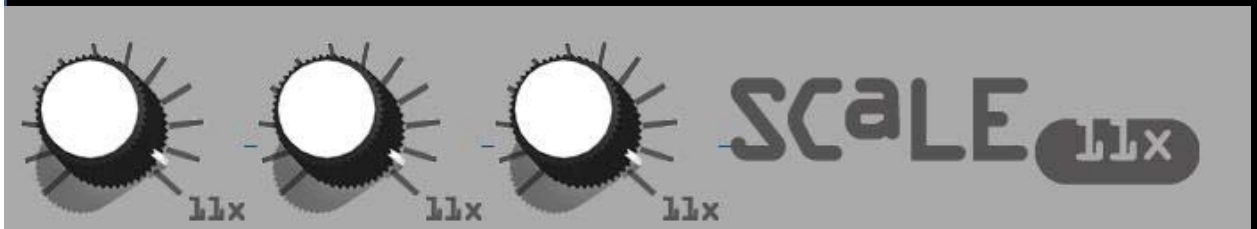
Intro to Drupal



The Eleventh Annual Southern California Linux Expo
February 22-24, 2013
Hilton Los Angeles International Airport

February 23, 2013

THE LAKEWOOD GROUP

DREAM, DESIGN, DELIVER (REPEAT)

www.the-lakewood-group.com

Douglas C. Hoffman
drupal.org douglaschoffman
@douglaschoffman
linkedin.com/in/douglaschoffman
doug@sagetree.net
doug@customersuccessmarketing.com

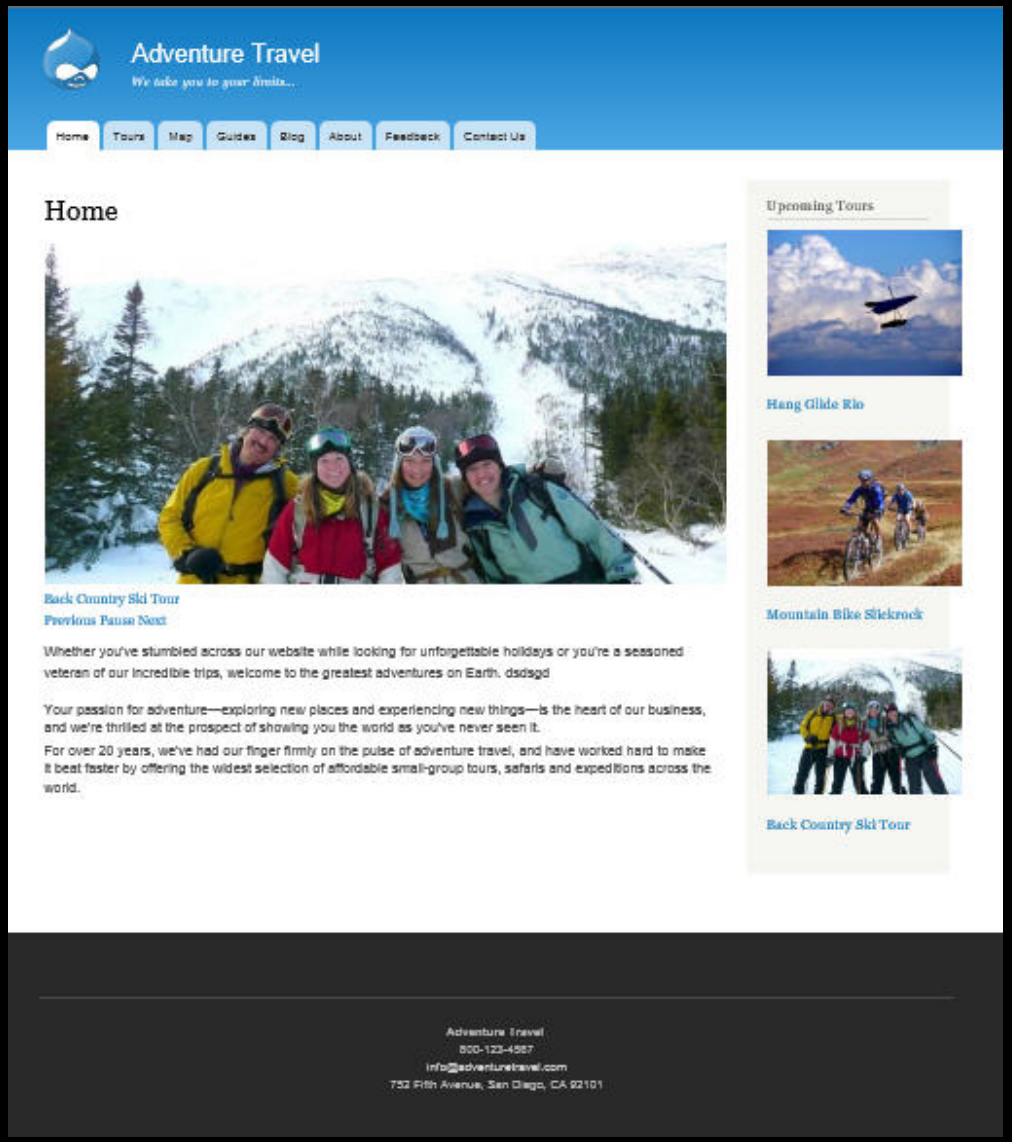
making waves with drupal
www.sagetree.net

Agenda

- Drupal Overview
- Site Building
- Theming
- Module Development
- Q & A

Adventure Travel

- Tours
- Guides
- Map
- Blog
- About
- Feedback
- Contact Us

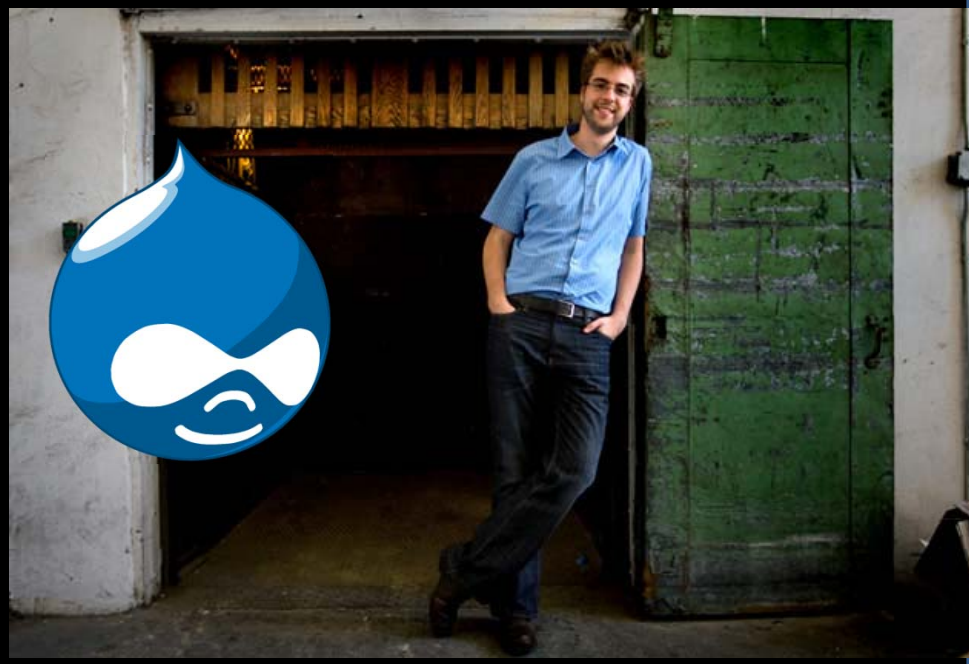


WHAT DO THESE THREE THINGS HAVE IN COMMON?

douglaschoffman.com/downloads.html

http://www.youtube.com/watch?v=rF1X12PE6PY

What is Drupal? Dries Buytaert



Dries started a small bulletin board for his friends. He called it "dorp" the Dutch word for village, but a typo when he registered the domain made it drop.org. In 2001, Dries released it as open source and named it Drupal which is Dutch for drop.

Who, What & Where Is Drupal?

938,104 people in 228 countries* speaking 181 languages power Drupal.

News | Docs Updates | Forum Posts | Commits

Drupal 7.20 released
February 20, 2013

Drupal 7.20, a maintenance release which contains fixes for security vulnerabilities, is now available for download. See the Drupal 7.20 release notes for further information. Read more

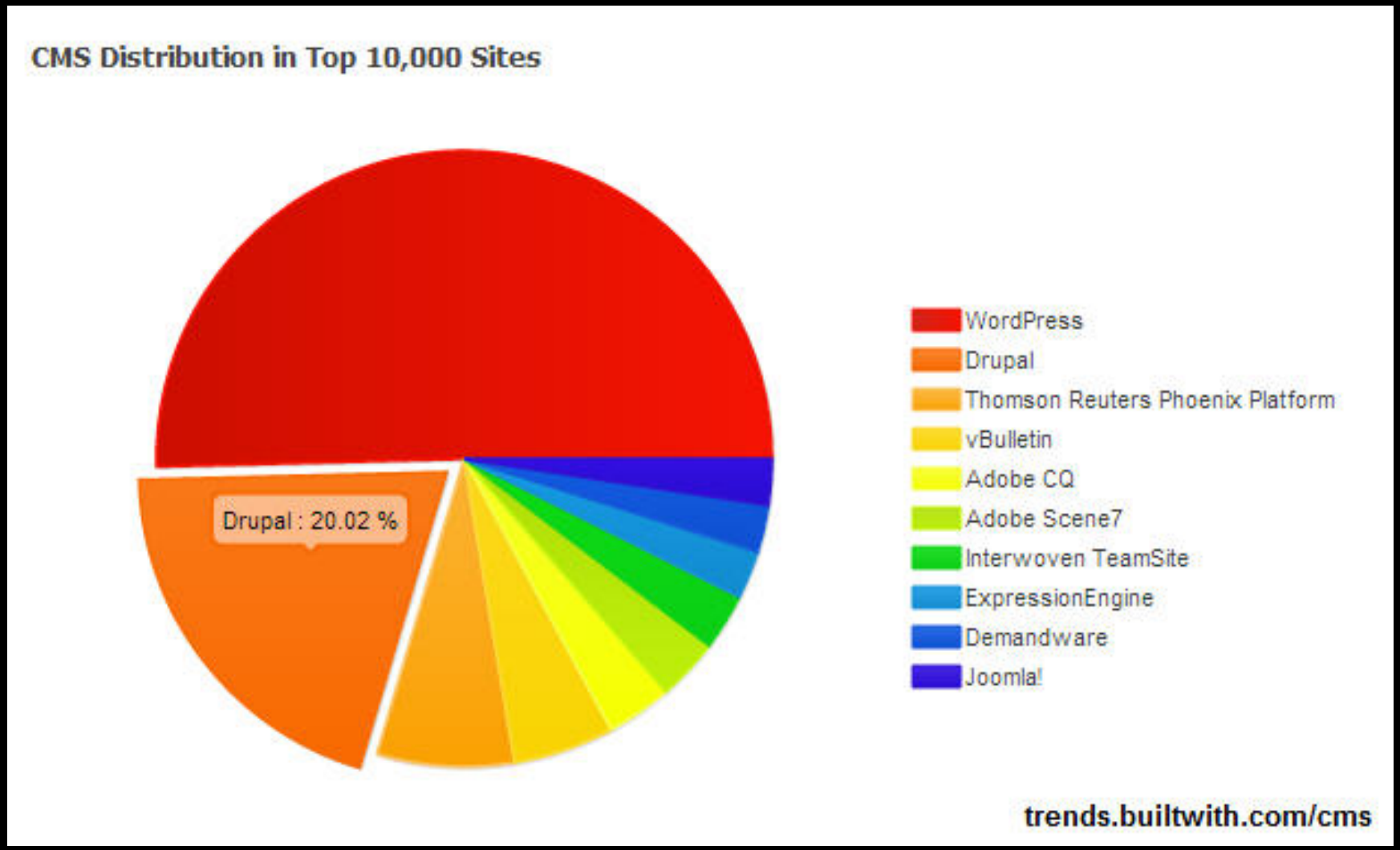
Drupal 7.19 and 6.28 released

Predictions for 2013

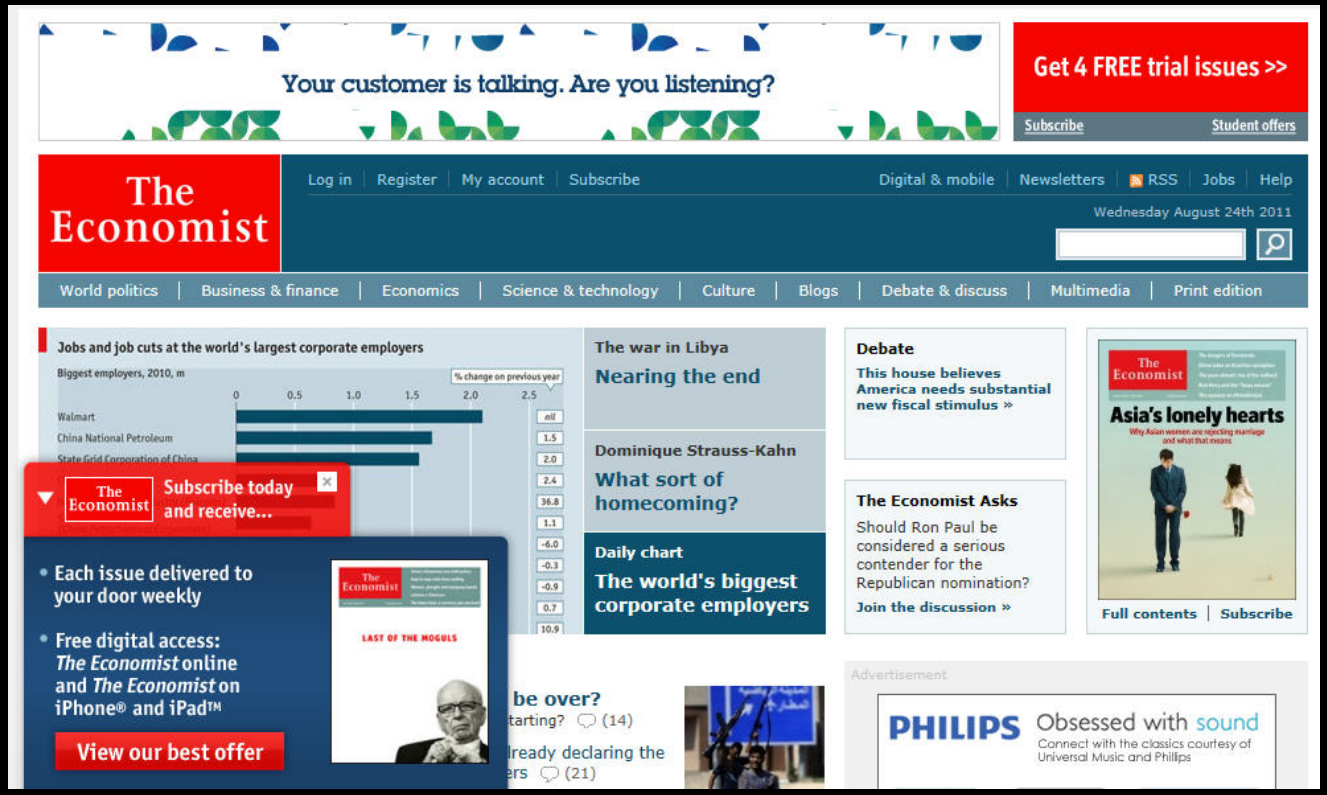
Drupal 7.18 and 6.27 released

More news...

DRUPAL POWERS 20% OF TOP 10,000



Who, What & Where Is Drupal?



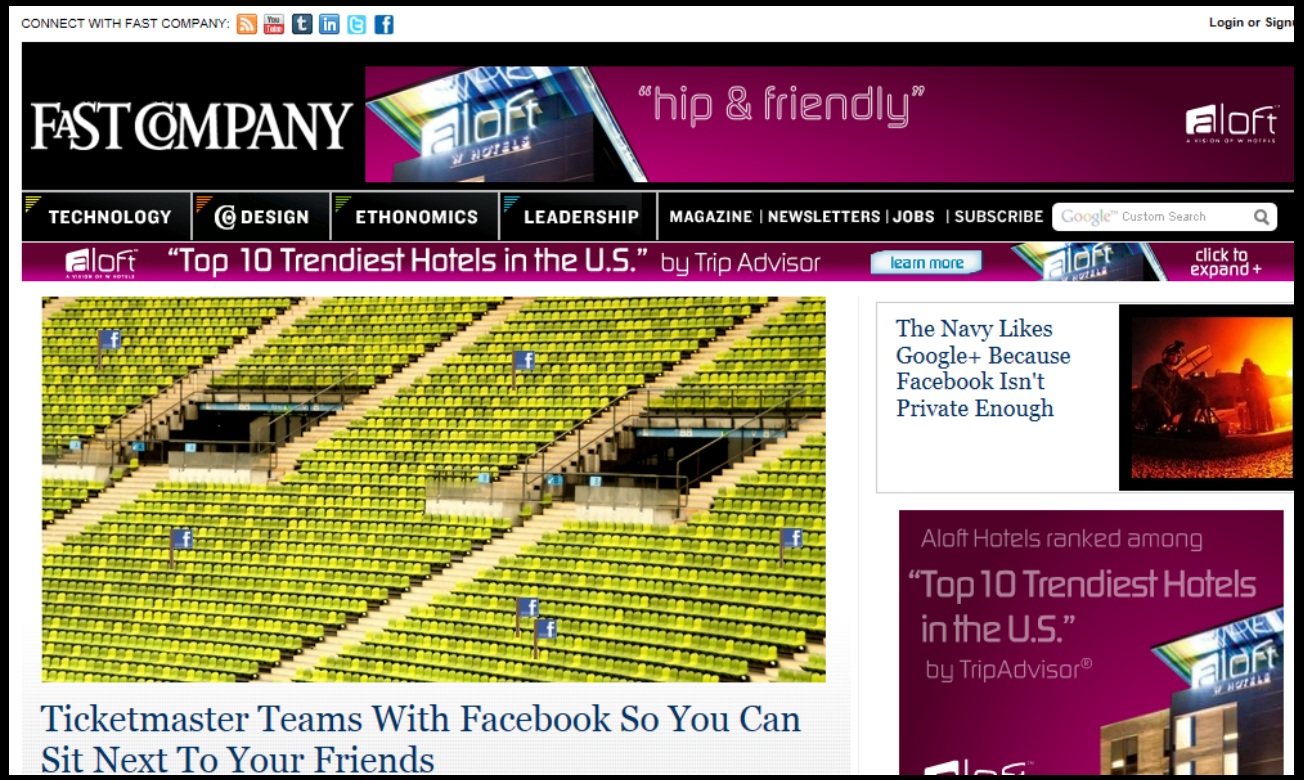
The Economist

20-30 million page views per month and 3-4 million unique visitors per month

Over 3 million registered users

Posting rate exceeds a comment per minute

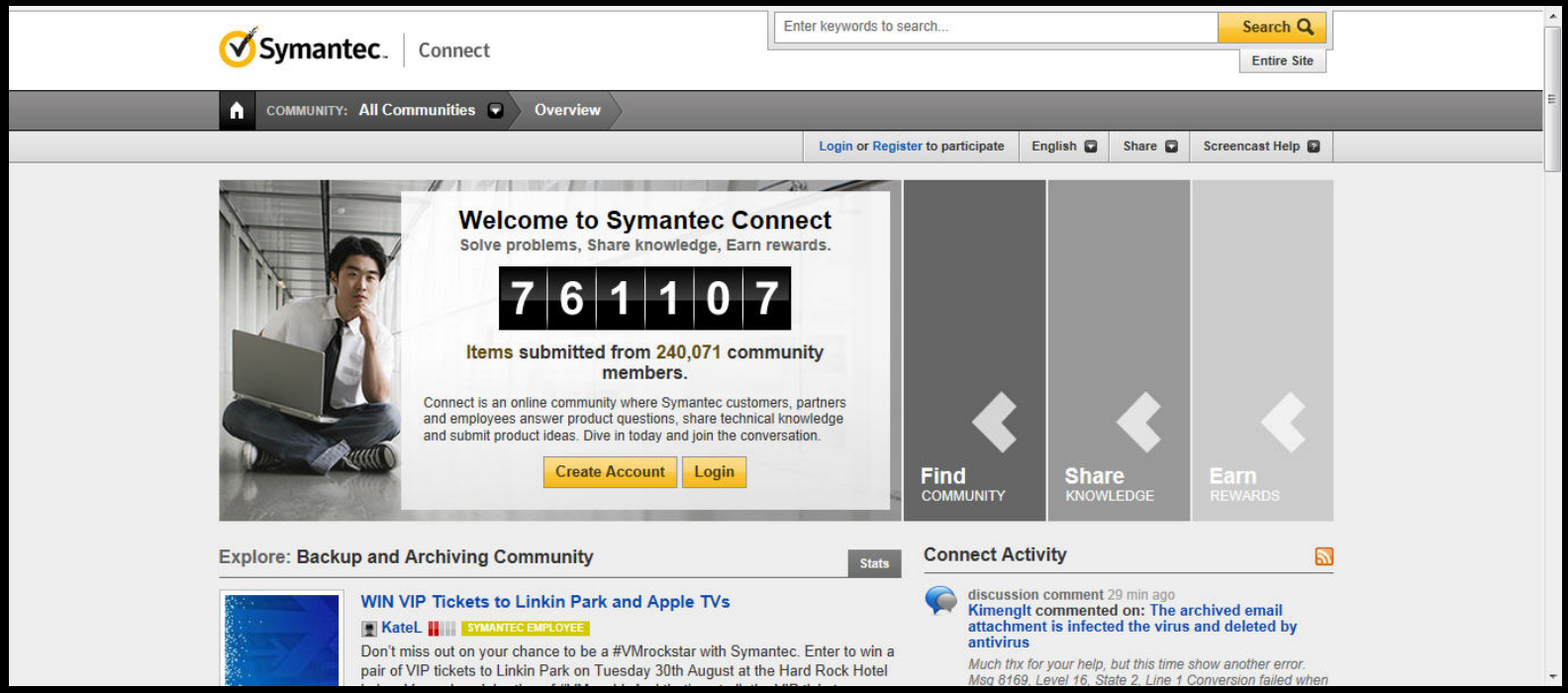
Who, What & Where Is Drupal?



Fast Company

15 million unique visitors per month

Who, What & Where Is Drupal?



Symantec Connect

3,000,000+ unique page views each month

More than 206,000+ registered users

Content base with 600,000+ combined nodes and comment

Who, What & Where Is Drupal?

WhiteHouse.org

Other Government Sites

Dept. of Commerce, World Economic forum, US House of Representatives

Who, What & Where Is Drupal?

Federal IT Dashboard

Federal government technology investment information - $75 billion budget

Contributed back to the Drupal open source organization - http://drupal.org/node/1100308

Who, What & Where Is Drupal?

making waves with drupal

www.sagetree.net

The CMS Landscape

- **Drupal** – "Enterprise Class"
  but not for the faint of heart!
- **Joomla** – Chaotic code base,
  big in government
- **WordPress** – Blogging, smaller sites,
  easier to get up and running, but doesn't
  scale nor have the enterprise
  development tools
- **SharePoint** – Corporate intranets

Site Build in 7 Easy Steps

Step 1 – Install Drupal, Modules and Libs

Step 2 – Content types, Fields and Taxonomy

Step 3 – User, Roles and Permissions

Step 4 – Themes, Blocks, Regions and Menus

Step 5 – Views

Step 6 – Other stuff: Image Styles, Pathauto, Webforms and CAPTCHA

Step 7 - Themes

Step 1 – Get Drupal Running

Setup a development environment

Create an empty mySQL database

Download Drupal core, modules and themes

Download javascript libraries

Load files into your development environment

Run Drupal installation script

Setup WYSISYG editor

LAMP/WAMP/MAMP Architecture

L – Linux

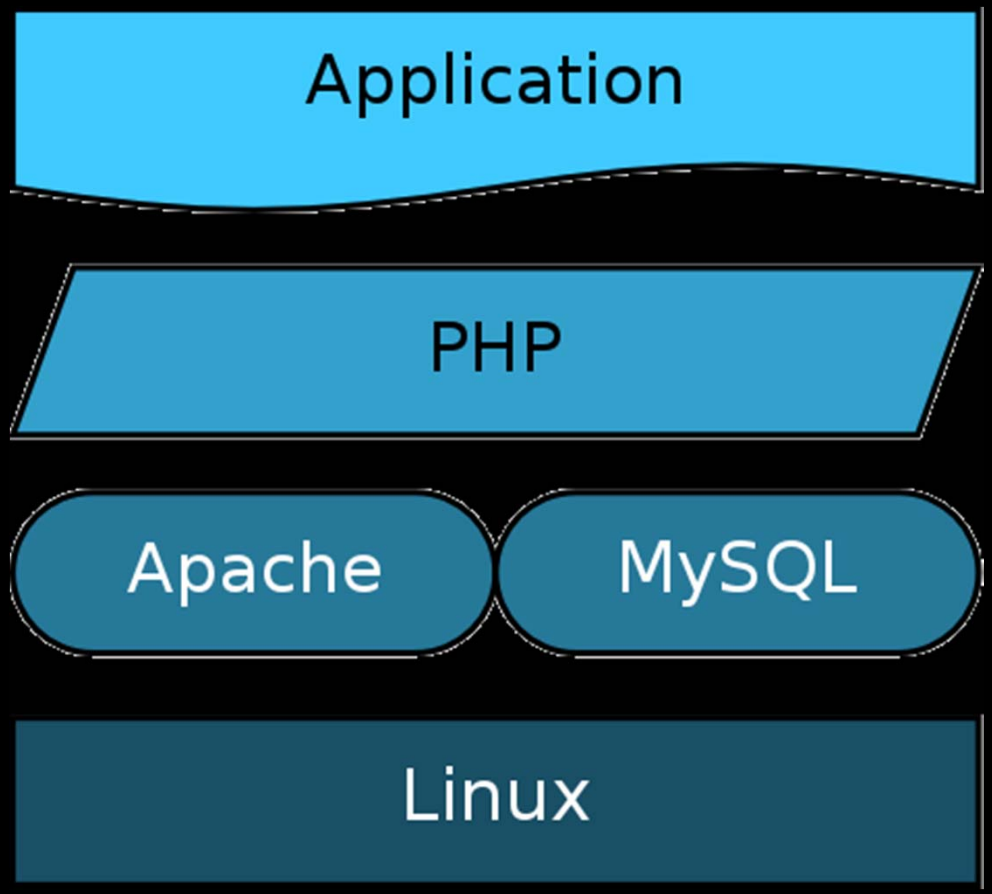
W – Windows

M – Mac OS

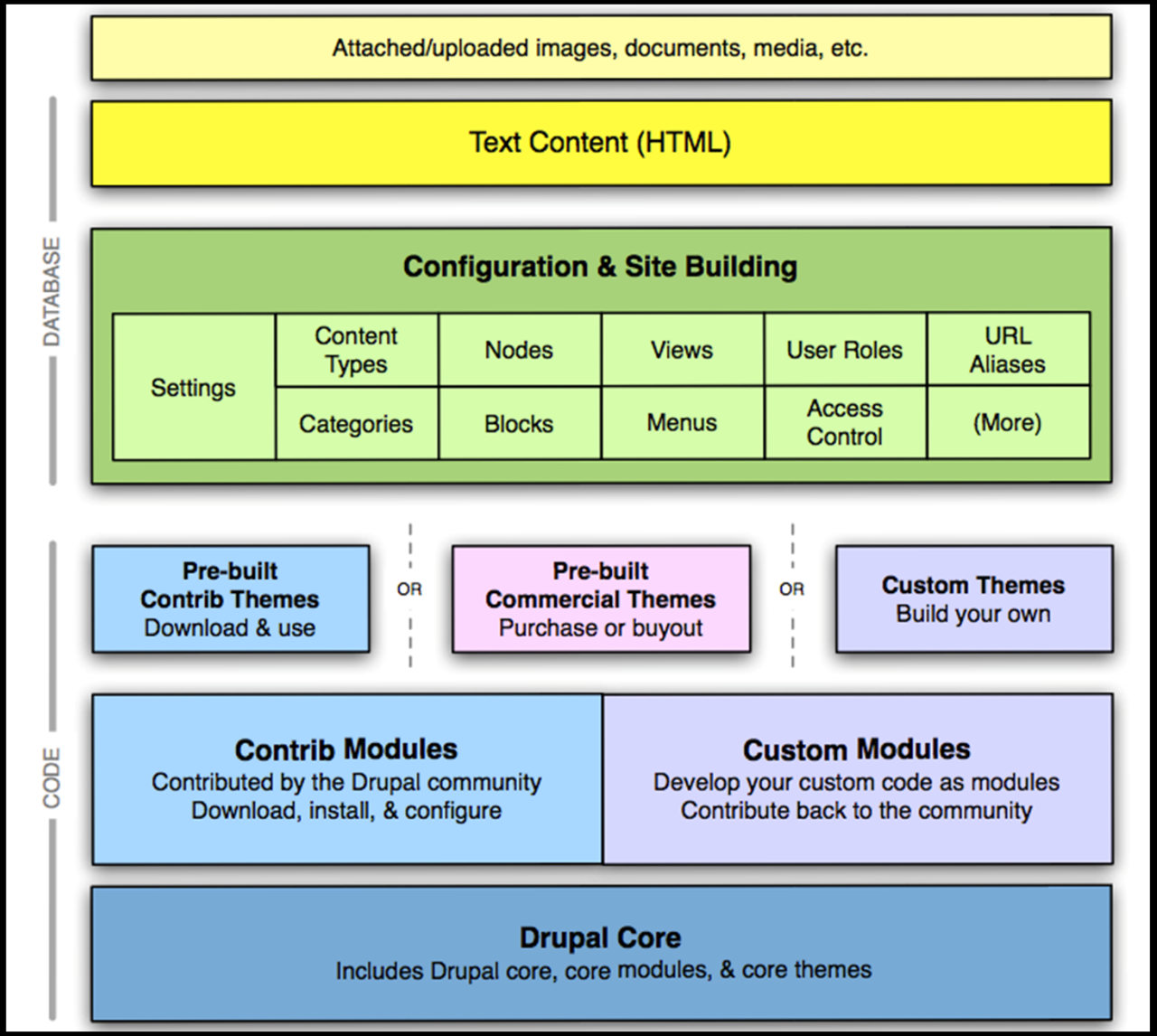
A – Apache

M – MySQL

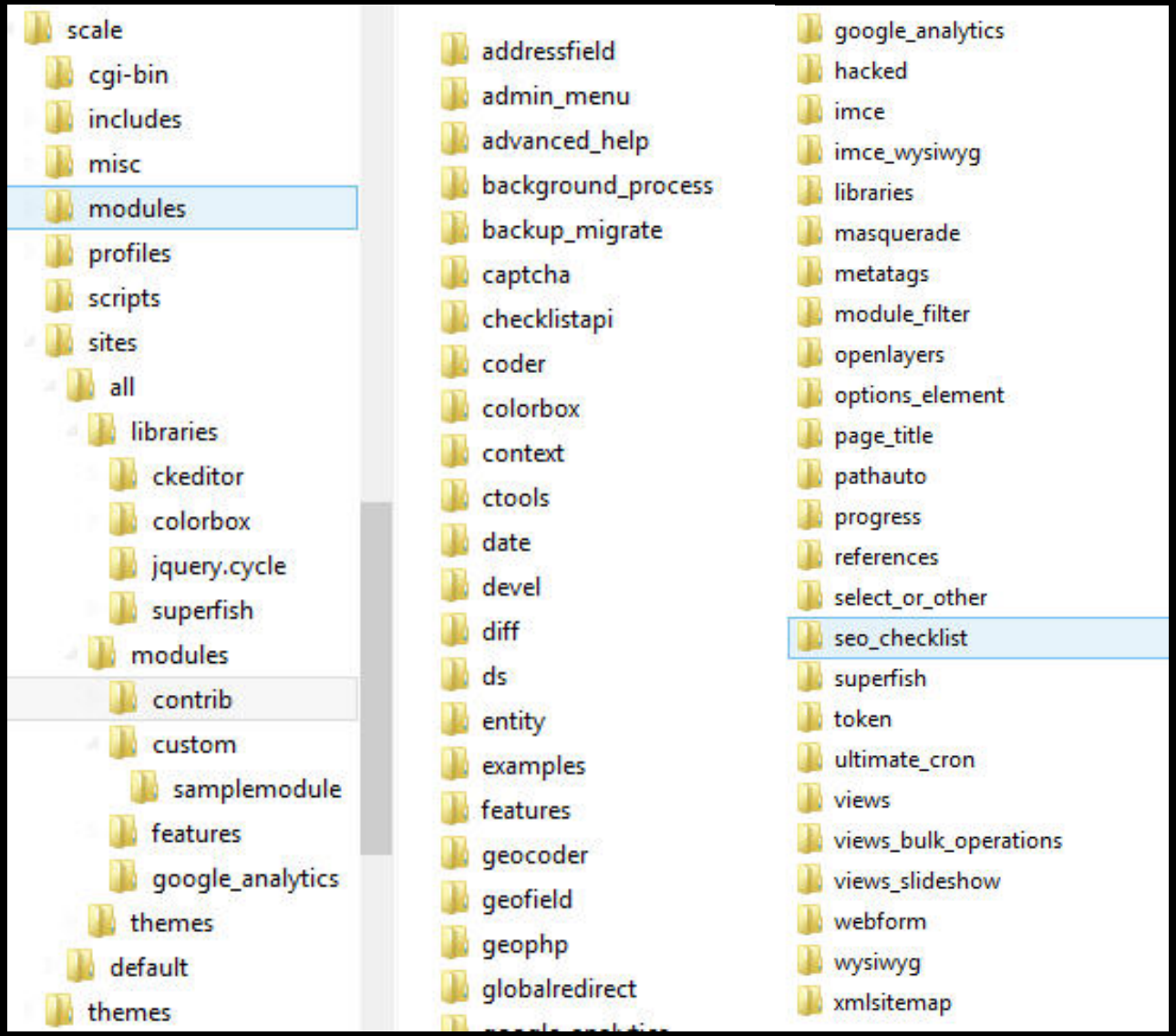
P – PHP



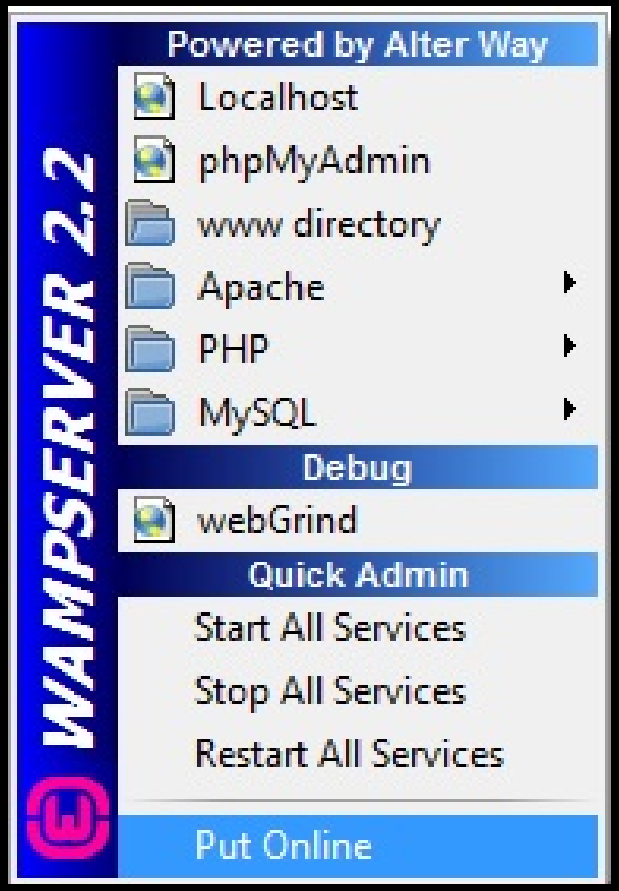
Architecture – Don't Hack Core!

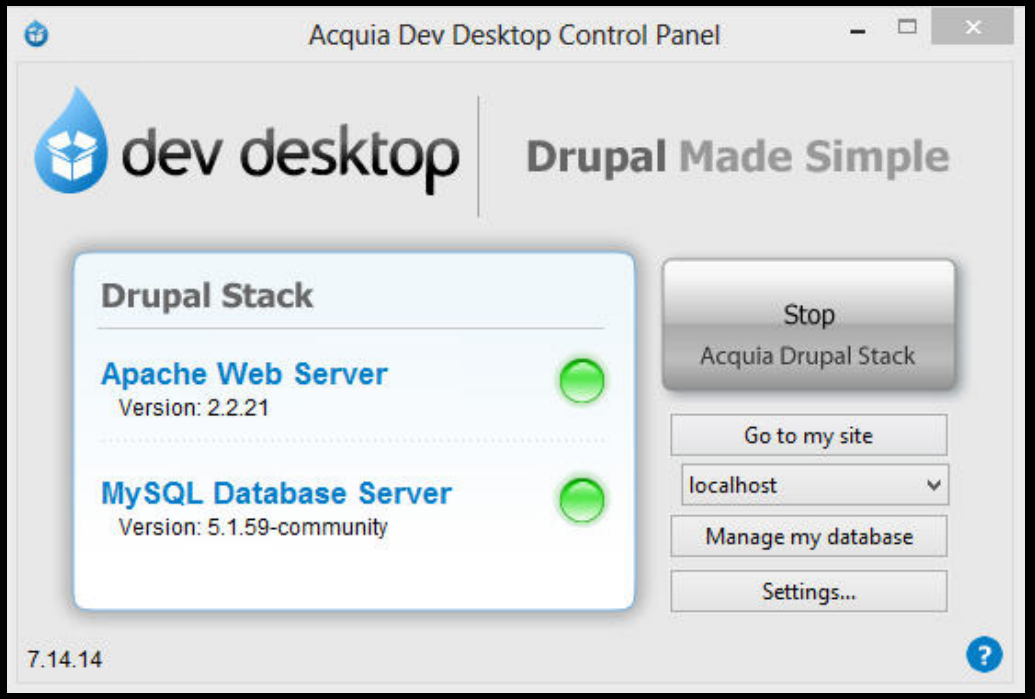


Architecture – Don't Hack Core!



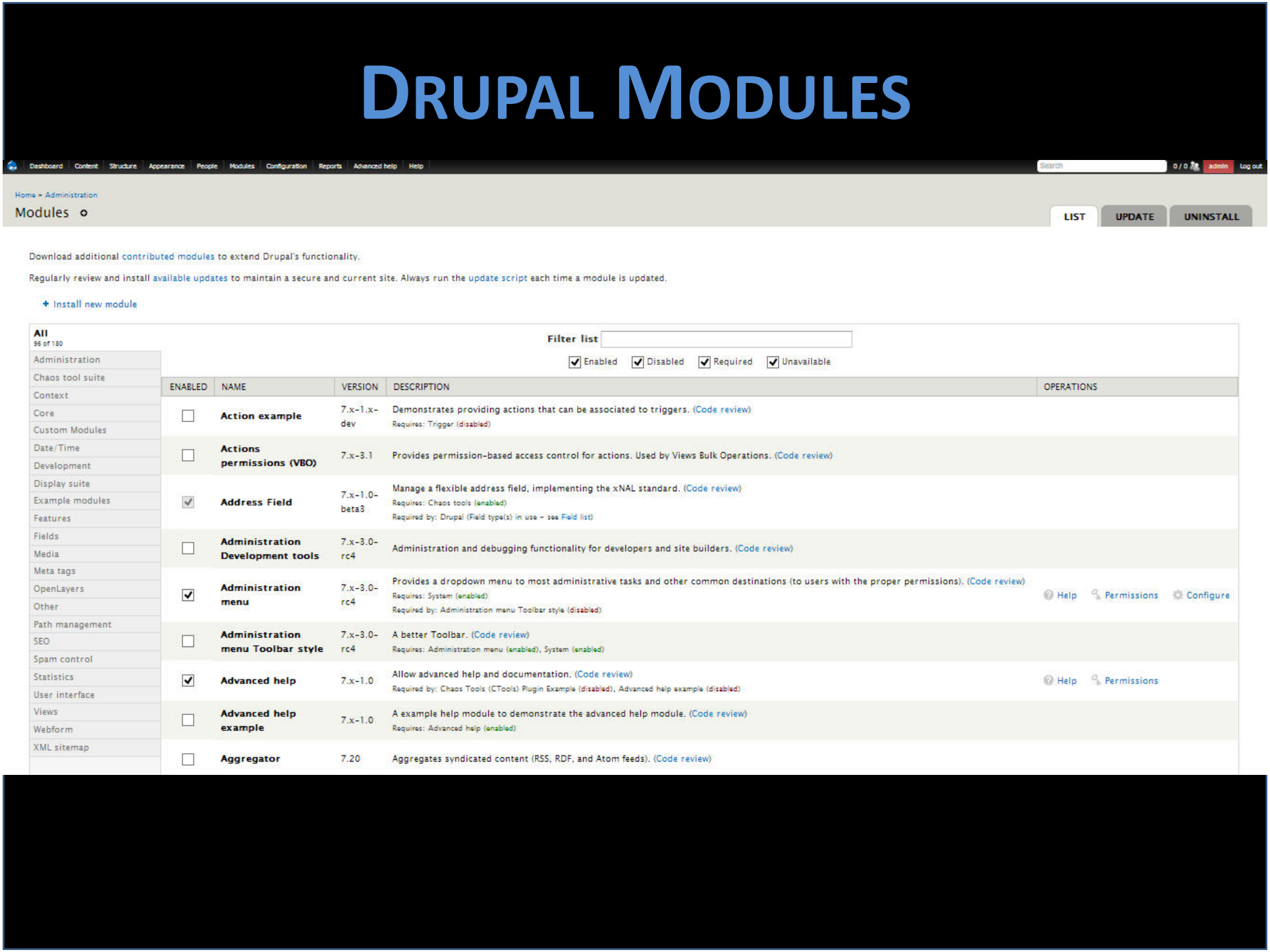
Local Development Environment





WAMP Server **Acquia Dev Desktop**

Drupal Modules



Step 2 – Content Types, Fields and Taxonomy

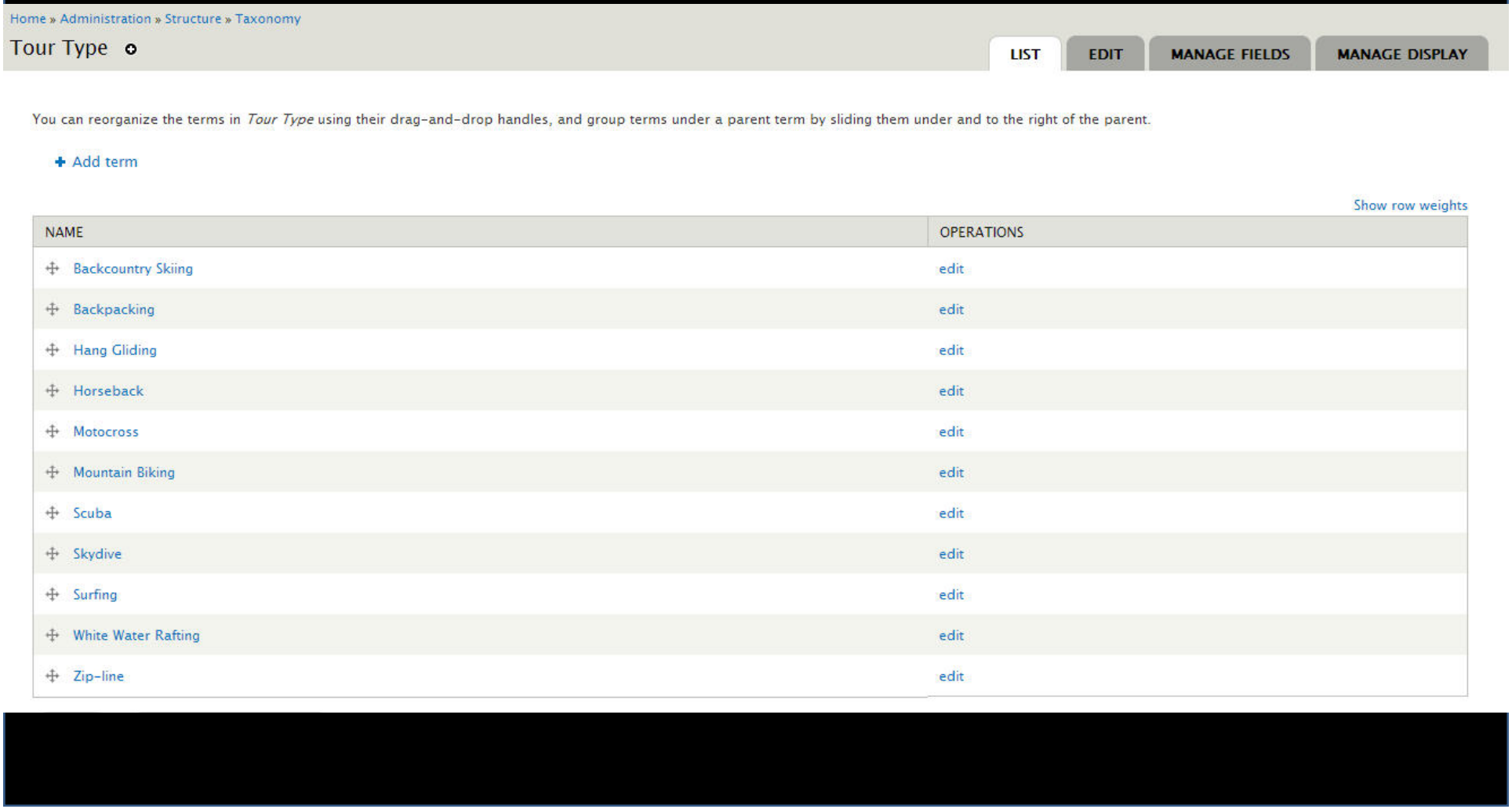
Tour

EDIT | MANAGE FIELDS | MANAGE DISPLAY

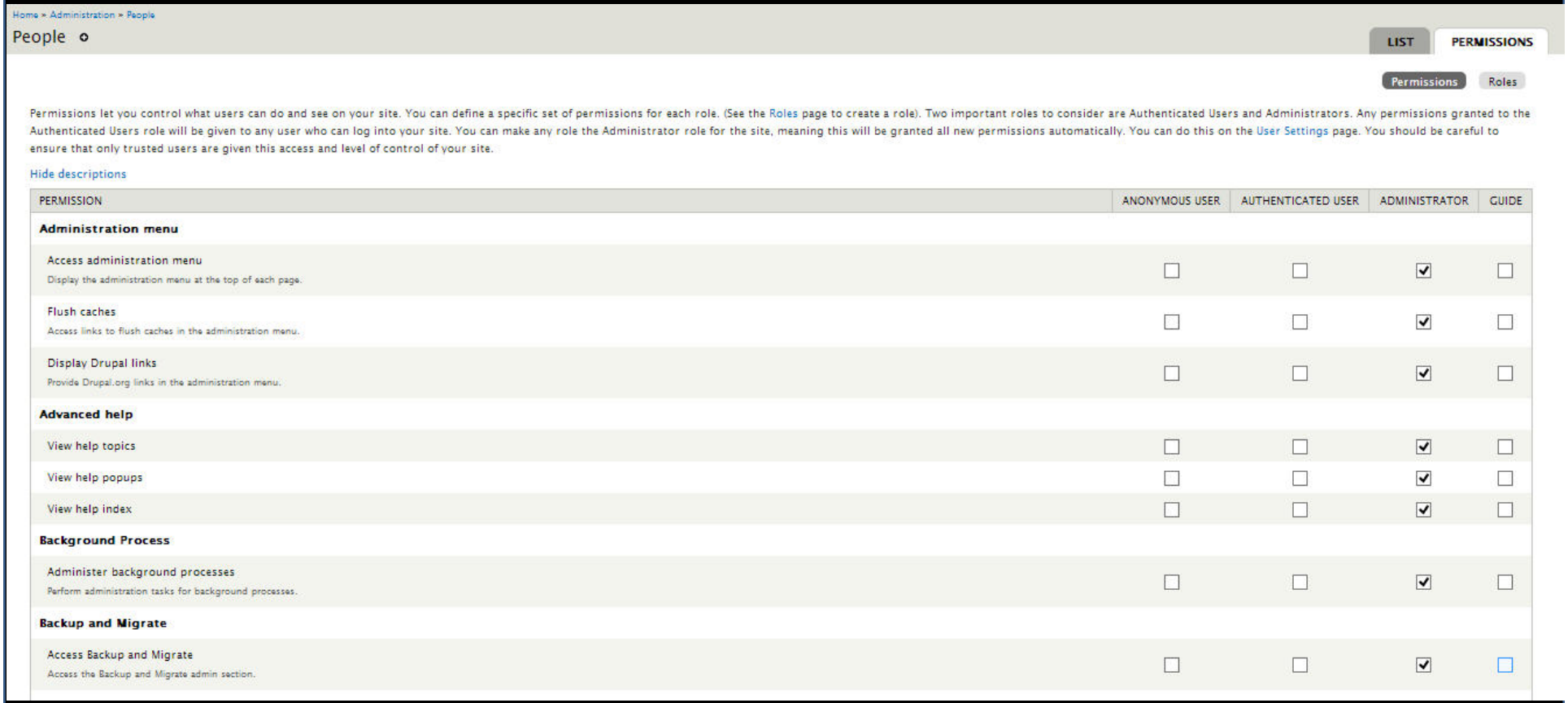
Show row weights

LABEL	MACHINE NAME	FIELD TYPE	WIDGET	OPERATIONS
Title	title	Node module element		
Photo	field_photo	Image	Image	edit delete
Type	field_type	Term reference	Select list	edit delete
Date	field_date	Date	Pop-up calendar	edit delete
Guide	field_guide	User reference	Select list	edit delete
Description	body	Long text and summary	Text area with a summary	edit delete
Address	field_address	Postal address	Dynamic address form	edit delete
Meta tags	metatags	Meta tag module form elements.		
URL path settings	path	Path module form elements		
XML sitemap	xmlsitemap	XML sitemap module element		
Geofield	field_geofield	Geofield	Geocode from another field	edit delete
Add new field				
Label		- Select a field type - Type of data to store.	- Select a widget - Form element to edit the data.	

Step 2 – Content Types, Fields and Taxonomy



Step 3 – Users, Roles, and Permissions



Step 4 – Themes, Blocks, Regions and Menus

Home » Administration

Appearance

Set and configure the default theme for your website. Alternative themes are available.

+ Install new theme

ENABLED THEMES

Corolla 7.x-3.0-rc1 (default theme)

Corolla is a subtheme of Adaptivetheme 7.x-3.x. To use this theme you must first download and install the 7.x-3.x version of Adaptivetheme. Corolla is colorable and has many theme settings for layout, fonts, headings and much more. Corolla also supports layouts for mobile devices such as tablets and smartphones.

Settings

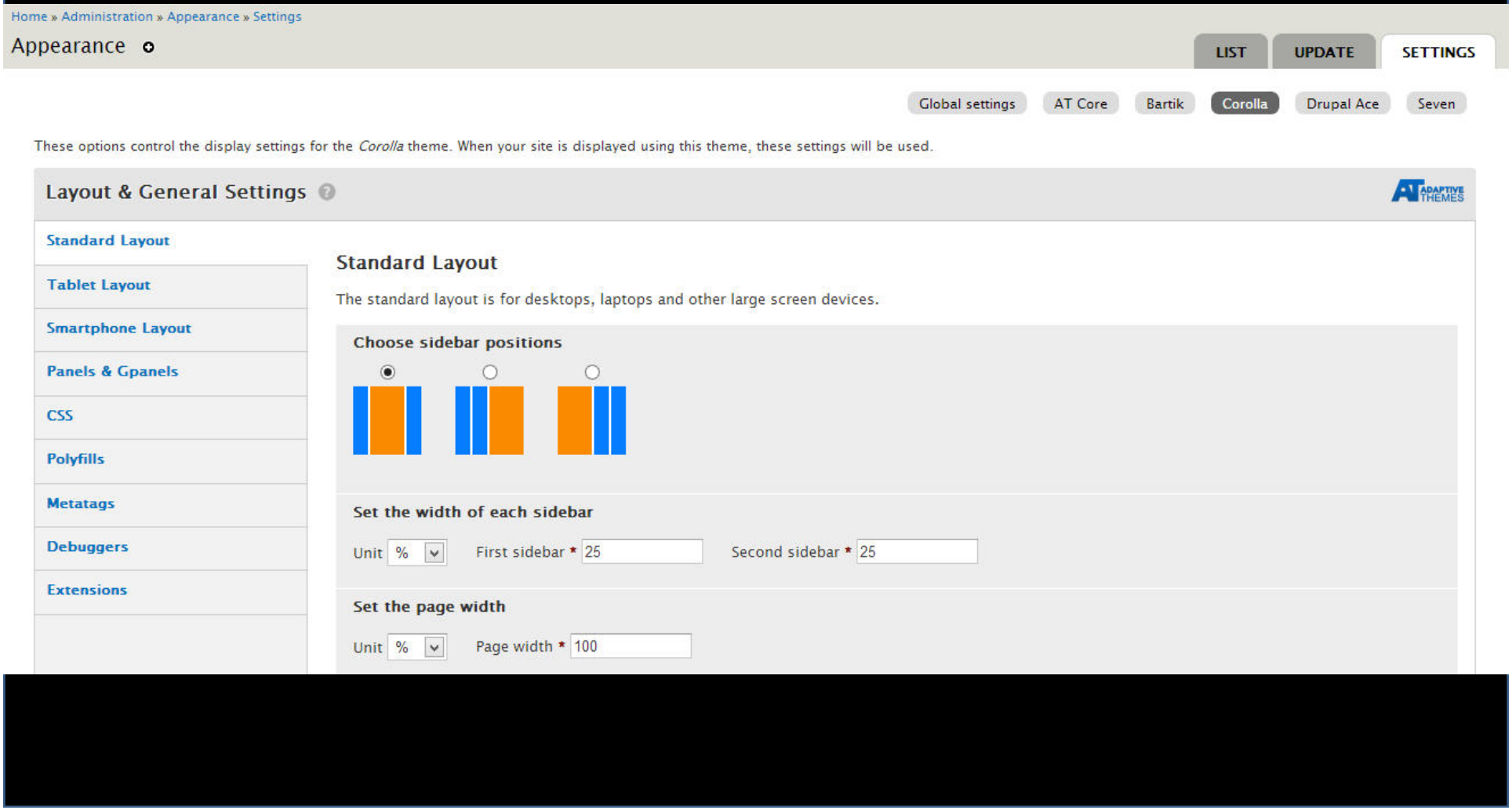
AT ADAPTIVE THEMES

AT Core 7.x-3.1

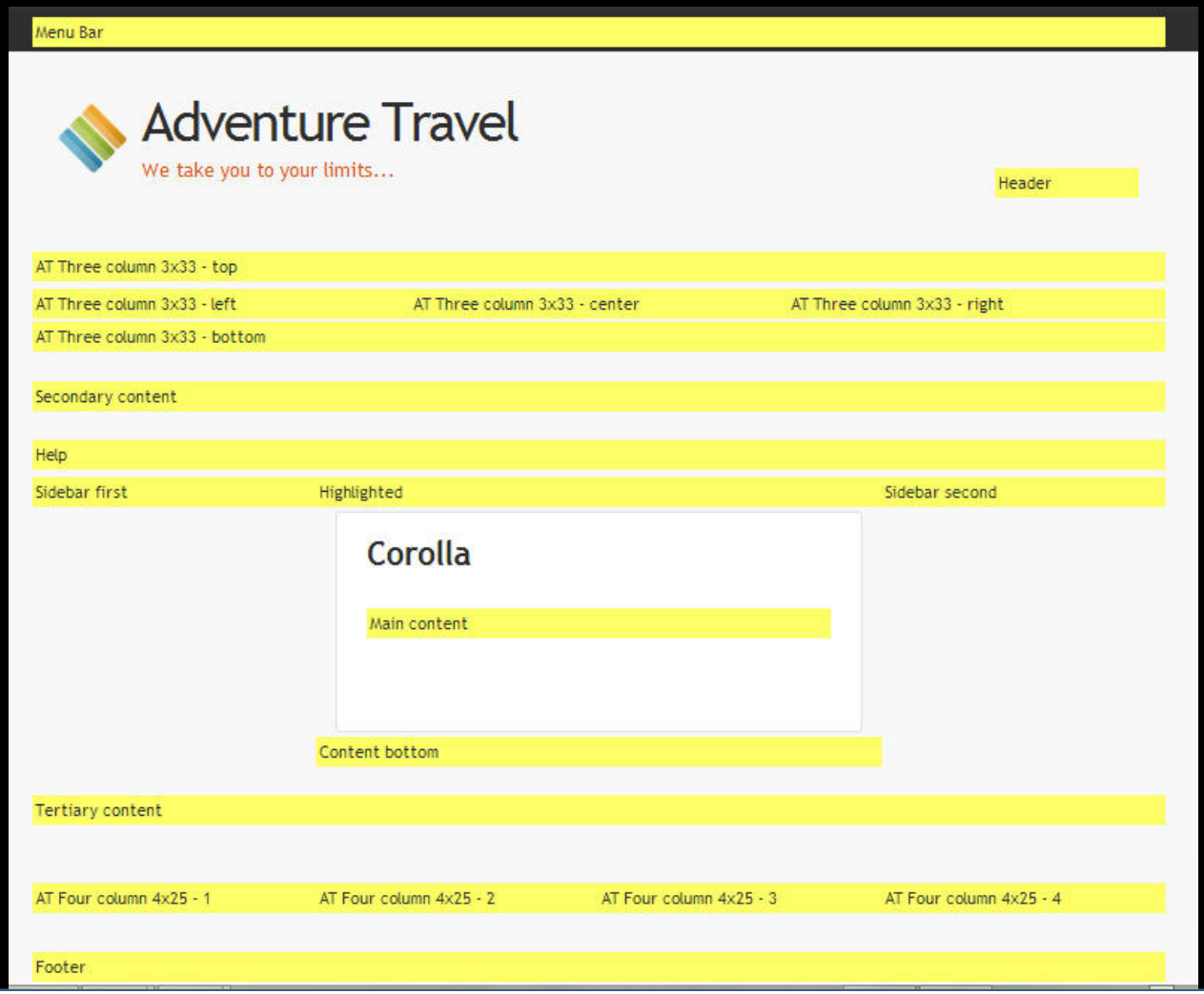
AT Core is the framework that drives the responsive layout system and provides an extensive set of tools for theme development. You do not need to enable this theme. Use the provided AT Subtheme to get started.

Settings | Disable | Set default

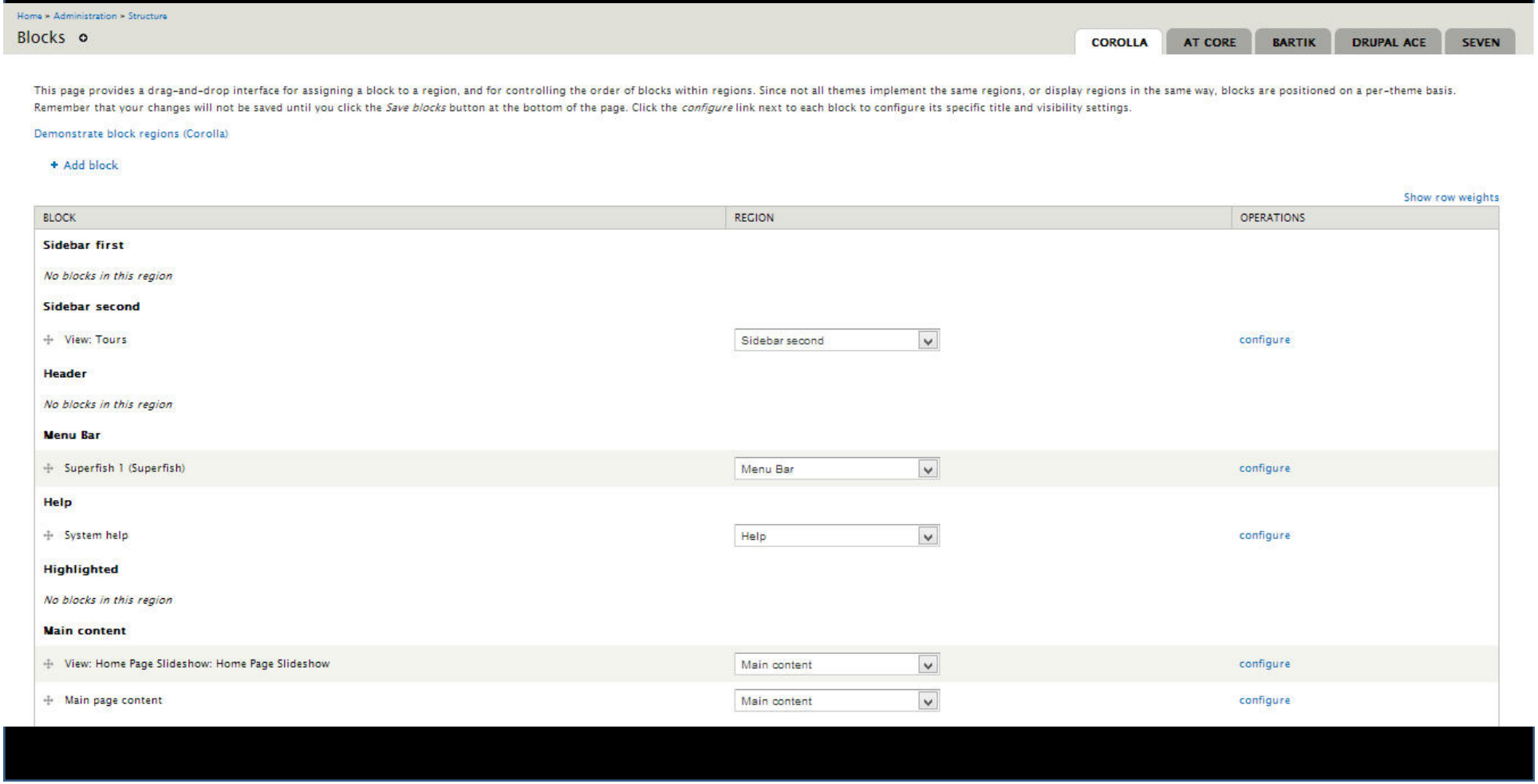
Step 4 – Themes, Blocks, Regions and Menus



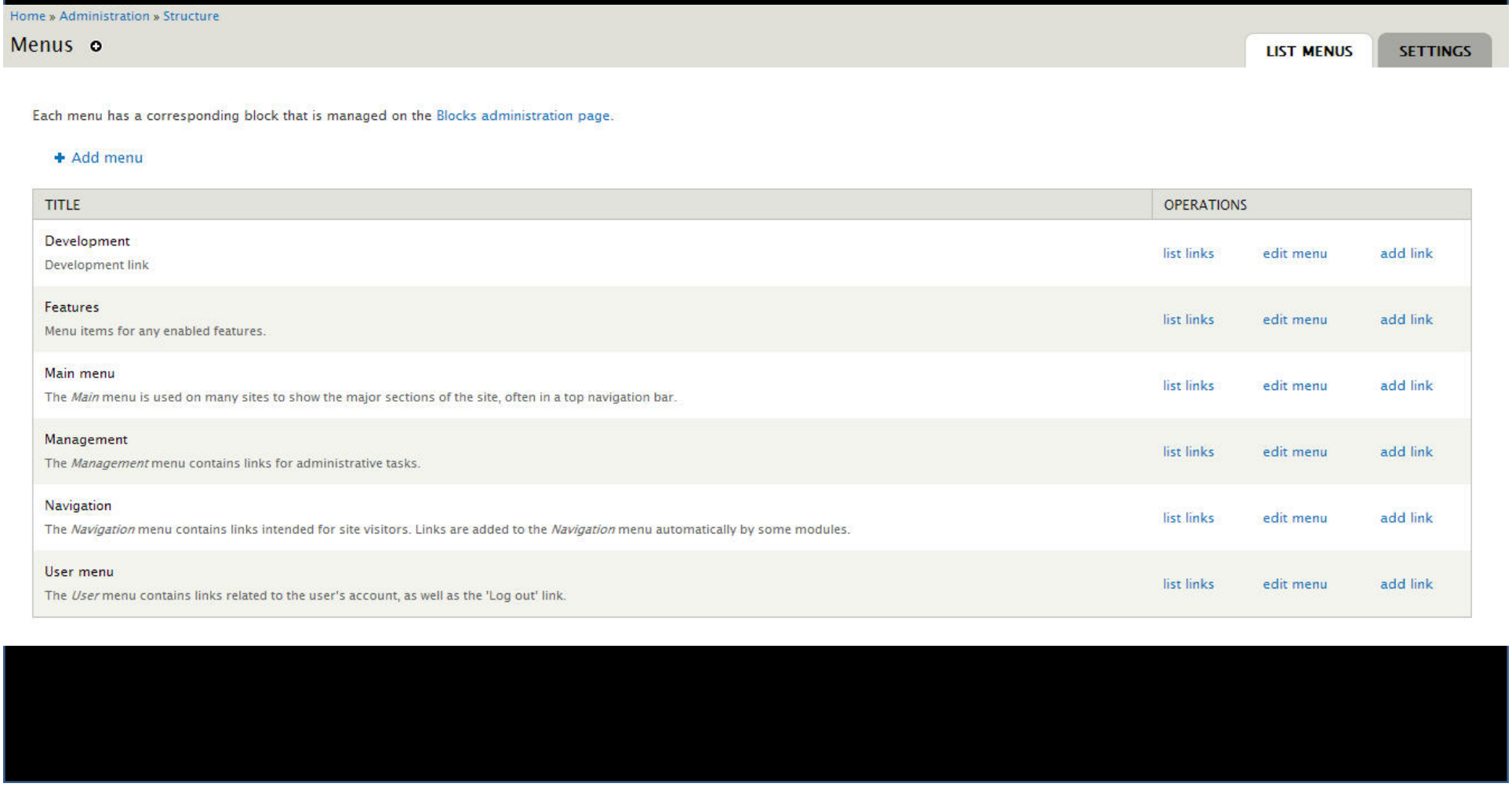
Step 4 – Themes, Blocks, Regions and Menus



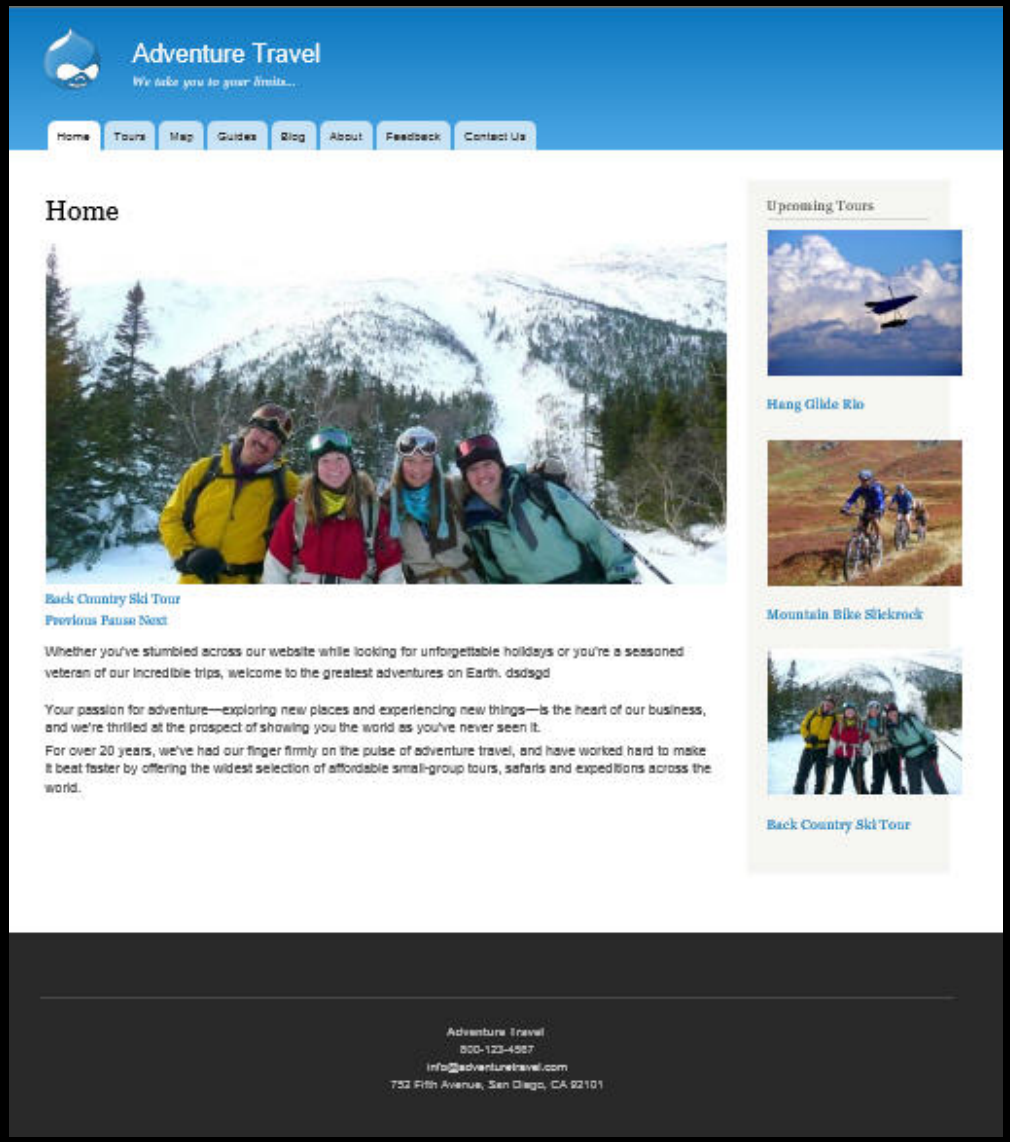
Step 4 – Themes, Blocks, Regions and Menus



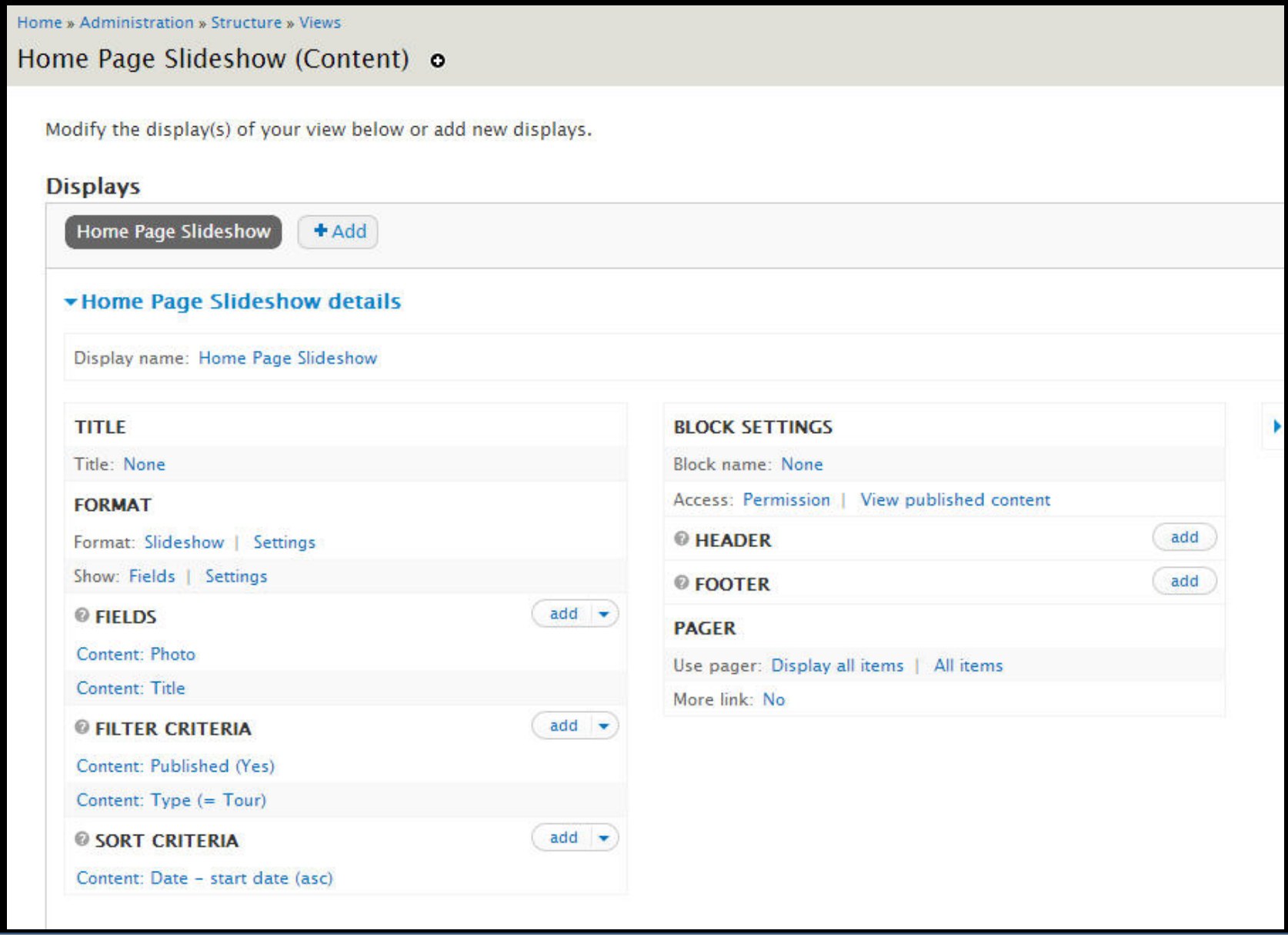
Step 4 – Themes, Blocks, Regions and Menus



Step 5 – Views


Adventure Travel
We take you to your limits...
Home
Tours
Map
Guides
Blog
About
Feedback
Contact Us
Home
Back Country Ski Tour
Previous Pause Next
Whether you've stumbled across our website while looking for unforgettable holidays or you're a seasoned veteran of our incredible trips, welcome to the greatest adventures on Earth. dsdsgd
Your passion for adventure—exploring new places and experiencing new things—is the heart of our business, and we're thrilled at the prospect of showing you the world as you've never seen it.
For over 20 years, we've had our finger firmly on the pulse of adventure travel, and have worked hard to make it beat faster by offering the widest selection of affordable small-group tours, safaris and expeditions across the world.
Upcoming Tours
Hang Glide Rio
Mountain Bike Slickrock
Back Country Ski Tour
Adventure Travel
800-123-4567
info@adventuretravel.com
752 Fifth Avenue, San Diego, CA 92101

Step 5 – Views


Home » Administration » Structure » Views
Home Page Slideshow (Content)
Modify the display(s) of your view below or add new displays.
Displays
Home Page Slideshow
+ Add
Home Page Slideshow details
Display name: Home Page Slideshow
TITLE
Title: None
FORMAT
Format: Slideshow | Settings
Show: Fields | Settings
FIELDS
add
Content: Photo
Content: Title
FILTER CRITERIA
add
Content: Published (Yes)
Content: Type (= Tour)
SORT CRITERIA
add
Content: Date - start date (asc)
BLOCK SETTINGS
Block name: None
Access: Permission | View published content
HEADER
add
FOOTER
add
PAGER
Use pager: Display all items | All items
More link: No

Step 5 – Views

Home | Tours | Guides | Blog | About | Feedback | Contact Us

Adventure Travel

We take you to your limits...

Upcoming Tours

Date: Wednesday, August 29, 2012

Photo	Title	Date	Type	Guide
	Hang Glide Rio	Wednesday, August 29, 2012	Tour	drake

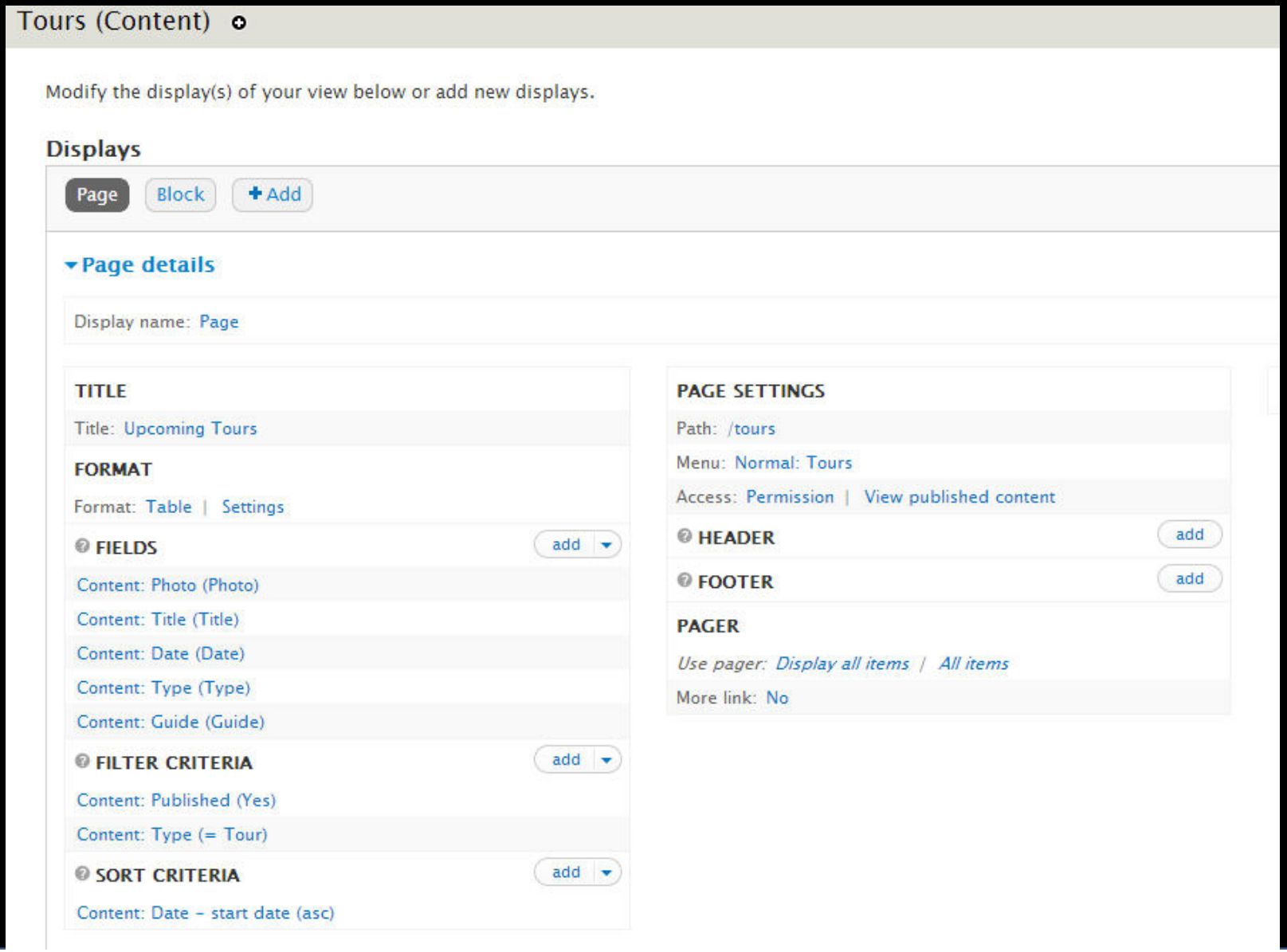
Date: Friday, August 31, 2012

Photo	Title	Date	Type	Guide
	Mountain Bike Slickrock	Friday, August 31, 2012	Tour	anne

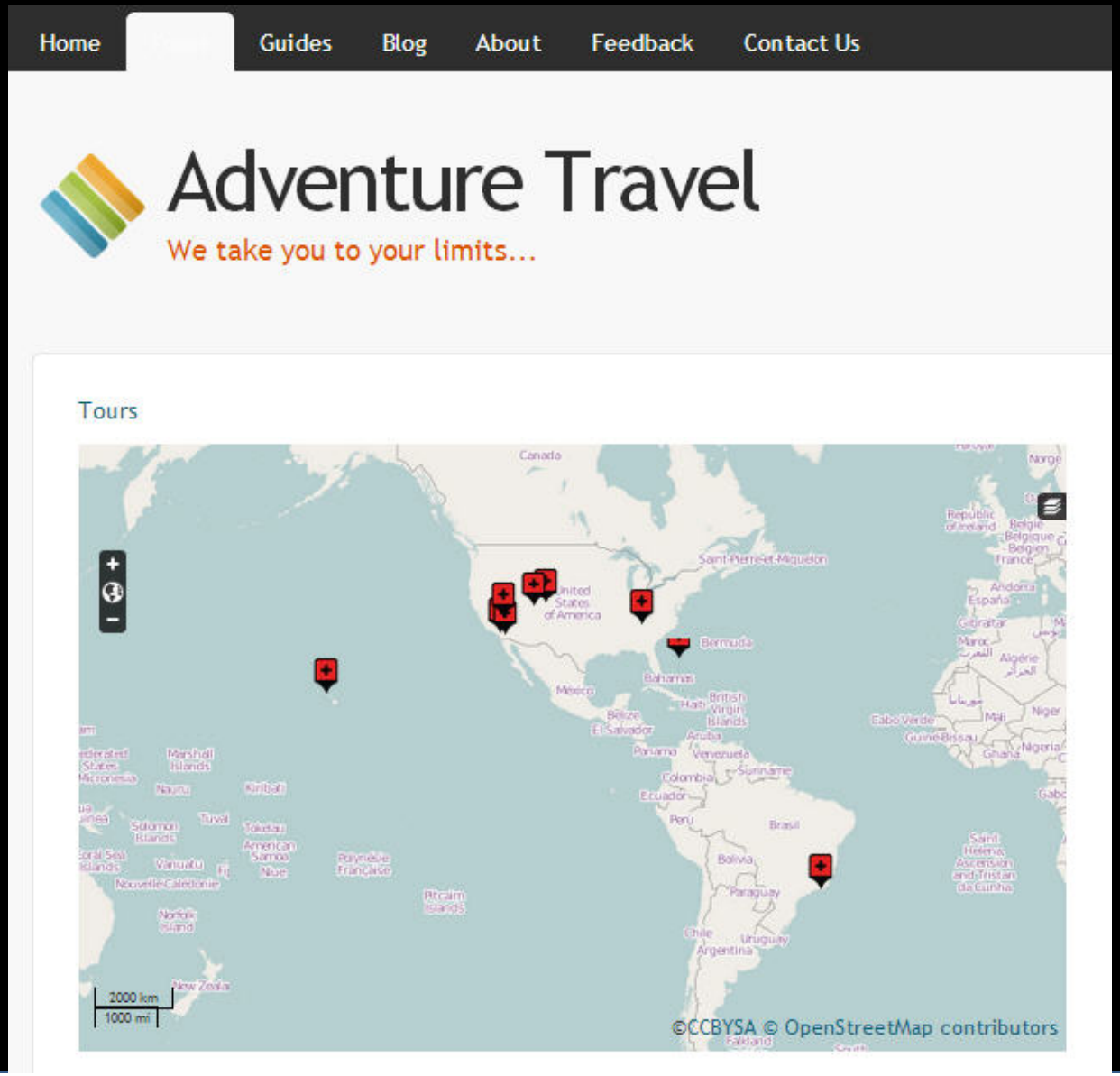
Date: Saturday, September 15, 2012

Photo	Title	Date	Type	Guide

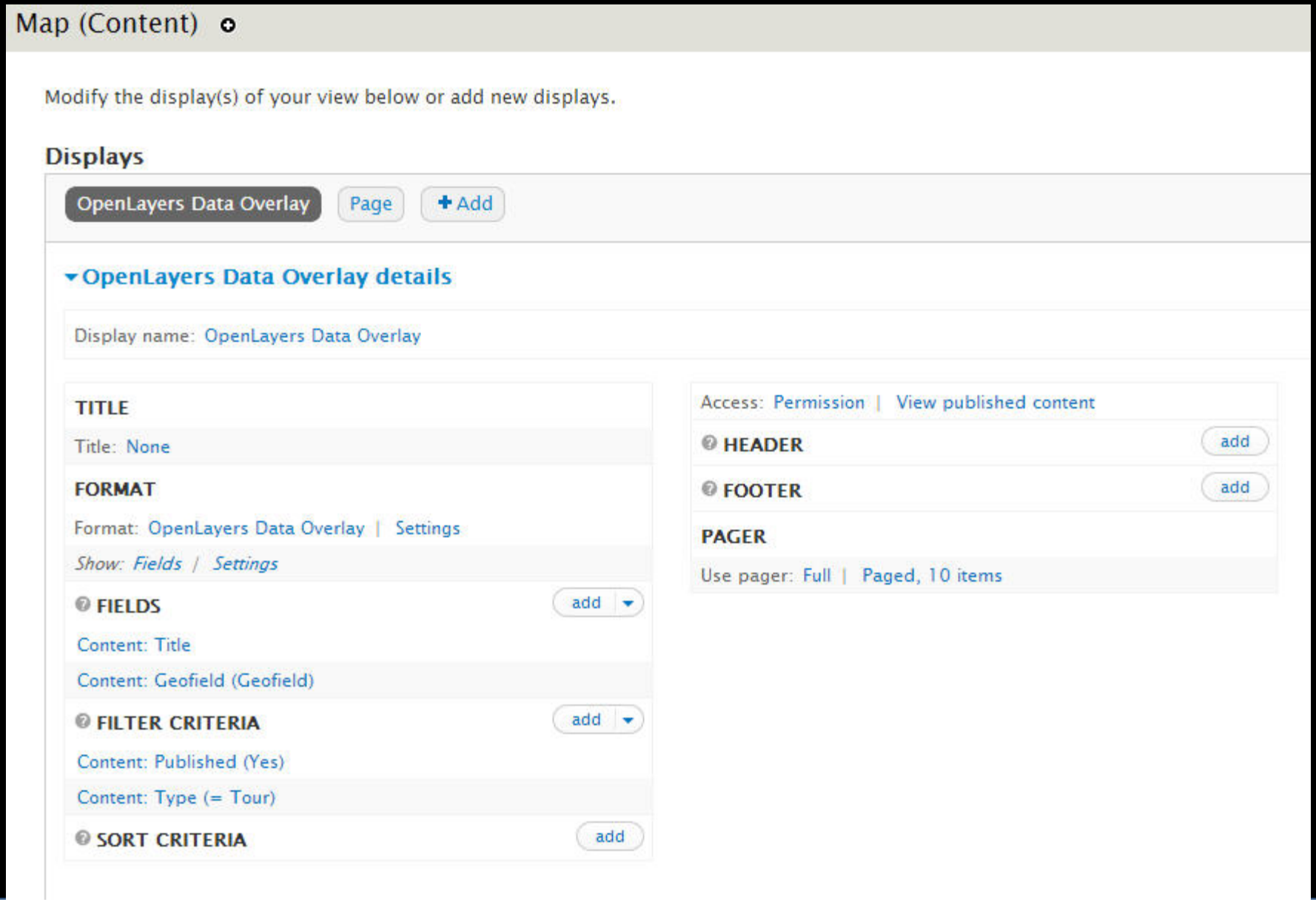
Step 5 – Views


Tours (Content)
Modify the display(s) of your view below or add new displays.
Displays
Page
Block
Add
Page details
Display name: Page
TITLE
Title: Upcoming Tours
FORMAT
Format: Table | Settings
FIELDS
add
Content: Photo (Photo)
Content: Title (Title)
Content: Date (Date)
Content: Type (Type)
Content: Guide (Guide)
FILTER CRITERIA
add
Content: Published (Yes)
Content: Type (= Tour)
SORT CRITERIA
add
Content: Date - start date (asc)
PAGE SETTINGS
Path: /tours
Menu: Normal: Tours
Access: Permission | View published content
HEADER
add
FOOTER
add
PAGER
Use pager: Display all items | All items
More link: No

Step 5 – Views


Home
Guides
Blog
About
Feedback
Contact Us
Adventure Travel
We take you to your limits...
Tours
2000 km
1000 mi
©CCBYSA © OpenStreetMap contributors

Step 5 – Views


Map (Content)
Modify the display(s) of your view below or add new displays.
Displays
OpenLayers Data Overlay
Page
+ Add
OpenLayers Data Overlay details
Display name: OpenLayers Data Overlay
TITLE
Title: None
FORMAT
Format: OpenLayers Data Overlay | Settings
Show: Fields | Settings
FIELDS
add
Content: Title
Content: Geofield (Geofield)
FILTER CRITERIA
add
Content: Published (Yes)
Content: Type (= Tour)
SORT CRITERIA
add
Access: Permission | View published content
HEADER
add
FOOTER
add
PAGER
Use pager: Full | Paged, 10 items

Step 6 – Image Styles, PathAuto, Webforms and CAPTCHA

Home » Administration » Configuration » Media » Image styles

Edit *tour* style

Preview

original (view actual size)

600px

800px

tour (view actual size)

250px

450px

Image style name *

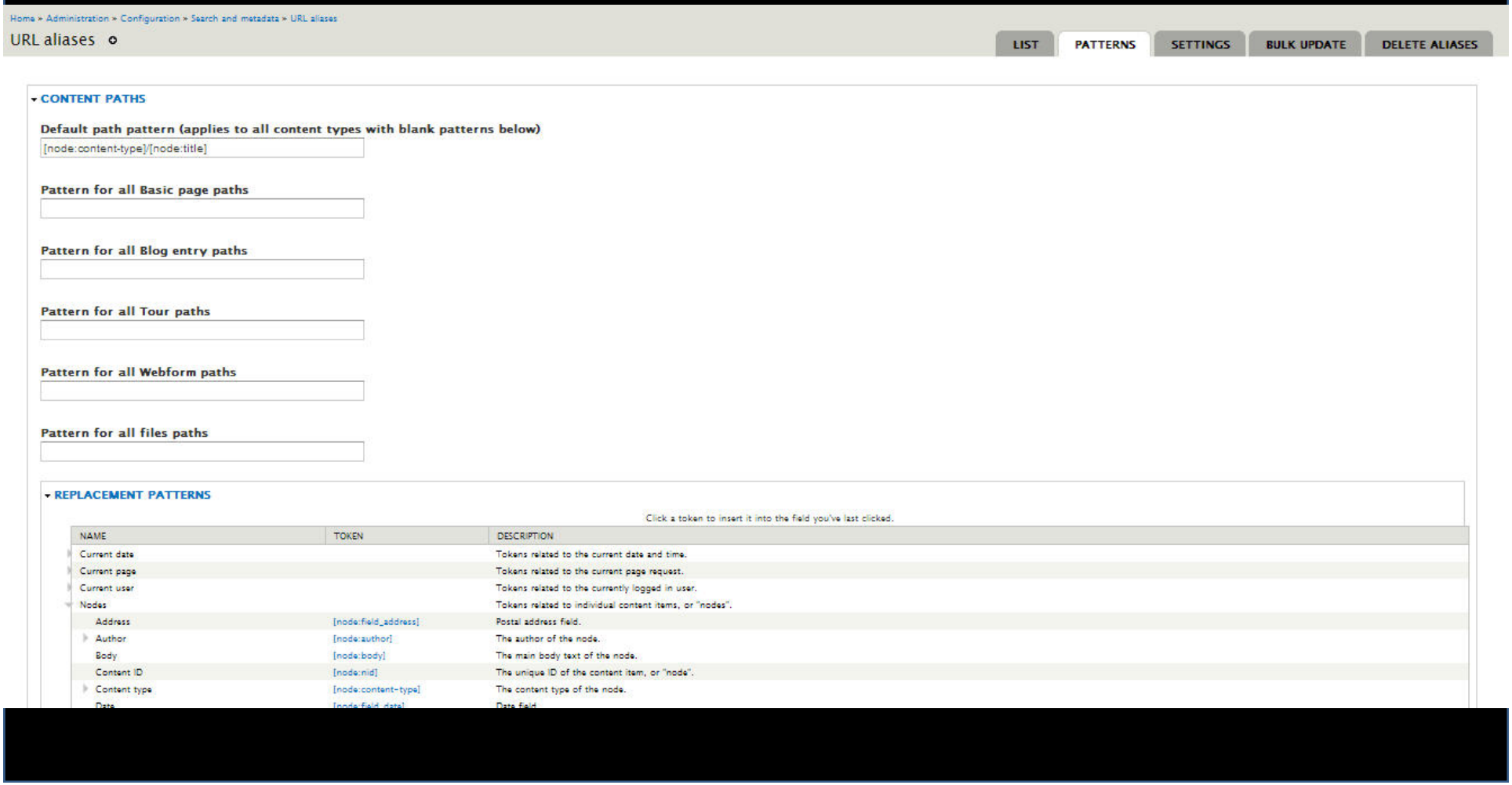
tour

The name is used in URLs for generated images. Use only lowercase alphanumeric characters, underscores (_), and hyphens (-).

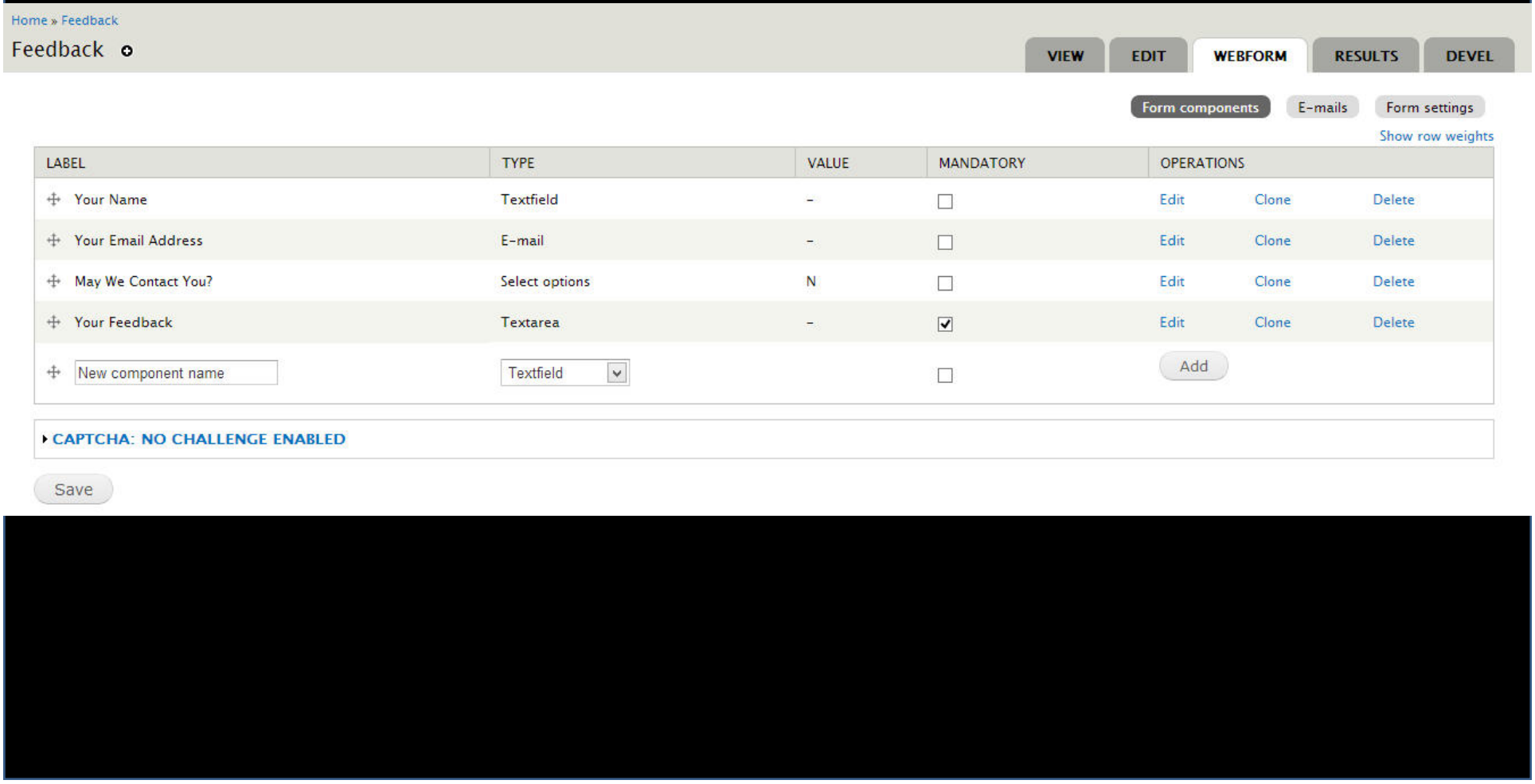
EFFECT	OPERATIONS
Scale and crop 450x250	edit
Select a new effect Add	

Update style

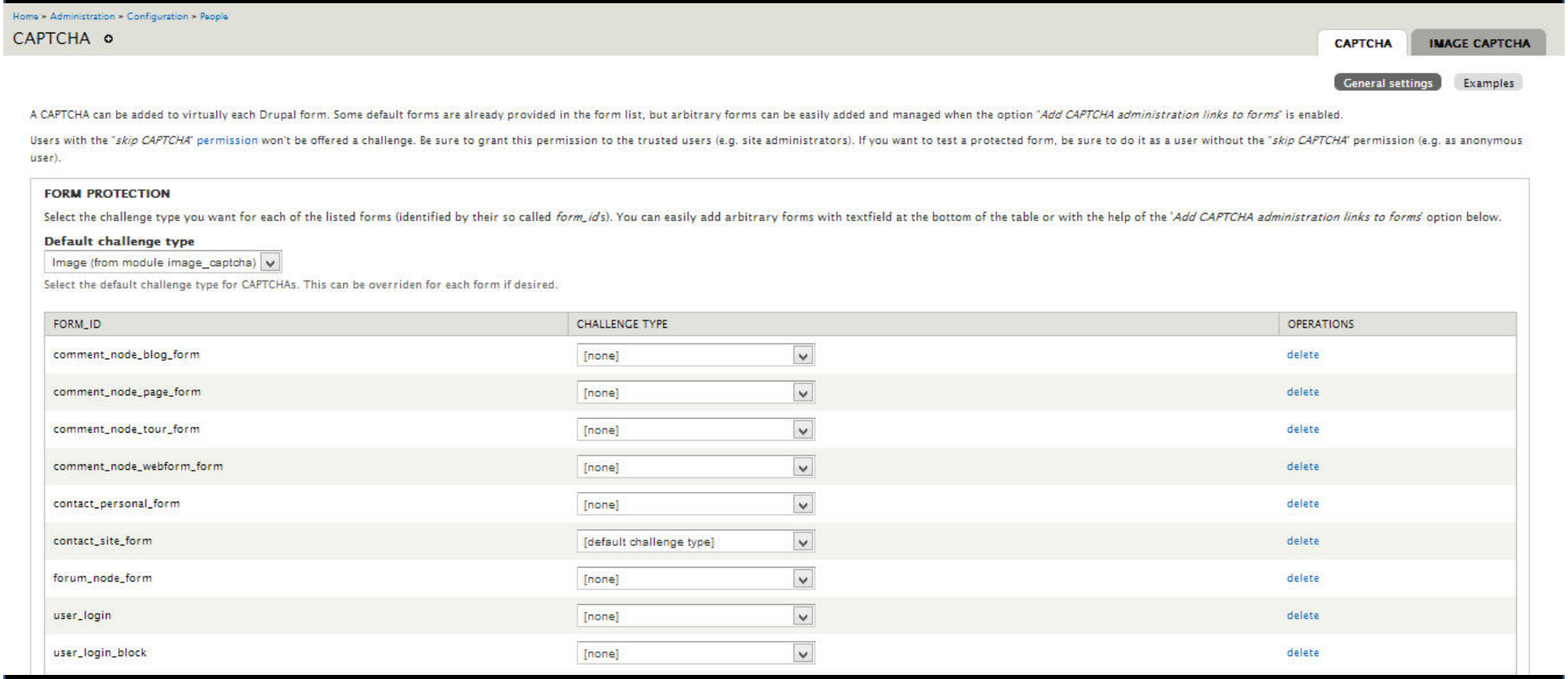
Step 6 – Image Styles, PathAuto, Webforms and CAPTCHA



Step 6 – Image Styles, PathAuto, Webforms and CAPTCHA



Step 6 – Image Styles, PathAuto, Webforms and CAPTCHA



Step 7 – Pick a Theme

Contributed Themes

Starter Themes

Themes from scratch

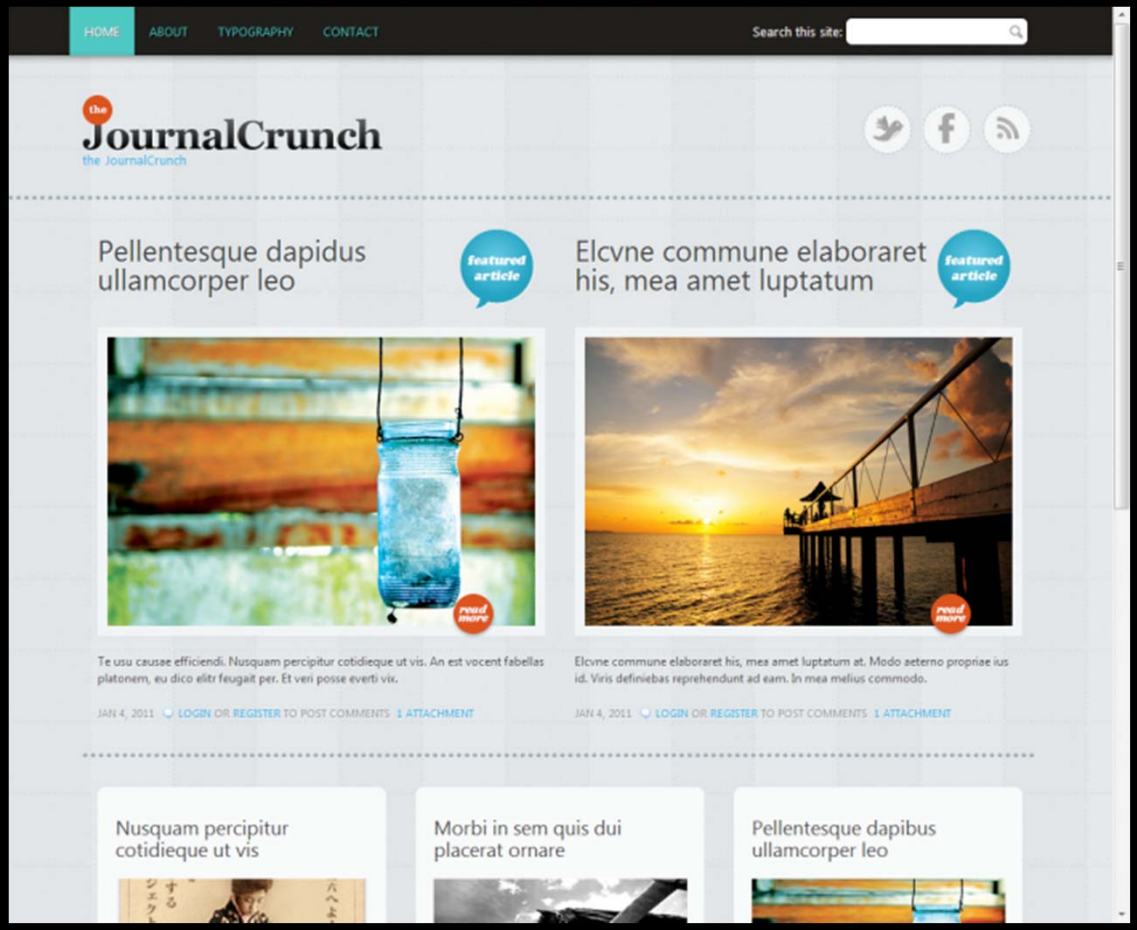
PHPTemplate Engine

Templates files and template suggestions

Template.php

Step 7 – Pick a Theme

Some Themes Are Complete

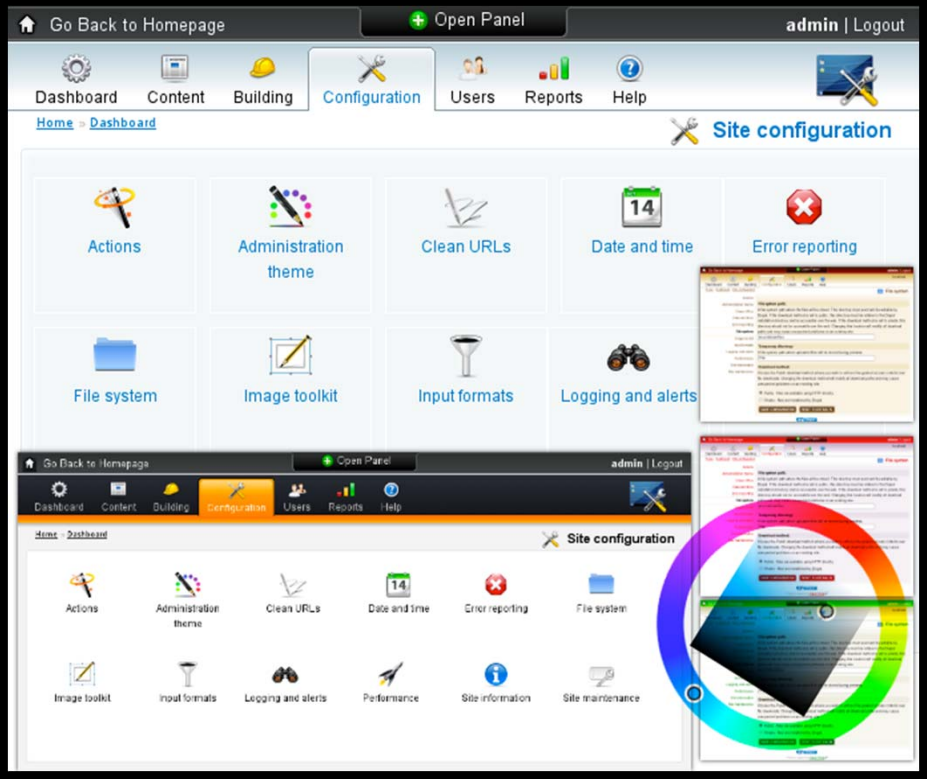


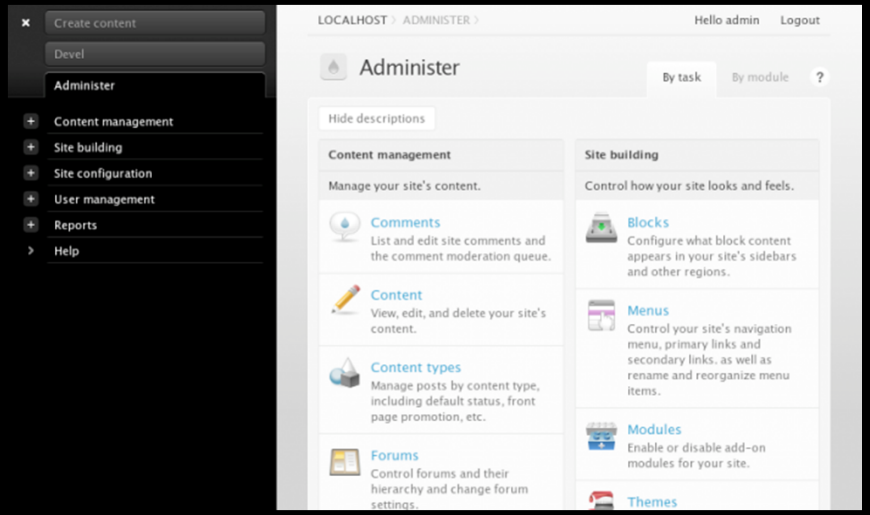
Step 7 – Pick a Theme

Some Themes Are Starting Points

Step 7 – Pick a Theme

Some Are Administration Themes





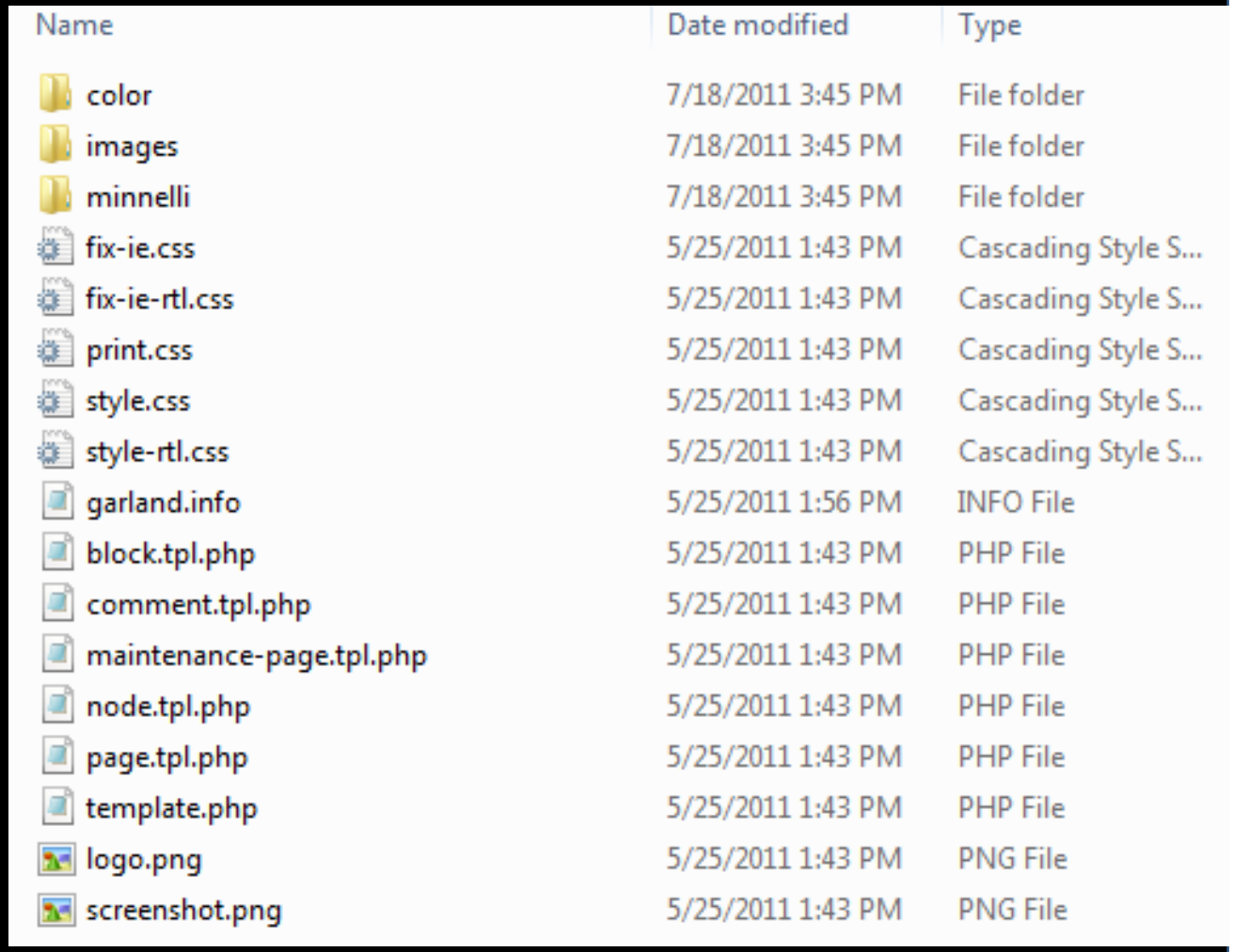
Step 7 – Pick a Theme

CSS

Images

Javascript

Templates



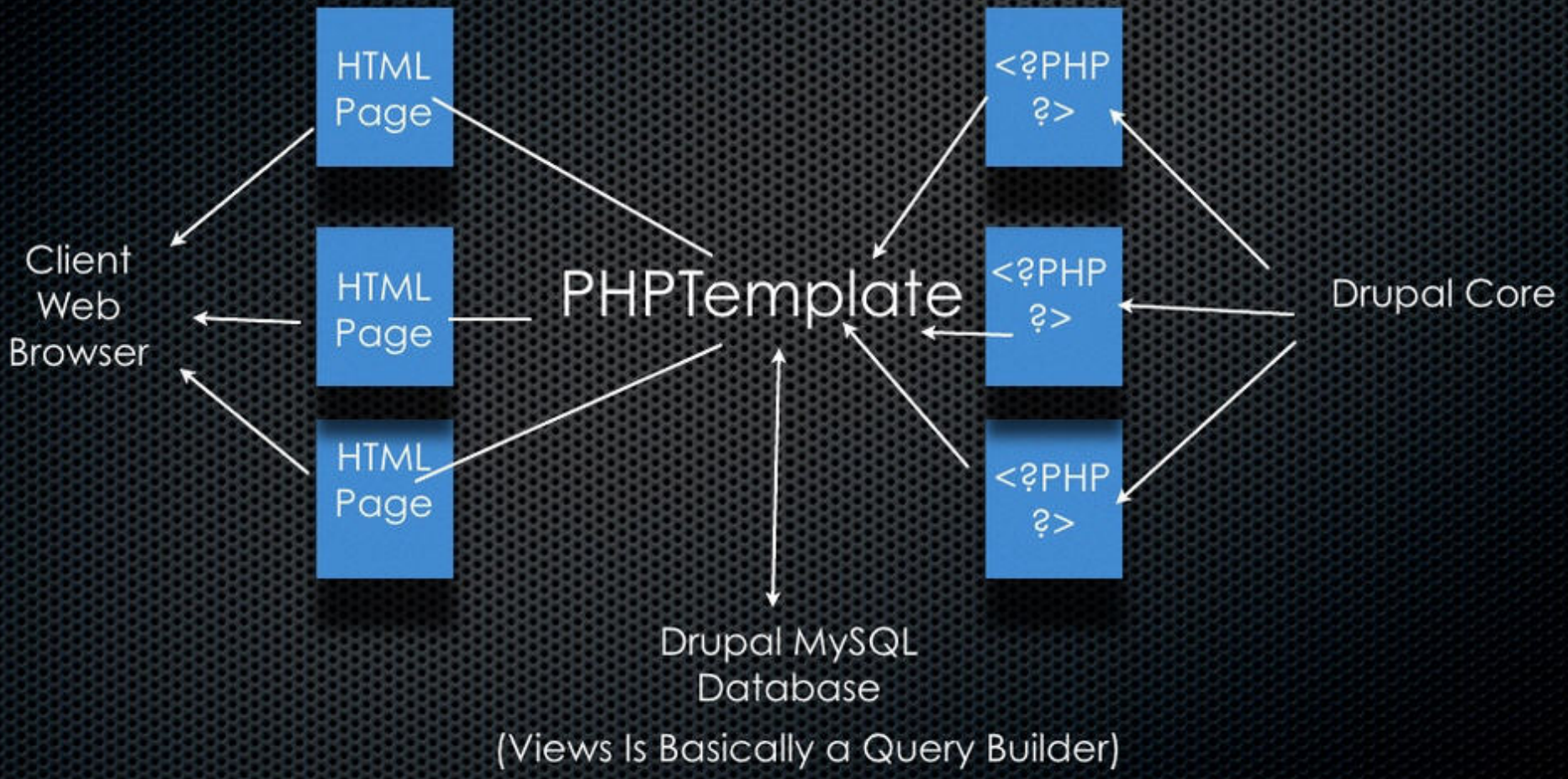
Name	Date modified	Type
color	7/18/2011 3:45 PM	File folder
images	7/18/2011 3:45 PM	File folder
minnelli	7/18/2011 3:45 PM	File folder
fix-ie.css	5/25/2011 1:43 PM	Cascading Style S...
fix-ie-rtl.css	5/25/2011 1:43 PM	Cascading Style S...
print.css	5/25/2011 1:43 PM	Cascading Style S...
style.css	5/25/2011 1:43 PM	Cascading Style S...
style-rtl.css	5/25/2011 1:43 PM	Cascading Style S...
garland.info	5/25/2011 1:56 PM	INFO File
block.tpl.php	5/25/2011 1:43 PM	PHP File
comment.tpl.php	5/25/2011 1:43 PM	PHP File
maintenance-page.tpl.php	5/25/2011 1:43 PM	PHP File
node.tpl.php	5/25/2011 1:43 PM	PHP File
page.tpl.php	5/25/2011 1:43 PM	PHP File
template.php	5/25/2011 1:43 PM	PHP File
logo.png	5/25/2011 1:43 PM	PNG File
screenshot.png	5/25/2011 1:43 PM	PNG File

Step 7 – Pick a Theme

Theme .info File

```
name = Drupal Ace
description = Bright nice theme with a lot of settings. Created by <a href = "http://drupalace.ru">Drupalace team</a>
core = 7.x

stylesheets[all][]      = css/layout.css
stylesheets[all][]      = css/style.css

regions[sidebar]        = Sidebar
regions[header]         = Header
regions[content_top]    = Page top
regions[content_bottom] = Page bottom
regions[content]        = Content
regions[node_top]       = Node top
regions[node_bottom]    = Node bottom
regions[footer_first]   = Footer first column
regions[footer_second]  = Footer second column
regions[footer_third]   = Footer third column
regions[footer]         = Footer

settings[drupalace_page_unit]           = px
settings[drupalace_page_width]          = 960
settings[drupalace_page_max_width]      = 1400
settings[drupalace_page_min_width]      = 960
settings[drupalace_sidebar_position]    = right
settings[drupalace_sidebar_unit]        = px
settings[drupalace_sidebar_width]       = 250
settings[drupalace_social_text]         = Share this node with friends
settings[drupalace_social_button_size]  = 32
settings[drupalace_social_services]     = facebook, twitter, vk, livejournal, formspring, google
settings[drupalace_popup_login]         = 1
settings[drupalace_search_text]         = Search text
settings[drupalace_search_button]       = Search
settings[drupalace_search_width]        = 275
```

PHP: Generates Dynamic Content



Step 7 – Pick a Theme

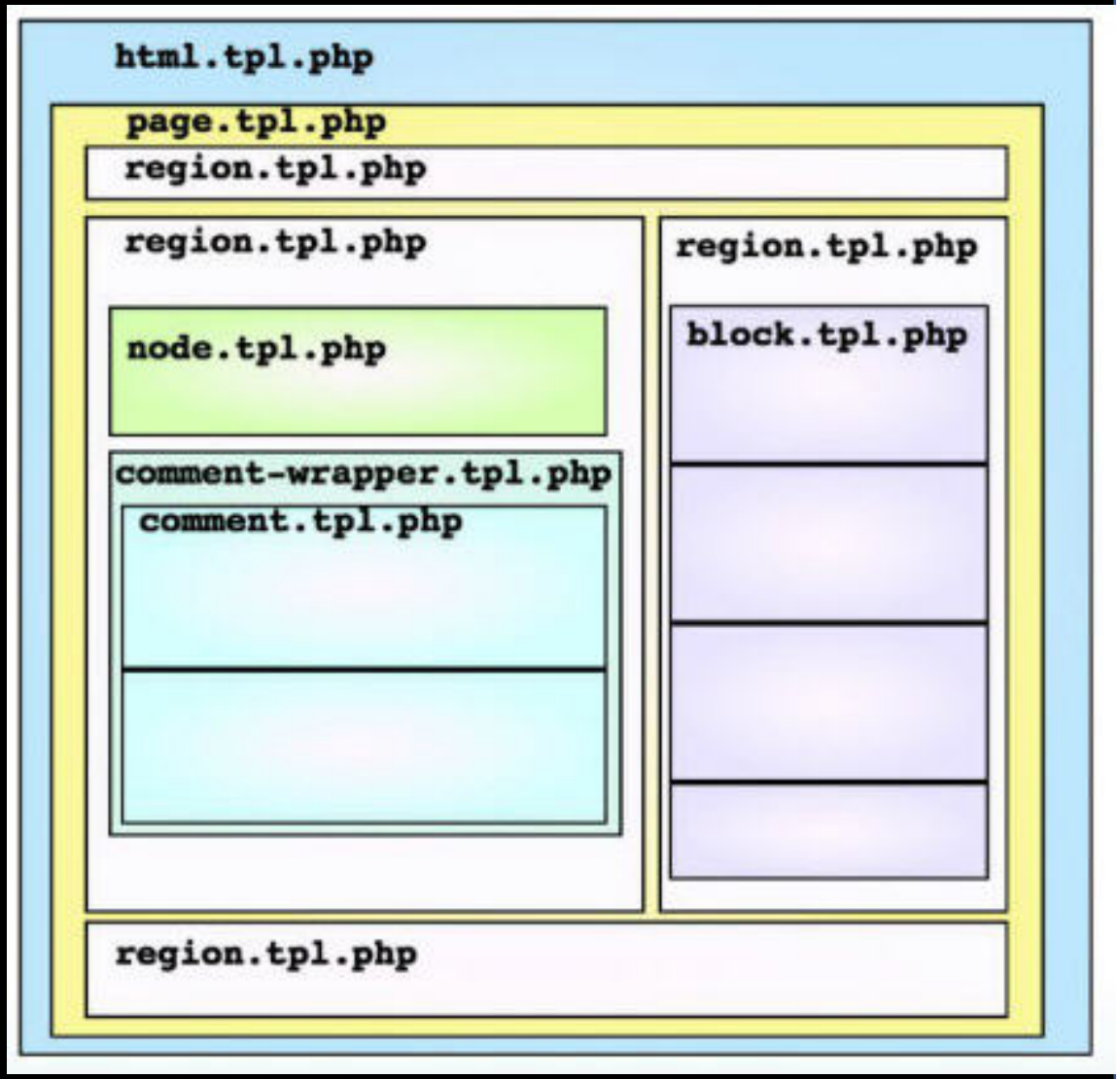
Page.tpl.php

Page.front.tpl.php

Node.tpl.php

Block.tpl.php

Comment.tpl.php



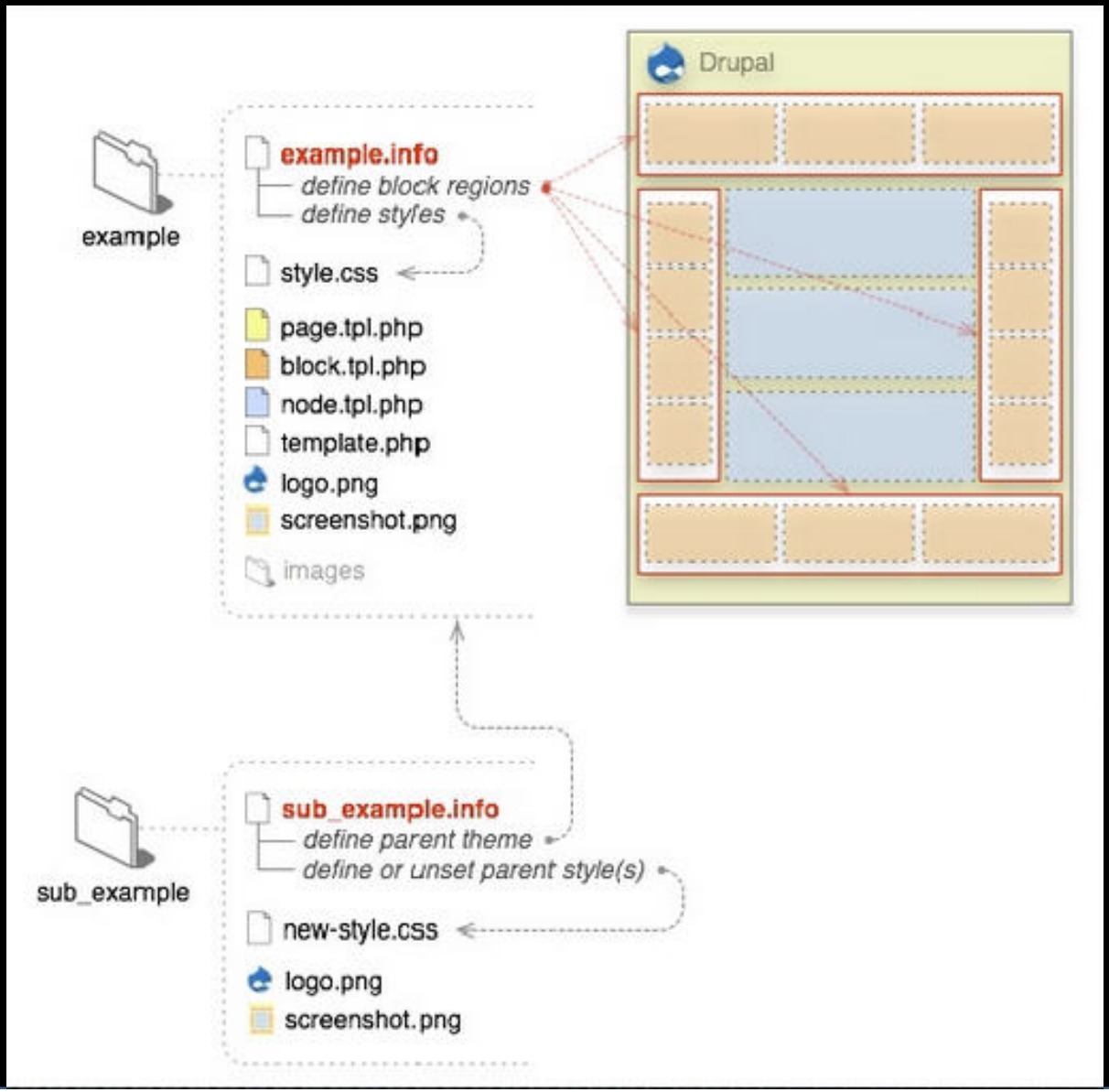
Step 7 – Pick a Theme

Templates = PHP + HTML

```
<div id="header-region"  class="clear-block">
  <?php print $header; ?>
  </div>
```

PHP Variables:
$header, $content, $footer…

Step 7 – Pick a Theme



Module Development

Drupal Hook System

.info file + .module file + .install file (optional)

DRUSH, DRUSH MAKE and GIT

Ezra Gildesgame (Acquia) Presentation

http://chicago2011.drupal.org/sessions/introduction-module-development

Module Development

http://api.drupal.org/api/drupal

Drupal™ API

API Homepage | Log in / Register

Search for hook_block

Search Drupal 4.6 for hook_block
Search Drupal 4.7 for hook_block
Search Drupal 5 for hook_block
Search Drupal 6 for hook_block
Search Drupal 8 for hook_block
Other projects

Functions & methods

Name	Location	Description
hook_block_configure	modules/block/block.api.php	Define a configuration form for a block.
hook_block_info	modules/block/block.api.php	Define all blocks provided by the module.
hook_block_info_alter	modules/block/block.api.php	Change block definition before saving to the database.
hook_block_list_alter	modules/block/block.api.php	Act on blocks prior to rendering.
hook_block_save	modules/block/block.api.php	Save the configuration options from hook_block_configure().

Search Drupal 7

Function, file, or topic *

Search

API Navigation

Drupal 7
Constants
Classes
Files
Functions
Globals
Topics

Module Development

http://api.drupal.org/api/drupal/developer%21topics%21forms_api_reference.html/7

Drupal API

API Homepage | Log in / Register

Form API Reference

7 developer/topics/forms_api_reference.html
4.7 developer/topics/forms_api_reference.html
5 developer/topics/forms_api_reference.html
6 developer/topics/forms_api_reference.html
8 developer/topics/forms_api_reference.html

This document provides a programmer's reference to the Drupal Form API. If you're interested in step-by-step documentation to help you write forms, please see the Form API QuickStart guide.

Skip to: Properties | Default Values | Elements

Note that internal properties are not included in the table below, but are included in the Properties list. These include: #built, #children, #error, #id, #input, #printed, #validation_arguments

Form Controls

Legend:
X = attribute can be used with this type
- = attribute is not applicable to this type

#type	checkbox	checkboxes	date	fieldset	file	machine_name	managed_file	password	password_confirm	radio	radios	select	tableselect	text_format
#access	X	X	X	X	X	X	X	X	X	X	X	X	X	X
#after_build	X	X	X	X	X	X	X	X	X	X	X	X	X	X
#ajax	X	X	-	-	-	X	-	-	-	X	X	X	X	X
#array_parents	X	X	X	X	X	X	X	X	X	X	X	X	X	X
#attached	X	X	X	X	X	X	X	X	X	X	X	X	X	X
#attributes	X	X	X	X	X	X	X	X	-	X	X	X	X	X
#autocomplete_path	-	-	-	-	-	X	-	-	-	-	-	-	-	-
#collapsed	-	-	-	X	-	-	-	-	-	-	-	-	-	-
#collapsible	-	-	-	X	-	-	-	-	-	-	-	-	-	-
#cols	-	-	-	-	-	-	-	-	-	-	-	-	-	X
#default_tab	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Module Development

Hooks

drupal 4.6 module.inc 4.7 module.inc 5 module.inc 6 module.inc 7 module.inc 8 module.inc

Allow modules to interact with the Drupal core.

Drupal's module system is based on the concept of "hooks". A hook is a PHP function that is named foo_bar(), where "foo" is the name of the module (whose filename is thus foo.module) and "bar" is the name of the hook. Each hook has a defined set of parameters and a specified result type.

To extend Drupal, a module need simply implement a hook. When Drupal wishes to allow intervention from modules, it determines which modules implement a hook and calls that hook in all enabled modules that implement it.

The available hooks to implement are explained here in the Hooks section of the developer documentation. The string "hook" is used as a placeholder for the module name in the hook definitions. For example, if the module file is called example.module, then hook_help() as implemented by that module would be defined as example_help().

The example functions included are not part of the Drupal core, they are just models that you can modify. Only the hooks implemented within modules are executed when running Drupal.

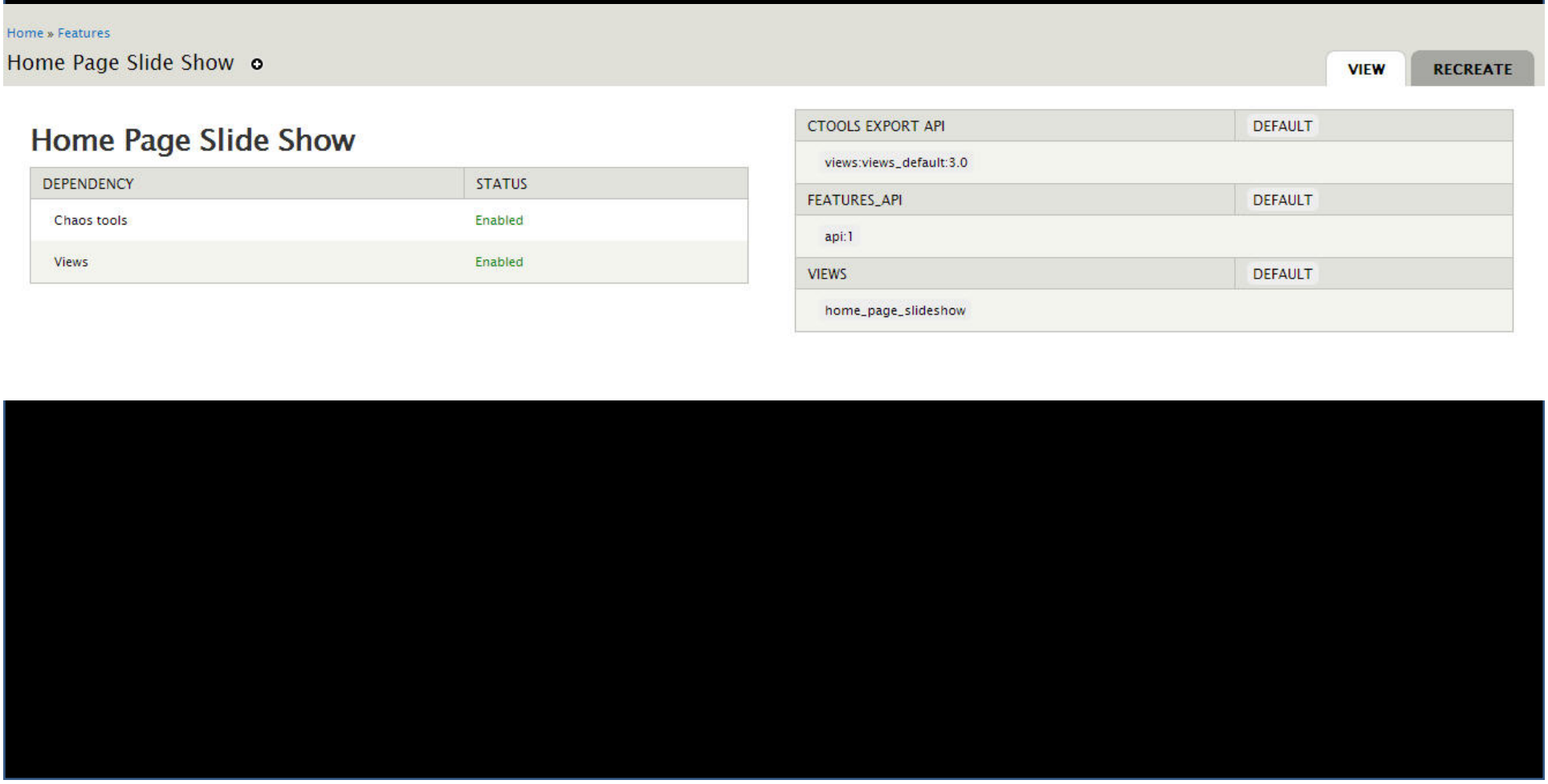
Module Development

```
name = "Sample Block"
description = "Example Block In Code"
core = "7.x"
package = "Custom Modules"
```

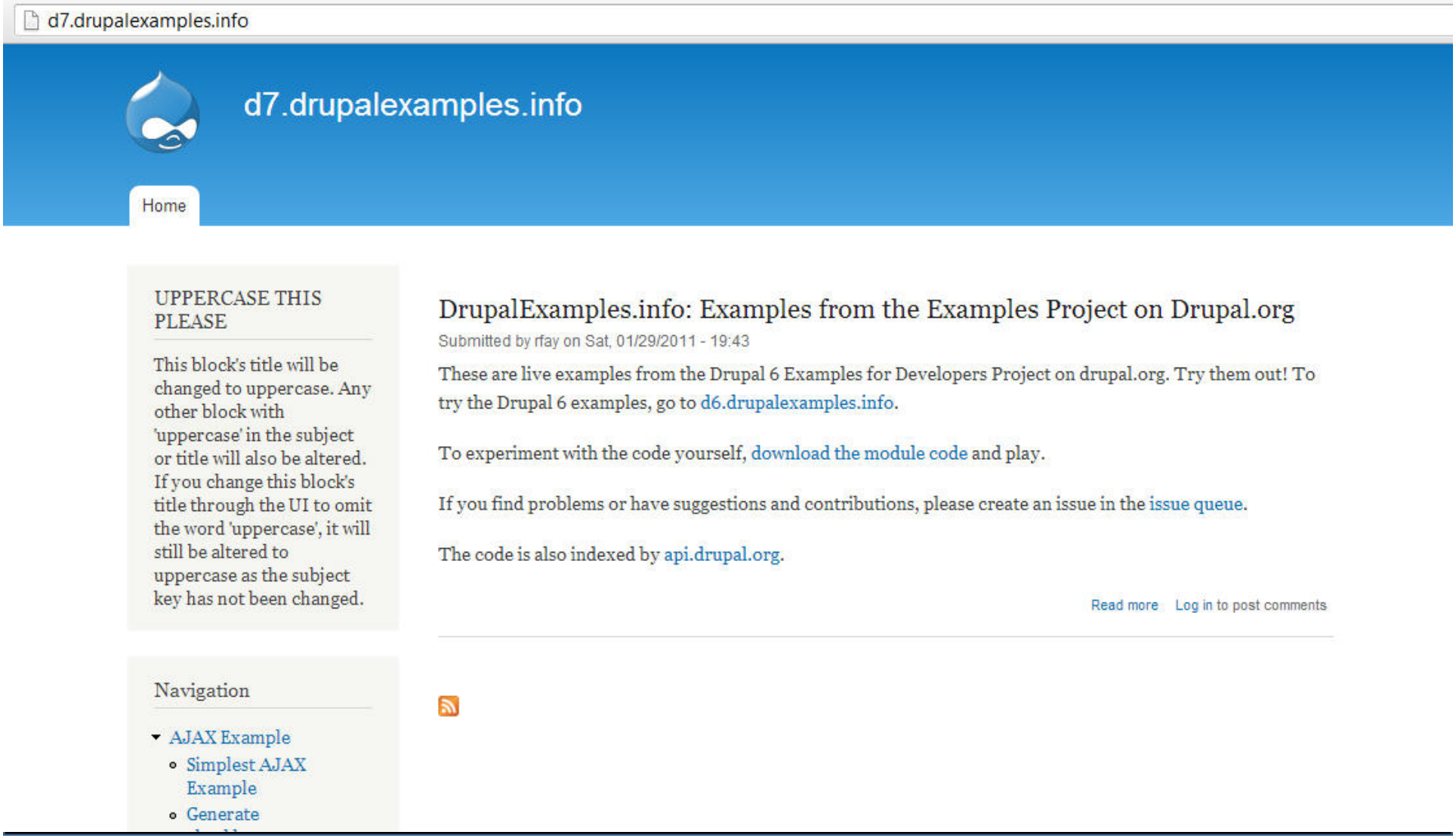
Module Development

```php
<?php
/**
 * Implementation of hook_block_info().
 */
function samplemodule_block_info() {
  $blocks['my-block-id'] = array(
    'info' => t('SAMPLE MODULE BLOCK'),
  );
  return $blocks;
}

/**
 * Implementation of hook_block_view().
 */
function samplemodule_block_view($delta='') {
  $block = array();
  switch ($delta) {
    case 'my-block-id':
      $block['subject'] = t('SAMPLE MODULE BLOCK NAME');
      $block['content'] = samplemodule_contents();
      break;
  }
  return $block;
}

/**
 * custom html block
 * @return string
 */
function samplemodule_contents() {
  return '
    </p><div class="body">
      Hello World, this is a example custom block!
    </div><p>
  ';
}
```

Module Development
Features



Module Development Examples Module



Distributions

Full fledged applications

- **COD, Commons, OpenPublish, OpenAtrium, Pressflow, OpenChurch, OpenPublic, Acquia Drupal, Panopoly**
- **EDU – ELMS, Julio, Open Academy, Open Scholar…**
- **Pub – OpenPublish, NodeStream, ProsePoint…**
- **Nonprofits – CiviCRM, OpenAid, OpenOutreach…**

Resources

- Drupalize.com
- BuildAModule.com
-

Glossary

D.O – Drupal.org

Modules, Libraries and Themes – Core, Contrib, Custom

D6 (CCK), D7 (Entities and Fields), D8

Nodes – Title (H1) and Body

Comments – Just what you think they are!

Taxonomy – Categorization lists

Content Types – Customize nodes with fields

Media Image Styles – Image presets

Pages – Just what you think they are!

Regions – Areas of the page (div)

Blocks – Objects that can be placed in regions

Menus – Main, Management, Navigation, User, Custom

Views – Lists of content

Users, Roles and Permissions

Get Involved

Create an account on Drupal.org

Participate in your local DUG

Become a Drupal Association member

Go to more camps!

Thanks!

Enjoy SCALE!

douglaschoffman.com/downloads.html

scale.customersuccessmarketing.com