Drupal 7: What’s New?

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Stanford Tech Briefing
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What is the Drupal CMS

- Drupal is an Open Source Content Management System
- Rapidly Growing Platform for Making Websites
- Powers Thousands of Big Sites from Britney.com to Whitehouse.gov
Drupal 7: CMS Blockbuster

- The kind of feeling you got when you saw Star Wars in 1977....
- Huge technical improvements
- Important usability enhancements
- Drupal 7 moves the whole industry forward. The next big thing.

A really awesome (but copyrighted) image from Avatar
The Road to Drupal 7
Drupal 7 Timeline

- Development: 82 weeks
  - Features
  - High-impact exceptions
    - API changes existing features

- Code freeze: 5 weeks
  - API freeze
    - Upgrade path

- Code freeze: 4 weeks
  - Performance
    - Usability
    - Accessibility
    - Documentation
    - String changes and UI changes

- Code freeze: ? weeks
  - Bug fixes
  - Simple Tests

- Dates:
  - Feb 1, 2008
  - Sep 7, 2009
  - Oct 15, 2009
  - Nov 15, 2009
  - Unknown
Drupal 7: Coming of Age

- Admin Experience
- Under the Hood
- Theming and Design

Image of the Breakfast Club ft. John Hughes
Out of the Box Experience

- Default States out of the Box
- Install Profile API Support!
Admin Experience: Admin Bar

- Admin Toolbar: “Admin Menu” Grown Up
- “Shortcuts” and their Advantages
Admin Experience: “Seven”
Admin Experience: I.A.

---

### Show descriptions

**CONTENT**
- Comments

**APPEARANCE**
- Update
- Settings

**PEOPLE**
- Permissions

**CONFIGURATION**
- Regional and language
- System
- User interface
- People
- Search and metadata

**STRUCTURE**
- Blocks
- Content types
- Menus
- Taxonomy

**MODULES**
- Update
- Uninstall
Admin Experience: Add Content

- Edit Teaser
- Input Formats
- Vertical Tabs
Admin Experience: Dashboard

Drag and drop these blocks to the columns below. Changes are automatically saved.

- Recent comments
- Syndicate
- Shortcuts
- Navigation
- Management
- User menu
- Main menu
- Who’s online

Recent content
- Movie Review: Home Alone
  - root
  - edit
  - delete
- Movie Review: 16 Candles
  - root
  - edit
  - delete

Search form

Who’s new
- root

Secondary menu
(empty)
Admin Experience: Edit in Place
Admin Experience: Overlays

This web page allows administrators to register new users. Users’ e-mail addresses and usernames must be unique.

**ACCOUNT INFORMATION**

**Username**
John Hughes

Spaces are allowed; punctuation is not allowed except for periods, hyphens, apostrophes, and underscores.

**E-mail address**
comingofage@ohnHughes.com

A valid e-mail address. All e-mails from the system will be sent to this address. The e-mail address is not made public and will only be used if you wish to receive a new password or wish to receive certain news or notifications by e-mail.

**Password**

Password strength: Fair

**Confirm password**
Admin Experience: Module

Dashboard » Modules

To install a new module or theme, either enter the URL of an archive file you wish to install, or upload the archive file that you have downloaded. You can find modules and themes at http://drupal.org. The following archive extensions are supported: zip, tgz, tar.gz, tar.bz2

Install from a URL

For example: http://ftp.drupal.org/files/projects/name.tar.gz

Or

Upload a module or theme archive to install

For example: name.tar.gz from your local computer

Install
Under the Hood: Better Technology

A movie poster from Star Trek
Under the Hood: Less Technology

- Modules removed:
  - Blog API
  - Ping
  - Throttle
  - Upload
  - Block module made optional
  - Access rules removed

- Minimum # of words in Body removed

- User-selectable themes removed

- Related terms, and taxonomy +, URL arguments removed

- Comment display options removed
Under the Hood: More Modules!

Admin Role  IMAGECACHE  Token

Image and Image API  FILEFIELD

Poormanscron  Imagefield  FeedAPI (some)

Install Profile API (some)  CCK
Under the Hood: Fields in Core

Boolean  File  Textarea  List  Image
Decimal/Float/Integer  Body  Image  Textfield

**which can be used on...**

Nodes  Users  Taxonomy Terms  Comments

*and many more to come...*
Under the Hood: Javascript

- jQuery 1.3
- jQuery Forms 2.2
- jQuery UI 1.7
- drupal_add_library()
- CTools AJAX Framework
Under the Hood: SimpleTest
Under the Hood: Security

- Email Notifications for Security Updates
- PHP Filter has global kill switch
- Cron.php requires key in URL
- New Permission Screen!
- Stronger Password Hashing
- Login Limitations
Under the Hood: DBTNG

- Full Database Abstraction Layer using PHP’s Data PDO

- Full PHP Database Support - MySQL, SQLite, PostgreSQL in D7. MSSQL, Oracle forthcoming.

- Master/Slave Replication, Transactions, Multi-Insert, Delayed Insert!
Under the Hood: Performance

- Proxy and Reverse Proxy Support: Varnish!
- Full XDebug Profiling for Micro Optimizations
- InnoDB Default Storage System
- CDN Support
# Under the Hood: Registry

<table>
<thead>
<tr>
<th>name</th>
<th>type</th>
<th>filename</th>
<th>module</th>
<th>suffix</th>
<th>weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>system_help</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>help</td>
<td>0</td>
</tr>
<tr>
<td>system_theme</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>theme</td>
<td>0</td>
</tr>
<tr>
<td>system_perm</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>perm</td>
<td>0</td>
</tr>
<tr>
<td>system_rdf_namespaces</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>rdf_namespaces</td>
<td>0</td>
</tr>
<tr>
<td>system_elements</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>elements</td>
<td>0</td>
</tr>
<tr>
<td>system_menu</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>menu</td>
<td>0</td>
</tr>
<tr>
<td>blocked_ip_load</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>_system_themes_access</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>system_init</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>init</td>
<td>0</td>
</tr>
<tr>
<td>system_preprocess_page</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>preprocess_page</td>
<td>0</td>
</tr>
<tr>
<td>system_user_form</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>user_form</td>
<td>0</td>
</tr>
<tr>
<td>system_user_register</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>user_register</td>
<td>0</td>
</tr>
<tr>
<td>system_user_login</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>user_login</td>
<td>0</td>
</tr>
<tr>
<td>system_user_timezone</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>user_timezone</td>
<td>0</td>
</tr>
<tr>
<td>system_block_list</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>block_list</td>
<td>0</td>
</tr>
<tr>
<td>system_block_configure</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>block_configure</td>
<td>0</td>
</tr>
<tr>
<td>system_block_save</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>block_save</td>
<td>0</td>
</tr>
<tr>
<td>system_block_view</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>block_view</td>
<td>0</td>
</tr>
<tr>
<td>system_admin_menu_block</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>admin_menu_block</td>
<td>0</td>
</tr>
<tr>
<td>system_theme_select_form</td>
<td>function</td>
<td>modules/system/system.module</td>
<td>system</td>
<td>theme_select_form</td>
<td>0</td>
</tr>
</tbody>
</table>
Under the Hood: Hooks

- hook_modules_X()
- hook_taxonomy_term_X()
- hook_taxonomy_vocabulary_X()
- hook_aggregator_X()
- hook_node_X()
- hook_user_X()

and many many more...

“Hook” by Robin Williams and others
Design: A Theme Called “Stark”

“Stark” from Jim Henson’s “Farscape”
Design: \$page and hook_page_alter()

\$page[ 'left' ][ 'blocks' ][ 'user-navigation' ][ '#block' ] = (block object);
\$page[ 'content' ][ 'message' ][ '#markup' ] = 'Welcome to a big list of nodes.';
\$page[ 'content' ][ 'nodes' ] = (array of node objects keyed by node ID);
\$page[ 'content' ][ 'pager' ][ '#markup' ] = (HTML markup of pager);
\$page[ 'footer' ][ 'blocks' ][ 'system-powered-by' ][ '#block' ] = (block object);
Design: #WYSIWYG

Little Red Riding Hood

Improved support for integration of WYSIWYG editors.

A wolf wants to eat the girl but is afraid to do so in public. He approaches the girl, and she naively tells him where she is going. He suggests the girl pick some flowers, which she does. In the meantime, he goes to the grandmother's house and gains entry by pretending to be the girl. He swallows the grandmother whole, and waits for the girl, disguised as the grandmother.

When the girl arrives, she notices he looks very strange to be her grandma. In most retellings, this eventually culminates with Little Red Riding Hood saying, "My, what big teeth you have!"
To which the wolf replies, "The better to eat you with," and swallows her whole, too.

A hunter, however, comes to the rescue and cuts the wolf open. Little Red Riding Hood and her grandmother emerge unharmed. They fill the wolf's body with heavy stones, which drown him when he falls into a well. Other versions of the story have had the grandmother shut in the closet instead of eaten, and some...
Design: Image Handling in Core

<table>
<thead>
<tr>
<th>Image style name</th>
<th>*</th>
<th>thumbnail</th>
</tr>
</thead>
<tbody>
<tr>
<td>The name is used in URLs for generated images. Use only lowercase alphanumeric characters, underscores (_), and hyphens (-).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EFFECT</th>
<th>OPERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale and crop 85x85</td>
<td>edit</td>
</tr>
<tr>
<td>Desaturate</td>
<td></td>
</tr>
</tbody>
</table>

[Select a new effect](#)  
Add

**Preview**

**original (view actual size)**  
600px  
800px

**thumbnail (view actual size)**  
85px

Update style
Design: Page Elements as Blocks

<table>
<thead>
<tr>
<th>Block</th>
<th>Region</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Header</td>
<td></td>
<td></td>
</tr>
<tr>
<td>User login</td>
<td>Header</td>
<td>configure</td>
</tr>
</tbody>
</table>

**Left sidebar**

<table>
<thead>
<tr>
<th>Block</th>
<th>Region</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigation</td>
<td>Left sidebar</td>
<td>configure</td>
</tr>
</tbody>
</table>

**Right sidebar**

No blocks in this region

**Highlighted content**

<table>
<thead>
<tr>
<th>Block</th>
<th>Region</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission statement</td>
<td>Highlighted content</td>
<td>configure delete</td>
</tr>
</tbody>
</table>

**Help**

<table>
<thead>
<tr>
<th>Block</th>
<th>Region</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>System help</td>
<td>Help</td>
<td>configure</td>
</tr>
</tbody>
</table>

**Content**

<table>
<thead>
<tr>
<th>Block</th>
<th>Region</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main page content</td>
<td>Content</td>
<td>configure</td>
</tr>
</tbody>
</table>

**Footer**

<table>
<thead>
<tr>
<th>Block</th>
<th>Region</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footer message</td>
<td>Footer</td>
<td>configure delete</td>
</tr>
<tr>
<td>Powered by Drupal</td>
<td>Footer</td>
<td>configure</td>
</tr>
</tbody>
</table>


Design: Revamped *.tpl.php

- Better XHTML Structure for CSS-only Design. Zen!
- Standard Semantic Class/ID Names (.section, #navigation)
- Simply: Easier to Theme
Drupal 7: A Community Affair
What about Contrib?

#D7CX
Demo: Let’s Enter the Drupal 7

“The Matrix”
When Will it be Ready?

It’s ready when it’s ready.

Dries Buytaert
Drupalcon SF: The Drupal 7 Party

San Francisco / April 19-21, 2010
Questions?

and thanks to many for pictures and images about Drupal 7 reused here!