dendrograms on the top and left sides. A red and green bar is visible at the top of the heatmap grid.

The right sidebar contains several sections: 'Messages' (0 new messages), 'Menu' (Home, Search, Contact Us, Categories, Freetags, Calendar, MyTiki, Wiki, File Galleries, Spreadsheets, Trackers, Admin), and 'Since your last visit...' (2011-08-16). The 'Since your last visit...' section lists 5 wiki pages changed and 7 new files.

6.2. Tiki & PluginR internals



6.3. Example 4 - Microarray Pipe Line Workflow

The screenshot shows a web-based workflow editor interface. At the top, there is a navigation bar with links for Home, Resources, Seminars, Teaching, and Contact us. Below this, a breadcrumb trail indicates the current position: Sections of project "MEZ000": Section 00 | Upload targets file | 01 | 02 | Create project | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16. An "Export params file (R)" button is visible on the right.

The main content area is titled "Basic Pipe 2011" and contains a help section for "SECTION 14: MCPARAMETERS". The help text includes a checkbox for "Show custom fields instead of single free-form text area" and a note: "If you check this box, you will be offered some individual fields in the form to select values for each of these parameters or variables. Alternatively, you can use this free-form text area to write your own R functions and algorithm." Below this is a text area labeled "mcParsList_TextArea" containing R code:

```
p <- Estudi
mc<- list( fitMain = NULL,
  fitFileName= p$fitFileName,
  whichContrasts = p$whichContrasts,
  contrastName = p$contrastName,
  annotation = p$annotation)
```

Below the code editor, there is a "Character Count" field showing "Max: 10000" and a note: "Per si cal editar alguna cosa manualment (no ho tinc clar)". A "Save" button is located at the bottom left of the main content area.

At the bottom of the page, there are two navigation buttons: "<-- Go back to the previous section" and "Continue to the next section -->". A progress indicator shows "Percentage of completion: 85.00%" with a purple bar.

6.4. Example 5 - Other Goodies (i): Website for "local" R community (ES)

Proposal (currently in review by the Spanish R users community)

1. Documentation with syntax highlighting:
 1. in wiki pages
 2. blog posts
 3. potentially forums (nor used right now, since an email list seems to be the preferred option)
2. Job offers (blog)
3. RSS feeds (offered, and fetched)
4. freetags
5. i18n (internationalization) tools



6.5. Example 6 - Other Goodies (ii): UEB Knowledge Base (Intranet)

1. Wiki & tracker based project management
2. Documentation
3. ToDo lists
4. several levels of user groups, with fine-grained permission system

<http://ueb.ir.vhebron.net>

Benvingudes | Base de Coneixe...

vhebron.net https://ueb.ir.vhebron.net/ Google

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Benvinguts/des!

Aquesta és la Base de Coneixement de la Unitat d'Estadística i Bioinformàtica, del VHIR.
<http://ueb.ir.vhebron.net>

Permet gestionar:

- La base de coneixement de la UEB:
 - ben catalogada (amb **freeTags**, sistema de **categories** jeràrquic també)
 - fàcil de fer créixer **Wiki**
 - reconeixement (colorejat) de sintaxi de codi R i altres

```
# Foo  
print("bar")
```

server wrap center class basicpipe estudi itemid bash http code dels alex data with buntu proxy veure from type informe targetes

7. Similarities between R & Tiki

R & Tiki Softwares

1. SVN
2. FLOSS (Free/Libre...)
3. Distributed model (R packages and Tiki mods)
4. Frequent releases of stable versions (6 months, + LTS in Tiki every few years)
5. Stable version 1.0 released around a decade ago (2000 in R; 2002 in Tiki).
6. Multilatform (runs on GNU/Linux, Mac, Windows, ...).
7. Oriented towards **console users** typing on keyboards as much as possible: scripting in R & wiki-wiki writing (quick) in Tiki.
8. Powerful reporting system based on layout templates and R code (R: using Sweave .Rnw files in R alone; Tiki: using Smarty .tpl files (or Wiki pages) with Trackers and R code).
9. "InfoWorld Bossie Awards 2010" for both of them: R & Tiki!

R & Tiki Communities

1. Open
2. Supportive
3. International
4. Mailman e-mail lists
5. Irc channel
6. Using your own software for your internal needs ("dogfooding")

8. Differences between R & Tiki: *Software*

R

1. Package system for most features
2. Core team to accept changes in core
3. Allows writing code on web pages (Rapid application Development & documentation) with R-Studio (*in theory*)
4. Documentation: highly structured & compulsory
5. License: GPL
6. Ohloh:
 1. Lines: 660 k
 2. Weight: 22 Mb (40Mb .exe) - 260 Mb (svn R 2.14)
 3. Estimated cost: \$ 7 M (179 person-years)

Tiki

1. All-in-one approach for most features also highly integrated among them.
2. Wiki-way of doing software
3. Allows writing code on web pages (Rapid application Development & documentation) + **its web interface**
4. Documentation: Loose and community-wide effort.
5. License: LGPL
6. Ohloh:
 1. Lines: 1.300 k
 2. Weight: 23Mb (.tgz) - 460 Mb (svn 7x)
 3. Estimated cost: \$ 20 M (367 person-years)
7. Fine-grained permission management (user groups)
 1. 3 levels: object, content category, global
8. Configuration profiles
 1. Community-created
 2. Applicable in one click
 3. Hosted at profiles.tiki.org (public)

9. Differences between R & Tiki: *Community*

R

1. R core team (20) manages R roadmap
"R core team is a self-perpetuating oligarchy" [Brian Ripley]
2. **Not** needed for LTS branch (!!!, ~ "all" are supported 2 y.)
3. Many bloggers about R developments
4. Many printed books

Tiki

1. Tiki: Self-managed Community using Tiki + (devel) email list to help community management.
Tiki Software Community Association (created in 2010)
protecting trademarks, hosting of community servers, etc.
2. LTS every few years: 3.x (2009), 6.x (2011)... (9.x likely 2013)
3. Just a few bloggers about Tiki (afaik)
4. Just 2 printed books (so far)
BUT extensive wiki collaborative documentation early days ("**dogfooding!**"); 1000+ pp.

10. Thanks. Questions?

- PDF: http://www.warwick.ac.uk/statsdept/useR-2011/abstracts/030411-depedroxavier_sanchezalex.pdf
- Slides: <http://ueb.ir.vhebron.net/2011+UseR>
- contact: xavier.depedro@vhir.org

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