

“[Bricolage] is one of the first projects to claim that ‘Hey, this stuff that Vignette said is rocket science, isn’t.’”

—Jupiter Communications analyst Matthew Berk, *Intranet Journal*

# World Health Organization

- 4,000 documents
- Over 100 departments & 200 users
- Published in English, Spanish, and French
- <http://www.who.int/>





“When an open-source application developed by a few authors and maintained mainly by one guy beats the pants off million-dollar competitors in pretty much every way, I’m impressed.”

—Jim Rapoza, eWeek

# Mac Publishing

- 30,000+ documents
- MacCentral updated continually
- [www.macworld.com](http://www.macworld.com)
- [www.maccentral.com](http://www.maccentral.com)

The screenshot shows the MacCentral website interface. At the top, there's a blue header with the MacCentral logo and navigation links. The main content area features a large article titled "Microsoft drops development of Internet Explorer for Mac" with a sub-headline "Headline View | Summary View -- NEW! Choose your preferred news format." Below this, a list of news items is shown for Friday, June 13, 2003, including "Microsoft drops development of Internet Explorer for Mac", "Apple re-issues security update for Mac OS X", "Multiple Picture Viewer introduced by Monkeybread", and "Australian resellers unhappy with Apple online store". To the right of the main article, there's a sidebar with a "Get up to \$175 trade-in credit on your old one!" offer and a "ROAD TOOLS™ Traveler CoolPad" advertisement. On the far right, there's a section for "QuarkXPress 6.0" with a headline "Turning 6, Moving to Mac OS X" and a sub-headline "A Preview of QuarkXpress 6.0". This section includes a paragraph about the new features and a link to "Read the full story...". At the bottom right, there's a "FireWire 800 Drives IN STOCK" advertisement.



“Step forward Bricolage. It’s powerful, it’s flexible, it’s a perfect fit for the content we currently handle and the kind of content we want to handle in the future.”

—*The Register*

# Journal de Notícias

The screenshot shows the homepage of the Journal de Notícias website. At the top, there is a green navigation bar with links to 'SAPO XL', 'Mensageiro', 'Acesso', 'Toques e Logos', 'Páginas Amarelas', 'Imóveis', 'SMSPT', and 'Shopping'. Below this is a blue banner with the text 'gestão totalmente online'. A secondary green bar contains a 'LOGIN' button, a 'netb' logo, a 'Pesquisa SAPO' search bar, and a 'Canais e Serviços' dropdown menu. The main header area is blue and white, featuring the 'Jornal de Notícias' logo, the date 'Quarta-feira, 28 de Julho de 2004', and a 'Pesquisa JN' search bar. Below the header, there is a navigation bar with links to 'Edição do Dia', 'Diário de Notícias', and 'TSF Online'. A secondary navigation bar includes links to 'Arquivo', 'Dossier', 'Secção do Leitor', and 'JN Shopping'. The main content area is divided into two columns. The left column, titled 'Últimas', features a headline 'Fogo de grandes proporções em Poiares (Coimbra)' with a sub-headline 'Um incêndio de grandes proporções está a lavrar desde as 16:00 de hoje em Poiares, perto da EN (...)' and a timestamp '18:16h'. Below this is a section titled 'Edição impressa' with a list of categories: 'Em Foco', 'Sociedade', 'Política', 'Economia', and 'Mundo'. The right column, titled 'Classificados', displays four advertisements: 'Diversos' (Vendo Gatinho Persa), 'Veículos' (VW Polo GTI 3, portas tuningos), 'Imobiliária' (3 ass, amplas lareira, garagem), and another 'Imobiliária' (3 ass, amplas lareira, garagem). The website also includes a sidebar on the left with a 'PUB' label and a 'gestão totalmente online' banner.

- 26,500+ Documents
- Millions of readers
- 300 new stories daily
- <http://jn.sapo.pt/>



“Bricolage is a powerful tool. The system was able to accommodate our unique requirements and constraints, while adapting to our existing workflow.”

—Neal Sofge, The RAND Corporation

# The RAND Corporation

The screenshot shows the RAND Corporation website. At the top, the RAND logo is on the left, followed by the tagline "OBJECTIVE ANALYSIS. EFFECTIVE SOLUTIONS." and a navigation bar with links: Home, About RAND, Opportunities, Research Areas, Books & Publications, and View Cart. A search bar is on the right. Below the header, a banner states "A non-profit institution that addresses the challenges facing the public and private sectors around the world." and shows the date "July 28, 2004".

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- Contacts & Locations
- Organization & Divisions
- Clients & Sponsors
- Services & Tools
- Education & Fellowships
- Employment

**RAND POLICY RESEARCH**

- Quality Standards
- Books & Publications
- Research Areas
  - Child Policy
  - Civil Justice
  - Education
  - Energy & Environment
  - Health & Health Care
  - International Affairs
  - National Security
  - Population & Aging
  - Public Safety
  - Science & Technology
  - Substance Abuse
  - Terrorism & Homeland Security
  - Transportation & Infrastructure

**Featured Findings >**

**U.S. Needs to Improve International Skills of Future Leaders**

The U.S. faces an urgent national challenge in training and drawing into government service a new generation of international affairs talent.

[Issue Paper](#) [Related Document](#) [News Release](#) [International Affairs Research Area](#)

**Protecting Yourself in a Terrorist Attack**

Individuals can take simple steps to protect themselves from the harmful effects of potential terrorist attacks involving chemical, radiological, nuclear, and biological weapons.

[Full Document](#) [Quick Guide](#) [News Release](#) [Public Safety Research Area](#)

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**Understanding Middle Eastern Youth**

What forces shape attitudes and aspirations of young people in the Middle East? The RAND Initiative for Middle Eastern Youth aims to answer this question and help future generations achieve better lives.

[Read More](#) [International Affairs Research Area](#)

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- [Back Issues](#)
- [Subscribe Now](#)

- Rebuilding entire library of publications in Bricolage
- Thousands of publications
- [www.rand.org](http://www.rand.org)



“ In the Web content management space there has been a decent amount of buzz surrounding Bricolage.”

—Michael Pastore, *Intranet Journal*



# Entertainment Tonight



- 15,000+ Stories
- 7-10 new stories daily
- 60-70 new images daily
- 50 new videos weekly
- August 2003 launch
- [www.etonline.com](http://www.etonline.com)



“In the case of content management, a number of open source contenders are emerging but Bricolage, in particular, stands out in terms of capability.”

—Bloor Research analyst Martin Langham, *IT-Director.com*

# Discovering Bricolage

David Wheeler  
Kineticcode, Inc.  
david@kineticcode.com  
OSCON 2004



# The Content Problem

- Lots of contributors
- Editorial Workflow not reflected in software
- Volumes of decentralized content
- Inconsistent data
- Inconsistent formatting
- Multiple sites to manage
- Need to output to multiple formats
- Multiple destination servers

# Solution: Bricolage

- Centralized document library
- Document modeling and management
- Document versioning and locking
- Browser-based interface
- Customizable workflow with permissions
- Multisite Management
- Multiple output channels
- Document distribution
- SOAP Interface



# Architecture

- Enterprise-class open-source CMS
- Written in Perl with a Mason-powered UI
- Perl-powered templating architectures
- Runs on any modern Unix system
- Runs on Apache 1.3.x
- Supports SSL
- PostgreSQL back-end

# Discovering Bricolage

- Document analysis and modeling
- Mason template development
- Document editing



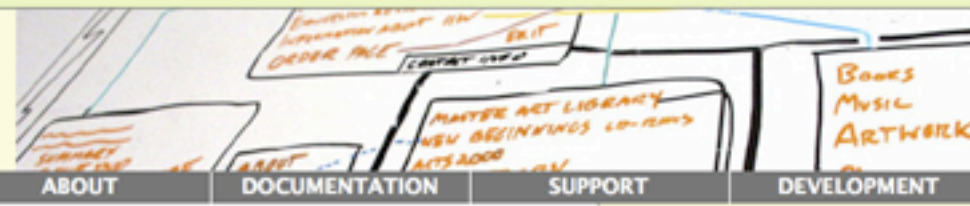
# Document Models

- Bricolage core technology
- Two kinds of documents: “Stories” & “Media”
- Documents defined by “Elements”
- Elements are hierarchically organized content containers
- Elements can contain Subelements and Fields
- Fields displayed as different HTML form fields

# Document Analysis

- Analyze existing documents
- Break them down into component parts
  - Subelements
  - Fields
- Model the structure





## Benefits of Bricolage

### Ease of Use

Unlike most commercial content management systems, Bricolage's browser-based interface provides a familiar, easy-to-use environment for all of your administration and content creation needs. Editors don't need to know HTML or XML to edit documents, and can publish them to your site with a single click. For organizations that require editors to manage content with embedded HTML, the supported HTMLArea editor allows for WYSIWYG text editing.



### David Wheeler takes to the Airwaves

Bricolage lead developer and maintainer David Wheeler appeared on *Online Tonight* in December, 2002. You can listen to the show here.

[Listen to the show](#)

### Recent News

#### [Bricolage 1.8.1 Released](#)

The Bricolage development team is pleased to announce the release of Bricolage 1.8.1. This maintenance release address a number of issues in Bricolage 1.8.0.

2004.07.08

#### [Bricolage 1.8.0 Arrives](#)

The culmination of over 15 months in development, this release offers more new features, improvements, and performance gains than any previous release.

2004.05.03

[Older stories...](#)

### Flexibility



This is the "Active Media" screen in Bricolage.

Bricolage's complete separation of content from presentation not only gives you the flexibility to output content the way you need it today, but also to adapt the presentation to meet the needs of tomorrow's new technologies. This flexibility is enhanced by the power of Perl-based templating systems, which allow you to output your content to any format.

### Configurability

Bricolage was built from the ground up to be fully configurable to meet the needs of a variety of organizations. Whether you need

your documents to adhere to a particular structure, your workflows to define very specific areas of responsibility, or your to be notified when a document is checked in by an editor, Bricolage can be shaped to fit your processes.

### Scalability

As a back-office workflow and publishing system independent of your front-end Web and Application servers, Bricolage frees you to use whatever technologies you need to serve content to your audience. This has the double benefit of eliminating the API and database overhead of serving content while allowing your front-end to scale as server loads demand. Furthermore, as you site grows and the number of documents your organization manages swells, Bricolage provides the architectural foundation to keep the pace and manage the growth.

"Ask not what your country can do for you. Ask what you can do for your country."

—John F. Kennedy

Includes



Title

# Benefits of Bricolage

Headers

## Ease of Use

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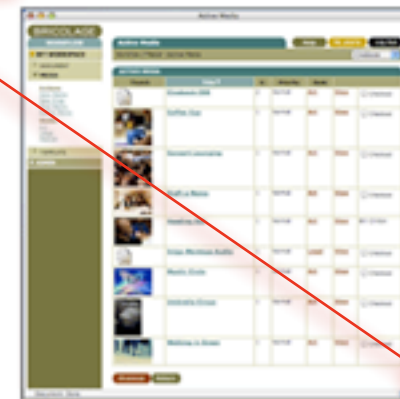


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Paragraphs



# Benefits of Bricolage

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Related Audio

Title

Caption

Link Text

Tooltip

Position

## Flexibility



Related Image

Alt Text

Caption

Position

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Pull Quote

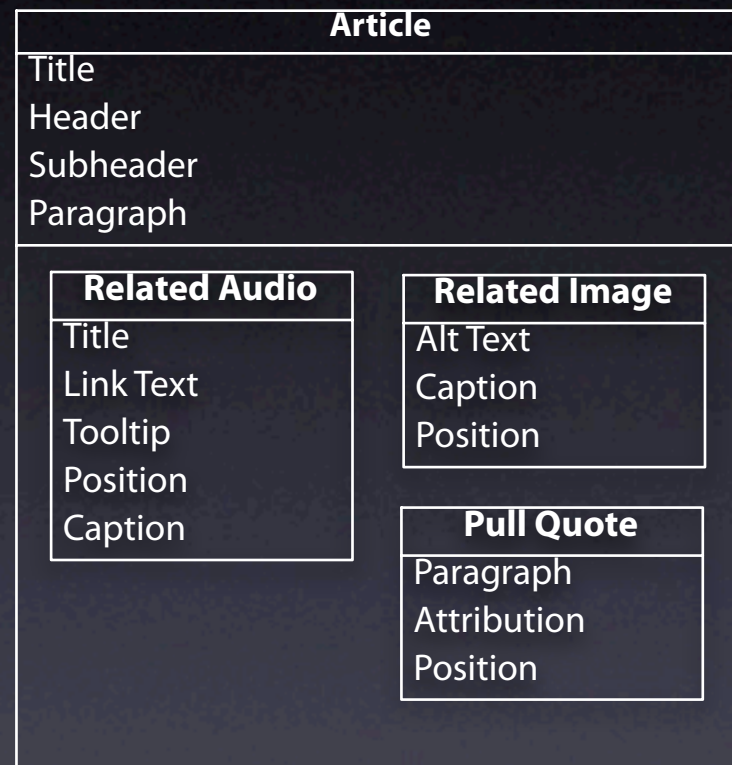
Paragraph

Attribution

Position



# Document Model





# Templating

- Based on Perl templating systems
- Current templating systems
  - Mason
  - HTML::Template
  - Template Toolkit
- Contribute one!
- PHP?

# Template Fundamentals

- Templates are pure Mason, HTML::Template, or Template Toolkit templates
- Three Template Types:
  - Category templates
  - Element templates
  - Utility templates

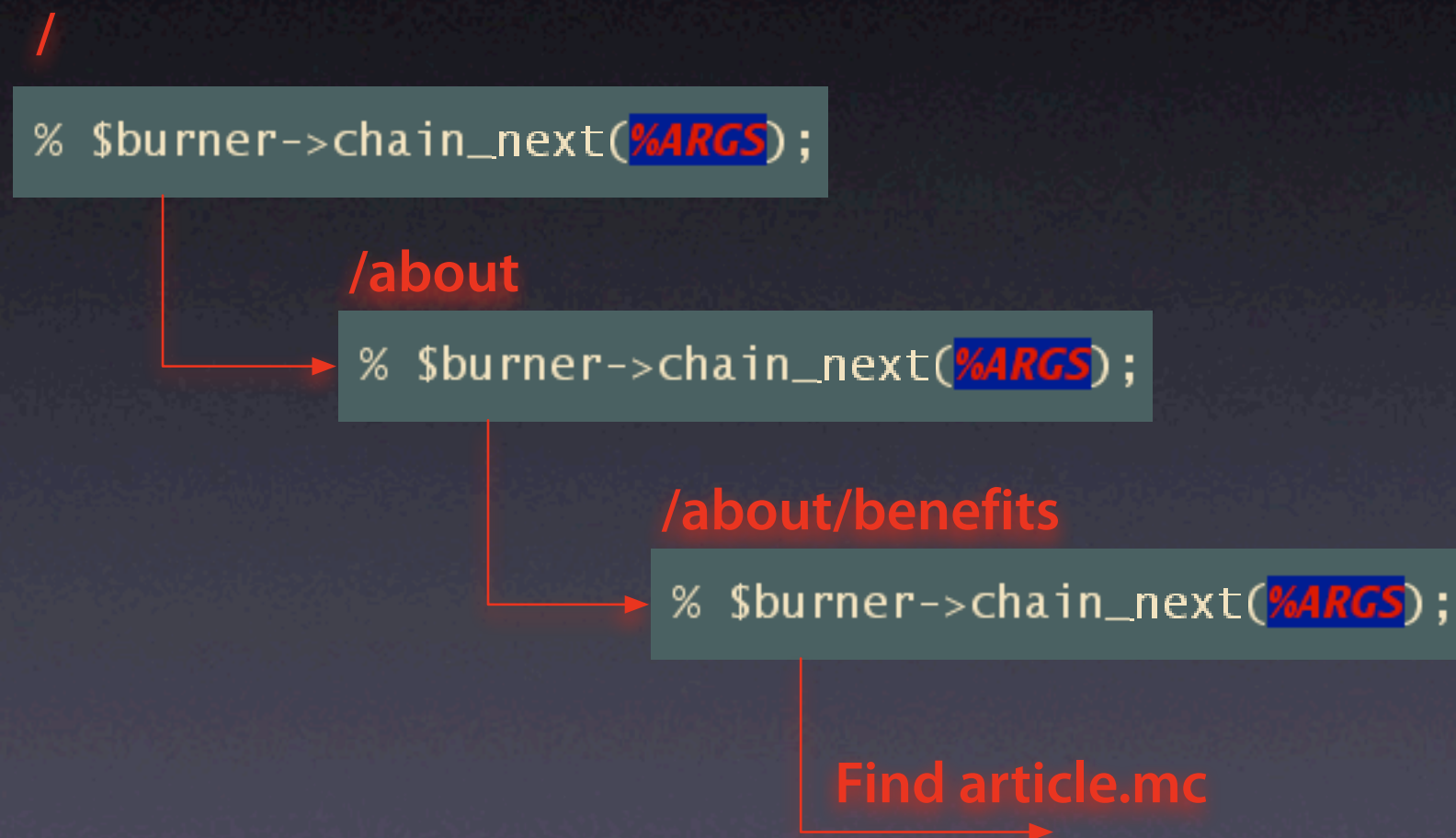


# Category Templates

- Placed in content categories
- Wrap execution of element templates
- Automatically executed when element templates executed
- Similar to Mason's "autohandlers" and TT's "wrappers"
- Cascading execution down the category path

# Category Template Execution

For “Article” document in /about/benefits category:





# Element Templates

- Correspond to a single document element
- Automatically located and executed by Burner
- Located by searching up the directory path
- Can override element templates further up the category path
- Most templates of this type

# Element Template Execution

For “Article” document in /about/benefits category:

/about/benefits/article.mc

/about/article.mc

/article.mc





# Utility Templates

- Ordinary Mason components or HTML::Template or Template Toolkit templates
- Executed via standard template architecture invocation
- Used for utility processing common across elements

```
<p><& /util/xhtml/output_link.mc,  
    url  => $url,  
    text => $title,  
    tip  => $tooltip,  
    teas => $teaser  
&></p>
```

# Utility Template

```
% $tip = '' unless defined $tip;
      <dt><a href=" <% $url %>" title=" <% $tip %>"><% $text %></a></dt>
      <dd>
<% $teas ? "                <p>$teas</p>\n" : '' %>\
<% $date ? qq{                <p class="date">$date</p>\n} : '' %>\
      </dd>

<%args>
$url
$text
$tip => ''
$teas => undef
$date => undef
</%args>
```



# Global Objects

- Templates contain three important global objects
  - \$burner
  - \$story
  - \$element

# \$burner Global

- Manages templating architecture and output
- Use similarly to Mason's \$m to output metadata
- Trigger element output
- Access relevant objects and data
  - Output Channel
  - Category
  - Page file names



# \$burner Example

```
<body>
% # Output top navigation hints.
% my $category = $burner->get_cat;
    <h3>Category: <% $category->get_name %></h3>
    <h4>Path:  <% $category->get_uri %></h4>

% # Execute next template.
% $burner->chain_next;

<%perl>
if ($burner->get_oc->get_name ne 'Printer Friendly'
    and my $next = $burner->next_page_file) {
    # Output a link to the next page.
    $m->print(qq{      <p class="more"><a href="$next">} .
                qq{Next Page &gt;&gt;</a></p>\n});
}
</%perl>
</body>
```

## Category Template

# \$story Global

- Bricolage story object
- Access primary story properties
  - Title
  - Description
  - URI
  - Site
  - Keywords
  - Contributors



# \$story Example

```
<html>
  <head>
    <title><% $story->get_title %></title>
    <meta name="keywords" content="<% join ', ',
      map { $_->get_name } $story->get_keywords %>" />
  </head>
  <body>
    <h1><% $story->get_title %></h1>
    <p>URL: <% $story->get_primary_uri %></p>
    <h2><% $story->get_description %></h2>
    % # Execute next template.
    % $burner->chain_next(%ARGS);
  </body>
</html>
```

# Category Template

# \$element Global

- Element for current template
- Most important templating object
- Contains content data
  - Subelements
  - Data elements (Fields)
  - Element order
  - Related media
  - Related story



# \$element Example

```
<%perl>;
foreach my $e ( $element->get_elements(qw(paragraph header subheader
                                           pull_quote related_image
                                           related_audio))) {

    my $kn = $e->get_key_name;
    if ($kn eq 'paragraph') {
        $m->print('        <p>', $e->get_data, " </p>\n");
    } elsif ($kn eq 'header') {
        $m->print('        <h2>', $e->get_data, " </h2>\n");
    } elsif ($kn eq 'subheader') {
        $m->print('        <h3>', $e->get_data, " </h3>\n");
    } elsif ($kn eq 'code') {
        $m->print('        <pre>', $e->get_data, " </pre>\n");
    } else {
        $burner->display_element($e);
    }
}
return;
</%perl>
```

# Element Template

# Document Editing


- Document structure adheres to definition
- Easy-to-use HTML forms
- Check-out/exclusive locking
- Check-in/version control
- Hierarchical content categorization
- Keyword association
- Contributor association
- Output channel association
- Bulk editing



# Document Editing Demo

**Story Profile** **Help** **My Alerts** **Log Out**

Workflow | Profile | Story | "Benefits of Bricolage"

**1** INFORMATION [Trail](#) 

<b>ID:</b>	1031
<b>Story Type Element:</b>	Fixed Document
<b>Current Version:</b>	2
<b>Published Version:</b>	
<b>First Published:</b>	
<b>Last Published:</b>	
<b>URI:</b>	<a href="/about/benefits">/about/benefits</a>
<b>Site:</b>	bricolage.cc

**Source:**

**Priority:**

**Title:**

**Description:**

**Slug:**

**Cover Date:**

**Month**

**Day**

**Year**

**Hour**

**Minute**

**Expire Date:**

**Month**

**Day**

**Year**

**Hour**

**Minute**

# Where to Learn More

- The Bricolage home page

<http://www.bricolage.cc/>

- The Kineticcode home page

<http://www.kineticcode.com/>

- The O'Reilly Mason Book

<http://www.masonbook.com/>

- *LinuxJournal*

<http://www.linuxjournal.com/search.php?query=bricolage>



# Thank You