Building Drupal sites using CCK, Views and Panels

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Agenda

- Introduction

- Definitions

- CCK (Content Construction Kit)

- Views

- Panels

- Demo of all of them together

- Questions, discussion

About 2bits.com, Inc.

- Founded 1999

- Based in Waterloo, Ontario (Canada)

- Active member of the Drupal community since 2003

- 35+ contributed modules on drupal.org

- Listed on Drupal.org's service providers section

- Maintain modules that run on drupal.org (donations, feature, lists, fee, drupalorg, ...)

- Advocacy and Event sponsorship (DrupalCon, DrupalCamps)

2bits.com Services

- Clients mainly in the USA and Canada

- Subcontracting development projects

- Development/Customization of modules

- Performance tuning and optimization

- Installation, upgrades

- Automated backups

About Khalid

- Software development and consulting for 23 years, Fortune 500 companies

- Using and contributing to Drupal since 2003

- Drupal Core contributions

  - Site maintenance (offline)

  - Logging and alerts in Drupal 6

  - Many patches

- Member of:

  - Drupal Association General Assembly

  - Drupal security and infrastructure teams

- Google Summer of Code (2005-2008)

- Co-founder of 2bits.com, Inc.

- Blog at http://baheyeldin.com

- Contributed modules

  - Adsense

  - Userpoints

  - Job search

  - Favorite nodes

  - Flag content

  - Second Life

  - Stock API and module

  - Currency

  - Custom Error

  - Image watermark

  - Site menu

  - Email logging and alerts

  - Technorati

  - Click thru

  - Referral

  - Nodevote

Definitions

- Node
    - The building block of Drupal's core.
    - A "content item"
    - Instance of a content type
- Content Types
    - Allows different types of nodes (e.g. "page", "article", "story", ...etc.)
    - Each with different workflow, categories, fields, ...etc.
    - In Drupal core since 6.x

Definitions (cont'd)

- Category (Taxonomy)

  – Each can have terms

  – Each content type can belong to one or more taxonomy

- Block

  – A chunk of content that is less than an a page

  – Used in sidebars and elsewhere

Before CCK

- Drupal core

  - Has limited number of predefined content types (page, story, blog, forum, book)

  - Fields are: Title and Body (only!)

  - What if I needed more? e.g. Course fees, Shipping method, Summary, ...

- Contributed modules

  - Can define their own types (image, job, resume, weblink, ...etc.)

  - Programming knowledge needed

Flexinode

- First attempt at admin-defined content types, without programming

- Did the job it was set to do

- Scalability and performance issues (joins for every field)

- Not available from 5.x onwards

Content Construction Kit

- Designed to replace Flexinode, and avoid its pitfalls

- Started by Jonathan Chaefer [JonBob]

- Current maintainers

  - Yves Chedemois [yched]

  - Karen Stevenson [KarenS]

  - Darryl O'Pry [dopry]

  - Wolfgang Ziegler [fago]

- More extensible

  - API to define fields

- Exposes fields to views

- Reusable fields

  - define a field once and reuse it in many content types (e.g. Phone number, ...)

- Different storage model (see Resources and Links)

Fields by modules

- Extensibility means that you can write modules that implement new field types

- Examples

  - date

  - phone numbers (USA, France, ...)

  - Image

  - file

  - taxonomy

  - Email

  - Many more ...

Theming CCK nodes

- Several ways

  - node-content_*type*.tpl.php

  - contemplate module

    - Web based, hence "thru the web" [TTW]
    - Recent modification to be file based (use an editor, and have version control)

Drawbacks?

- Added complexity, needed for functionality (always a trade-off)

- Some performance overhead (extra database tables insert/select/join)

- Extra theming effort (again functionality)

- Like with all contributed modules: watch out for longevity of CCK fields implemented by modules

Future of CCK

- CCK is destined for core

- Phased approach

  - In 5.x, we have the ability to create content types, but not fields

  - Discussed currently in the community

  - Did not happen for Drupal 6.x

  - Perhaps for 7.x?

Views

- Written by Earl Miles (merlinofchaos)

- Really powerful module: all sorts of magic

- Customized Node listing

  - creating custom blocks from any content type

  - creating custom lists from any content type

  - On selected fields

  - Filters

  - Sorting

  - Arguments

Views (cont'd)

- Basic info

  - Visibility (view can visible only to selected roles, e.g. Members, or moderators)

  - URL (how the user will navigate to that view)

- View type

  - Page (list, teaser, table, ...etc.)

  - Block

  - Provide Menu?

- Headers and footer

  - Your own HTML or PHP

Views (cont'd)

- Fields
  - Modules can expose fields to views (e.g. image module exposes the image, thumbnail, ...etc.)
  - All CCK fields are exposed (and that is where the power is)
- Sorting
  - Ascending/Descending
  - On one or more fields

Views Filters

- Filters
  - Can be on one or more fields (e.g. published, in moderation, content type, taxonomy, ...etc.)

- Exposed Filters
  - Any filter can be exposed, so site visitors can refine the selections.
  - Very useful feature.
  - In lieu of searching.

Views (cont'd)

- Can be exported

  - Easier test -> production move

  - Easier to RAD/prototype, then move to code in module and revision control

- Arguments

  - Can change the view

  - Allows PHP code for views

Theming views

- Theme wizard available

- Provides a good headstart

- Tells you where it goes as a .tpl.php file

Drawbacks?

- More database queries, means increased load, so watch out for performance and scalability

- Should not be a concern for small to medium sites

- Caching now available, helps

Future of Views

- Core inclusion
  - Only the engine
  - Maybe Drupal 7.x?

- Views 2
  - Different UI
  - Not restricted to Nodes (can use any data)
  - Displays
  - Beta available

Panels

- Custom grouping of nodes, blocks, HTML and everything

- Suitable for a site's front page, or section pages

- Provides several pre-defined layouts

- You can add your own layout as a module (HTML + CSS)

Panels (cont'd)

- Each panel has a URL (like views), as well as a title and CSS id.

- Content areas

  - Predefined in the panel, or module

  - Each can contain

    - One or more nodes

    - One or more views

    - One or more blocks

    - Custom content (HTML and/or PHP)

- Pressflow Preempt

- Caching module for panels.

- Panels 2
  - More visual layout
  - Drag and Drop
  - Beta available

Hands On

Let us see it all in action ...

- CCK

  - http://drupal.org/project/cck

  - http://drupal.org/node/101723

- Views

  - http://drupal.org/project/views

  - http://drupal.org/handbook/modules/views

- Panels

  - http://drupal.org/project/panels

Resources (cont'd)

- ## What is CCK, Robert Douglass

    - A more technical discussion on the internal of the CCK
      http://lullabot.com/articles/an_introduction_to_the_content_construction_kit

- ## Build a CCK module, Karen Stephenson

    - http://2007.oscms-summit.org/node/190

Conclusion

- Questions?

- Comments?

- Discussions?