Roxen™ Creator Manual

roxen Platform

www.roxen.com

Introduction

This part of the manual is intended for anyone who creates and publishes web pages using a Roxen Challenger server, either through Roxen SiteBuilder or from a normal file system. It describes the functionality Challenger provides that can be used to make it easier to create static web pages as well as dynamic content.

It is assumed that the reader is familiar with HTML. Most of Challenger's functions are available as RXML tags, easily learned by anyone who knows HTML.

This introduction chapter describes the different products together forming the Roxen Platform and the various concepts connected to them.

Concepts

The Roxen Challenger is a modular web server and forms the foundation of the Roxen Platform.

RXML

Content on web pages is written using HTML, a text format with mark-up in the form of `<tags>` telling the browser how the content should be displayed. Challenger comes with its own macro language, RXML, that uses tags like the ones in HTML. RXML is never sent to the browser though, but Challenger converts all RXML tags into HTML using the RXML parser.

RXML can be used for a number of things, such as creating graphical headings and diagrams, connecting to databases or creating dynamic pages or all of the above. The bulk of this manual describes the various RXML tags and how they can be combined. The key to RXML is that each tag solves a separate task. Hence several tags can be combined to perform an even greater task.

Modules

Roxen Challenger uses a system of modules. The different functions of Challenger is handled by different modules. Modules are enabled and configured through the configuration interface by the administrator. Many modules handle different RXML tags, therefore, which RXML tags can be used depends on how the administrator has configured the virtual server. The documentation for each tag includes information about which module handles it, if a tag is not available, the administrator can add the proper module to the server to enable the tag.

Modules that handle RXML tags can be written by third-party developers or any programmer with sufficient knowledge of pike and Roxen. It is also possible to create packages of RXML tags, for use with the `<use>` tag. Apart from the RXML tags in this manual there can be additional tags available at a Roxen site.

Products

The Challenger web server is the foundation of the Roxen Platform, which also consists of the Roxen products introduced below.

SiteBuilder

SiteBuilder is a we content management system. It contains its own file structure and transparent access control system and also provides a number of RXML tags.

Content Editor SiteBuilder's graphical user interface. It is described in the User's manual.

Templates The use of template files facilitates the creation and maintenance of web sites separating the content and appearance of the web pages. The templates can be used to control the layout to various extent or just adding functionality such as own-defined RXML tags to be used in the content files.

Navigation The navigation module contains a number of tags for simple creation of advanced, graphical navigation menus.

Access Control The Access Control system is described briefly in the security section, but the Administrator's manual contains a more thorough description.

LogView

LogView offers a number of advanced log analyzing tools.

The LogView chapter in this manual describes mainly the `<logview>` tag and how it can be used to put log reports on web pages.

IntraSeek

IntraSeek is a powerful search engine, providing tools making a site searchable. IntraSeek requires Challenger to run, but can index any other web site as well.

The IntraSeek chapter in this manual describes mainly how to put search forms on web pages using some RXML tags also provided by IntraSeek.

Database API pro

The Roxen Platform contains support for connections to a number of databases.

Database queries can be placed directly on a web page using RXML tags. The connections are made using RXML database-tags and the results from the queries can be customized using many of the other RXML tags. Connections can be made to several databases simultaneously in a single application.

To ensure security when accessing databases, passwords are not stored in the web page, but internally in the Challenger server.

Publishing web pages

Publishing web pages

To publish web pages using a Challenger web server there are a few things the web page creator ought to know. This chapter will explain the basics.

Using SiteBuilder

The SiteBuilder File System module automatically mounts a *virtual file system* that can only be reached via the server both for editing and viewing the files.

For files in SiteBuilder, the code necessary to present the page correctly, will be provided automatically if the right content type is chosen. For HTML files, tags such as `<html>`, `<head>` and `<body>` are not needed in the document.

Using Challenger directly

To publish an HTML page through Challenger, the web page creator only needs to know in what directory the files should be placed and on what URL the pages will be found. This is configured by the administrator of the server.

The virtual server used must have a file system module enabled. The file system module can mount a directory from a normal file system as a virtual file system. When referring to other files, the path to the file must be in the virtual file system. Both absolute and relative paths can be used.

To display the contents of a directory, a directory parsing module is needed. If a file called `index.html` is found in a directory that is mounted by a file system module, it will be shown when pointing a browser to the URL of that directory. By default the server will look for the following files: `index.html, Main.html, welcome.html, index.cgi, index.lpc, index.pike`, in that order. The names and the order can be configured by the administrator.

Content types

Each file fetched through a web server contains a MIME content type that identifies what type of file it is. Thus an HTML file has the content type `text/html`, while a GIF image has the content type `image/gif`.

On a Challenger server, the file extension determines the content type of that file. Usually `.html` or `.htm` files are given the content type `text/html` while `.gif` files are given the content type `image/gif`.

As a user, you usually don't have to bother with content types. If you just give your files their standard extensions everything will work. But sometimes, when you try out new plugins that use their own file format, the extension and content type that you want to use is not handled by the server. Then the administrator for the server has to change the configurations for the *Content types* module.

Some extensions might be handled by the web server itself. The most common use is to run files through the *Main RXML parser* module. This makes it possible to use RXML tags on such pages. Depending on the policy of your site this might be done for all `.html` files, or only for special `.rxml` files.

RXML

RXML, RoXen Macro Language, is a mark-up language similar to HTML that is handled by the Challenger web server. RXML will always be translated to HTML by the server, before it is sent to the browser.

The tags are either single tags or container tags accepting one or more *attributes*. Some attributes can be used together with *all* RXML tags:

nooutput The tag will generate no output at all. Side effects, for example sending queries to databases, will have effect.

noparse Can be used with all container tags. The result of the tag will not be run through the RXML parser.

preparse Can be used with all container tags. The contents of the tag will be run through the RXML parser before the tag itself is handled.

The list below describes the different categories of RXML tags.

Information tags Information tags are simple tags that provide information about the client, the server or the date.

String tags String tags are container tags that transform some input into HTML. The input differs, some tags use HTML while other use tab separated text.

Variable tags Variable tags are tags that handle form variables as well as the various variable types internal to Challenger. With variable tags it is also possible to define your own RXML tags.

URL tags Tags that handle properties of URLs and HTTP like prestates, cookies and authorization.

If Tags If tags handle conditional showing of different content. They make it possible to optimize the pages for all browsers as well as making advanced dynamic content.

Graphics tags Graphics tags create and manipulate images. They can create graphical headers, real-time diagrams as well as animated clocks.

Database tags Database tags communicate with SQL databases and makes it easy to incorporate data from those databases into RXML pages. It is possible to connect to any number of databases.

Programming tags Programming tags are useful for doing advanced RXML as well as for debugging Challenger modules. It is also possible to run Pike code within your RXML pages.

Template tags A number of tags designed for use in template files.

Navigation tags The navigation module provides a set of tags used to create graphical menus.

SiteBuilder tags The sb-tags handle SiteBuilder specific functions and can retrieve information from SiteBuilder's file system and the Access Control system.

IntraSeek tags The IntraSeek module adds a number of tags for creating search forms and tags used by the search engine when indexing pages.

The LogView tag The LogView tag is designed for placing logs on web pages.

Information tags

Information tags are simple tags that provide information about the client, the server or some external event. Examples are the <accessed> tag, that counts accesses to the page and the <modified> tag which shows when the page was last updated.

The information tags are:

<accept-language> Returns the language code of the language the user prefers.

<accessed> Generates an access counter that shows how many times the page has been accessed.

<clientname> Prints the name of the browser the user is using.

<configurl> Prints the URL to the configuration interface for this Challenger server.

<configimage> Inserts an image used by the configuration interface.

<countdown> Counts the time to or from a specified date.

<date> Prints the date and time.

<file> Prints the path part of the URL used to get this page.

<help> Prints help texts for tags.

<available_languages> Lists the number of additional languages the current page has been translated to, with links to them.

<language> Prints the language of the current page.

<unavailable_language> Shows the language the user wanted in case the page was not available in that language.

<line> Prints the current line number of the current page.

<list-tags> Lists all available RXML tags.

<modified> Prints when or by whom a page was last modified.

<number> Prints a number as a word.

<pr> Displays a *Powered by Roxen Challenger* logo.

<referrer> Prints the URL of the page from which the user followed a link that brought her to this page.

<user> Prints information about the specified user.

<version> Prints the version number of the Roxen Challenger web server being used.

<accept-language> *Main RXML parser*

Returns the language code of the language the user prefers, as specified by the first language in the accept-language header.

If no accept-language is sent by the users browser None will be returned.

full Returns all languages the user has specified, as a comma separated list.

Example

```
Your preferred language is <accept-language>
```

Results in

Your preferred language is en

<accessed> *Main RXML parser*

<accessed> generates an access counter that shows how many times the page has been accessed. In combination with the <gtext> tag you can generate one of those popular graphical counters.

A file, AccessedDB, in the logs directory is used to store the number of accesses to each page. Thus it will use more resources than most other tags and can therefore be deactivated in the *Main RXML parser* module. By default the access count is only kept for files that actually contain an <accessed> tag, but that can also be configured.

add=*number* Increments the number of accesses with this number instead of one, each time the page is accessed.

addreal Prints the real number of accesses as an HTML comment. Useful if you use the *cheat* attribute and still want to keep track of the real number of accesses.

capitalize Capitalizes the first letter of the result.

cheat=*number* Adds this number of accesses to the actual number of accesses before printing the result. If your page has been accessed 72 times and you add <accessed cheat=100> the result will be 172.

factor=*percent* Multiplies the actual number of accesses by this factor.

file=*filename* Shows the number of times the page filename has been accessed instead of how many times the current page has been accessed. If the filename does not begin with "/", it is assumed to be a URL relative to the directory containing the page with the <accessed> tag. Note, that you have to type in the full name of the file. If there is a file named tmp/index.html, you cannot shorten the name to

tmp/, even if you've set Challenger up to use index.html as a default page. The `filename` refers to the **virtual** filesystem.

One limitation is that you cannot reference a file that does not have its own `<accessed>` tag. You can use `<accessed silent>` on a page if you want it to be possible to count accesses to it, but don't want an access counter to show on the page itself.

lang=ca es_CA hr cs nl en fi fr de hu it jp mi no pt ru sr si es sv Will print the result as words in the chosen language if used together with *type=string*. Available languages are ca, es_CA (Catala), hr (Croatian), cs (Czech), nl (Dutch), en (English), fi (Finnish), fr (French), de (German), hu (Hungarian), it (Italian), jp (Japanese), mi (Maori), no (Norwegian), pt (Portuguese), ru (Russian), sr (Serbian), si (Slovenian), es (Spanish) and sv (Swedish).

lower Prints the result in lowercase.

per=second minute hour day week month Shows the number of accesses per unit of time.

prec=*number* Rounds the number of accesses to this number of significant digits. If *prec=2* show 12000 instead of 12148.

reset Resets the counter. This should probably only be done under very special conditions, maybe within an `<if>` statement.

This can be used together with the file argument, but it is limited to files in the currentd directory and subdirectories.

silent Print nothing. The access count will be updated but not printed. This option is useful because the access count is normally only kept for pages with actual `<accessed>` tags on them. `<accessed file=filename>` can then be used to get the access count for the page with the silent counter.

upper Print the result in uppercase.

since Inserts the date that the access count started. The language will depend on the *lang* tag, default is English. All normal date related attributes can be used. See the `<date>` tag.

type=number string roman iso discordian stardate Specifies how the count are to be presented. Some of these are only useful together with the *since* attribute.

Example

```
This page has been accessed <accessed
type=string cheat=90 addreal> times since
<accessed since>.
```

Results in

This page has been accessed ninetyfive times since August 1st.

<clientname>

Main RXML parser

Prints the name of the browser the user is using.

full Returns the full name of the browser.

Example

```
Your browser idientifies itself as <client-
name>.
```

Results in

Your browser idientifies itself as Mozilla/4.51.

<configurl>

Main RXML parser

Prints an URL to the configuration interface for this Challenger server.

Example

```
Link to the configuration interface
```

Results in

Link to the configuration interface

<configimage>

Main RXML parser

Inserts an image used by the configuration interface.

src=back err_1 err_2 err_3 fold fold2 help ihfc manual-note manual-tip manual-warning pike power roxen unfold unfold2 unit Specifies which image to use.

All other attributes are sent through to the generated `<img>` tag.

Example

```
<configimage src=fold>
```

Results in

<countdown>

Countdown

This tag counts the time to or from a specified date.

Time related attributes

day=*number, weekday* Sets the weekday.

hour=*number* Sets the hour.

iso=*year-month-day* Sets the year, month and day, all at once.

mday=*number* Sets the day of month.

min=*number* Sets the minute.

month=*number, month* Sets the month.

sec=*number* Sets the second.

year=*number* Sets the year.

Presentation related attributes

combined Shows an English text describing the time period. Example: 2 days, 1 hour and 5 seconds. You may use the *prec* attribute to limit how precise the description should be. You can also use the *month* attribute if you want to see years/months/days instead of years/weeks/days.

days Prints the number of days until the time.

dogyears Prints the number of dog years until the time, with one decimal.

hours Prints the number of hours until the time.

lang=ca es_CA hr cs nl en fi fr de hu it jp mi no pt ru sr si es sv Will print the result as words in the chosen language if used together with *type=string*. Available languages are ca, es_CA (Catalan), hr (Croatian), cs (Czech), nl (Dutch), en (English), fi (Finnish), fr (French), de (German), hu (Hungarian), it (Italian), jp (Japanese), mi (Maori), no (Norwegian), pt (Portuguese), ru (Russian), sr (Serbian), si (Slovenian), es (Spanish) and sv (Swedish).

minutes Prints the number of minutes until the time.

months Prints the number of month until the time.

nowp Returns 1 if the specified time is now, otherwise 0. How precise now should be interpreted is defined by the *prec* attributes. The default precision is one day.

prec=year month week day hour minute second A modifier for the *nowp* and *combined* attributes. Sets the precision for these attributes.

seconds Prints how many seconds until the time.

since Counts from a time rather than towards it.

type=string number ordered How to present the result.

weeks Prints the number of weeks until the time.

when Prints when the time will occur. All `<date>` tag attributes can be used.

years Prints the number of years until the time.

Example

```
<p>I am <countdown iso=1980-06-28 since years
type=string> years old.</p> <p>There are
<countdown year=2000 days> days left until year
2000.</p> <p>Is this a Sunday? <br><if
eval='<countdown day=sunday nowp>'> Yes, this
is a Sunday.</if> <else>No, it isn´t.</else>
```

Results in

I am nineteen years old.

There are 335 days left until year 2000.

Is this a Sunday?
No, it isn´t.

<date>

Main RXML parser

This tag prints the date and time.

brief Generates as brief a date as possible.

capitalize Capitalizes the first letter of the result.

date Shows the date only.

day=*number* Adds this number of days to the current date.

hour=*number* Adds this number of hours to the current date.

lang=ca es_CA hr cs nl en fi fr de hu it jp mi no pt ru sr si es sv Used together with *type=string* and the *part* attribute to get written dates in the specified language. Available languages are ca, es_CA (Catala), hr (Croatian), cs (Czech), nl (Dutch), en (English), fi (Finnish), fr (French), de (German), hu (Hungarian), it (Italian), jp (Japanese), mi (Maori), no (Norwegian), pt (Portuguese), ru (Russian), sr (Serbian), si (Slovenian), es (Spanish) and sv (Swedish).

lower Prints the results in lower case.

minute=*number* Adds this number of minutes to the current date.

part=year month day date hour minute second yday

- **o** `year`; The year
- **o** `month`; The month
- **o** `day`; The weekday, starting with Sunday.
- **o** `date`; The number of days since the first this month.
- **o** `hour`; The number of hours since midnight.
- **o** `minute`; The number of minutes since the last full hour.
- **o** `second`; The number of seconds since the last full minute.
- **o** `yday`; The day since the first of January.

The return value of these parts are modified by both `type` and `lang`.

second=*number* Adds this number of seconds to the current date.

time Prints the time only.

type=number string roman iso discordian stardate Specifies what type of date you want. Discordian and stardate only make a difference when *not* using *part*. Note that *type=stardate* has a separate companion attribute, *prec*, which sets the precision.

unix_time=*time_t* This attribute uses the specified Unix time_t time as the starting time, instead of the current time. This is mostly useful when the `<date>` tag is used from a Pike-script or Roxen module.

upper Prints the result in upper case.

Example

```
<date part=day type=string lang=de>
```

Results in

Montag

<file>

Main RXML parser

Prints the path part of the URL used to get this page.

raw Prints the full path part, including the query part with form variables.

Example

```
<file>
```

<help>

Main RXML parser

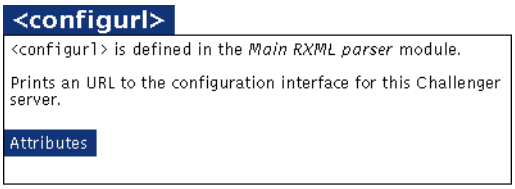
Gives help texts for tags. If given no arguments, it will list all available help texts.

for=*tag* Gives the help text for that tag.

Example

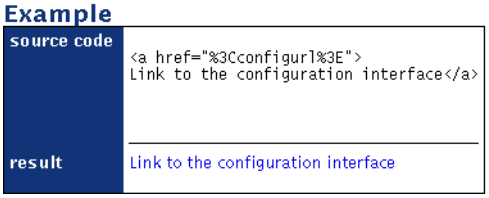
```
<help for=configurl>
```

Results in



Attributes

Example



<available_languages>

Language

Lists the number of additional languages the current page has been translated to, with links to them.

type=txt img Whether to present the available languages with text or images. See the module documentation for information about how to configure which images to send.

<language>

Language

Prints the language of the current page.

type=txt img Whether to present the language with text or an image. See the module documentation for information about how to configure which image to send.

<unavailable_language>

Language

Shows the language the user wanted in case the page was not available in that language.

type=txt img Whether to present the unavailable language with text or an image. See the module documentation for information about how to configure which image to send.

<line>

Main RXML parser

Prints the current line number of the current page.

Example

```
The current line is line <line>.
```

Results in

The current line is line 5.

<list-tags>

Main RXML parser

Lists all available RXML tags.

verbose Lists the tags with their help texts as well.

<modified>

Main RXML parser

Prints when or by whom a page was last modified, by default the current page.

by Print by whom the page was modified. Takes the same attributes as the `<user>` tag.

capitalize Capitalizes the first letter of the result.

date Print the modification date. All attributes from the `<date>` tag can be used.

file=*path* Get information from this file rather than the current page.

lower Print the result in lower case.

realfile=*path* Get information from this file in the computers filesystem rather than Challenger's virtual filesystem.

Example

```
This page was last modified <modified date
type=string>
```

Results in

This page was last modified August the 1st in the year of 1999

<number>

Main RXML parser

Prints a number as a word.

num=*number* The number in question.

lang=ca es_CA hr cs nl en fi fr de hu it jp mi no pt ru sr si es sv The language to use. Available languages are ca, es_CA (Catala), hr (Croatian), cs (Czech), nl (Dutch), en (English), fi (Finnish), fr (French), de (German), hu (Hungarian), it (Italian), jp (Japanese), mi (Maori), no (Norwegian), pt (Portuguese), ru (Russian), sr (Serbian), si (Slovenian), es (Spanish) and sv (Swedish).

Example

```
<number lang=es num=42>
```

Results in

cuarenta y dos

<pr>

Main RXML Parser

Displays a *Powered by Roxen Challenger* logo.

size=small medium large Defines the size of the logo.

color=blue brown green purple Defines the color of the logo.

align=left center right Defines the alignment of the logo.

Example

```
<pr size=medium color=green>
```

Results in

<referrer>

Main RXML parser

Prints the URL of the page on which the user followed a link that brought her to this page. The information comes from the referrer header sent by the browser.

alt=*string* If no referrer header is found print this value instead.

Example

```
You came from <referrer>, didn't you?
```

Results in

You came from .., didn't you?

<user>

Main RXML parser

Prints information about the specified user. By default, the full name of the user and her e-mail address will be printed, with a mailto link and link to the home page of that user.

The `<user>` tag requires an *authentication* module to work.

name The login name of the user.

realname Only print the full name of the user, with no link.

email Only print the e-mail address of the user, with no link.

link Include links. Only meaningful together with the *realname* or *email* attribute.

nolink Don't include the links.

Example

```
<user name=wing realname>
```

Results in

Mattias Wingstedt

<version>

Main RXML parser

Print the version number of the Roxen Challenger web server you are using.

Example

```
This page has been brought to you by <version>
```

Results in

This page has been brought to you by Roxen Challenger/1.3.118

String tags

String tags are container tags that process their contents somehow. Examples are the <sort> tag that sorts its contents and the <tablify> tag that creates good looking tables from tab separated text files.

The contents of an RXML container tag may contain other RXML tags. However, this is not as simple as it may seem since the outer tag is, by default, handled first. The following example will try to explain what happens.

Our example contains an <obox> tag enclosing a <smallcaps> tag.

```
<obox>
<smallcaps>Hello World</smallcaps>
</obox>
```

Which will result in:

HELLO WORLD

The first thing that will happen is that the RXML parser handles the <obox> tag, which creates some HTML table code to draw a box around its contents. The result from the first pass will be something like:

```
<generated HTML table code>
<smallcaps>Hello World</smallcaps>
</generated HTML table code>
```

This result will then be parsed another time by the RXML parser, which will then run the <smallcaps> tag.

That the outer tag is handled first is usually not a problem, but in some special cases it will cause a problem. It is, therefore, possible to give the *preparse* attribute to all RXML container tags. This will cause the RXML parser to parse the contents of the tag before parsing the actual tag.

Below follows an example where the *preparse* attribute makes a huge difference.

```
<source>
<smallcaps>Hello World</smallcaps>
</source>
```

generates

```
<smallcaps>Hello World</smallcaps>
```

HELLO WORLD

while

```
<source preparse>
<smallcaps>Hello World</smallcaps>
</source>
```

generates

```
H<font size=-1>ELLO</font> W<font size=-1>ORLD</font>
```

HELLO WORLD

Special Attributes

preparse is not the only special attribute that can be given to all RXML tags. They are:

nooutput The tag will generate no output at all. Side effects, for example sending queries to databases, will have effect.

noparse Can be used with all container tags. The result of the tag will not be run through the RXML parser.

preparse Can be used with all container tags. The contents of the tag will be run through the RXML parser before the tag itself is handled.

String tags

<ai> Makes it possible to use a database of links.

<autoformat> Replaces all line-feeds in the content with
 tags.

<case> Changes the case of the enclosed text.

<comment> The contents will be completely removed from the page.

<doc> Simplifies writing html examples. Within the <doc> tag { will be replaced by < and } by >. Thus eliminating the need to write < and > manually.

<fl> Used to build folding lists.

<obox> draws outlined boxes.

<smallcaps> Prints the contents in smallcaps.

<sort> Sorts the contents alphabetically.

<source> Used to show examples of HTML or RXML code. It will first show the source code, then a separator and last the results of the code.

<spell> Checks and marks common misspellings in the contents.

<tablify> Generates tables from the contents.

<trimlines> Removes all empty lines from the contents.

<ai> </> *Indirect href*

Makes it possible to use a database of links. Each link is referred to by a symbolic name instead of the URL.

The database is updated through the configuration interface.

name Which link to fetch from the database. There is a special case, *name=random* that will choose a random link from the database.

Example

```
<ai name=roxen>Roxen Platform</ai>
```

Results in

Roxen Platform

<autoformat> </> *Main RXML parser*

Replaces all linefeeds in the content with
 tags.

nobr Don't add any
 br tags.

pre Replaces all double linefeeds with <p> tags.

Example

```
<autoformat> It is almost like using the pre
tag. </autoformat>
```

Results in

It is almost like
using the pre tag.

<case> </> *Main RXML parser*

Changes the case of the text in the contents.

lower Changes all upper case letters to lower case.

upper Changes all lower case letters to upper case.

capitalize Capitalizes the first letter in the content.

Example

```
<case upper>upper case</case>
```

Results in

UPPER CASE

<comment> </> *Main RXML parser*

The contents will be completely removed from the page. As opposed to HTML comments where you can still see the comment by doing *View Source* in the browser.

RXML tags within the <comment> tag will not be parsed.

<doc> </> *Main RXML parser*

This tag simplifies writing html examples. Within the <doc> tag { will be replaced by &< and } by &>. Thus eliminating the need to write < and > manually.

pre Encloses the section within a <pre> tag as well.

Example

```
<doc pre> {table} {tr} {td} First cell {/td}
{td} Second cell {/td} {/tr} {/table} </doc>
```

Results in

```
<table>
  <tr>
    <td> First cell </td>
    <td> Second cell </td>
  </tr>
</table>
```

<fl> </> *Folder list tag*

This tag is used to build folding lists, that are like <dl> lists, but where each element can be unfolded. The tags used to build the list elements are <ft> and <fd>.

folded An argument to both the <fd> itself as well as the <ft> tag. Will make all elements in the list or that element folded by default.

unfolded An argument to both the <fd> itself as well as the <ft> tag. Will make all elements in the list or that element unfolded by default.

Example

```
<fl> <ft folded>Moose <fd>Tastes great. <ft
unfolded>Elk <fd>Beware. </fl>
```

Results in

	Fatal Errors	Errors	Warnings. Reports. Scheduler info.	Rejects. Accepts
Full (Default)	Yes	Yes	Yes	Yes
Medium	Yes	Yes	Yes	No
Short	Yes	Yes	No	No
None	Yes	No	No	No

<obox> </> *Outlined box*

This tag draws outlined boxes.

align=left right Vertical alignment of the box.

bgcolor=*color* Color of the background and title label.

left=*number* Length of the line on the left of the title.

outlinecolor=*color* Color of the outline.

outlinewidth=*number* Width, in pixels, of the outline.

right=*number* Length of the line on the right of the title.

Note that the *left* and *right* attributes are constrained by the width argument.

spacing=*number* Width, in pixels, of the space in the box.

style=caption groupbox Style of the box. Groupbox is default

textcolor=*color* Color of the text inside the box.

titlecolor=*color* Color of the title text.

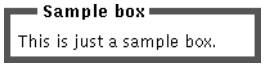
width=*number* Width, in pixels, of the box.

If the title is not specified in the argument list, you can put it in a <title> container in the obox contents.

Example

```
<obox outlinecolor="#555555" align="left"
width="200" outlinewidth="5"> <title>Sample
box</title> This is just a sample box. </obox>
```

Results in



<smallcaps> </>

Main RXML parser

This tag prints the contents in smallcaps

size Sets the base font size, which can be between 1 and 7. This is used for the upper case letters.

small Sets the font size for the lower case letters.

space Inserts a space between every letter.

Example

```
<smallcaps size=6 small=2 space>Roxen Chal-
lenger</smallcaps>
```

Results in

ROXEN CHALLENGER

<sort> </>

Main RXML parser

Sorts the contents divided by newline or the specified separator.

separator The separator used to separate the elements that are to be sorted.

Example

```
<sort> 1 Hello 3 World Are 2 You Listening </
sort>
```

Results in

1 2 3 Are Hello Listening World You

<source> </>

Main RXML parser

This tag is used to show examples of HTML or RXML code. It will first show the source code, then a separator and last the results of the code.

separator Use this string as a separator between the presentation of the source of the result.

Example

```
<source separator="The result of the above
code"> <font size=+9><b>Bold</b></font>
<h5>This is a small heading</h5></source>
```

Results in

```
<font size=+9><b>Bold</b></font>
<h5>This is a small heading</h5>
```

The result of the above code

Bold

This is a small heading

<spell> </>

Spell checker

Checks and marks common misspellings in the contents.

warn Report all unknown words.

Example

```
<spell warn> Acctually spelling is not what I
do best. </spell>
```

Results in

Acctually spelling is not what I do best.

<tablify> </>

Tablify

This tag generates tables from the contents, by default in tab separated form. This simplifies making tables significantly.

cellalign=left center right Alignment of the contents of the cells.

cellseparator=*string* The separator for separating columns, default is tab.

fields=num text This is not an argument but rather a container tag used in the contents that sets the field type for each column. Fields marked numerically will be right aligned and formatted

nice Generates tables with customizable layouts. The first row is referred to as the title row. The additional attributes are:

bgcolor=*color* Sets the background color of your table.

titlebgcolor=*color* Sets the background color of the title cell.

titlecolor=*color* Sets the font color of the title cell.

fgcolorX=*color* Sets the background color of cell X.

nicer Generates tables with even more customizable layouts and gtext font capabilities for the title field. Nicer uses the same attributes as nice plus these:

font=*font* Selects which gtext font to use for the title field.

scale=*factor* Sets the scaling of the gtext font.

face=*font* Sets the font face to use for the HTML text.

size=*number* Sets the font size to use for the HTML text.

modulo=*number* The number of rows that are to use the same color, default is one.

rowalign=left center right This tag aligns the contents of the rows.

rowseparator=*string* Sets the separator used for separating rows, default is newline.

Example

```
<tablify nice="nice" cellseparator=","> Coun-
try, Population Sweden, 8 865 051 Denmark, 5
305 042 </tablify>
```

Results in

Country	Population
Sweden	8 865 051
Denmark	5 305 042

<trimlines> </>

Main RXML parser

This tag removes all empty lines from the contents.

Example

```
<pre> <trimlines> Foo Bar Gazonk </trimlines>
</pre>
```

Results in

```
Foo
Bar
Gazonk
```

Variable tags

Variable tags can be used to create dynamic web pages as well as making web pages that are easier to maintain. The tags have one thing in common, they store and retrieve information from different places:

variables Form variables, as well as variables created with tags like `<set>` and `<cset>`. Variables are the backbone of RXML programming.

other Other variables only exist in *output* tags, like `<sqloutput>`. The most common use is to transfer a value available from the *output* tag to a real variable, by using `<set variable=foo other=bar>`.

defines or macros are fully internal to the server. They are mostly used for to save authors typing repetitive blocks of text.

tags It is possible to define new tags, or to redefine an existing HTML tag.

packages Packages are ready-to-use defines and tags provided by the administrator of the server.

The variable tags are:

<set> Sets a variable to a new value.

<unset> Unsets a variable.

<cset> Sets a variable to the contents of the tag.

<append> Appends a value to a variable.

<define> Defines new tags, container tags or defines.

<undefine> Undefines a previously defined tag, container tag or define.

<insert> Inserts values from files, cookies, defines or variables.

<use> Reads tags, container tags and defines from a file or package.

<formoutput> A tag for inserting variables into just about any context.

<set>

Main RXML parser

Sets a variable to a new value.

variable=*variable* The variable to set.

debug Provide debug messages in case the operation fails. `<set>` will normally fail silently.

define=*define* Set the variable to the contents of this define.

expr=*expression* Set the variable to the result of a simple mathematical expression. Operators that can be used are +, -, *, /, % and |. Only numerical values can be used in the expression.

eval=*rxml expression* Set the variable to the result of this rxml expression.

from=*variable* Set the variable to the value of the named variable.

other=*variable* Set the variable to the value of this *other* variable. This is mostly useful from within *output* tags like `<sqloutput>` where all columns from the SQL result will be available as *other* variables.

value=*string* Set the variable to this value.

If none of the above attributes are specified, the variable is unset. If debug is currently on, more specific debug information is provided if the operation failed.

Example

```
<set variable=foo value="Hello World"> <insert
variable=foo>
```

Results in

Hello World

```
<set variable=foo eval="<date>"> <insert vari-
able=foo>
```

Results in

08:53, August the 30th, 1999

<unset>

Main RXML parser

Unsets a variable.

variable=*variable* Specifies which variable to unset.

Example

```
<set variable=foo value="Hello World"> set:
<insert variable=foo> <br><unset variable=foo>
unset: <insert variable=foo>
```

Results in

set: Hello World
unset:

<cset> </>

Main RXML parser

Sets a variable to the contents of the tag.

variable=*variable* The variable to set.

Example

```
<cset variable=foo> Hello World </cset> <insert
variable=foo>
```

Results in

Hello World

<append> *Main RXML parser*

Append a value to a variable.

variable=*variable* The variable to append to.

debug Provide debug messages in case the operation fails. <append> will normally fail silently.

define=*define* Append the contents of this define.

from=*variable* Append the value of the named variable.

other=*variable* Append the value of this *other* variable. This is mostly useful from within *output* tags like <sqloutput> where all columns from the sql result will be available as *other* variables.

value=*string* Append the variable to this value.

Example

```
<set variable=foo value="Hello"> <append vari-
able=foo value=" World"> <insert variable=foo>
```

Results in

Hello World

<define> </> *Main RXML parser*

Defines new tags, container tags or defines.

container=*name* Define a new RXML container tag, or override a previous definition.

name=*name* Sets the specified define. Can be inserted later by the <insert> tag.

tag=*name* Defines a new RXML tag, or overrides a previous definition.

default_*attribute*=*value* Set a default value for an attribute, that will be used when the attribute is not specified when the defined tag is used.

You can use a few special tokens in the definition of tags and container tags:

#args# All attributes sent to the tag. Useful when defining a new tag that is more or less only an alias for an old one.

&attribute; Inserts the value of that attribute.

Example

```
<define container=h1> <gtext fg=blue
#args#><contents></gtext> </define> <h1>Hello</
h1>
```

Results in

Hello

```
<define tag=test default_foo=foo
default_bar=bar> The test tag: Testing testing.
Foo is &foo;, bar is &bar; </define> <test
foo=Hello bar=World> <br><test foo=Hello>
```

Results in

The test tag: Testing testing. Foo is Hello, bar is World
The test tag: Testing testing. Foo is Hello, bar is bar

<undefine> *Main RXML parser*

Removes a previously defined tag, container tag or define.

name Undefine this define.

tag Undefine this tag.

container Undefine this container tag.

Example

```
<define container=h1> <gtext><contents></gtext>
</define> <h1>Hello</h1> <undefine con-
tainer=h1> <h1>World</h1>
```

Results in

Hello

World

<insert> *Main RXML parser*

Inserts values from files, cookies, defines or variables. If used to insert cookies or variables <insert> will quote before inserting, to make it impossible to insert dangerous RXML tags.

cookie=*cookie* Inserts the value of the cookie.

cookies=full Inserts the value of all cookies. With the optional argument full, the insertion will be more verbose.

encode=none html Determines what quoting method should be when inserting cookies or variables. Default is *html*, which means that <, > and & will be quoted, to make sure you can't insert RXML tags. If you choose *none* nothing will be quoted. It will be possible to insert dangerous RXML tags so you must be of what your variables contain.

define=*name* Inserts this define, which must have been defined by the `<define>` tag before it is used. The define can be done in another file, if you have inserted the file.

file=*path* Inserts the file. This file will then be fetched just as if someone had tried to fetch it through an HTTP request. This makes it possible to include things like the result of Pike or CGI scripts.

If path does not begin with `/`, it is assumed to be a URL relative to the directory containing the page with the `<insert>` tag. Note that included files will be parsed if they are named with an extension the main RXML parser handles. This might cause unexpected behavior. For example, it will not be possible to share any macros defined by the `<define>` tags.

If you want to have a file with often used macros you should name it with an extension that won't be parsed. For example, `.txt`.

fromword=*toword* Replaces fromword with toword in the macro or file, before insering it. Note that only lower case character sequences can be replaced.

nocache Don't cache results when inserting files, but always fetch the file.

variable=*variable* Insert the variable.

Example

```
<define name=foo>This is a foo</define> <insert
name=foo> <br><insert name=foo foo=cat>
<br><insert name=foo a=some foo=cats " is"="
are" his=here>
```

Results in

This is a foo
This is a cat
There are some cats

<use>

Main RXML module

Reads tags, container tags and defines from a file or package.

file=*path* Reads all tags and container tags and defines from the file.

This file will be fetched just as if someone had tried to fetch it with an HTTP request. This makes it possible to use Pike script results and other dynamic documents. Note, however, that the results of the parsing are heavily cached for performance reasons. If you do not want this cache, use `<insert file=... nocache>` instead.

package=*name* Reads all tags, container tags and defines from the given package. Packages are files located in `local/rxml_packages/`.

By default, the package `gtext_headers` is available, that replaces normal headers with graphical headers. It redefines the h1, h2, h3, h4, h5 and h6 container tags.

The `<use>` tag is much faster than the `<include>`, since the parsed definitions is cached.

Example

```
<use package=gtext_headers> <h1>Hello World</
h1>
```

Results in

Hello World

<formoutput> </>

Main RXML parser

A tag for inserting variables into just about any context. By default anything within #'s will be interpreted as a variable. Thus #name# will be replaced by the value of the variable name. ## will be replaced by a #.

By default, the variable will be HTML quoted, that is, < will be inserted as < > as > and & as &. However, there are instances when that is not what you want, for example, when inserting variables into SQL queries. Therefore, the quoting can be controlled by #variable : quote=*scheme*#. The different quoting schemes are:

none No quoting. This is dangerous and should never be used unless you have total control over the contents of the variable. If the variable contains an RXML tag, the tag will be parsed.

html The default quoting, for inserting into regular HTML or RXML.

dtag For inserting into HTML or RXML attributes that are quoted with ". For example `<img src="/base/#image#">`.

stag For inserting into HTML or RXML attributes that are quoted with '. For example `<img src='/base/#image#'>`.

url For inserting variables into URLs.

pike For inserting into Pike strings, for use with the `<pike>` tag.

js, javascript For inserting into Javascript strings.

mysql For inserting into MySQL SQL queries.

sql, oracle For inserting into SQL queries.

Attributes

quote Select the string used for quoting the variable, default is #.

encode Set the default quoting scheme for all variables inserted with this tag.

Example

```
<set variable=foo value="World"> <formoutput
quote=$> Hello $foo$ </formoutput>
```

Results in

Hello World

URL tags

URL tags are tags that somehow use or manipulate the URL or HTTP headers. Among other things they manipulate;

prestate options Prestate options are a way to present options in the URL, that will be persistent for a user over several pages. A prestate for the options `txt` and `en` would be stored as `http://www.roxen.com/(en,txt)/my.page` in the URL. If you use prestate options you must only use relative URLs in your links.

cookies Cookies are a way for a web site to store a small amount of information in the users' browsers. It is a much better way than prestates to handle information that should be persistent for a user over several pages.

authentification HTTP can be used to transmit a user name and a password through HTTP.

expire It is possible to tell the browser, and any proxy on the way to it, how long it is to cache a page.

The URL tags are:

<**apre**> Adds or removes prestate options.

<**aconf**> Adds or removes config options.

<**set_cookie**> Sets a cookie that will be stored by the user's browser.

<**remove_cookie**> Removes a cookie.

<**auth-required**> Adds an HTTP auth required header and return code, that will force the user to supply a login name and password.

<**expire_time**> Sets the expire-time for the document.

<**header**> Adds an HTTP header to the result from page.

<**redirect**> Adds an HTTP redirect header and return code to the response from the page.

<**return**> Changes the HTTP return code for this page.

<**killframe**> Prevents your page from being placed in a frame,

<apre> </>

Main RXML parser

Adds or removes prestate options.

Prestate options are simple true/false flags that are added to the URL of the page. Use `<if prestate=...>` to test for the presence of a prestate. `<apre>` works just like a `<a href=...>` container tag, but the *href* attribute can be omitted in which case the current page is used.

option Add the prestate option.

-option Remove the prestate option.

href Make the generated link point to this URL. The URL must be local to this web site.

Example

```
<apre foo>Add the option</apre> <br><apre -
foo>Remove the option</apre> <p><if
prestate=foo> The option is set. </if> <else>
The option is not set. </else>
```

<aconf> </>

Main RXML parser

Adds or removes config options.

Config options are simple toggles that are stored in the cookie *roxen-config*. This ensures that they are persistent for that user, the same user will have the same config options even if he returns to the site another day. If cookies cannot be used, prestate variables are used instead.

Use `<if config=...>` to test for the presence of a config option. `<aconf>` works just like the `<a href=...>` container tag, but if no *href* attribute is specified, the current page is used.

Example

```
<aconf +foo>Add the option</aconf> <br><aconf -
foo>Remove the option</aconf> <p><if con-
fig=foo> The option is set. </if> <else> The
option is not set. </else>
```

<set_cookie>

Main RXML parser

Sets a cookie that will be stored by the user's browser. This is a simple and effective way of storing data that is local to the user. The cookie will be persistent, the next time the user visits the site, she will bring the cookie with her.

name=*string* The name of the cookie.

value=*string* The value the cookie will be set to.

persistent Keep the cookie for two years.

hours=*number* Add this number of hours to the time the cookie is kept.

minutes=*number* Add this number of minutes to the time the cookie is kept.

seconds=*number* Add this number of seconds to the time the cookie is kept.

days=*number* Add this number of days to the time the cookie is kept.

weeks=*number* Add this number of weeks to the time the cookie is kept.

months=*number* Add this number of months to the time the cookie is kept.

years=*number* Add this number of years to the time the cookie is kept.

It is not possible to set the date beyond year 2038. By default the cookie will be kept until the year 2038.

Note that the change of a cookie will not take effect until the next page load. Therefore, a reload will be needed to see the effect of the example.

Example

```
<apre foo>Set the cookie</apre> <br><apre -
foo>Remove the cookie</apre> <if
prestate=foo><set_cookie name=foo value="Hello
World"></if> <else><remove_cookie name=foo></
else> <p><insert cookie=foo>
```

<remove_cookie> *Main RXML parser*

Removes a cookie.

name Name of the cookie to remove.

Note that removing a cookie won't take effect until the next page load. Therefore, a reload will be needed to see the effect of the example.

Example

```
<apre foo>Set the cookie</apre> <br><apre -
foo>Remove the cookie</apre> <if
prestate=foo><set_cookie name=foo value="Hello
World"></if> <else><remove_cookie name=foo></
else> <p><insert cookie=foo>
```

<auth-required> *Main RXML parser*

Adds an HTTP auth required header and return code, that will force the user to supply a login name and password. This tag is needed when using access control in RXML in order for the user to be prompted to login.

Example

```
<apre foo> Try it. </apre> <if prestate=foo>
<auth-required> </if>
```

Results in

Try it.

<expire-time> *Main RXML parser*

Sets the expire-time for the document. Caches along the way to the user are only allowed to cache the page for this amount of time.

hours=*number* Add this number of hours to the expire time.

minutes=*number* Add this number of minutes to the expire time.

seconds=*number* Add this number of seconds to the expire time.

days=*number* Add this number of days to the expire time.

months=*number* Add this number of months to the expire time.

years=*number* Add this number of years to the expire time.

Bugs: it is not possible to set the date beyond the year 2038.

You can check our example by asking your browser about the *Page Info*.

Example

```
<expire-time hours=5>
```

<header> *Main RXML parser*

Adds an HTTP header to the result from page.

See the Appendix for a list of HTTP headers.

name=*string* The name of the header.

value=*string* The value of the header.

Example

```
<apre foo>Try it</apre> <if prestate=foo>
<header name=Location value=http://
www.roxen.com/> <return code=301> </if>
```

<redirect> *Main RXML parser*

Adds an HTTP redirect header and return code to the response from this page.

to=*URL* Redirect to this URL.

Example

```
<apre foo>Try it</apre> <if prestate=foo>
<redirect to="http://www.roxen.com/"> </if>
```

<return> *Main RXML parser*

Changes the HTTP return code for this page.

See the Appendix for a list of HTTP return codes.

code The return code to set.

Example

```
<apre foo>Try it</apre> <if prestate=foo>
<header name=Location value=http://
www.roxen.com/> <return code=301> </if>
```

<killframe>

Killframe tag

Prevents your page from being placed in a frame, by adding some JavaScript code.

As an added bonus `index.html` will be removed from the end of the URL, as shown in the *Location* field in your browser.

Example

```
<killframe>
```

If tags

If-tags make it possible to make dynamic pages that show different content based on conditions. Authenticated users can get confidential information and pages can be optimized for all browsers. They also makes it possible to program web application in RXML, without using any programming language.

The if tags are:

<if> Container tag used to conditionally show its contents.

<else> Shows the contents if the previous `<if>` tag didn't, or if preceded by a `<false>`.

<elseif> Same as the `<if>`, but it will only evaluate if the previous `<if>` tag returned false.

<true> An internal tag used to set the return value of `<if>` tags.

<false> An internal tag used to set the return value of `<if>` tags.

<if> </>

Main RXML parser

`<if>` is used to conditionally show its contents. `<else>`, `<elif>` or `<elseif>` can be used to suggest alternative content.

It is possible to use glob patterns in almost all attributes, where * means match zero or more characters while ? matches one character. * Thus `t*f??` will match `trainfoo` as well as * `tfoo` but not `trainfork` or `tfo`.

accept=*type1[,type2,...]* Returns true is the browser accept certain content types as specified by it's Accept-header, for example *image/jpeg* or *text/html*. If browser states that it accepts */* that is not taken in to account as this is always untrue.

config=*name* Has the config been set by use of the `<aconf>` tag?

cookie=*name[is value]* Does the cookie exist and if *value* is given, does it contain the value *value*?

date=*yyyymmdd* Is the date yyyymmdd? The attributes *before*, *after* and *inclusive* modifies the behavior.

defined=*define* Is the define *define* defined?

domain=*pattern[,pattern...]* Does the user's computer's DNS name match any of the patterns? Note that domain names are resolved asynchronously, and the the first time someone accesses a page, the domain name will probably not have been resolved.

eval=*RXML expression* Returns true if *RXML expression* returns a string that evaluates to true if casted to an integer in Pike, i.e. the string begins with 1-9 or a number of zeroes followed by 1-7 (octal greater than zero).

exists=*path* Returns true if the file *path* exists. If *path* does not begin with `/`, it is assumed to be a URL relative to the directory containing the page with the `<if>`-statement.

filename=*filepattern1[,filepattern2,...]* Returns true if the current page is among the listed filepatterns.

host=*pattern[,pattern...]* Does the users computers IP address match any of the patterns?

language=*language1[,lang2,...]* Does the client prefer one of the languages listed, as specified by the Accept-Language header?

match=*string[is pattern[,pattern,...]]* Does the string match one of the patterns?

name=*pattern[,pattern...]* Does the full name of the browser match any of the patterns?

prestate=*option1[,option2, ...]* Are all of the specified prestate options present in the URL?

referrer=*[=pattern[,pattern,...]]* Does the referrer header match any of the patterns?

supports=*feature* Does the browser support this feature? See the Supports classes page page for a list of all available features.

time=*ttmm* Is the date ttmm? The attributes *before*, *after* and *inclusive* modifies the behavior.

user=*name[,name,...]|any* Has the user been authenticated as one of these users? If *any* is given as argument, any authenticated user will do.

variable=*name[is pattern]* Does the variable exist and, optionally, does it's content match the pattern?

Modifier Attributes

after Used together with the *date* attribute.

and If several conditional attributes are given all must be true for the contents to be shown. This is the default behavior. The *and* attribute cannot be compined with the *or* attribute.

before Used together with the *date* attribute.

file=*path* Used together with the *user* attribute. An external file will be used to authenticate the user, rather than the cur-

rent *Authentication* module. The file should have the following format:

```
user name : encrypted password
user name : encrypted password
```

Unless the *wwwfile* attribute is given the path is a path in the computers real file system, rather than Challenger's virtual file system.

group=*group, groupfile path* Used together with the *user* attribute to check if the current user is a member of the group according the the groupfile. The groupfile is of the following format:

```
group : user1, user2, user3
group : user4
```

inclusive Used together with the *date* and *before* or *after* attributes. The contents will also be shown if the date is the current date.

wwwfile Used together with the *file* attribute to indicate what Challenger's virtual file system should be used to find the password file. This might be a security hazard, since anyone will be able to read the password file.

not Inverts the results of all tests.

or If several conditional attributes are given, only one of them has to be true for the contents to be shown. The *or* attribute cannot be compined with the *and* attribute.

Complex expressions

You might be tempted to write expressions like:

```
<if variable="foo is bar"
 or variable="bar isfoo">
Something
</if>
```

This will not work, as you can only use an attribute once.

Another common problem is a misconception of how the *and*, *or* and *not* attributes work.

```
<if user=foo
 or not domain="*.foobar.com">
...
</if>
```

will not work since the *not* attribute negates the whole tag, not just the *domain* attribute.

Example

```
<if supports=tables> Your browser supports
tables. </if>
```

Results in

Your browser supports tables.

```
<if user=any> You are logged in. </if> <else>
You are not logged in. </else>
```

Results in

You are not logged in.

```
<if date=20000101 before> The year 2000 is yet
to come. </if>
```

Results in

The year 2000 is yet to come.

<else> </> *Main RXML parser*

Show the contents if the previous `<if>` tag didn't, or if there was a `<false>` above. The result is undefined if there has been no `<if>`, `<true>` or `<false>` tag above.

Example

```
<false> <else> Show this. </else>
```

Results in

Show this.

<elseif> </> *Main RXML parser*

Same as the `<if>`, but it will only evaluate if the previous `<if>` tag returned false.

<true> *Main RXML parser*

An internal tag used to set the return value of `<if>` tags. It will ensure that the next `<else>` tag will not show its contents. It can be useful if you are writing your own `<if>` lookalike tag.

<false> *Main RXML parser*

Internal tag used to set the return value of `<if>` tags. It will ensure that the next `<else>` tag will show its contents. It can be useful if you are writing your own `<if>` lookalike tag.

Graphics tags

Good looking graphics are an important part of the layout of web pages. But creating graphics can also be very time consuming, especially if it involves creating the same type of headings, only with different text.

Therefore, Challenger features graphic tags that create images. They can be used to draw analog clocks and graphical headings as well as diagrams.

File Formats

Some of the tags take images as attributes. For example, to use as background. The images can be in GIF, JPEG, PNM or PNG format.

Color Attributes

Color attributes can be specified in one of the following ways:

name For example *black* or *darkred*.

#RGB value The color is specified as a hexadecimal-digits, `#RRGGBB`. For example, *#ffdead* or *#00ff00*.

@HSV value The color is specified with the syntax `@h,s,v` where h is the hue specified as degrees (0 to 359), s is the saturation specified as a percentage and v the value also specified as a percentage. For example, *@150,70,70*.

%CMTK value The color is specified with the syntax `%c,m,t,k` where all the values are percentages. For example, *%10,20,30,40*.

The graphics tags are:

<gtext> Renders a GIF image of the contents.

<diagram> Draws draw pie, bar, or line charts as well as graphs.

<gclock> Draws an analogue clock that will always show the right time.

<pimage> A Pike tag optimized for creating images or GIF animations.

<imgs> Works like an `<img>` tag where the server automatically sets the width and height attributes.

<config_tablist> Generates a list of tabs, like the one in the configuration interface.

<gtext> </>

Graphics text

Renders a GIF image of the contents.

Note: If the background and text colors are not set in the `<body>` tag of the page, the *bg* and *fg* attributes must be set, otherwise the `<gtext>` tag will only render a "Please reload this page" message.

alpha=*path* Use the specified image as an alpha channel, together with the *background* attribute.

alt=*string* Sets the *alt* attribute of the generated `<img>` tag. By default the *alt* attribute will be set to the contents of the `<gtext>` tag.

background=*path* Specifies the image to use as background.

bevel=*width* Draws a bevel box.

pressed Inverts the direction of the bevel box, to make it look like a button that is pressed down.

bg=*color* Tells the `<gtext>` tag what the background color of the page is. This is used for anti-alias purposes. The module can be configured to try to find out this by itself, by parsing at appropriate HTML tags.

black Use a black, or heavy, version of the font, if available.

bold Use a bold version of the font, if available.

border=*width, color* Draws a border around the text of the specified width and color.

fadein=*blur, steps, delay, initialdelay* Generates an animated GIF file of a fade-in effect.

fg=*color* Sets the color or the rendered text. The module can be configured to try to find out an appropriate color by parsing HTML tags.

fs Apply floyd-steinberg dithering to the resulting image.

fuzz=*color* Apply a glow effect.

ghost=*dist, blur, color* Apply a ghost effect. Cannot be used together with *shadow* or *magic*.

glow=*color* Apply a glowing outline around the text.

href=*URL* Link the image to the specified URL. The link color of the document will be used as the default foreground rather than the foreground color.

italic Use an italic version of the font, if available.

light Use a light version of the font, if available.

magic=*message* Used together with the *href* attribute to generate a JavaScript that will highlight the image when the mouse is moved over it.

magic_*attribute*=*value* Same as for any `<gtext>` attribute, except for the highlighted image.

magicbg=*color|path* Same as the *background* attribute, except for the highlighted image.

maxlen=*number* Sets the maximum length of the text that will be rendered into an image, by default 300.

mirrortile Tiles the background and foreground images around x-axis and y-axis for odd frames, creating seamless textures.

move=*x, y* Moves the text relative to the upper left corner of the background image. This will not change the size of the image.

nfont=*font* Use this font. If no font is specified, the define *nfont* will be used, or the default font, if there is no define.

notrans By default, the background of the image is set as a transparent color. This option overrides that behavior.

opaque=*percentage* Generate text with this amount of opaqueness. 100% is default.

quant=*number* Use this number of colors in the generated image. For GIF images, fewer colors implies smaller images but also aliasing effects. It is advisable to use powers of 2 to optimize the palette allocation.

rescale Rescale the background to fill the whole image.

rotate=*angle* Rotates the image this number of degrees counter-clockwise.

scale=*float* Scale the font this much.

scolor=*color* Use this color for the shadow. Used with the *shadow* attribute.

scroll=*width, steps, delay* Generate an animated GIF image of the text scrolling.

shadow=*intensity, distance* Draw a drop-shadow with the specified intensity and distance. The intensity is specified as a percentage.

size=*width, height* Set the size of the image.

spacing=*number* Add space around the text.

split Generate a separate GIF image out of each word. This will allow the browser to word-wrap the text, but will disable certain attributes like *magic*.

split=*character* Split the string also at each occurrence of the character.

talign=left eight center Adjust the alignment of the text.

textbelow=*color* Place the text in a colored box.

textbox=*opaque, color* Draw a box with an opaque value below the text of the specified color.

texture=*path* Uses the specified images as a field texture.

tile Tiles the background and foreground images if they are smaller than the actual image.

turbulence=*frequency, color; frequency, color; frequency, color* Apply a turbulence effect.

verbatim Allows the gtext parser to not be typographically correct.

xpad=*percentage* Increases padding between characters.

xsize=*number* Sets the width.

xspacing=*number* Sets the horizontal spacing.

ysize=*number* Sets the height.

yspacing=*number* Sets the vertical spacing.

Example

```
<gtext>The time is <date time></gtext>
<br><gtext href=http://www.roxen.com/
magic>Roxen Platform</gtext>
```

Results in

<diagram> </> *Business Graphics*

The <diagram> container tag is used to draw pie, bar, or line charts as well as graphs. It is quite complex with six internal container tags.

Internal Tags

<data> The data the diagram is to visualize, in tabular form.

<colors> The colors for different pie slices, bars or lines.

<legend> A separate legend with description of the different pie slices, bars or lines.

<xaxis> Used for specifying the quantity and unit of the x-axis, as well as its scale, in a graph.

<yaxis> Used for specifying the quantity and unit of the x-axis, as well as its scale, in a graph or line chart.

<xnames> Separate tag that can be used to give names to put along the pie slices or under the bars. The names are usually part of the data.

Pie

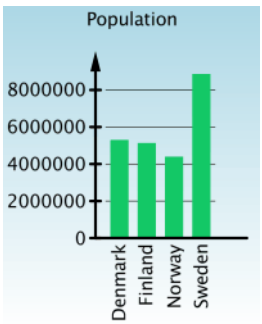
```
<diagram type=pie width=200 height=200
name='Population' tonedbox='lightblue,light-
blue,white,white'> <data separator=,>
5305048,5137269,4399993,8865051 </data> <legend
separator=,> Denmark,Finland,Norway,Sweden</
legend> </diagram>
```

Results in

Bar

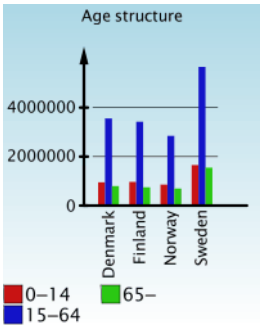
```
<diagram type=bar width=200 height=250
name='Population' horgrid tonedbox='light-
blue,lightblue,white,white'> <data xnamesvert
xnames separator=,> Denmark,Finland,Norway,Swe-
den 5305048,5137269,4399993,8865051</data> </
diagram>
```

Results in




```
<diagram type=bar width=200 height=250
name='Age structure' horgrid tonedbox='light-
blue,lightblue,white,white'> <data xnamesvert
xnames form=column separator=,> Den-
mark,951175,3556339,797534 Fin-
land,966593,3424107,746569
Norway,857952,2846030,696011 Swe-
den,1654180,5660410,1550461</data> <legend sep-
arator=,> 0-14,15-64,65- </legend> </diagram>
```

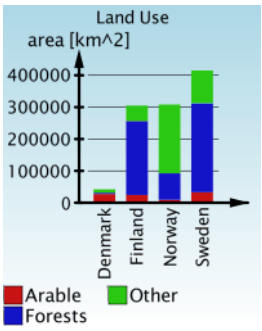
Results in



Sumbar

```
<diagram type=sumbar width=200 height=250
name='Land Use' horgrid tonedbox='light-
blue,lightblue,white,white'> <data xnamesvert
xnames form=column separator=,> Den-
mark,27300,4200,10500 Fin-
land,24400,231800,48800
Norway,9240,83160,215600 Swe-
den,32880,279480,102750</data> <legend separa-
tor=,> Arable,Forests,Other </legend> <yaxis
quantity=area> <yaxis unit=km^2> </diagram>
```

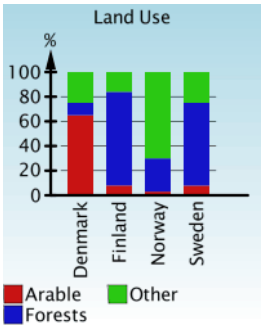
Results in



Normalized Sumbar

```
<diagram type=normsumbar width=200 height=250
name='Land Use' horgrid tonedbox='light-
blue,lightblue,white,white'> <data xnamesvert
xnames form=column separator=,> Den-
mark,27300,4200,10500 Fin-
land,24400,231800,48800
Norway,9240,83160,215600 Swe-
den,32880,279480,102750 </data> <legend separa-
tor=,> Arable,Forests,Other </legend> <yaxis
quantity=%> </diagram>
```

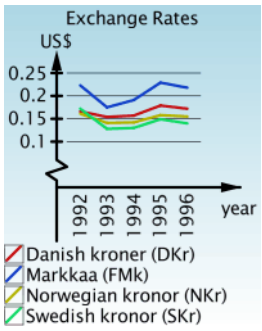
Results in



Line Chart

```
<diagram type=line width=200 height=250
name='Exchange Rates' horgrid tonedbox='light-
blue,lightblue,white,white'> <data form=row
separator=, xnamesvert xnames>
1992,1993,1994,1995,1996
0.166,0.154,0.157,0.179,0.172
0.223,0.175,0.191,0.229,0.218
0.161,0.141,0.142,0.158,0.155
0.172,0.128,0.130,0.149,0.140 </data> <yaxis
start=0.09 stop=0.25> <legend separator=,> Dan-
ish kroner (DKr), Markkaa (FMk), Norwegian kro-
nor (NKr), Swedish kronor (SKr) </legend>
<xaxis quantity=year> <yaxis quantity=US$> </
diagram>
```

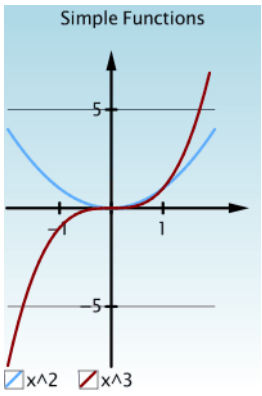
Results in



Graph

```
<diagram type=graph width=200 height=300
name='Simple Functions' horgrid toned-
box='lightblue,lightblue,white,white'> <colors
separator=" ">#60b0ff darkred</colors> <data
separator=,><pike> float c; for (c=-2.0; c <
2.0; c+=0.1) output( "%f,%f,", c, c * c ); out-
put( "%f,%f", 2.0, 2.0 * 2.0 ); return flush();
</pike> <pike> float c; for (c=-2.0; c < 2.0;
c+=0.1) output( "%f,%f,", c, c * c * c ); out-
put( "%f", 2.0, 2.0 * 2.0 * 2.0 ); return
flush(); </pike></data> <axis start=-2.1
stop=2.1> <axis start=-6.1 stop=6.1> <legend
separator=,> x^2,x^3 </legend> </diagram>
```

Results in



3d=*number* Draws a pie-chart on top of a cylinder, takes the height of the cylinder as argument.

background=*path* Use the image as background.

bgcolor=*color* Set the background color to use for anti-aliasing.

center=*number* Centers a pie chart around that slice.

eng Write numbers in engineering fashion, i.e like 1.2M.

font=*font* Use this font. Can be overridden in the `<legend>`, `<xaxis>`, `<yaxis>` and `<names>` tags.

fontsize=*number* Height of the text.

height=*number* Height of the diagram. Will not have effect below 100.

horgrid Draw a horizontal grid.

labelcolor=*color* Set the color for the labels of the axis.

legendfontsize=*number* Height of the legend text.

name=*string* Write a name at the top of the diagram.

namecolor=*color* Set the color of the name, by default *textcolor*.

namefont=*font* Set the font for the name.

namesize=*number* Sets the height of the name, by default *fontsize*.

neng As eng, but 0.1-1.0 is written as 0.xxx.

notrans Make bgcolor opaque.

rotate=*degree* Rotate a pie chart this much.

textcolor Set the color for all text.

tonedbox=*color1,color2,color3,color4* Create a background shading between the colors assigned to each of the four corners.

turn Turn the diagram 90 degrees.

type=sumbars normsum line bar pie graph The type of the diagram.

vertgrid Draw vertical grid lines.

voidsep=*string* Change the string that means no such value, by default "VOID".

width=*number* Set the width of the diagram.

xgridspace=*number* Set the space between two vertical grid lines. The unit is the same as for the data.

ygridspace Set the space between two horizontal grid lines. The unit is the same as for the data.

Regular `<img>` arguments will be passed on to the generated `<img>` tag.

<data>

form=column row How to interpret the tabular data, by default row.

lineseparator=*string* Set the separator between rows, by default newline. lineseparator.

noparse Do not parse the contents by the RXML parser, before data extraction begins.

separator=*string* Set the separator between elements, by default tab.

xnames Treat the first row or column as names for the data to come. The name will be written along the pie slice or under the bar.

xnamesvert Write the names vertically.

<colors>

separator=*string* Set the separator between colors, by default tab.

<legend>

separator=*string* Set the separator between legends, by default tab.

<xaxis>, <yaxis>

start=*float* Limit the start of the diagram at this value. If set to *min* the axis starts at the lowest value in the data.

stop=*float* Limit the end of the diagram at this value.

quantity=*string* Set the name of the quantity of this axis.

unit=*string* Set the name of the unit of this axis.

<xnames>

separator=*string* Set the separator between names, by default tab.

orient=vert horiz How to write names, vertically or horizontally.

<gclock> *Pike Image Module*

Draw an analog clock that will always show the right time through use of GIF animations.

background_image=*path* Set the background image to use.

delay=*seconds* Set the delay between the frames in the animation.

time_offset=*seconds* Add or subtract a number of seconds to the actual time.

Example

```
<gclock>
```

Results in

<pimage> </> *Pike Image Module*

A <pike> tag optimized for creating images or GIF animations.

<imgs> *Main RXML parser*

Works like an <img> tag where the server automatically sets the *width* and *height* attributes. That way, the page will be rendered faster by the browser while no information about the image is hard-coded into the page. If the image changes size, so will the *width* and *height* attributes. The server will read the first bytes of the image file to determine its size.

<imgs> can determine this image dimensions of JPEG, GIF and PNG images.

The <imgs> takes the same attributes as the <img> tag.

Example

```
<source preparse> <imgs src="/internal-roxen-
err_1"> </source>
```

Results in

```
<img height=14 width=14 src="/internal-roxen-err_1">
```

<config_tablist> </> *Config tab-list*

Generates a list of tabs, like the one in the configuration interface.

The <config_tablist> container tag does not take any attributes, but it must always contain one or more <tab> container tags. The following attributes apply to the <tab> tags.

alt=*string* Alternative text for the image. The default is to use ascii-art to make it look like a tablist.

bgcolor=*color* Set the background color. Default is white.

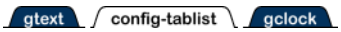
border=*number* Set the width of the border of the image. Default is zero.

selected Make this tab the selected tab.

Example

```
<config_tablist> <tab href="gtext.html">gtext</
tab> <tab selected="selected">config-tablist</
tab> <tab href="gclock.html">gclock</tab> </
config_tablist>
```

Results in



Database tags

The database tags interact with SQL databases. They can be used to create interactive graphical reports as well as complete web applications.

The database tags are almost always combined with other RXML tags. Together with the <diagram> tag they provide real-time diagrams, with the <tablify> tag they provide nice looking tables. Combined with the <wizard> tag they make easy-to-use web applications.

Each database tag needs to know which database it should connect to. This is specified by the *host*-attribute which usually is a symbolic name for the database that the administrator has configured in the *SQL databases* module. It is also possible to specify the database host, user and password directly in the tags, but this is not recommended. See the Database chapter in the Administrator's manual for the syntax.

The database tags are:

<sqlquery> Executes an SQL query.

<sqltable> Creates an ASCII or HTML table with the results from an SQL query.

<sqloutput> Insert the results of an SQL query into HTML or RXML code.

<sqlquery> *SQL*

Executes an SQL query, but doesn't do anything with the result. This is mostly used for SQL queries that change the contents of the database, for example INSERT or UPDATE.

host=*database* Which database to connect to, usually a symbolic name. If omitted the default database will be used.

query=*SQL query* The actual SQL-query.

quiet Do not show any errors in the page, in case the query fails.

parse If specified, the query will be parsed by the RXML parser. Useful if you wish to dynamically build the query.

Example

```
<apre foo>Reset the database</apre> <if
prestate=foo> <sqlquery host=test query="DELETE
from test"> </if>
```

<sqltable> *SQL*

Creates an HTML or ASCII table from the results of an SQL query.

ascii Create an ASCII table rather than a HTML table. Useful for interacting with the <diagram> and <tablify> tags.

host=*database* Which database to connect to, usually a symbolic name. If omitted the default database will be used.

query The actual SQL-query.

quiet Do not show any errors in the page, in case the query fails.

parse If specified, the query will be parsed by the RXML parser. Useful if you wish to dynamically build the query.

Example

```
<tablify nice="nice" preparse="preparse">Coun-
tryPopulation <sqltable ascii host=test
query="SELECT country, population FROM coun-
tries ORDER BY country"> </tablify>
```

<sqloutput> </> *SQL*

Insert the results of aa SQL query into HTML or RXML. <sqloutput> works like all *output* tags. By default anything within #'s will be interpreted as a variable. Thus #column# will be replaced by the column value. ## will be replaced by a #. The inserted SQL results will by default be HTML quoted, < will for example be quoted to <. See the formoutput page for more information about quoting.

The <sqloutput> tag will copy its contents and replace the columns for each row in the result of the query. If the result is empty, the <sqloutput> will not return anything.

Within the <sqloutput> the column values can be accessed as *other* variables. This is useful for transferring the result to normal RXML variables.

host=*database* Which database to connect to, usually a symbolic name. If omitted the default database will be used.

query=*SQL query* The actual SQL-query.

quiet Do not show any errors in the page, in case the query fails.

parse If specified, the query will be parsed by the RXML parser. Useful if you wish to dynamically build the query.

Example

```
<table > <tr> <th>Country</th> <th>Population</
th> </tr> <sqloutput host=test query="SELECT
country, population FROM countries ORDER BY
country"> <tr> <td>#country#</td> <td>#popula-
tion#</td> </tr> </sqloutput> </table>
```

```
<sqloutput host=test query="SELECT population
FROM countries WHERE country='Sweden'"> <set
```

```
variable=swepop other=population> </sqloutput>
The population of Sweden is <insert vari-
able=swepop>.
```

LDAP

The LDAP directory tags interact with LDAP directories as well as LDAP accessible directories like Novell NDS or Microsoft Active Directory.

The directory tags can be combined with other RXML tags.

Each directory operation tag needs to know which directory it should connect to. This is specified by the `host`, `user`, `password` and `basedn`-attribute.

<ldap>

LDAP module

Executes a LDAP operation, but doesn't do anything with the result. `<ldap>` is mostly used for LDAP operation that change the contents of the directory, for example *add* or *modify*.

host=*hostname* Host name of server on which directory server will connect to. If omitted the default host name will be used.

name=*user name* User name for connection to the directory server. If omitted the default user name will be used.

password=*password* User password for connection to the directory server. If omitted the default will be used.

dn=*distinguished name* Distinguished name of object. Required.

op=add delete modify replace The actual LDAP operation. Required.

Note that `op=modify` will change only the attributes given by the *attr* attribute.

attr=*attribute/value list* The actual values of attributes.

The syntax: (*attribute_name1*:[('*attribute_value1*'[, ...])][,*attribute_name2* ...]

for example: (sn:'Zappa'),(mail:'hello@nowhere.org','athell@pandemonium.com')

quiet In case of the operation fails, no error messages will show on the page. Error description can be returned by `<ldapelse>`.

parser If specified, the query will be parsed by the RXML parser. This is useful if the operation is to be built dynamically.

Example

```
<apre foo>Delete the user</apre> <if
prestate=foo> <ldap host=test dn="uid=bill,
o=M$, c=US" op="delete"> </if>
```

<ldapoutput> </>

LDAP module

Insert the results of a LDAP search into HTML or RXML. `<ldapoutput>` works like *output* tags. By default anything within #'s will be interpreted as a variable. Thus #attribute_name# will be replaced by the attribute value. ## will be replaced by a #. See formoutput page for more information about quoting.

As the attribute can contains multiple values the #attribute_name# expression returns first value only. Second, third ... values can be specified by suffix before # (i.e second email value is written as #mail:2#). Obviously this isn't more often usable. Better solution is the subcontainer <ldapfor>, see bellow.

The `<ldapoutput>` tag will copy its contents and replace the named attribute for each row in the result. If the result is empty, the `<ldapoutput>` will not return anything.

host=*hostname* Hostname of server on which directory server will connect to. If omitted the default hostname will be used.

name=*user name* User name for connection to the directory server. If omitted the default user name will be used.

password=*user password* User password for connection to the directory server. If omitted the default will be used.

basedn=*base DN* Base DN of an object where is started search of directory. Required.

scope=base onelevel subtree

name=*attribute* The attribute name used for sorting output.

Note: Only one attribute name can be used.

quiet Do not show any errors in the page, in case the query fails.

parse If specified, the content will be parsed by the RXML parser.

Example

```
<table > <tr> <th>Name</th> <th>Email</th>
<th>Home page</th> </tr> <ldapoutput host=test
based="c=US" filter="(&(objectclass=per-
son)(mail=*))"> <tr> <td>#givenname# #sn#</td>
<td>#mail#</td> <td>#labeleduri#</td> </tr> </
ldapoutput> </table>
```

<ldapfor> </>

LDAP module

Repeats the content for a multiple attribute values.

The `<ldapfor>` tag only works within the `<ldapoutput>` container tag!.

By default anything within #'s will be interpreted as a variable. Thus #attribute_name# will be replaced by the attribute value. ## will be replaced by a #. See formoutput page for more information about quoting.

attr=*attribute name* The attribute name. Required.

index=*initial value* The initial value for index. If omitted the *index=1* will be used.

step=*increment* The increment for index. If omitted the *step=1* will be used.

max=*value* The restriction for returned values. If omitted all values will be returned.

Example

```
<table > <th>Name</th> <th>Phone</th> <ldapout-
put host=test basedn="c=US" scope="subtree"
filter="(telephonenumber=*)"> <tr> <td>#given-
name# #sn#</td> <td>#telephonenumber:1# <ldap-
for attr=telephonenumber index=2> ,
#telephonenumber# </ldapfor></td> </tr> </
ldapoutput> </table>
```

Programming tags

Programming tags are tags that can be used for advanced RXML such as making web applications. There are also tags of interest to module programmers. For anyone interested in combining programming with RXML there is the <pike> tag that lets you put pike code into RXML pages.

The programming tags are:

<catch> Prints the enclosed text or that of a <throw> tag.

<throw> Throws a text to be catched by <catch>.

<cgi> Executes a CGI script.

<crypt> Encrypts the contents as a Unix style password.

<debug> Sets debugging on or off.

<default> Used to set default values for form elements.

<for> Makes it possible to create loops in RXML.

<gauge> Measures how much CPU time is takes to run its contents through the RXML parser.

<nooutput> The contents will not be sent through to the page. Side effects, for example sending queries to databases, will take effect.

<noparse> The contents of this container tag will not be RXML parsed.

<pike> Runs the content as Pike code.

<random> Randomly chooses a message from its contents.

<realfile> Prints the path to the file containing the page in the computers file system, rather than Challenger's virtual file system.

<scope> Creates a new scope for RXML variables.

<sed> Emulates a subset of *sed* operations in RXML.

<strlen> Returns the length of the contents.

<trace> Makes a trace report about how the contents is parsed by the RXML parser.

<vfs> Prints the mountpoint of the filesystem module that handles the page.

<wizard> Generates wizard-like user interfaces.

<catch> </>

Main RXML parser

This tag does normally just pass along it's contents. However, in case there are an error in the RXML evaluation of the contents, or a <throw> tag is evaluated, only the error messages will be returned.

Example

```
<catch> <h1>Hello World</h1> <throw>Error
dude.</throw> </catch>
```

Results in

Error dude.

<throw> </>

Main RXML parser

This tag throws an exception, with the enclosed text as the error message. The RXML parsing will stop at the <throw> tag.

Has a close relation to the <catch> tag.

Example

```
<catch> <set variable=foo value=Hi>
<throw>Error dude.</throw> <set variable=foo
value=Bye> </catch> <p><insert variable=foo>
```

Results in

Error dude.

Hi

<cgi>

CGI executable support

Executes a CGI script, any attributes is forwarded from the tag to the CGI script. The same can be achieved by the <insert> tag or SSI <!-- #exec -->, but the <cgi> tag has a nicer syntax.

script=*path* The CGI script to invoke.

attribute=value This attribute will always be sent to the CGI script, as a form variable. It cannot be overridden.

default-*attribute=value* This attribute will be sent to the CGI script, unless a form variable exists with the same name.

<crypt>

Main RXML parser

Encrypts the contents as a Unix style password. Useful when combined with services that use such passwords.

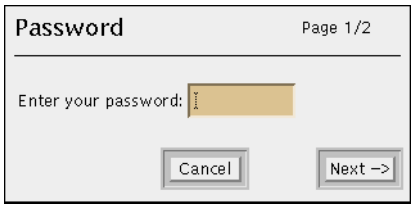
Unix style passwords are one-way encrypted, to prevent the actual clear-text password from being stored anywhere. When a login attempt is made, the password supplied is also encrypted and then compared to the stored encrypted password.

Example

```
<wizard name="Password"> <page>Enter your pass-
word: <var name=password type=password size=10>
</page> <page>Your encrypted password is
```

```
<tt><crypt><insert var=password></crypt></tt>.
</page> </wizard>
```

Results in



<debug>

Main RXML parser

Sets debugging on or off. When debugging is on many RXML tags will output more detailed error messages. It is equivalent to giving the *debug* attributes to those tags.

on Enables debug mode.

off Disables debug mode.

Example

```
With debug: <br><debug on> <append variable=foo
from=bar> <p>Without debug: <br><debug off>
<append variable=foo from=bar>
```

Results in

With debug:
Append: from variable doesn't exist

Without debug:

<default>

Main RXML parser

Makes it easier to give default values to `<select>` or `<checkbox>` form elements.

The `<default>` container tag is placed around the form element it should give a default value.

This tag is especially useful in combination with database tags.

value=*string* The value to set.

name=*string* Only affect form element with this name.

Example

```
<form> <default value=2 name=number> <select
name=number> <option value="1">One <option
value="2">Two <option value="3">Three </select>
</default> </form>
```

Results in

<for> </>

Main RXML parser

Makes it possible to create loops in RXML.

from=*number* Initial value of the loop variable.

step=*number* How much to increment the variable per loop iteration. By default one.

to=*number* How much the loop variable should be incremented to.

variable=*name* Name of the loop variable.

Example

```
<for variable=i from=1 to=10> <formoutput>
<number num=#i#> </formoutput> </for>
```

Results in

one two three four five six seven eight nine ten

<gauge>

Main RXML parser

`<gauge>` measures how much CPU time is takes to run its contents through the RXML parser.

Example

```
<gauge> <for variable=i from=1 to=5> </for> </
gauge> <gauge> <for variable=i from=1 to=50> </
for> </gauge> <gauge> <for variable=i from=1
to=500> </for> </gauge>
```

Results in

Time: 0.001894 seconds

Time: 0.013031 seconds

Time: 0.127760 seconds

<nooutput> </>

Main RXML parser

The contents will not be sent through to the page. Side effects, for example sending queries to databases, will take effect.

Example

```
<set variable=foo value=Hi> <nooutput> <h1>Hi
dude</h1> <set variable=foo value=Bye> </noout-
put> <p><insert variable=foo>
```

Results in

Bye

<noparse> </>

Main RXML parser

The contents of this container tag won't be RXML parsed.

Example

```
<use package=gtext_headers> <h1>Hello</h1>
<h1>World</h1>
```

Results in

Hello
World

<pike> </>

Pike tag

Runs the content as Pike code. This tag is not always available, since it can be a security hazard.

Example

```
<gtext><pike> string a; a = "Hello"; a += "
World"; return a; </pike></gtext>
```

Results in

Hello World

<random>

Main RXML parser

Randomly chooses a message from its contents.

separator=*string* The separator used to separate the messages, by default newline.

Example

```
<cset preparse variable=num><random >1 2 3 4
5</random></cset> Your random number is <for-
moutput><number num=#num#></formoutput>.
```

Results in

Your random number is four.

<realfile>

Main RXML parser

Prints the path to the file containing the page in the computers file system, rather than Challenger's virtual file system, or *unknown* if it is impossible to determine.

Example

```
<realfile>
```

Results in

unknown

<scope> </>

Main RXML parser

Creates a new scope for RXML variables. Variables can be changed within the <scope> tag without having any effect outside it.

extend Copy all variables from the outer scope.

Example

```
<set variable=foo value="World"> <scope>
<h1>Hello <insert variable=foo></h1> <set vari-
able=foo value="Duck"> </scope> <scope extend>
<h1>Hello <insert variable=foo></h1> </scope>
```

Results in

Hello

Hello World

<sed> </>

SED module

Emulates a subset of *sed* operations in RXML. (*Sed* is the Unix "Stream EDitor" program which edits a stream of text according to a set of instructions.)

append

chars

lines

prepend

split=*<linesplit>*

suppress

```
Syntax :

<sed [suppress] [lines] [chars]
[split=<linesplit>]
 [append] [prepend]>
 <e [rxml]>edit command</e>
 <raw>raw, unparsed data</raw>
 <rxml>data run in rxml parser before edited</
rxml>
 <source variable|cookie=name [rxml]>
 <destination variable|cookie=name>
 </sed>

edit commands supported:
 <firstline>,<lastline><edit command>
 ^^ numeral (17) ^^
 or relative (+17, -17)
 or a search regexp (/regexp/)
 or multiple (17/regexp//regexp/+2)

 D - delete first line in space
 G - insert hold space
 H - append current space to hold space
 P - print current data
 a<string> - insert
 c<string> - change current space
 d - delete current space
 h - copy current space to hold space
 i<string> - print string
 l - print current space
 p - print first line in data
 q - quit evaluating
 s/regexp/with/x - replace
 y/chars/chars/ - replace chars

 where line is numeral, first line==1
```

<strlen> </>

Main RXML parser

Returns the length of the contents.

Example

```
<cset variable=num preparse> <strlen>Roxen</
strlen> </cset> Roxen is a <formoutput><number
num=#num#></formoutput> letter word.
```

Results in

Roxen is a five letter word.

<trace> *Main RXML parser*

Makes a trace report about how the contents are parsed by the RXML parser.

Example

```
<trace> <nooutput> <for variable=i from=1 to=2>
<list-tags> </form> </nooutput> </trace>
```

Results in

Trace report

1. tag <trace> Main RXML parser
    1. container <nooutput> Main RXML parser
        1. container <for> Main RXML parser
           Time: 0.00034 (CPU = 0.00)
        2. tag <set> Main RXML parser
           Time: 0.00011 (CPU = 0.00)
        3. tag <list-tags> Main RXML parser
           Time: 0.05281 (CPU = 0.00)
        4. tag <set> Main RXML parser
           Time: 0.00011 (CPU = 0.00)
        5. tag <list-tags> Main RXML parser
           Time: 0.04528 (CPU = 0.00)

    Time: 0.12698 (CPU = 0.00)

Time: 0.12788 (CPU = 0.00)

<vfs> *Main RXML parser*

Prints the mountpoint of the filesystem module that handles the page, or *unknown* if it could not be determined. This is useful for creating pages or applications that are to be placed anywhere on a site, but for some reason have to use absolute paths.

Example

```
<set variable=path eval="<vfs>"> <formoutput>
Link to this page. </formoutput>
```

<wizard> </> *Wizard generator*

The `<wizard>` tag generates wizard-like user interfaces, where the user is guided through several pages of controls. It is very useful for making web applications in RXML.

The `<wizard>` tag must contain at least one `<page>` container tag. The `<page>` tag can in turn contain `<var>` tags or `<cvar>` container tags.

cancel=*URL* The URL to go to when the *cancel* button is pressed.

cancel-label=*string* The text on the *cancel* button.

done=*URL* The URL to go to when the *done* button is pressed.

name=*string* The title of the wizard.

next-label=*string* The text on the *next* button.

ok-label=*string* The text on the *ok* button.

page-label=*text* The text *Page* in the upper right corner.

previous-label=*text* The text on the *previous* button.

Attributes for `<var>` and `<cvar>`

cols=*number* Sets the number of columns.

default=*value* The default value.

name=*name* The name of the variable.

options=*option1,option2,...* Available for *select* or *select_multiple* variables.

rows=*number* Sets the number of rows.

size=*number* Sets the size or the input form.

type=string password list text radio checkbox int float color color-small font toggle select select_multiple The variable type.

Example

```
<wizard done="wizard.html" name="Sample wizard"
ok-label="Done" cancel="wizard.html"> <page>
<b>Message</b> <var name=message size=30
value="Hello World"> <p><var name=color
type=color-small> </page> <page> <formoutput>
<gtext fg=#color#>#message#</gtext> </formout-
put> </page> </wizard>
```

Results in

SSI tags

SSI, Server Side Includes, are similar to RXML tags and have the advantage of being a standard supported by many web servers. It is thus possible to write pages using SSI that are portable to other web servers.

The downside is that SSI is in no way as flexible or powerful as RXML. The tags are placed within HTML comments, which makes it impossible to combine different SSI tags. However, it is possible to combine SSI tags with regular RXML tags.

Challenger does not presently implement all the SSI functionality that Apache supports.

The SSI tags are:

<!--#config--> used to configure how things should be printed.

<--#echo--> Prints a variable from the server or request.

<--#exec--> Executes a CGI script or shell command.

<--#flastmod--> Prints the last modification date of the specified file.

<--#fsize--> Prints the size of the specified file.

<--#include--> Insert a text from another file into the page.

<!--#config-->

Main RXML parser

The config command is used to configure how things should be printed.

errmsg=*string* Where `msg` is a message that is sent back to the client if an error occurs while parsing the document.

sizefmt=bytes abbrev The value sets the format to be used when displaying the size of a file. *Bytes* gives a count in bytes while *abbrev* gives a count in KB or MB, as appropriate.

timefmt=*value* The value is a string to be used when printing dates.

<!--#echo-->

Main RXML parser

Prints a variable from the server or request.

var=sizefmt document name path translated document uri date local date gmt query string unescaped last modified server software server name gateway interface server protocol server port request method remote host remote addr auth type remote user http cookie cookie http accept http user agent http referrer The variable to print.

Example

```
We're using <gtext><!--#echo var="server soft-
ware"--></gtext>
```

Results in

<!--#exec-->

Main RXML parser

Executes a CGI script or shell command. This command has security implications and therefore, might not be available on all web sites.

cgi=*URL* Path to the CGI script URL encoded. That is, a character can be quoted by % followed by its hex value. The CGI script is given the PATH_INFO and QUERY_STRING of the original request from the client. The variables available in `<!--#echo>` will be available to the script in addition to the standard CGI environment. If the script returns a Location header, then this will be translated into an HTML anchor.

cmd=*path* The server will execute the command using `/bin/sh`. The variables available in `<!--#echo>` will be available to the script.

<!--#flastmod-->

Main RXML parser

Prints the last modification date of the specified file.

file=*path* Path to the file.

virtual=*URL* Path to the file URL encoded. That is, a character can be quoted by % followed by its hex value.

<!--#fsize-->

Main RXML parser

Prints the size of the specified file, subject to the sizefmt format specification.

file=*path* Path to the file.

virtual=*URL* Path to the file URL encoded. That is, a character can be quoted by % followed by its hex value.

<!--#include--> *Main RXML parser*

Insert a text from another file into the page.

file=*path* The file as a path relative to the directory containing the current page. It cannot contain `../`, nor can it be an absolute path.

virtual=*URL* The path to the file URL encoded. That is, a character can be quoted by % followed by its hex value. The path may contain `../` and may be absolute, i e starting with a `/`

Image maps

Image maps are used for images where you can click on different parts to go to different pages. Nowadays, this is usually handled in the browser, by client-side image maps. But it is also possible to do this in the server. This is done through `.map` files, where you define which page the user should be brought to when clicking somewhere on the image.

The HTML code needed to use an image map is:

```
<a href=file.map>
 <img src=image.gif ismap>
</a>
```

For server-side image maps to work the *ISMAP image-maps* module must be enabled. The map file is a text file where one clickable area is defined per line. The file will be scanned one line at a time till a directive that includes the point the user clicked is found. The possible directives are:

(X1,Y1)-(X2,Y2) URL *(X1, Y1)* are the coordinates of the upper left corner of a rectangular area whose lower right corner has the coordinates *(X2, Y2)*. Any point inside the rectangle will take the user to the *URL*.

(X,Y),R URL Any point inside the circle centered at *(X,Y)* and with the radius *R* will take the user to the *URL*.

(X,Y) URL This specifies a single point and ties a URL to it. If more than one point is specified in the file, the one closest to the position on which the user clicks will be used.

ppm: path Use the PPM file referred to by path. Each color in that file may give a different URL.

pgm: path As PPM, but the file is a grey scale file.

color:(r,g,b):URL In all PPM files referenced, this color will point to the *URL*. r,g and b are decimal integers between 0 and 255 and the color defined is the combination of the red (r), green (g) and blue (b) intensities. If the file searched is a grey scale PGM file, the grey scale will be (r+g+b)/3.

color:(r,g,b)-(r,g,b):URL All colors in the range will point to *URL*. If the file searched is a PGM (grey scale) picture, the grey scale will be (r+g+b)/3.

color:greyscale-greyscale:URL All colors with an intensity falling within the range will point to *URL*.

default:URL The url *URL* will be returned if nothing else matched. Don't forget to set it.

void:URL The url *URL* will be returned if the client doesn't support image maps or if the map file is accessed without coordinates.

IntraSeek

IntraSeek offers the web site creator an easy way of making information searchable on the world wide web. Together with a few tags a powerful search page can be created.

This chapter contains information on how to create search pages, how to use different character sets and how to use the different crawler standards IntraSeek supports, and all of this can be done by using a set of tags.

The IntraSeek tags

<intraseek_title> Gives a title to the search pages.

<intraseek_form> Generates a search form.

<intraseek_results> Generates the research results including text summaries, links and search scores.

<meta> Defined by Netscape and is designed to help the crawler indexing only the wanted pages.

<no_index> Removes parts of a document from the index and the summaries.

<intraseek_title>

Intraseek

This tag gives a title to the search pages.

lang=da en fi fr de hu it li no pt ro sl es se Languages supported are: Danish(da), English(en), Finnish(fi), French(fr), German(de), Hungarian(hu), Italian(it), Lithuanian(lt), Norwegian(no), Portuguese(pt), Romanian(ro), Slovenian(sl), Spanish(es) and Swedish(se). If this attribute is not used, English will be used as default.

<intraseek_form>

Intraseek

This tag generates a search form.

lang=da en fi fr de hu it li no pt ro sl es se Languages supported are: Danish(da), English(en), Finnish(fi), French(fr), German(de), Hungarian(hu), Italian(it), Lithuanian(lt), Norwegian(no), Portuguese(pt), Romanian(ro), Slovenian(sl), Spanish(es) and Swedish(se). If this attribute is not used, English will be used as default.

ids=*profile1[,profile2,...]* Profiles defines how and what web pages and servers should be indexed by the crawler and can be created inside Intraseek configuration interface. This attribute tells what profiles should be searchable in the search form.

default_id=*profile* Sets the default profile in which to search. This attribute cannot be used together with the *ids* attribute.

target=*URL* Gives the URL where a dedicated search page can be found.

action=*URL* Sends the user to a different page containing the search form.

<intraseek_results>

Intraseek

This tag generates the research results including text summaries, links and search scores.

lang=da en fi fr de hu it li no pt ro sl es se Languages supported are: Danish(da), English(en), Finnish(fi), French(fr), German(de), Hungarian(hu), Italian(it), Lithuanian(lt), Norwegian(no), Portuguese(pt), Romanian(ro), Slovenian(sl), Spanish(es) and Swedish(se). If this attribute is not used, English will be used as default.

target=*URL* Gives the URL where a dedicated search results page can be found.

action=*URL* Sends the user to a different page containing the search results.

textcolor=*color* Changes the text color of the search results summaries.

charset=iso-8859-1 (Latin1) iso-8859-2 (Latin2) iso-8859-3 (Latin3) iso-8859-4 (Latin4) iso-8859-9 (Latin9) More information about character sets and languages can be found in the IntraSeek language page.

<meta>

Intraseek

This tag is defined by Netscape and is designed to help the crawler indexing only the wanted pages. It gives the documents a set of restrictions that the crawler must follow. It also provides the crawler with important words and a summary shown

When using SiteBuilder the meta data for keywords and description is stored in the meta data for each page. It is necessary to put `<meta>` tags in the template for this information to reach any search engine. See the example for information about how to do this.

name=*robots* The argument *robots* lets the crawler know that there will be a restriction imposed on its indexing of the page it currently is indexing.

content=*all,none,index,noindex,follow,nofollow* These are the restrictions that will be imposed on the crawler. The restrictions can be mixed and should be given as a comma-separated list.

all This is the default setting, telling the crawler that there are no restrictions. Lets the crawler index all words and follow all new links found. This works the same as "index,follow".

none Tells the crawler to ignore the page, and not retrieve and new links from it. This works in the same way as combining "noindex, nofollow".

index Index this page

noindex Do not index this page.

follow Follow all new links found on this page.

nofollow Do not follow any new links found on this page.

name=*keyword*

content=*keyword1[,keyword2,...]* Gives the crawler a comma-separated list of the most important words in the document. It is recommended to use this tag as much as possible as the probability of a successful search is greatly improved.

name=*description*

content=*Summary of page content..* Meta descriptions are used as page summaries when presenting search results. If no meta description is found, IntraSeek will create a summary from the text that appears on top of the page.

A good use for meta descriptions could be to avoid the text from navigation interfaces at the top of the pages, which would otherwise become the summary.

Example

```
<sb-output file> <title>#title#</title> <meta
name="keywords" content="#keywords#"> <meta
name="description" content="#description#"> </
sb-output>
```

<no_index> </> *Intraseek*

This tag removes parts of a document from the index and the summaries. It is only used by IntraSeek and is not at all standard. Browsers might dislike it and HTML validators complain.

By default, new links found within the `<no_index>` specified area are followed.

nofollow If this attribute is inserted into the tag no new links within the `<no_index>` area will be followed.

LogView

This chapter contains information on how to put LogView diagrams and tables on the user's own web pages on the server. The user interface of LogView, is described in the User's manual.

If the administrator has configured LogView to permit this, the LogView diagrams or tables can be displayed on any page on the server. This is done by adding a `<logview>` tag to the page, with the correct parameters for showing the desired kind of report.

A very handy way to automatically create the tag text is to go to the Advanced page, try out different parameters until the report is satisfactory, and then press tag display button and copy-and-paste the tag into the page.

<logview>

LogView

The LogView module provides a special RXML tag, `<logview>`, which provides an easy way of inserting statistics reports in ordinary RXML documents.

help Display this text.

manual Display the LogView manual.

list-groups List all statistics groups.

list-reports List all available reports.

list-defaults Report variable values, including default values.

group=*statistics-group* Select the statistics group for which to make a report.

report=*report* Select what to report. Some available report types are *Hits*, *Bandwidth*, *Popular pages*, *Average session length* and *Return code summary*. Exactly which types are available may depend on the exact version and configuration of the LogView installation. Use the *list-reports* attribute to find out which report types are available on a particular server.

op=append sum This attribute is used to select whether to *append* or *sum* the statistics over the specified period. See the Advanced page of the Logview chapter in the User manual for more information.

display=table line-chart bar-chart sum-bars pie-chart 3d-pie-chart ascii export This selects the format in which to display the report.

max=*num* Maximum number of rows in the result.

unit=year month week day hour Select the granularity of the report to be produced.

per=year month week day hour Selects a second level of reported time resolution, and must have a values greater or equal to unit. Available units are the same as for unit. The difference between unit and per is that the former determines the width of the periods to sum to produce individual sample points, while the latter only affects how the values should be reported. The difference is perhaps easiest to see in the bar chart report type, where granularity determines the number of bars, while per determines how to label the bars; if granularity is greater than per, bars within the same per period will have the same label.

When using op=sum, corresponding unit values from different per periods will be totaled, instead of being presented separately. For instance, with:

```
report=bandwidth op=sum unit=hour per=day
```

the diagram/table produced will show how the bandwidth usage varies at different times of day, during the specified time period (see below).

Setting unit and per to the same value, and using op=sum, will have the effect of producing a single sum for the whole time period specified (this is really only useful for report=table).

from-year|from-month|from-day=*value* These attributes select the start of the time period for which to produce a report. Apart from plain digit values, the values can be specified with a '-' prefix, indicating an offset from the current day/month/year, so that:

```
from-day=-3
```

means three days ago. *from-day* can also take values like *this-friday* and *last-tuesday*, as well as *today* and *yesterday*. *from-month* can take month names, as well as *this-month* and *last-month*.

to-year|to-month|to-day=*value* These attributes select the end of the time period for which to produce a report. The values are specified just as for the corresponding *from-* attributes.

Example

```
<logview report='Hits' unit=day per=month dis-
play=line-chart>
```

Templates

Templates is an integrated part of Roxen SiteBuilder used to separate content from layout. It works by transforming *content files* to RXML files according to a *template file*. This is done on demand and the result is cached by the web server for performance.

Usually the template determines the fundamental layout of the web page; where the navigation interfaces are, where the title is shown, what the background is etc. If there is a table defining the basic structure of the web pages it is also included in the template. With templates it is possible to define and redefine RXML and HTML tags. The custom tags can be simple tags used in the content to control the look of headers and such, but they can also be used to control the layout and structure of the pages.

Templates also provide simple creation of advanced graphical and non-graphical navigation interfaces. The look of the interface are defined in the template and the titles and links are either taken from the site structure or from special menu definitions. The menus will of course make use of Access Control, so that only the files or directories the user has permission to visit are shown in the menu.

These functions enables the designer to effortlessly keep a consistent design on the whole web site and at the same time simplify the process of creating content for the editorial staff.

Content processing

The illustration below shows how the content is processed.

1 At the start we have the empty content file, containing some text and an inline image.

2 The first template processing step is to apply the template to the content. In this step all custom tags are replaced by their definitions, and custom tags controlling layout are inserted.

3 Next the navigation buttons are added, these are either taken from menu definitions, the site structure or a combination of both. The navigation buttons are sensitive to where the web page is located and can indicate which page is currently being visited. It is also possible to present the site structure in a hierarchical way by only showing the files and folders below the current page.

4 Finally the Access Control parses the menu, hiding the buttons the user is not permitted to visit.

Content processing

Modules

The three modules most important for templates are the *Templates* module, the *Sitebuilder tags* module and the *Navigation* module. The *Templates* module is used when defining the web page structure and the custom tags. The *Navigation* module creates the navigation buttons and the *SiteBuilder tags*-module provides additional tags useful when creating templates.

Using different templates

When the user views a web page from a SiteBuilder site, the content is inserted according to the definitions made in the template chosen for the page. Which template to use is determined by the template field in meta data, but it may also be forced by adding `?tmpl=the-template.tmpl` to the end of the url. The templates are stored in the `/templates/` directory.

Templates processing

Templates work by providing the framework for each generated page, as well as defining custom tags. Custom tags are tags that can be used within the content files, and will be replaced according to the definition in the template.

Templates can be used in different ways. The template could only provides custom tags, and not interfere with the content file in any other way. Or templates could be used to control the exact layout of the generated page, only inserting data from the content file in specific places. A database application could use a template to controls exactly how and where fields should be printed.

The most common case is something in between, where the template defines the overall layout while the content file is inserted as is somewhere within that overall layout.

The template processing is driven by the template file. It is only when certain tags are used that information is fetched from the content file. It is possible to insert information several times from the content file, for example to first create an index over the headers and then insert the whole file. It is possible to change the definition of any custom tags between these inserts.

Parse order

All template tags are evaluated first, to generate a RXML page. In this step the information from the content file is inserted, and becomes part of the RXML page. The generated RXML page will then be sent through the RXML parser to produce a HTML page. It doesn't matter whether the RXML code is in the template or in the content file, it will be evaluated at the same time.

When generating the RXML page it is the template file that is evaluated. Any RXML in the template file will be sent right through to the generated RXML page. The template tags `<tmplinsert>`, `<tmplinsertblock>`, `<tmplinsertall>` and `<tmplinsertexcept>` can then be used to insert tags from the content file, or the entire content file.

The template tags

<tmplinsert> Inserts the contents of the first occurrence of a container tag from the content file. It is useful for handling tags that there should only be one instance of, like the `<title>` tag in HTML.

<tmpldefault> Default value for the `<tmplinsert>` tag in case a container tag doesn't exists in the content file.

<tmplblock> Defines a new tag or container tag.

<tmpldefaultparam> Is used within a `<tmplblock>` tag to define default values for attributes.

<tmplinsertblock> Inserts one or more tags from the content file. All occurrences of the tags will be inserted.

<tmplinsertall> Insert all tags from the content file.

<tmplinsertexcept> Insert all tags from the content file except these.

<tmplhelp> Define a help text for the template, a tag or an attribute of a tag. This help text will be shown when viewing the template source.

<tmplinsert> *Templates*

The `<tmplinsert>` tag inserts the first occurrence of a container tag in the content file. If the tag does not exists in the content file, a default value defined by the `<tmpldefault>` tag will be used.

`<tmplinsert>` is useful for handling tags that there should only be one of in the content file, for example the `<title>` tag in HTML. `<tmplblock>` and `<tmplinsertblock>` or `<tmplinsertall>` are used to handle tags that may occur more than once in the content file.

tag=*name* Name of the container tag to insert.

<tmpldefault> </> *Templates*

Defines a default value for use with the `<tmplinsert>` tag. In case the `<tmplinsert>` tag can't find a tag in the content file it will use the default value for that tag, as defined with `<tmpldefault>`.

tag=*name* The name of the tag.

<tmplblock> </> *Templates*

The `<tmplblock>` tag defines a new custom tag, that can later be inserted with the `<tmplinsertblock>` tag or the `<tmplinsertall>` tag.

Insertion of a tag is done when the `<tmplinsertblock>` or `<tmplinsertall>` tag finds the tag in the content file. Then the contents of the `<tmplblock>` tag will be inserted. Within that contents $*tag name*$ will be replaced by the contents from the tag in the content file. $*attribute name*$ will be replaced by that attribute value from the tag in the contents file, or by a default value as defined by the `<tmpldefaultparam>` tag. The attribute must have been specified in the *params* attribute of the `<tmplblock>` tag. Finally `$varargs$` will be replaced by all other attributes given to the tag in the content file.

It is possible to redefine RXML and HTML tags with the `<tmplblock>` tag. However, you should be very careful when choosing name for your custom tags so they don't interfere with any RXML or HTML tags. For example, if you define a tag, `<option>`, it will interfere with HTML forms, since the `<select>` tag uses `<option>` tags.

It is possible to change the tag definition between insertions. The `<tmplinsertblock>` tag or `<tmplinsertall>`

tag will always use the latest definition. Each time an insertion is done all matching tags from the entire content file will be inserted. This way it is possible to first create an index for the page, with a list of all headers, and then insert the contents with the headers as graphical headers.

Within the contents the <tmpldefaultparam> container tag can be used, to specify default values for attributes. It takes the attribute *params* to specify which attribute it should give a default value to.

It is possible to use a <tmplinsertblock> or <tmplinsertexcept> inside a <tmplblock> tag. In that case the <tmplinsertblock> tag will not search the whole content file for tags to insert but rather the contents of the current tag. That way it is possible to define tags that contain tags themselves. You should however not combine the use <tmplinsertblock> with the use of $*tag name*$ to insert the contents, since the result will probably not be what you expect.

tag=*name* The name of the tag.

singletag The tag is a simple tag rather than a container tag.

params=*name,name,...* Names of all attributes this tag should handle. The values of the attributes will be available within the contents as *$name$*.

<tmpldefaultparam> </>

Templates

Can be used within the contents of a <tmplblock> container to specify default values for attributes. It takes the attribute params to specify which attribute it should give a default value to.

params=*name* The name of the attribute.

<tmplinsertblock>

Templates

<tmplinsertblock> inserts one or several custom tags defined by the <tmplblock> tag. The content file will be searched for all occurrences of the tag or tags, and they will then be inserted according to the definition done with the <tmplblock> tag. Other tags in the content file will be ignored.

It is possible to insert the contents several times. Each time an insertion is done the whole content file will be searched for appropriate tags. Between the insertions the tag definition can be changed, with another <tmplblock> tag defining the same tag.

An exception to the rule that the whole content file is searched, is when a <tmplinsert> tag is used within a <tmplblock> tag. In that case, only the current tag will be searched, not the whole content file.

tag=*tag, tag, ...* The tags to insert.

<tmplinsertall>

Templates

The <tmplinsertall> tag inserts all of the content file. Custom tags will be replaced according to their definition by the <tmplblock> tag. Tags that are not defined will be inserted as is, so unlike the <tmplinsertblock> tag this tag can be used to insert normal HTML and RXML tags.

<tmplinsertblock> cannot be used within a <tmplblock>.

<templinsertexcept>

Templates

The <tmplinsertexcept> works like the <tmplinsertall> tag, but you can specify some tags that are not to be inserted. It is also possible to use <tmplinsertexcept> within a <tmplblock> container tag, in which case it will insert all tags from the current tag rather than from the whole content file.

tag=*tag,tag,...* The tags that are not to be inserted.

<tmplhelp> </>

Templates

The <tmplhelp> tag makes it possible to write help texts about a template file and the custom tags defined by it. The help texts will be displayed when a user views the template file in the Content Editor.

tag=*name* The help text is for this tag.

param=*name* The help text is for this attribute, to the tag specified by the *tag* attribute.

Examples

These examples show how to define custom tags using the tags provided by the *Templates* module. The examples both show how to use custom tags to control layout exactly and how to define custom tags working just as regular html tags. The last example shows how it is possible to combine these two techniques.

Simple header tag

This template definition defines a simple header tag, <rh1>. It uses <gtext> to render a graphic header. The header is scalable with the scale argument and the default size is set to 0.5.

```
<tmplblock tag=rh1 params=scale>
<tmpldefaultparam
param=scale>0.5</tmpldefaultparam>
```

```
<p><gtext scale=$scale$>$rh1$</gtext><br>
</tmplblock>
```

Controlling layout

This is an example showing how it is possible to control exactly where the content will be inserted into the template. In this example there are three custom tags defined <title>, <description> and <image>. All tags are inserted into the template using the <tmplinsert> tag. Observe that there is no <tmplinsertall> or <tmplinsertexcept> tag in the example. The result of this is that the only content that will be sent to the web page after the template has been applied are the content within the three custom tags. The image is inserted using the <imgs> tag which automatically sets the correct width and height of the image.

```
<tmplblock tag=title>
<h1>$title$</h1>
</tmplblock>

<tmplblock tag=description>
$description$
</tmplblock>

<tmplblock tag=image singletag params=src>
<imgs src=$image$>
</tmplblock>

<tmplinsertblock tag=title>

<table>
 <tr>
 <td valign=top>
 <tmplinsertblock tag=image>
 </td>
 <td valign=top>
 <tmplinsertblock tag=description>
 </td>
 </tr>
</table>
```

Automatic index

In this example the technique from the first and the second example has been combined. The tag in this example is defined and inserted twice. The first time it is defined as a link to an anchor point. This first definition is inserted at the place in the template where the <tmplinsertblock tag=rh1> is found, creating a list of links to the headers in the html file. After the tags are inserted the tag is redefined to a graphic header with an anchor point attached to it. The value of the anchor point is taken from the text in the header (of course this will not allow for several identical headers in one html file). The graphic header with its anchor point will be inserted where it is found in the content file.

```
<tmplblock tag=rh1>
<a href="#$rh1$"><b>$rh1$</b></a><br>
</tmplblock>

<tmplinsertblock tag=rh1>
 .
 .
 .

<tmplblock tag=rh1 params=scale>
<tmpldefaultparam
param=scale>0.5</tmpldefaultparam>
<p>
<a name="$rh1$">
<gtext scale=$scale$>$rh1$</gtext>
</a><br>
</tmplblock>

<tmplinsertall>
```

Default template

The default.tmpl template is provided as an example template. It shows various techniques useful when creating templates. The different parts of the template are defined as RXML tags and are inserted in the table structure found last in the template. The table defines the page layout of the template. By separating the layout of the page from the different functions in the template it is much easier to understand the layout and maintaining the template.

There are three different navigation menus provided with the default.tmpl, showing different approaches to the creation of navigation menus.

Custom tags

There are several custom tags in the default.tmpl. First the <h1> tag has been redefined as a graphical header and the <h2> tag as a simple text header. The <leftobject> tag gives the user of the template the possibility to place images and other objects in the left margin right under the navigation menu.

The <file-listing> tag gives a simple way to create nice looking file listings with a few features. By default the tag lists all text/html files but it can also list different file types by adding the argument type=*glob-pattern,glob-pattern,...* to the tag. The <file-listing> tag will then list all the files whose content type match one of the glob patterns. The argument title=*The title of the file listing* sets the title of the file listing.

Navigation menus

There are three different navigation menus provided with the template. They are all designed to fulfill different goals ranging from easy navigation in an arbitrary deep structure to simply looking nice. To change navigation menu in the template edit the tag found below the comment *This is where we insert the navigation menu* in the default.tmpl. The three alternatives are <navigation-cell-text>, <navigation-cell-graphical> and <navigation-cell-intranet>.

The first one is a navigation menu built using <sb-output> together with <gtext> and simple text buttons. It outputs a simple menu limited to a depth of five folders. It scans the site structure using <sb-output> and creates buttons linking to folders and files. To do this it uses the output from the previous <sb-output> to determine where to scan for files and subdirectories for the next <sb-output>, this is repeated for each level in the navigation menu. This navigation menu is suitable for intranets or large volume Internet sites.

The second navigation menu is basically the same as the first one but built entirely using the <navigation> tag. It works in the same way as the previous navigation menu but only in two levels of folders. The menu created will be graphical only and thus suitable for smaller sites where the design is important.

The last navigation menu is designed to be used in larger intranet sites. It is text only and has no limitation in the number of levels of folders. The navigation menu shows a

history of the folders descended to reach the current folder and the content of the current folder.

Navigation

The *Navigation* module draws graphical navigation menus, thus eliminating the need to create them manually. Within the <navigation> container tag the exact look of the menu is defined. It is possible to use images for backgrounds and use any TrueType font for the text. The end result will can be made to look as if the entire menu was drawn by hand.

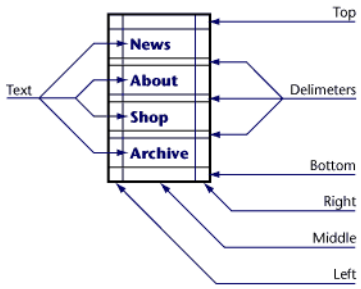
The actual content of a navigation menu can be fetched in a number of ways. Since the <navigation> tag is a RXML tag the content can be created by other RXML tags. A special tag, <sb-menu>, exists for the purpose of creating menu content from a SiteBuilder site.

A navigation menu is defined in a table-like manner, where the menu is divided into a fixed number of table cells. The layout for each cell is defined with the <boxstyle> tag.

Defining cells

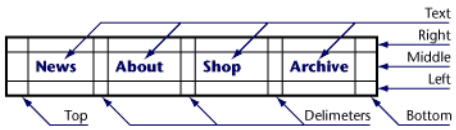
When creating a menu the appearance of each cell can be defined by stating for example, that the left top cell should have a white background while the right bottom cell should be blue.

The image below shows the name of the different cells. The <boxstyle> tag takes attributes defining the position within the table. One of the *left*, *middle* attributes and *right* attributes defines the horizontal position while one of the *top*, *text*, *delimiter* or *bottom* attributes defines the vertical position. The tag <boxstyle left top> would define a cell in the upper left corner.



Vertical menu

The *Navigation* module also allows for horizontal menus. When defining a horizontal menu all the <boxstyle> positioning attributes are rotated 90 degrees. This makes the top row named *right* instead of *top*, thus <boxstyle top right> defines the upper left corner in the horizontal menu.



Horizontal menu

Cell state

A cell on the text row has three states, *normal*, *selected* and *mouseover*. The *selected* state is used to highlight the menu item for the current page. The *mouseover* state is used to highlight the menu item the user is holding the mouse pointer over. The attributes *normal*, *selected* or *mouseover* are used to specify what type of text cell it is in a <boxstyle>.

Alpha channels and backgrounds

Alpha channels are used to define the opacity of a foreground image in respect to a background image. The alpha channel can in itself be a grayscale image, in which case the background might be more visible in certain parts of the image.

The *Navigation* module uses a alpha channel to determine the opacity between a cell and the background image of the whole navigation menu. The alpha channel is defined with the *alpha* attribute of the <boxstyle> tag. It is either a grayscale value between zero and 255, or a image. 255 means opaque, only the cell itself will be shown, while zero is totally transparent, only the background will be shown. If an image is used the grayscale value of each pixel will be used. White parts will be opaque while black parts are totally transparent.

The most common usage of an alpha channel is to use a alpha image to define the shape of a cell. Since an alpha channel is used the background can be changed by changing background color or image for the whole menu. If instead a background image was drawn for each cell, which would achieve the same result, all those images would have to be redrawn in order to change the menu background.

Fonts

To choose font, font size and other text related attributes the <textstyle> tag is used. As with the <boxstyle> tag, the <textstyle> is placed within the <navigation> tag.

Creating menu items

With the <navigation> tag, the layout and appearance of the navigation interface is defined. The actual text for the navigation interface is given in <mi> tags. The <mi> tags are most often automatically generated, by the the <sb-menu> tag, which uses access control to provides dynamic navigation menus customized for each user.

Sub menus

It is possible to create nested, multi-level graphical menus. This is done by the <submenu> tag which is placed within the <navigation> tag. The <submenu> tag is in essence a <navigation> tag defining the submenu and it takes the same attributes as the <navigation> tag.

The placement of the submenu is defined by the <sub-menu> tag's position in relation to the <mi> tags defining the menu content. The <submenu> tag will usually be placed somewhere in the middle of a group of <mi> tags.

If the <sb-menu> tag is used to create the <mi> tags in such a scenario tags it becomes necessary to have two <sb-menu> tags. One above the <submenu> tag and another below the <submenu> tag. The attributes *above*, *below* and *selected* are used to determine what part of the menu a <sb-menu> should return. <sb-menu menu=my-menu.menu above> returns, for example, all the <mi> tags above, and including, the selected button.

The navigation tags

<navigation> Generates graphical menus.

<submenu> Same as navigation, used inside a <navigation> or another <submenu> tag.

<textstyle> Defines the style of the text in the menu.

<boxstyle> Defines the appearance of one of the cells of the menu.

<mi> Describes a menu item.

<navigation> </> *Navigation*

The <navigation> tag generates graphical menus. Within it the <textstyle>, <boxstyle>, <mi> and <submenu> tags are used to specify the appearance of the menu. The <submenu> tag use the same attributes as <navigation> and is used for making nested menus.

bg=*color* Sets the background color of the background image.

bgsrc=*path* Sets the background to the given image.

fs Applies a Floyd-Steinberg dither to the result.

horiz Makes the menu horizontal, all box-styles are rotated 90 degrees counter-clockwise.

imgbase=*path* Imgbase can be used to simplify the use of graphics in your menu. The path specified will be used as a prefix to all image paths.

indent=*number* Sets the amount of indentation.

maxwidth=*number* The max width of the text column. If the text in a menu box is wider than this, it will be word wrapped to fit.

mirrortile Mirrortiles the background image.

preload Generates extra Java Script code used to load all images used in the menu. This may speed up the delivery of the pages since the requested images will already be in the client's local cache when requested.

quant=*number* Quantifies the image with the specified number of colors. The default is set in the configuration interface. At most 255 colors can be used.

scaletofit Scales the background image to fit the size of the generated menu.

selected=*number* Determines which menu item should be selected. The first item is item number one. A number out of range will generate the menu without any selected item. Note that the preferred way to determine which menu items should be select is by using the *selected* attribute in a <mi> tag.

tile Tiles the background image.

transparent=*color* Makes the resulting GIF image transparent at pixels with the specified color. Defaults to the background color of the current document, set in the standard HTML <body> tag. Detection of HTML colors is done by the *Graphics Text* module.

<textstyle> *Navigation*

Sets the style of the text in the menu.

left Align the text to the left.

center Center the text.

right Align the text to the right.

font=*name* Set the font to use. The *bold*, *italic*, *black* or *light* attributes can be used to specify what version of the font should be used. If the requested version of the font is not available, the closest match will be used.

- **bold** Select a bold version of the font.
- **italic** Select an italic version of the font.
- **black** Select a black version of the font.
- **light** Select a light version of the font.

size=*2-7* Set the font size of the text.

spacing=*number* Set this amount of spacing around the text, defaults to 5.

xspacing=*number* Set this amount on spacing to the left and right of the text, defaults to 5.

yspacing=*number* Set this amount of spacing above and below the text, defaults to 5.

<boxstyle> *WebLayout Templates*

Defines the appearance of one of the cells of the menu.

alpha=*number|path* Set the alpha channel that is used to determine how transparent the foreground should be. Is either an number between zero and 255 or an image file. Zero means opaque while 255 means totally transparent.

alphainvert Invert alpha values and alpha images.

bg=*color* Set the background color.

fg=*color|path* Set the text color. Is either a color or an image file.

height Set the cell's height.

left Set the cell's horizontal position to the left column.

middle Set the cell's horizontal position to the middle column.

right Set the cell's horizontal position to the right column.

mirrortile Make all images tile to the actual size of the cell. The tiling will be mirrored so that no rough edges appear.

mouseover Make the cell specify how the menu should look when the mouse pointer is over it. Can only be used on the text row.

rot=*degrees* Rotate all images clock-wise.

scaletofit Resize all images so they fit in the cell.

selected Make the cell specify how the menu should look for the selected item. Can only be used on the text row.

shadow=*[color[,distance[,blur amount[,direction]]]]* Draw a blurred drop-shadow behind the text. Distance defaults to three pixels. Direction is entered using clock-wise degrees and defaults to 135. Color defaults to black. Blur amount defaults to two.

src=*path* Use this foreground picture.

tile Tile all images to the actual size of the cell.

top Set the cell's vertical position to the top row.

text Set the cell's vertical position to the text row.

delimit Set the cell's vertical position to the delimit row.

bottom Set the cell's vertical position to the bottom row.

width=*number* Set the cell´s width in pixels.

<mi> </> *WebLayout Templates*

Describes a menu item. The contents of the tag will be used for the text shown in the menu. The `<navigation>` includes as many `<mi>` tags as there are menu items.

`<mi>` tags are usually generated dynamically by the SiteBuilder tags.

href=*URL* Set the URL the menu item should link to.

status=*string* Set the text that will show up in the status bar when the mouse pointer is over the link. Is usually not used.

selected This menu item should be selected. It will use the *selected* boxstyle rather than the normal.

Examples

These examples shows how navigation can be used to build different navigation interfaces. It should also shed some light on the use of alpha channels. For more examples study the example templates supplied with the Roxen Platform.

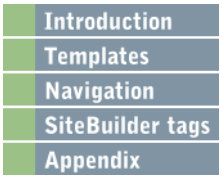
Simple navigation menu

This is a very simple graphical navigation interface. Note that instead of setting the background color in the *normal* box, the *alpha* attribute has been set to zero. This causes the alpha channel in this box to be completely transparent. The color of the *normal* boxes are instead the background color set in the `<navigation>` tag. The point of using the color from the lowest layer and not setting it in the box is that this way it is easier to change color of the whole navigation interface.


```
<navigation bg=#8094a3>

<textstyle font=bell_gothic scale=0.5 xspac-
ing=7>

<boxstyle text middle normal fg=#ffffff
alpha=0>
<boxstyle text middle selected bg=#ffffff
fg=#8094a3>
<boxstyle text middle mouseover bg=#ffffff
fg=#8094a3>

<sb-menu menu=example.menu>

</navigation>
```

Using boxstyles

This example is basically the same as the first one, but there has been added some extra `<boxstyle>` tags. In this case a green box to the left and a delimiter. When adding a delimiter it is important to define all the boxes affected. In this example, both the *middle* and the *left* delimiter has been defined as a two pixel high line dividing the buttons.




```
<navigation bg=#8094a3>

<textstyle font=bell_gothic scale=0.5 xspac-
ing=7>

<boxstyle text left normal bg=#9bc187 width=25>
<boxstyle text left selected bg=#ffffff
width=25>
```

```
<boxstyle text left mouseover bg=#ffffff
width=25>

<boxstyle text middle normal fg=#ffffff
alpha=0>
<boxstyle text middle selected bg=#ffffff
fg=#8094a3>
<boxstyle text middle mouseover bg=#ffffff
fg=#8094a3>

<boxstyle delimit middle height=2 bg=#ffffff>
<boxstyle delimit left bg=#ffffff>

<sb-menu menu=example.menu>

</navigation>
```

Alpha channels

In this example, two black and white images has been used to control the alpha channel of the *left middle* box. The image for the *normal* state of the button is

and

is used for the mouseover state. The black parts of the images corresponds to alpha=0, i.e full transparency, the white parts corresponds to alpha=255, i.e no transparency. The parts with full transparency (black) will show the color of the background set in the `<navigation>` tag and the parts with no transparency (white) will show the color set in the `<boxstyle>` tag.


```
<navigation bg=#8094a3
 imgbase=/creator/img/>

<textstyle font=bell_gothic scale=0.5 xspac-
ing=4>

<boxstyle text left normal alpha=half-
sphere.gif
 bg=#ffffff width=25>
<boxstyle text left selected bg=#ffffff
width=25>
<boxstyle text left mouseover alpha=sphere.gif
 width=25 bg=#ffffff>

<boxstyle text middle normal fg=#ffffff
alpha=0>
<boxstyle text middle selected bg=#ffffff
fg=#8094a3>
<boxstyle text middle mouseover bg=#ffffff
fg=#8094a3>

<boxstyle delimit middle height=2 bg=#ffffff>
<boxstyle delimit left bg=#ffffff>

<sb-menu menu=example.menu>

</navigation>
```

Changing colors using alpha channels

Since the background color of the graphical buttons is defined in the `<navigation>` tag, it is a simple task to change color of the navigation interface. By changing the background color in the `<navigation>` the color of the whole navigation interface is changed in a few seconds. To get a consistent look the colors of the text has also been changed from blue to yellow.


```
<navigation bg=#c1a44b
 imgbase=/creator/img/>

<textstyle font=bell_gothic scale=0.5 xspac-
ing=4>

<boxstyle text left normal alpha=half-
sphere.gif
 bg=#ffffff width=25>
<boxstyle text left selected bg=#ffffff
width=25>
<boxstyle text left mouseover alpha=sphere.gif
 width=25 bg=#ffffff>

<boxstyle text middle normal fg=#ffffff
alpha=0>
<boxstyle text middle selected bg=#ffffff
fg=#c1a44b>
<boxstyle text middle mouseover bg=#ffffff
fg=#c1a44b>

<boxstyle delimit middle height=2 bg=#ffffff>
<boxstyle delimit left bg=#ffffff>

<sb-menu menu=example.menu>

</navigation>
```

Background images

Instead of using a solid color as background in the `<navigation>` tag, it is possible to use an image. In this example the attribute bg=#c1a44b has been replaced by an image, bgsrc=craters.gif.


```
<navigation bg=#c1a44b
 imgbase=/creator/img/
 bgsrc=craters.gif tile>

<textstyle font=bell_gothic scale=0.5 xspac-
ing=4>

<boxstyle text left normal alpha=half-
sphere.gif
 bg=#ffffff width=25>
<boxstyle text left selected bg=#ffffff
width=25>
<boxstyle text left mouseover alpha=sphere.gif
 width=25 bg=#ffffff>

<boxstyle text middle normal fg=#ffffff
alpha=0>
<boxstyle text middle selected bg=#ffffff
fg=#c1a44b>
<boxstyle text middle mouseover bg=#ffffff
fg=#c1a44b>
```

```
<boxstyle delimit middle height=2 bg=#ffffff>
<boxstyle delimit left bg=#ffffff>

<sb-menu menu=example.menu>

</navigation>
```

Coloring the background

The *Navigation* module supports layers with partial transparency i.e alpha channels. Taking advantage of this allows for coloration of the background image set in the <navigation> tag. This has been used in the next example to color the *selected* and the *mouseover* boxes in a lighter blue color. The transparency, or alpha, is set to alpha=100 and the background color is set to a light blue color (bg=#0066ff).


```
<navigation imgbase=/creator/img/
 bgsrc=craters.gif tile>

<textstyle font=bell_gothic scale=0.5 xspac-
ing=7>

<boxstyle text middle fg=#ffffff alpha=0>
<boxstyle text middle selected alpha=100
bg=#0066ff
 fg=#ffffff>
<boxstyle text middle mouseover alpha=100
bg=#0066ff
 fg=#ffffff>

<boxstyle delimit middle height=1 bg=#ffffff>

<sb-menu menu=example.menu>

</navigation>
```

Submenus

Working with submenus is also possible in Roxen SiteBuilder. In this example the <sb-output> and the <submenu> tags are used to define a two-level graphical navigation interface. The attribute *above*, *selected* and *below* are used in <sb-output> to define which part of the menu to output. *Above* outputs the part above the selected button, *selected* outputs the selected part and *below* outputs the part of the menu below the selected button. The <submenu> tag works exactly the same way as the <navigation> tag.


```
<navigation imgbase=/creator/img/
 bgsrc=craters.gif tile>

<textstyle font=bell_gothic scale=0.5 xspac-
ing=7>

<boxstyle text middle fg=#ffffff alpha=0
width=190>
<boxstyle text middle selected alpha=100
bg=#0066ff
 fg=#ffffff>
<boxstyle text middle mouseover alpha=100
bg=#0066ff
 fg=#ffffff>

<boxstyle delimit middle height=1 bg=#ffffff>

<sb-menu menu=example.menu above>
<sb-menu menu=example.menu selected>

<submenu imgbase=/creator/img/
 bgsrc=craters.gif tile>
<textstyle font=bell_gothic scale=0.5 xspac-
ing=7>

<boxstyle text left fg=#ffffff alpha=0
alpha=100
 bg=#0066ff width=10>
<boxstyle text left selected alpha=100
bg=#00aa66
 fg=#ffffff>
<boxstyle text left mouseover alpha=100
bg=#00aa66
 fg=#ffffff>

<boxstyle text middle fg=#ffffff alpha=0
alpha=100
 bg=#0066ff width=180>
<boxstyle text middle selected alpha=100
bg=#00aa66
 fg=#ffffff>
<boxstyle text middle mouseover alpha=100
bg=#00aa66
 fg=#ffffff>

<boxstyle delimit middle height=1 bg=#ffffff>
<boxstyle delimit left height=1 bg=#ffffff>

<boxstyle left bottom height=1 bg=#ffffff>
<boxstyle middle bottom height=1 bg=#ffffff>

<sb-menu menu=sub-example.menu>
</submenu>

<sb-menu menu=example.menu below>

</navigation>
```

SiteBuilder tags

SiteBuilder tags are RXML tags that are used to handle SiteBuilder specific functions. <sb-output> can be used for getting information and meta data about files, while <sb-menu> can use the same information to build dynamic menus for the <navigation> tag. <sb-if> can check whether the user has permission to a RXML protection point. <sb-login> forces the user to authenticate herself.

The SiteBuilder tags are useful for creating web pages with dynamic user interfaces. The SiteBuilder tags make full use of Access Control to ensure that only information that the current user has permission to see is shown.

On an intranet the SiteBuilder tags can be used to create Content Editor like functionality. It is possible to create edit buttons that will take the user to the right file in the Content Editor and that are only available if the user has permission to edit the page.

If is also possible to use the SiteBuilder tags to create web applications. Through the SiteBuilder tags it is possible to get a unique user id that can be used to store user specific information in a database. It is possible to user RXML protection points to control who gets to use what parts of the application.

The sb-tags are:

<sb-if> Works like the <if> tag, but for SiteBuilder related data.

<sb-login> Creates an <a href=...> tag linking to a page that forces the user to log in.

<sb-menu> Produces a menu from a menu file or directory listings.

<sb-output> An output tag like <formoutput> or <sqloutput>, that can be used to get SiteBuilder specific information.

<sb-if> </>

SiteBuilder tags

Works like the <if> tag, but for SiteBuilder related data. It can currently be used to test if the user has access to one of the *RXML protection points*. The RXML protection points can be listed, created and edited under the *configuration* tab.

ppoint=*RXML protection point* The protection point to check.

none The check will be true if the user has no permission to the protection point.

read The check will be true if the user has read permission to the protection point.

write The check will be true if the user has write permission to the protection point.

not Negate the test.

Note that the *none*, *read* and *write* attributes can be combined. <sb-if ppoint=foo read write> could be used to give access to everyone that has either read or write access to the RXML protection point *foo*.

Example

```
<debug> <set variable=var value=Hello> <sb-if
ppoint=var read> The value is <insert vari-
able=var>. </sb-if> <sb-if ppoint=var write>
<wizard name="Test"> <page> Change the value to
<var name=var size=20>. </page> </wizard> </sb-
if>
```

Results in

The value is Hello.

<sb-login> </>

SiteBuilder tags

Creates a <a href=...> tag that links to a page that forces the user to log in, or to log in as a different user if she already has logged in.

Example

```
Press <sb-login>login</sb-login> to log in.
```

<sb-menu>

SiteBuilder tags

Produces a menu from a menu file or directory listing, suitable for usage together with the <navigation> tag.

menu=*filename* Reads the menu from a menu file with this name. If there are no menu file in the current directory and a *dir*, *type* or *glob* attribute is present, a directory listing will be used. If not, the tag will search for a menu file with this name in the parent directory and its parent directory until a suitable menu file is found or all directories has been tried.

above Only produce the part of the menu above the selected entry. *Above* can be combined with *selected* or *below*.

selected Only produce the selected entry. *Selected* can be combined with *above* or *below*.

below Only produce the part of the menu below the selected entry. *Below* can be combined with *above* or *selected*.

history Creates the menu from all the directories in the path, including the current directory.

dirs Create a menu from all directories in the directory specified by the *attribute* or the current directory. Can be

combined with the *glob* and *type* attributes as well as the *menu* attribute.

glob=*glob-pattern, glob-pattern, ...* Create a menu from the files whose name match one of the glob patterns. It searches for files in the directory specified with the *path* attribute or the current directory. Can be combined with the *dirs* and *type* attributes as well as the *menu* attribute.

sort=*variable, -variable, ...* Sorts the result according to one or several of the available variables. The same variables that are available to the `<sb-output>` tag are available for sorting. A "-" put before the variable name will change the sort direction. By default the sort order is *title, filename*.

type=*glob-pattern, glob-pattern, ...* Create a menu from the files whose content type match one of the glob patterns. It searches for files in the directory specified by the *path* attribute or the current directory. Can be combined with the *dirs* and *glob* attributes as well as the *menu* attribute.

path=*path* Change which directory the *dirs*, *glob* and *type* attributes should work on.

notitle Include files or directories that does not have any title set.

index Include the `index.html` file in directory listings. By default the `index.html` file is omitted.

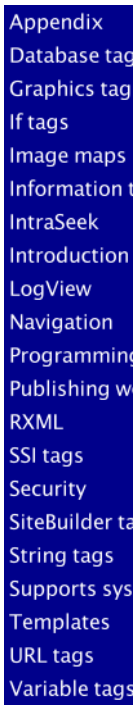
selected=*filename* | *path* Make this file selected.

Note that *above*, *selected* and *below* may be combined.

Example

```
<navigation bg=black height=100 width=100>
<textstyle scale=0.5 xspacing=4 yspacing=4>
<boxstyle middle text bg=darkblue fg=white
alpha=255> <boxstyle middle text selected
bg=purple fg=yellow alpha=150> <boxstyle middle
text mouseover bg=darkblue fg=yellow alpha=255>
<sb-menu path='../' dirs> </navigation>
```

Results in



<sb-output> </>

SiteBuilder tags

`<sb-output>` is an output tag like `<formoutput>` or `<sqloutput>`, that can be used to get SiteBuilder specific information. All attributes that can be used with `<formoutput>` can also be used with `<sb-output>`. It can either be used to get meta data and information about files or to get information about the current user.

When the `<sb-output>` tag is used to get information about files or directories it uses the same attributes as the `<sb-menu>` tag. It is possible to get information of all files or directories listed in a menu file. For directories the meta data is fetched from the `index.html` file. Since the `index.html` is treated as the contents for the directory itself it will not be included in any listing of files within a directory.

One file in a list of files or directories might be selected. This is usually the current file, but in the case of directories it might be any directory that is part of the path to the current file.

File or directory variables

url An URL to the file or directory.

selected Whether this file is the current file or if this directory is a directory within the path to the current file. Only one entry will be selected.

title The title of the file or `index.html` file in a directory.

description The description of the file or `index.html` file in a directory.

filename The file name of the file or `index.html` in case of a directory.

filesize The size of the file or the `index.html` file in case of a directory.

keywords The keywords of the file or `index.html` file in a directory.

language The language of the file or `index.html` file in a directory. The language of the document, from the meta data.

type The content-type of the file or *directory* for a directory.

type-img A URL to the icon for that type of file.

status-img A URL to the icon representing the status of the file or `index.html` file in a directory. This is the same status icon as used by the Content Editor.

permission The users permission on to the file or directory. Is either *read* or *write*.

content-editor A URL to the Content Editor, focusing on the file or `index.html` file in a directory.

workarea The name of the workarea.

workarea-id The unique id of the workarea. For use when doing web applications.

User variables

user-id The unique user id. For use when doing web applications.

user-name The user's name, as used at the login prompt.

full-name The user's full name.

Attributes

user Get information about the current user. Cannot be combined with other attributes.

file Get information about the current file. Cannot be combined with other attributes.

file=*path* Get information about the specified file. Cannot be combined with other attributes.

menu=*filename* Get information about files or directories listed in a menu file with this name. If there are no menu file in the current directory and a *dir*, *type* or *glob* attribute is present, a directory listing will be used instead. If not, the tag will search for a menu file with this name in the parent directory and its parent directory until a suitable menu file is found or all directories has been tried.

history Get information about all directories in the path, including the current directory.

dirs Get information about all directories in the directory specified by the *path* or the current directory. Can be combined with the *glob* and *type* attributes as well as the *menu* attribute.

glob=*glob-pattern, glob-pattern, ...* Get information about files whose name match one of the glob patterns. It searches for files in the directory specified with the *path* attribute or the current directory. Can be combined with the *dirs* and *type* attributes as well as the *menu* attribute.

type=*glob-pattern, glob-pattern, ...* Get information about the files whose content type match one of the glob patterns. It searches for files in the directory specified by the *path* attribute or the current directory. Can be combined with the *dirs* and *glob* attributes as well as the *menu* attribute.

above Only produce the part of the menu above the selected entry. *Above* can be combined with *selected* or *below*.

selected Only produce the selected entry. *Selected* can be combined with *above* or *below*.

below Only produce the part of the menu below the selected entry. *Below* can be combined with *above* or *selected*.

range=*from .. to* Limits the number of rows of the output to the interval between the numeric arguments *from* and *to*. The first element is element "0". If either argument is negative it will be counted from the last element. Thus the last element is element "-1". If *from* is empty it will default to "0". If *to* is empty it will default to "-1".

sort=*variable, -variable, ...* Sorts the result according to one or several variables. A "-" put before the variable name will change the sort direction. By default the sort order is *title, filename*.

path=*path* Change which directory the *dirs*, *glob* and *type* attributes should work on.

notitle Include files or directories that does not have any title set.

index Include the `index.html` file in directory listings. By default the `index.html` file is omitted.

selected=*filename* | *path* Make this file selected.

delimiter=*html-code* The HTML code of the delimiter will be put between each row in the output.

Example

```
<sb-output glob=*.html> <img src="#type-img#"
border=0> #title# <br> </sb-output>
```

Results in

Supports system

The supports system makes it possible to use features that are only supported by a few browsers and still be compatible with all browsers. This is done through a database of capabilities supported by the different browsers. The `<if>` tag is then used on the pages to make versions that use different browser capabilities.

Pages are not customized for a certain browser, but rather for browsers that support different features. When a new browser is released, all that is necessary is to determine what features it supports. Once that has been done, and the database updated, all pages using the support system will work with it.

Some features might work to a lesser degree on some browsers. Old versions of the Macintosh version of Netscape supports JavaScripts, but some JavaScripts make the Netscape browser hang. If you have such JavaScripts, you would probably want the support system to make sure they are not sent to that version of Netscape. On the other hand, if you have less complicated JavaScripts you will probably want to send them.

To make the supports system work for you, you might need to tweak it yourself. This can be done by the Challenger administrator by changing the *Global Variables/Client supports regexps* variable (you will have to choose *more options* to see it).

Since new browsers get released all the time, updated versions of the supports database are by default fetched regularly from www.roxen.com.

Supports classes

List of the available features:

backgrounds The browser supports backgrounds according to the HTML3 specifications.

bigsmall The browser supports the `<big>` and `<small>` tags.

center The browser supports the `<center>` tag.

cookies The browser can receive cookies.

divisions The browser supports `<div align=...>`.

font The browser supports `<font size=num>`.

fontcolor The browser can change color of individual characters.

fonttype The browser can set the font.

forms The browser supports forms according to the HTML 2.0 and 3.0 specifications.

frames The browser supports frames.

gifinline The browser can show GIF images inlined.

imagealign The browser supports *align=left* and *align=right* in images.

images The browser can display images.

java The browser supports Java applets.

javascript The browser supports Java Scripts.

jpeginline The browser can show JPEG images inlined.

mailto The browser supports mailto URLs.

math The `<math>` tag is correctly displayed by the browser.

perl The browser supports Perl applets.

pjpeginline The browser can handle progressive JPEG images, `.pjpeg`, inline.

pnginline The browser can handle PNG images inlined.

pull The browser handles Client Pull.

push The browser handles Server Push.

python The browser supports Python applets.

robot The request really comes from a search robot, not an actual browser.

stylesheets The browser supports stylesheets.

supsub The browser handles `<sup>` and `<sub>` tags correctly.

tables The browser handles tables according to the HTML3.0 specification.

tcl The browser supports TCL applets.

vrml The browser supports VRML.

File syntax

By default, the supports database is located in the file `server/etc/supports` which is updated automatically from www.roxen.com.

The `server/etc/supports` file should not be edited directly, since that might interfere with the automatic updates. If you need to tweak the supports database it is better to create your own local supports file, and change the *Global Variables/Client supports regexps* variable (you will have to choose *more options* to see this variable).

The syntax used is:

patternfeature`, -`*feature*`, ...`

If the regular expression *pattern* matches the name of the client, all features will be added to the list of features handled by the client. If '-' is prefixed to the name of the feature, it will be removed instead.

\ can be used to escape newlines.

If a line starts with '#', it is skipped, unless it is:

`#include <`*path*`>`

which means include the contents of that file here

`#define` *fromto*

which means replace all occurrences of the word *from* with *to*

or

`#section` *pattern* `{`
`...`
`# }`

which is used to speed up parsing. If the name of the client matches *pattern* it will go through the section. If the pattern doesn't match the entire section will be skipped.

Security

htaccess is a system for handling access control to your pages. It works by placing an `.htaccess` file in a directory, which contains the access control lists for that directory. It is possible to get fine grained security and to configure exactly who can view which pages. The *.htaccess support* module must be enabled for htaccess to work.

It is possible to distinguish users either by the IP address or domain name of their computer or by letting them authenticate with a user name and password. The user name and password is by default compared via an *authentication* module. That usually means that users are authenticated by the operating systems authentication system.

If you want to have password protected pages usable by users that are not handled by the current Authentication module you can create your own database of users by creating `.htpasswd` and `.htgroup` files.

htaccess is a standard supported by many web servers. The access control you have built with htaccess should therefore be portable to other web servers.

.htaccess

A `.htaccess` file consists of lines containing directives. Apart from the `Limit`; directive, all directives have the form

```
directive argument(s)
```

where *argument(s)* is one or more arguments. The directives supported are:

AuthUserFile Use this user and password file to authenticate users. Typically, the AuthUserFile is called `.htpasswd`

AuthGroupFile Use this group file, which contains a database of which groups users are member of. Typically, the AuthGroupFile is called `.htgroup`, if used.

AuthName Set the authentication realm, which can be any name you choose. The name will be used to tell browsers how to *label* user authentications within a session, so that the browsers can automatically repeat passwords the user has already entered when accessing new pages with the same access requirements.

Redirect Redirect all accesses for pages in the directory to this URL.

ErrorFile Show this page in case the requested page could not be found, maybe because the user did not have permission to view it.

Then there is the `<Limit>` container tag. The attributes are the HTTP method(s) that access should be limited to, *GET*, *PUT*, *POST* or *HEAD*. The contents of the tag are access control directives, one directive on each line. Possible directives are:

allow from *address*
deny from *address* Allow or deny access to users from a DNS domain or IP number. `www.roxen.com` means the computer while `.roxen.com` means all computers on the domain *roxen.com*. The same way `194.52.202.3` means the computer while `194.52.` means the net starting with *194.52*

require user *user(s)*
require group *group(s)* Allow access only for the named user(s) or group(s).

require valid-user Allow access to any user present in the AuthUserFile or Authentication module.

satisfy all
satisfy any Decide what happens if both *require* and *allow* rules are present; *all* indicates that the user must satisfy both kinds of requirements, while *any* means that it is enough that the user satisfies either kind.

order deny,allow
order allow,deny
order mutual-failure The *order* rules decides how to prioritize deny and allow rules. If the order is set to *deny,allow*, deny rules will be processed before allow rules. With *allow,deny*, allows will be processed before denies, and with *mutual-failure*, hosts allowed by any *allow* rule will be allowed, and other hosts denied. *Deny,allow* is the default.

The rule evaluation does not stop until all rules have been processed, so the earlier a rule is processed, the lower priority is has in determining access. This only matters when different rules contradict each other, for instance when a wide-ranging deny rule forbids access to a certain domain, and an allow grants access to a smaller part of the domain.

Example

A typical `.htaccess` file would look something like this:

```
AuthUserFile /home/frotz/.htpasswd
AuthGroupFile /home/frotz/.htgroup
AuthName MyTestDomain
AuthType Basic

<Limit PUT HOST HEAD>
require user frotz
</Limit>

<Limit GET>
allow from all
</Limit>
```

The `.htaccess` file above would allow everyone to GET documents in the directory, but all other kinds of access would be restricted to the user frotz, and expect this user to login with the password listed for frotz in the `.htpasswd` file in the home directory of the user frotz.

.htpasswd

The format of the password file is straightforward, one line per user, with the line containing the user name, followed by a colon, followed by the user's password encrypted with the standard Unix password encryption. The `<crypt>` tag can be used to encrypt such a password.

In other words, an `.htpasswd` can look like this:

```
frotz:taeWr6tbTZKO6
gnusto:jKXVnZH6eXR7
```

with one line for each user.

.htgroup

The format of the group file is straightforward, one line per group, with the line containing the group name, followed by a colon, followed by the users in the group. Users are separated by commas.

In other words, an `.htgroup` file can look like this:

```
all:frotz,gnusto
admins:frotz
```

with one line per group.

Appendix