

Template Guide

Apache Roller (incubating) Version 3.2

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1 - Introduction

If you know a little about HTML and CSS, then you'll find that it's easy to customize the appearance, layout and content of your Roller-based weblog. You can change the appearance of any of your weblog's pages and add as many new pages as you want. Any Roller user can do it through Roller's web-based interface and it's all done with Roller's simple and easy-to-use template language. In this guide, we'll tell you how. We'll start by explaining how Roller's weblog template system works then we'll provide a reference to the objects and macros that you can use in your templates.

NOTE: If you have only AUTHOR or LIMITED permissions within a weblog then you won't have access to the Preferences->Theme or Preferences->Templates pages and you won't be able to change or customize your theme. You need to have ADMIN permission within a weblog to be able to do the things described in this guide.

NOTE: It is possible for a Roller site administrator to disable theme customization. So if you do have ADMIN permission in your weblog and you still don't see the Preferences->Templates page, perhaps your Roller site does not allow customization.

2 - Overview

Each Roller weblog is defined by a set of page templates, which you can edit to customize the content, layout and appearance of your weblog.

2.1 - Page templates

When you create a new Roller weblog you must pick a theme to define the new weblog's appearance and layout. A theme is just a small set of templates, where each template contains HTML code, template language expressions and macros. What's a template? A template for an HTML web page is simply an HTML web page with some Velocity code embedded inside. For example, this is a valid Roller template, with one Velocity expression:

```
<html>
<body>
  My blog is named $model.weblog.name
</body>
</html>
```

The string "`$model.weblog.name`" is a template language expression and when Roller displays the template, that expression will be replaced with the name of the weblog.

Note that **`$model`** is something special. Roller makes a set of objects, known as *models*, available to page templates. In the example above, we see only the `$model` object, but here are others. You'll learn more about models in Section 4 and Section 5 provides a complete reference.

2.2 - The Velocity template language

The simple template language that we use inside Roller page templates is called Velocity. It's designed to be simple and easy for even non-programmers, but it's also a simple programming language. You can set variables, use if-else conditional logic and create loops.

For example, this Roller page template will list the categories available in your weblog except for the one named Music:

```
<html>
<body>
  My blog is named $model.weblog.name. These are my categories:<br>
  #foreach ($cat in $model.weblog.categories)
    #if ($cat.name != "Music")
      $cat.name<br>
    #end
  #end
</body>
</html>
```

Velocity also supports the concepts of *macros*. A macro is essentially a Velocity method call. We use them in Roller to generate HTML. For example, as illustrated below, to display a bookmark folder you first retrieve it from the weblog and second pass it to the `#showBookmarkLinksList()` macro to display it as an HTML `` list.

```
<html>
<body>
  <h2>Blogroll</h2>
  #set($rootFolder = $model.weblog.getBookmarkFolder("/"))
  #showBookmarkLinksList($rootFolder false false)

```

```
</body>  
</html>
```

You'll learn more about macros in Section 4 and Section 7 provides a complete reference to the standard Roller macros. If you want more information on Velocity, here are links to the User and Reference guides:

- <http://jakarta.apache.org/velocity/docs/user-guide.html>
- <http://jakarta.apache.org/velocity/docs/vtl-reference-guide.html>

Now that we've covered the basic concepts of page templates and the Velocity template language, let's dig into the details of editing templates.

3 - Editing and creating page templates

After you've used Roller **Preferences->Themes** page to customize your weblog theme, you can edit and create page templates through the **Preferences->Templates** page. We'll show you how to do that, but first you need to understand how the required pages, found in every theme, work together to display a weblog.

Every theme is different, but all themes must have two required pages -- pages that you cannot rename or delete. These are the **Weblog** template, which defines the main page of your blog, and the **_day** template, which defines how each day's worth of blog entries is displayed on your main page. Some themes also have a required page named **_css** which defines the CSS style code used by the weblog.

First, let's look at a simple Weblog template.

3.1 - The Weblog template

Below is a simple Weblog page that displays all of the data that weblog typically contains including recent entries with paging to past entries, category link, feed links, a calendar and feed auto-discovery. Check the annotations for more detail.

Listing 1: a typical Weblog template

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html><head>
  <title>$model.weblog.name : $model.weblogPage.name</title>           #1
  #showAutodiscoveryLinks($model.weblog)                                #2
  <style type="text/css">#includeTemplate($model.weblog "_css")</style>  #3
</head>
<body>
<table border="0" align="center" width="95%">
  <tr>
    <td class="entries" width="80%" valign="top">
      <h1>$model.weblog.name</h1>                                         #4
      <p class="descrip">$model.weblog.description</p>
      #set($rootCategory = $model.weblog.getWeblogCategory("nil"))      #5
      #showWeblogCategoryLinksList($rootCategory false false)<br>
      #set($pager = $model.getWeblogEntriesPager())                     #6
      <div class="next-previous">
        #if ($model.results)                                             #7
          #showWeblogSearchAgainForm($model.weblog)
          #showNextPrevSearchControl($pager)
        #else
          #showNextPrevEntriesControl($pager)                             #8
        #end
      </div>
      #showWeblogEntriesPager($pager)                                     #9
      #if ($model.permalink)                                             #10
        #showWeblogEntryComments($entry)
        #showWeblogEntryCommentForm($entry)
      #end
    </td>
    <td width="20%" valign="top">
      <h2>Calendar</h2>
      #showWeblogEntryCalendar($model.weblog "nil")                     #11
      <h2>Feeds</h2>
      #showAtomFeedsList($model.weblog)                                  #12
      <h2>Search</h2>
      #showWeblogSearchForm($model.weblog false)                        #13
      <h2>Links</h2>
    </td>
  </tr>
</table>
</body>
</html>
```

```

        #set($rootFolder = $model.weblog.getBookmarkFolder("/"))          #14
        #showBookmarkLinksList($rootFolder false false)
        <h2>Navigation</h2>
        #showPageMenu($model.weblog)                                       #15
        #showAuthorMenu(true)                                              #16
        <h2>Referrers</h2>
        #set($refs = $model.weblog.getTodaysReferrers())                  #17
        #showReferrersList($refs 30 20)
    </td>
</tr>
</table>
</body>
</html>

```

The above template includes a good mix of Velocity expressions and statements. There's a lot going on, so let's explain it in detail. Here's the point-by-point breakdown.

1. **HTML title**
For the HTML title we use the weblog's name, a colon and the name of the page template that is currently being displayed.
2. **Auto-discovery links**
The `#showAutodiscoveryLinks()` macro adds the HTML `<link>` elements required for RSS and Atom feed auto-discovery as well as RSD for weblog clients.
3. **Include CSS styles**
Here we use the include the theme's `_css` template directly in the page, right inside a pair of `<style>` tags.
4. **Display a page title**
Here we use the weblog's name again in an `<h1>` title.
5. **Category links list**
Display a list of weblog category links.
6. **Get entries pager**
Get the entries pager object so we can display entries and a paging control.
7. **Show search results control?**
Show search results pager control if search in progress
8. **Else . . .**
Show normal entries pager control.
9. **Show entries**
Show current page's worth of entries (or search results). Calls on `_day` template to do the display of each day's worth of entries.
10. **Show comments?**
If we're on a permalink page, then show comments and comments form
11. **Show the calendar**
Show the standard weblog calendar.
12. **Show feed links**
Show links to all available Atom entry feeds, one per category.
13. **Search form**
Show the weblog search form, false indicates no category chooser.
14. **Display blogroll**
Display contents of the root bookmark folder.
15. **Show page menu**
Display navigation bar of pages available in weblog.
16. **Show author menu**
Display author's menu, only visible to authorized users.
17. **Display today's referrers**
Display today's referrer URL with hit counts.

Note in point #9 that the display of the weblog entries is controlled by another template, the `_day` template. So next let's take a look at that `_day` template.

3.2 - The `_day` template

A theme's `_day` template is responsible for displaying one day's worth of weblog entries. Here's a typical `_day` template, one that corresponds to the above Weblog template.

Listing 2: a typical `_day` template

```
<div class="dayBox">
  <div class="dayTitle">
    $utils.formatDate($day, "EEEE MMM dd, yyyy") #1
  </div>
  #foreach($entry in $entries) #2
  <div class="entryBox">
    <p class="entryTitle">$entry.title</p> #3
    <p class="entryContent">
      #if($model.permalink) #4
        $entry.displayContent
      #else
        $entry.displayContent($url.entry($entry.anchor))
      #end
    </p>

    <p class="entryInfo">
      Posted at
      <a href="$url.entry($entry.anchor)"> #5
        $utils.formatDate($entry.pubTime, "hh:mmm MMM dd, yyyy")</a>
      by $entry.creator.fullName in #6
      <span class="category">$entry.category.name</span> &nbsp;|&nbsp; #7
      #if ($utils.isUserAuthorizedToAuthor($entry.website)) #8
        <a href="$url.editEntry($entry.anchor)">Edit</a> &nbsp;|&nbsp;
      #end
      #if($entry.commentsStillAllowed || $entry.commentCount > 0) #9
        #set($link = "$url.comments($entry.anchor)" )
        <a href="$link" class="commentsLink">
          Comments[$entry.commentCount]</a>
        #end
      </p>
    </div>
  #end
</div>
```

And here's a point-by-point description of the template language expressions and statements found in the above day template:

- Display day header.**
For the day header, we display the current date in a long format.
- Loop through day's entries.**
Here we use a `$foreach` loop to iterate through the `$entries` collection
- Display entry title.**
Display the entry title in a `<div>` so that it can be easily styled.
- Display entry content or summary.**
If we're on a permalink page, show the entry's content. Otherwise, show the summary if a summary is available.
- Display entry permalink.**
Display permanent link to the entry.

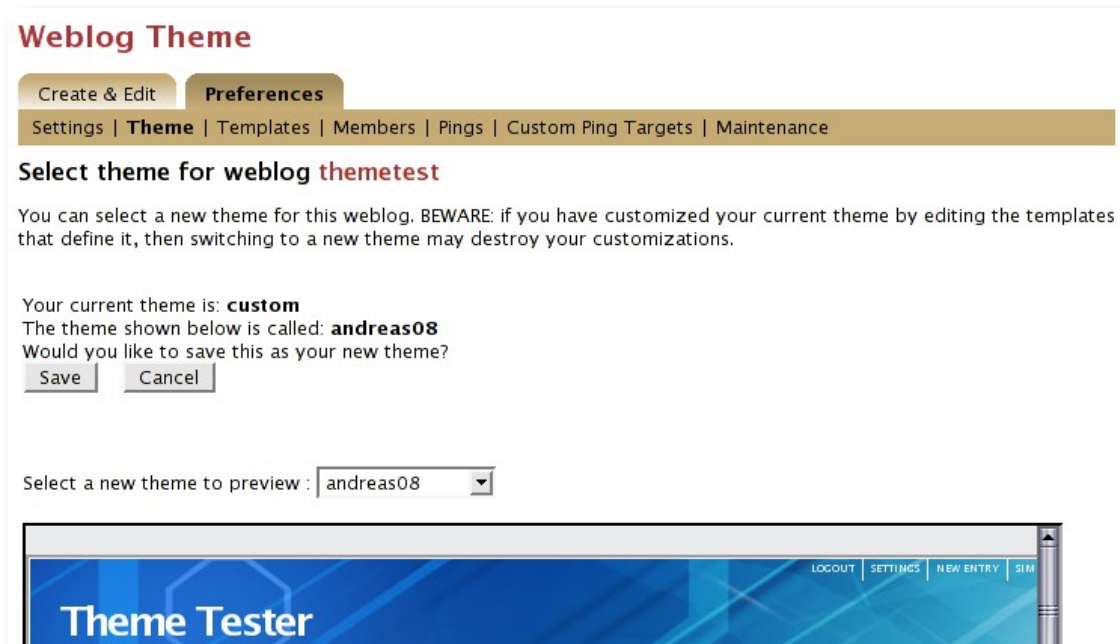
6. **Display entry author's name.**
Display the name of the author of the entry.
7. **Display entry category.**
Display the name of the category associated with the entry.
8. **Show edit link.**
If user is authorized, display link to edit the entry.
9. **Show comments link.**
If comments are available or are still allowed, display link to entry comments.

Now you've seen the required templates and you've seen most of the commonly used macros in action, let's discuss the mechanics of customizing your theme.

3.3 - Customizing your theme

When you start a Roller weblog and you pick a theme, your weblog uses a *shared* copy of that theme. The page templates that define your theme are shared by all of the other users who have also picked that theme. Using a shared theme is nice because, when your Roller site administrator makes fixes and improvements to that shared theme, then you'll get those automatically. But you can't customize a shared theme. Before you can customize your theme, you've got to get your own copy of the theme's page templates like so:

1. **Go to the Preferences->Theme page.**
Login to Roller and go to your weblog's **Preferences->Themes** page. Shown below.



2. **Pick and save the theme you'd like to customize.**
If you want to customize your weblog's current theme, then you can skip this step. If you have't decided which theme to customize, then use the preview combo-box to pick the theme that you'd like to use as your starting point. Once you've picked your theme, click the Save button to save it as your current theme.
3. **Click the Customize button.**
Click the Customize button to customize your theme. When you do this, copies of the themes page templates will be copied into your weblog so you can edit them.

Your current theme is: **andreas08**
If you like you may customize a personal copy of this theme.
[Customize](#)

4. **Customize your theme by editing and creating page templates.**

Go to the Preferences->Templates page, edit your page templates and add new ones as needed – as described in the next section.

And if you get tired of your customized theme, just use the **Preferences->Theme** page to switch back to a shared theme – or pick another one to customize. Now let's discuss editing and creating templates.

3.4 - Editing and creating page templates

Once you've got the page templates copied into your weblog, you can do just about anything you want to your theme. You can use the **Preferences->Templates** page, shown below, to create a new page, delete a page or choose a page to edit.

Templates

Create & Edit **Preferences**

Settings | Theme | **Templates** | Members | Pings | Custom Ping Targets | Maintenance

Manage templates that define weblog **themetest**

You can edit the templates that define the layout, colors and fonts of your weblog. You can also create new templates to define entirely new pages. This is for advanced users only, if you're not comfortable with HTML, you might want to leave your templates alone.

Reminder: You are currently using the andreas08 shared theme, so some template edits may not effect how your blog looks.

Add a new template
Name:
[Add](#)

Name	Description	Link	Navbar	Hidden	Edit	Remove
simple		simple	True			
Weblog		Weblog	True	True		(required)
_css		css	True	True		(required)
_day		day	True	True		(required)
_decorator	decorator	decorator		True		(required)

Now might be a good time to describe the *page template properties* since you can see them in the table above. The properties are name, description, link, navbar and hidden. Let's explain each:

- **Name:** Each template has a name, which you can display in your templates. You can also use the `#includeTemplate()` macro to include the contents of one page in another, by referring to the template by name.
- **Description:** You can enter an option description for each page for display or just as a reminder to yourself as to the purpose of the page.
- **Link:** Each page template has a link property, which is used to form the URL for the page. For example, if the page's name is "simple" then the page will be available at the URL `"/page/simple"` within the weblog.
- **Navbar:** This is a flag that indicates whether the page is to be shown in the weblog navigation bar that is produced by the `#showPageMenu()` macro.

- **Hidden:** This is a flag that indicates that a page is hidden and not possible to access via URL.

For new templates that you add, you'll be able to edit all of those properties using the **Preferences->Template->Edit Template** page (shown below).

Edit Template

Create & Edit Preferences

Settings | Theme | **Templates** | Members | Pings | Custom Ping Targets | Maintenance

Edit Template: simple

Name

Link

Description

Include in page menu ☒ Include in menu produced by showPageMenu() macro

Hidden ☐ Hidden templates cannot be accessed via a weblog URL

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
  <title>$model.weblog.name : $model.weblogPage.name</title>
  #showAutodiscoveryLinks($model.weblog)
  <style type="text/css">#includeTemplate($model.weblog "_css")</style>
</head>
<body>
```

Save Done

But the rules for *required pages* are different. The weblog pages named Weblog, _day and _css are considered to be required pages. You can change the template code for those pages but you cannot edit the name, link or any other properties.

Now that you know how to edit and create page templates, let's discuss how to use the models, objects and macros that Roller makes available to template authors.

4 - Using models, objects and macros

Roller makes weblog data available to page templates in the form of *models* and *data objects* and makes it easy for you to generate the HTML for your weblog by providing *macros*. Let's explain these new terms.

- **Model objects:** Model objects provide access to data from Roller and specifically from your Roller weblog. A model object returns data objects or collections of data objects. In Section 6, we'll describe each model, its properties and methods.
- **Data objects:** Data objects each represent an item of data within your Roller weblog, for example there is a *Weblog* object that represents your weblog, *WeblogEntry* objects which represent individual weblog entries and *Bookmark* objects that represent items in your blogroll. In Section 7, we'll describe each data object, its properties and methods.
- **Macros.** A macro is Velocity routine that generates HTML based on a data object or a collection of data objects. In Section 8 we'll describe each of Roller's build-in macros.

Let's discuss how to access data via models and data objects.

4.1 - Accessing data via models and objects

Models and data objects are objects and there are two ways to access data from objects. One way is to access an objects properties. Another is to call the object's methods. Let's talk about these two techniques.

4.1.1 - Accessing object properties

To access an objects properties, you use a simple dot-notation. For example, if you want to display the Roller version number property of the **\$config** model object, you do something like this in your page:

```
<p>$config.rollerVersion</p>
```

Or, if you'd like to save the Roller version number in a variable named \$version, you'd do this:

```
#set( $version = $config.rollerVersion )
```

And some properties are themselves objects, which in turn have their own properties and methods. For example, you can get the Weblog object from the \$model object and from the weblog object you can display the weblog's name and description like so:

```
<p>$model.weblog.name</a>  
<p>$model.weblog.description</a>
```

4.1.2 - Calling object methods

Another way to access an object's data is to call an objects's methods. Methods are different from properties because they require parameters. You use the same simple dot-notation, but you must end the expression with a list of parameters in parentheses. For example, if you'd like to display an image from within your theme, you can use the \$url model like so:

```
<img=' $url.themeResource("basic", "background.gif") '></a>
```

Argument one is the name of the theme and argument two is the name of a file that exists in the theme's directory. Note that a comma is used to separate the arguments.

4.2 - Calling macros

In page templates, you get data from objects and you use template code to display that data as HTML. To help

you along, Roller includes some macros which can be used to generate commonly used HTML constructs on your weblog. There are macros for displaying your weblog entries, displaying your blogroll and displaying a comment form.

Calling a macro is a little different from calling a method. A macro call starts with a `#` pound-sign, followed by the macro name and the macro parameters enclosed in parentheses. For example, you call the weblog calendar macro like so:

```
#showWeblogEntryCalendar($model.weblog "nil")
```

Argument one is the weblog for the calendar and argument two is the category, where “nil” indicates that no category is specified. Note that the arguments for a macro are separated by a space and NOT a comma as was the case for methods.

4.3 - A word about pagers

There are many cases in a weblog when we want to display a large collection of values and we want that collection to be page-able – that is, we want a Next link to go to the next page of results and possibly a Previous link to go to the previous page. So in Roller, we've introduced the concept of a pager. A *pager* is a special type of object that makes it easy to display a page-able collection of items within a page template. You can see a pager in action in Listing 1 above.

You probably won't need to use a pager object directly, since the macros do it for you. But if you do, here's what a pager looks like:

- `$pager.homeLink` – URL of the first page of results
- `$pager.homeName` – Name to be displayed for that URL
- `$pager.nextLink` – URL of the next page of results
- `$pager.nextName` – Name to be displayed for that URL
- `$pager.prevLink` – URL of the previous page of results
- `$pager.prevName` – Name to be displayed for that URL
- `$pager.items` – Collection of data objects; the current page of results

There is also a `WeblogEntryPager` interface that provides some extra methods for next-collection paging. The collection methods exist because often, with weblog entries, we are paging through the entries that exist within one time period, a month for example. In that case, the `nextLink` point to the next page of results within that month and the `nextCollectionLink` points to the next months entries.

- `$pager.homeLink` – URL of the first page of results
- `$pager.homeName` – Name to be displayed for that URL
- `$pager.nextLink` – URL of the next page of results
- `$pager.nextName` – Name to be displayed for that URL
- `$pager.prevLink` – URL of the previous page of results
- `$pager.prevName` – Name to be displayed for that URL
- `$pager.nextCollectionLink` – URL of next collection in sequence
- `$pager.nextCollectionName` – Name to be displayed for that URL
- `$pager.prevCollectionLink` – URL of previous collection in sequence
- `$pager.prevCollectionName` – Name to be displayed for that URL
- `$pager.items` – Collection of data objects; the current page of results

5 - Model Object Reference

This section covers the standard model objects available in all page templates:

- `$config` – provides access to the Roller site configuration parameters
- `$model` – provides access to data for one specific weblog
- `$url` – for creating Roller URLs and URLs within one specific weblog
- `$utils` – utility methods needed within page templates

For each model, we'll cover properties and methods.

5.1 - \$config

The `$config` model provides access to the Roller configuration data that you'll need in your weblog.

5.1.1 - \$config Properties

Property Name	Type	Description
<code>\$config.commentAutoFormat</code>	Boolean	True if comments should be formatted with added line feeds.
<code>\$config.commentEmailNotify</code>	Boolean	True if notification of new comments via email is enabled.
<code>\$config.commentEscapeHtml</code>	Boolean	True if all HTML will be stripped of comments before display.
<code>\$config.feedMaxSize</code>	Integer	Maximum number of items displayed in RSS and Atom feeds.
<code>\$config.feedStyle</code>	Boolean	True if feeds are displayed with user-friendly formatting (via XSL stylesheet).
<code>\$config.rollerVersion</code>	String	Version number of Roller build.
<code>\$config.registrationEnabled</code>	Boolean	True if new user registration is enabled.
<code>\$config.registrationURL</code>	Boolean	URL of new user registration site (if not using standard Roller registration).
<code>\$config.siteDescription</code>	String	Description of this Roller site.
<code>\$config.siteEmail</code>	String	Email address of this Roller site's administrator.
<code>\$config.siteName</code>	String	Name of this Roller site.
<code>\$config.siteShortName</code>	String	Short name of this Roller site.

5.1.2 - \$config Methods

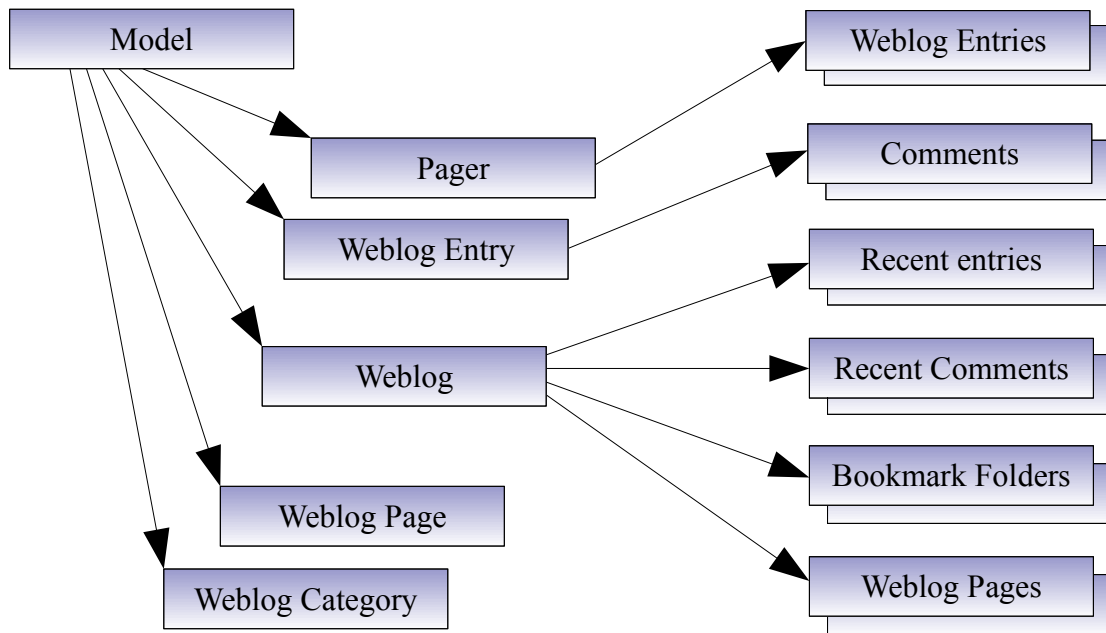
The `$config` model also provides a set of methods for accessing properties by name. Generally, you should be able to get the configuration data you need from the properties above. You shouldn't need to call these methods, but just so you know:

- **`boolean getBooleanProperty(String propertyName)`**
Returns the named runtime property as a boolean.
- **`String getProperty(String propertyName)`**
Returns the named runtime property as a String.
- **`int getIntProperty(String propertyName)`**
Returns the named runtime property as an integer.

5.2 - \$model

The **\$model** object provides you with access to all of the data objects that make up your weblog. You can get a pager object to access your weblog entries, the weblog entry referenced by the request, the category object referenced by the request and the weblog itself.

The diagram below show the objects you can get from the **\$model** and the collections of objects that you can get from those. See Section 6 for a complete reference to the data objects and their properties.



Now let's the details of the \$model object, starting with properties.

5.2.1 - \$model Properties

Name	Type	Description
<code>\$model.commentForm</code>	CommentForm	On a comment-page, this object will be populated with the comment form values. Values available are <code>\$model.commentForm.name</code> , <code>\$model.commentForm.url</code> and <code>\$model.commenForm.content</code> .
<code>\$model.locale</code>	String	Name of locale if one is specified in the URL.
<code>\$model.weblog</code>	Weblog	Current weblog being displayed.
<code>\$model.weblogCategory</code>	WeblogCategory	Weblog category specified by URL or null if not specified.
<code>\$model.weblogEntry</code>	WeblogEntry	Weblog entry object specified by URL or null if none specified.
<code>\$model.weblogEntriesPager</code>	Pager	Weblog entry pager for paging over entries specified by URL.
<code>\$model.weblogPage</code>	PageTemplate	Weblog page object specified or implied by URL.
<code>\$model.permalink</code>	Boolean	True if URL specifies one specific Weblog Entry permalink.
<code>\$model.searchResults</code>	Boolean	True if displaying search results.
<code>\$model.tags</code>	List of strings	List of tags specified by request.

5.2.2 - \$model Search Properties

If the URL indicates a search, then the pager returned by **\$model.weblogEntriesPager** will return entries from the search and some additional properties will be available on the **\$model** object:

Name	Type	Description
\$model.categories	List of Strings	List of category names available in search.
\$model.hits	Integer	Total number of hits found.
\$model.limit	Integer	Max. number of search results displayed per page.
\$model.offset	Integer	Offset into current page of search results.
\$model.weblogSpecificSearch	Boolean	True if search is specific to one weblog.

5.2.3 - \$model methods

The **\$model** object also provides a couple of methods:

- **Pager getWeblogEntriesPager(String catPath)**
Returns a pager that contains only entries from the specified category.
- **String getRequestParameter(String paramName)**
Returns a specific request parameter from the URL.

5.3 - \$url

To ensure that your URLs are formed correctly, you should use the **\$url** model to form all URLs that point to the Roller site or to your weblog. Every possible type of Roller URL is supported:

Name	Type	Description
\$url.absoluteSite	String	Absolute URL of Roller site.
\$url.category(String catPath)	String	URL for one categor within weblog.
\$url.category(String catPath, int pageNum)	String	URL for one categor within weblog, w/page.
\$url.commentAuthenticator	String	URL of comment authenticator.
\$url.comment(String anchor, String timeStamp)	String	URL of comment for entry specified by anchor.
\$url.comments(String anchor)	String	URL of comments for entry specified by anchor.
\$url.createEntry	String	URL for new-entry page in Roller UI.
\$url.editEntry(String anchor)	String	URL for edit-single-entry page in Roller UI.
\$url.date(String dateString)	String	URL for one specific 6 or 8 character date.
\$url.date(String dateString, int pageNum)	String	URL for one specific 6 or 8 character date, w/page.
\$url.editSettings	String	URL for edit-weblog-settings page in Roller UI.
\$url.entry(String anchor)	String	URL for entry specified by anchor.
\$url.feed.entries.atom	String	URL of entries feed (Atom).
\$url.feed.entries.rss	String	URL of entries feed (RSS).
\$url.feed.comments.atom	String	URL of comments feed (Atom).
\$url.feed.comments.rss	String	URL of comments feed (RSS).
\$url.home	String	URL of weblog.
\$url.home(String locale)	String	URL to access weblog in one specific language
\$url.home(String locale, int pageNum)	String	URL to access weblog in one specific language, with paging
\$url.login	String	URL of login page.
\$url.logout	String	URL of logout page.
\$url.rsd	String	URL of Really Simple Discovery (RSD) service.
\$url.page(String pageLink)	String	URL of page specified by pageLink.
\$url.page(String pageLink, String dateString, String catPath, int pageNum)	String	URL of page specified by pageLink, dateString, catPath and pageNum.
\$url.search	String	URL of search.
\$url.search(String query, String catPath, int pageNum)	String	URL of search for specific search string, catPath and pageNum.
\$url.site	String	Relative URL of Roller site.
\$url.resource(String filePath)	String	URL of uploaded file resource in weblog.
\$url.themeResource(String theme, String file)	String	URL of a resource within a Roller theme.
\$url.themeResource(String theme, String file, boolean abs)	String	Absolute URL of a resource within a Roller theme.
\$url.trackback(String anchor)	String	Trackback URL for entry specified by anchor.

5.4 - \$utils

The **\$utils** object provides all of the string manipulation methods you'll ever need for your weblog, including methods for formatting dates, escapeing HTML, encoding URLs and even removing HTML entirely. Here's a comprehensive list of the \$utils methods:

- **String addNowFollow(String s)**
Adds the nofollow attribute to any HTML links found within the string.
- **String autoformat(String s)**
Converts any line-breaks in the string with `
` tags.
- **String decode(String s)**
Decodes a string that has been URL encoded.
- **String encode(String s)**
Applies URL encoding to a string.
- **String escapeHTML(String s)**
Escapes any non-HTML characters found in the string.
- **String escapeXML(String s)**
Escapes any non-XML compatible characters found in the string.
- **String formatDate(Date date, String fmt)**
Formats a date object according to the format specified (see `java.text.SimpleDateFormat`)
- **String formatIso8601Date(Date date)**
Formats a date object using ISO-8601 date formatting.
- **String formatRfc822Date(Date date)**
Formats a date object using RFC-822 date formatting.
- **boolean isEmpty(Object o)**
Returns true if the object is null or if it is an empty string.
- **boolean IsNotEmpty(Object o)**
Returns true if the object is not null or is a non-empty string.
- **String removeHTML(String s)**
Remove all HTML markup from a string.
- **String replace(String str, String target, String replacement)**
In the string str, replace the target string with the replacement string.
- **String toBase64(String s)**
Convert a string to Base64 encoding.
- **String transformToHTMLSubset(String s)**
Transform any HTML in the string to a safe HTML subset.
- **String truncate(String str, int lower, int upper, String append)**
Truncate a string str so that it is between lower and upper characters in length and add the append string.
- **String unescapeHTML(String s)**
Unescape a string that has been HTML escaped.
- **String unescapeXML(String s)**
Unescape a string that has been XML escaped.

That's it for the \$url model and for models in general. Let's move on to the data objects.

6 - Data Object Reference

In this section we'll list each of the properties and methods of the Roller data objects. These are:

- **Bookmark:** A single link within a weblog's web bookmark collection, exists with a Folder
- **Bookmark Folder:** A Folder containing Bookmarks.
- **Comment:** A Comment associated with a specific Weblog Entry
- **Page Template:** An individual page template within a Weblog.
- **Referrer:** A Referrer represents an external site that links to the Weblog
- **User:** Represents a single user within the Roller site.
- **Weblog:** a Weblog containing Weblog Entries, Page Templates, Bookmarks, etc.
- **Weblog Entry:** an individual Weblog Entry
- **Weblog Entry Attribute:** a name value pair-associated with a Weblog Entry
- **Weblog Category:** A category within a weblog, categories in Roller are hierarchical

6.1 - Bookmark

Name	Type	Description
\$bookmark.description	String	Description of the bookmark
\$bookmark.feedUrl	String	URL of the newsfeed associated with the bookmark
\$bookmark.folder	BookmarkFolder	Parent folder of the bookmark
\$bookmark.image	String	URL of image to be displayed for bookmark
\$bookmark.name	String	Name of the bookmark
\$bookmark.url	String	URL of the bookmark

6.2 - BookmarkFolder

Name	Type	Description
\$folder.bookmarks	List of Bookmarks	Bookmarks contained in folder.
\$folder.description	String	Description of folder
\$folder.folders	List of BookmarkFolders	Folders contained in folder
\$folder.inUse	Boolean	True if folder contains other bookmarks or folders.
\$folder.name	String	Name of folder
\$folder.parent	BookmarkFolder	Parent of folder
\$folder.path	String	Path in the BookmarkFolder hierarchy
\$folder.website	Weblog	Weblog in which folder is contained

6.3 - Comment

Name	Type	Description
\$comment.approved	Boolean	True if comment has been approved for display
\$comment.content	String	Content of the comment
\$comment.email	String	Email address of the commenter
\$comment.name	String	Name of the commenter
\$comment.notify	Boolean	True if commenter choose the 'please notify me via email' option
\$comment.pending	Boolean	True if comment is waiting for approval
\$comment.postTime	Date	Time that comment was created
\$comment.remoteHost	String	Host name or IP address of commenter
\$comment.spam	Boolean	True if comment is marked as spam
\$comment.url	String	URL of the commenter
\$comment.weblogEntry	WeblogEntry	Weblog entry with which comment is associated

6.4 - PageTemplate

Name	Type	Description
\$page.contents	String	The content of the page template, typically HTML and Velocity code
\$page.description	String	Description of the page
\$page.lastModified	Date	Date that page properties or content was last modified
\$page.link	String	String used to form URL to page
\$page.name	String	Name of the page
\$page.navbar	String	True if page should be included in page navigation menu
\$page.hidden	String	True if page is NOT callable by URL

6.5 - Referrer

Name	Type	Description
\$referrer.dateString	String	Eight character date string implied by referred to URL
\$referrer.dayHits	Integer	Number of hits counted against this referrer today
\$referrer.displayUrl	String	URL to be displayed for this referrer
\$referrer.excerpt	String	Excerpt extracted from referring site by linkback extractor
\$referrer.referrerUrl	String	URL that refers to your weblog
\$referrer.referrerPermalink	String	Permalink URL referred by the referrer
\$referrer.title	String	Title extracted from referring site by linkback extractor
\$referrer.totalHits	Integer	Total number of hits counted against this referrer
\$referrer.visible	Boolean	True if referrer should be displayed
\$referrer.weblogEntry	WeblogEntry	Weblog entry referenced by this referrer
\$referrer.website	Weblog	Weblog referred to by this referrer

6.6 - TagStat

Name	Type	Description
\$tagStat.name	String	Name of tag
\$tagStat.count	Integer	Number of usages of tag within weblog or site (depending on context)
\$tagStat.intensity	Integer	Relative intensity rating of tag (values 1 through 5)

6.7 - User

Name	Type	Description
\$user.dateCreated	Date	Date that user was created
\$user.emailAddress	String	User's email address
\$user.fullName	String	Users full name
\$user.locale	String	User's locale
\$user.timeZone	String	User's timezone
\$user.userName	String	User's username

6.8 - Weblog

Name	Type	Description
\$weblog.active	Boolean	True if weblog is considered active
\$weblog.allowComments	Boolean	True if comments are allowed in weblog
\$weblog.commentCount	Long	Total number of comments of approved in weblog
\$weblog.creator	User	User who created this weblog
\$weblog.dateCreated	Date	Date weblog was created
\$weblog.description	String	Description of weblog
\$weblog.emailAddress	String	Email address of weblog's managing editor
\$weblog.emailComments	Boolean	True if email notification of comments is enabled
\$weblog.emailFromAddress	String	Email address for from-address of notifications
\$weblog.enableBloggerApi	Boolean	True if remote blogging API is enabled
\$weblog.enabled	Boolean	True if weblog is enabled
\$weblog.entryCount	Long	Total number of entries in weblog
\$weblog.entryDisplayCount	Integer	Default number of entries to display in pagers
\$weblog.handle	String	Simple string handle that uniquely identifies weblog
\$weblog.lastModified	Date	Timestamp of last modification to weblog
\$weblog.locale	String	Default locale used by weblog
\$weblog.moderateComments	True	True if comment moderation is enabled in weblog
\$weblog.name	String	Name of the weblog
\$weblog.pages	List of PageTemplates	Page templates of weblog
\$weblog.popularTags(int sinceDays, int length)	List of TagStat objects	Popular tags in past <i>sinceDays</i> number of days. Returns up to <i>length</i> number of objects.
\$weblog.timeZone	String	Timezone of the weblog

Name	Type	Description
\$weblog.todaysHits	Integer	Number of hits counted today
\$weblog.weblogCategories	List of WeblogCategories	Top-level categories of weblog

Weblog Methods

- **WeblogEntry getWeblogEntry(String anchor)**
Get an individual weblog entry by the entry's anchor, which is unique within a weblog.
- **List getRecentWeblogEntries(String cat, int max)**
Get most recent WeblogEntries in the weblog up to the number max. You can specify a category name if you'd like only entries from one category (or "nil" for all categories).
- **List getRecentComments(int max)**
Get most recent Comments in the weblog up to the limit max.
- **List getWeblogCategories(String catpath)**
Get WeblogCategories in folder found at the specified category path.
- **WeblogCategory getWeblogCategoryByPath(String path)**
Get weblog category specified by path.
- **PageTemplate getPageByName(String name)**
Get page template specified by name.
- **PageTemplate getPageByLink(String link)**
Get page template specified by link.

6.9 - WeblogCategory

Name	Type	Description
\$category.description	String	Description
\$category.image	String	URL of image to be displayed for category
\$category.inUse	Boolean	True if category is in use, i.e. if WeblogEntry objects use it
\$category.name	String	Name of the category
\$category.parent	WeblogCategory	Parent category
\$category.path	String	Absolute path to category in hierarchy
\$category.website	Weblog	Weblog that contains category
\$category.weblogCategories	List of WeblogCategories	Children of this weblog category

6.10 - WeblogEntry

Name	Type	Description
\$entry.allowComments	Boolean	True if this weblog entry allows comments
\$entry.anchor	String	Simple string that uniquely identifies post in weblog
\$entry.categories	List of WeblogCategories	Weblog categories associated with this entry
\$entry.category	WeblogCategory	Primary weblog category of this entry
\$entry.commentDays	Integer	Number of days that comments are allowed
\$entry.commentsStillAllowed	Boolean	True if comments are currently allowed

Name	Type	Description
\$entry.contentSrc	String	URL of entry content, if out-of-line
\$entry.contentType	String	MIME content-type of entry
\$entry.creator	User	User who created the entry
\$entry.entryAttributes	List of EntryAttributes	Arbitrary name/value attributes associated with entry
\$entry.pubTime	Date	Timestamp when entry was published
\$entry.referrers	List of referrers	List of referrers to entry (cleared nightly)
\$entry.rightToLeft	Boolean	True if entry text is to be displayed right-to-left
\$entry.status	String	Status of entry (i.e. PUBLISHED)
\$entry.summary	String	Raw summary text of entry
\$entry.tags	List of WeblogEntryTags	Tags associated with entry
\$entry.tagsAsString	String	Tags listed as a string
\$entry.text	String	Raw content text of entry
\$entry.transformedText	String	Content text of entry processed by plugins
\$entry.transformedSummary	String	Summary text of entry processed by plugins
\$entry.updateTime	Date	Timestamp of last modification to entry
\$entry.website	Weblog	Entry's weblog

WeblogEntry methods

- **public String getDisplayContent()**
Returns transformed text of entry or transformed summary if there is no entry.
- **public String getDisplayContent(String readMoreLink)**
If you pass in a non-null and non-empty entry permalink, then this method will return the transformed summary of the entry, or the text if there is no summary.
- **public String findEntryAttribute(String name)**
Returns the value of the entry attribute specified or null if no such attribute

6.11 - WeblogEntryTag

A user can assign as many tags as they wish to each weblog entry.

Name	Type	Description
\$tag.name	String	Weblog entry associated with this attribute
\$tag.user	User	User who added the tag
\$tag.weblogEntry	WeblogEntry	Weblog entry associated with tag
\$tag.weblog	Weblog	Weblog associated with tag

6.12 - WeblogEntryAttribute

Weblog entry attributes are name/value pairs that can be assigned to weblog entries. Currently, they're only used to add podcasts to blog entries.

7 - Macro Reference

This section lists the macros that are available for use in Roller page templates and a brief description of how each works.

7.1 - Entry macros

- **#showWeblogEntriesPager(\$pager)**
Displays the weblog entries contained in the specified \$pager object.
- **#showNextPrevEntriesControl(\$pager)**
Display the next/prev links of the specified \$pager object.
- **#showEntryTags(\$entry)**
Display tags associated with one weblog entry as list of links to tag specific views of weblog.

7.2 - Comment macros

- **#showWeblogEntryComments(\$entry)**
Display the comments associated with the specified entry, not including those entries that are not approved for posting or that are marked as spam.
- **#showWeblogEntryCommentForm(\$entry)**
Display a comment form for adding a comment to the specified entry.

7.3 - List macros

- **#showWeblogEntryLinksList(\$entries)**
Display a simple list of entries, with a title and link for each.
- **#showBookmarkLinksList(\$folderObj \$expanding \$subfolders)**
Displays all bookmarks in a specified bookmark folder object. If \$expanding and \$subfolders are set to true, then display the bookmarks as an expandable tree view.
- **#showWeblogCategoryLinksList(\$categoryObj \$expanding \$subcats)**
Displays all categories under a specified category object. If \$expanding and \$subcats are set to true, then display the categories as an expandable tree view.

7.4 - Menu macros

- **#showPageMenu(\$weblog)**
Display a page navigation menu that lists all pages in the weblog.
- **#showAuthorMenu(\$vertical)**
Display an authoring menu for the current weblog. If \$vertical is true, then display a menu suitable for use in a narrow sidebar.

7.5 - Search macros

- **#showWeblogSearchForm(\$weblog \$withCats)**

Show a search form for searching the weblog and, if \$withCats is true show a category chooser.

- **#showWeblogSearchAgainForm(\$weblog)**
Show search again form, suitable for display at the start of a page of search results.
- **#showNextPrevSearchControl(\$pager)**
Show special pager designed for paging through search results.

7.6 - Misc. macros

- **#showWeblogEntryCalendar(\$weblog \$category)**
Show weblog entry calendar, optionally restricted by category name ("nil" for no category)
- **#includeTemplate(\$weblog \$pageName)**
Parse and include a page template into the current page template.
- **#showAutodiscoveryLinks(\$weblog)**
Show the RSS, Atom and RSD auto-discovery links suitable for use within an HTML <head> element.
- **#showTrackbackAutodiscovery(\$entry)**
Show trackback autodiscovery code for a specified weblog entry, suitable for use within a day template.

And that's it for the Roller macros. Now let's move on to some additional models for use in site-wide weblogs.

7.7 - Displaying a Tag Cloud

We don't yet include a Tag Cloud macro in Roller because it's so easy to create one yourself. Here's what you do to display a tag cloud for your weblog. First, if you have not already done so, customize your theme. Next, you've got to get the tags you want to display from your weblog object. For example, to get your most 100 most often used tags for all time you'd do this:

```
#set($mytags = $model.weblog.getPopularTags(-1, 30))
```

Or if you want to only get tags used in the last 90 days you'd do this:

```
#set($mytags = $model.weblog.getPopularTags(90, 30))
```

Once you've got your tags, you can display them with a `foreach` loop. For example, here's a loop that displays each tag as a link to your weblog that displays only entries in that tag. It also gives each tag a CSS class that indicates the intensity of the tag, which indicates on a scale of zero to five how often-used the tag is.

```
#foreach ($tag in $mytags)
  <a class="tag s${tag.intensity}" href="$url.tag($tag.name)" title="$tag.count">
    $tag.name
  </a>
#end
```

Include that `#set` statement and loop in your weblog template and you'll see a tag cloud, but it all the tags will be displayed in the same size and font. If you'd like to vary the size of the tags based on how often they are used, then you'll need to add some CSS. Edit your CSS template and add this to size often used tags larger than those less often used:

```
.s1 {font-size:60%;}
.s2 {font-size:80%;}
.s3 {font-size:100%;}
.s4 {font-size:120%;}
.s5 {font-size:140%;}
```

8 - Additional models

There are some additional models that can be made available to Roller weblogs by a site administrator. These are the **\$site** for accessing site-wide data, and the **\$planet** model for accessing Planet Roller data. Let's start with the **\$site** model.

8.1 - \$site

The **\$site** model provides access to site-wide data: aggregations of weblog entries from all weblogs, comments from all weblogs, lists of users, lists of weblogs, etc. -- in short, everything you need to build an interesting community front page for Roller.

8.1.1 - \$site Objects

Site object

Name	Type	Description
\$site.commentCount	Long	Total number of comments in entire site
\$site.entryCount	Long	Total number of entries in entire site
\$site.userCount	Long	Total number of users in entire site
\$site.weblogCount	Long	Total number of weblogs in entire site

For some SiteModel methods (e.g. hot-blogs, most commented, etc.) return a special type of object use to expressing a count with a short name, a long name and an internationalized type:

StatCount object

Name	Type	Description
\$stat.subjectNameLong	WeblogEntry	Long name of subject of statistic (e.g. name of a weblog)
\$stat.subjectNameShort	String	Short name of subject of statistic (e.g. handle of a weblog)
\$stat.count	Integer	Value of the statistic (i.e. number of hits)
\$stat.typeKey	String	I18N key for type of the statistic

8.1.2 - \$site Methods

- **Pager getWeblogEntriesPager(int sinceDays, int max)**
Get pager that returns WeblogEntry objects. Will only return entries created in last sinceDays number of days and never more than max items.
- **Pager getWeblogEntriesPager(Weblog weblog, int sinceDays, int max)**
Get pager that returns WeblogEntry objects from one specific weblog. Will only return entries created in last sinceDays number of days and never more than max items.
- **Pager getWeblogEntriesPager(Weblog weblog, User user, int sinceDays, int max)**
Get pager that returns WeblogEntry objects from one specific weblog and user. Will only return entries created in last sinceDays number of days and never more than max items.
- **Pager getWeblogEntriesPager(Weblog weblog, User user, String category, int sinceDays, int max)**
Get pager that returns WeblogEntry objects from one specific weblog and category. Will only return entries created in last sinceDays number of days and never more than max items.

- **Pager getCommentsPager(int sinceDays, int max)**
Get pager that returns Comment objects. Will only return comments created in last sinceDays number of days and never more than max items.
- **Pager getUsersByLetterPager(String letter, int sinceDays, int max)**
Get pager that returns User objects. Will only return users whose names start with letter, created in last sinceDays number of days and never more than max items.
- **Pager getWeblogsByLetterPager(String letter, int sinceDays, int max)**
Get pager that returns Weblog objects. Will only return weblogs whose names start with letter, created in last sinceDays number of days and never more than max items.
- **Map getUserUsernameLetterMap()**
Get map of User objects keyed by first letter.
- **Map getWeblogHandleLetterMap()**
Get map of Weblog objects keyed by first letter.
- **List getUsersWeblogs(String userName)**
Get list of all Weblog objects associated with a specified user.
- **List getWeblogsUsers(String handle)**
Get list of all User objects associated with a specified weblog.
- **Weblog getWeblog(String handle)**
Get Weblog object by handle.
- **List getNewWeblogs(int sinceDays, int max)**
Get newest Weblog objects, i.e. only those created in last sinceDays number of days.
- **List getNewUsers(int sinceDays, int max)**
Get newest User objects, i.e. only those created in last sinceDays number of days.
- **List getHotWeblogs(int sinceDays, int max)**
Get recent hot Weblogs in the form of StatCount objects, but only those updated in last sinceDays number of days.
- **List getMostCommentedWeblogs(int sinceDays, int max)**
Get most commented weblogs in the form of StatCount objects, but only those updated in last sinceDays number of days.
- **List getMostCommentedWeblogEntries(List cats, int sinceDays, int max)**
Get most commented WeblogEntries in the form of StatCount objects, but only those updated in last sinceDays number of days.

8.2 - \$planet

The **\$planet** model makes Planet Roller data available to weblog pages. It allows you to display the main aggregation (i.e. the one named “external”), any custom group aggregation, a feed and ranked subscriptions.

8.2.1 - \$planet Objects

The \$planet model returns two types of objects that we haven't seen before: the PlanetSubscription object, which represents a feed subscription, and PlanetEntry, which represents one entry from a feed.

PlanetSubscription object

Name	Type	Description
\$sub.author	String	Author, from feed header

Name	Type	Description
\$sub.feedURL	String	URL of the feed
\$sub.inboundBlogs	Integer	Number of weblogs that link to this weblog (or 0 if no Technorati license available)
\$sub.inboundLinks	Integer	Number of links to this weblog (or 0 if no Technorati license available)
\$sub.lastUpdated	Date	Last update time, from feed header
\$sub.name	String	Name of the feed
\$sub.title	String	Title of the feed
\$sub.URL	String	Same as feedURL

PlanetEntry object

Name	Type	Description
\$entry.author	String	Name of author of entry
\$entry.category	WeblogCategory	Category of entry
\$entry.creator	User	User object representing author
\$entry.guid	String	Unique ID of entry
\$entry.permalink	String	Permanent link to entry
\$entry.pubTime	Date	Time entry was published
\$entry.summary	String	Entry summary text
\$entry.text	String	Entry content text
\$entry.title	String	Entry title
\$entry.updateTime	Date	Time entry was last updated
\$entry.website	PlanetSubscription	Subscription to which entry belongs

8.2.2 - \$planet Methods

- Pager getAggregationPager(int sinceDays, int max)**
 Get pager that returns PlanetEntry objects from the main aggregation. Will only return entries created in last sinceDays number of days and never more than max items.
- Pager getAggregationPager(String groupHandle, int sinceDays, int max)**
 Get pager that returns PlanetEntry objects from the specified group aggregation. Will only return entries created in last sinceDays number of days and never more than max items.
- Pager getFeedPager(String feedURL, int max)**
 Get pager that returns PlanetEntry objects from the specified feed, up to max items.
- List getRankedSubscriptions(int sinceDays, int max)**
 Get all PlanetSubscription objects ordered by Technorati ranking. Will only return subscriptions updated in last sinceDays number of days and never more than max items.
- List getRankedSubscriptions(String groupHandle, int sinceDays, int length)**
 Get PlanetSubscription objects in the specified group ordered by Technorati ranking. Will only return subscriptions updated in last sinceDays number of days and never more than max items.