

001 - 23dfa3ca-31ba-4bae-be39-1555ff53a3a4

Target audience

Is Joomla a CMS or a web-application platform on which you can develop any application (including a cms)?

- a. "Joomla! is an open product, developed by and for the community. It is used by :
 - i. end users,
 - ii. site integrators and
 - iii. Small to Medium Enterprises (SMEs to)
- b. build
 - i. medium to
 - ii. high complexity,
- c. very secure websites
- d. on a budget,
- e. using off-the-shelf software components they can install, configure and integrate themselves without prior experience with the system or requiring knowledge of PHP, HTML and CSS." ref
<http://www.dionysopoulos.me/joomla-4-and-beyond-target-audience-and-a-unified-marketing-message.html> and the discussion below that article
- f. Stakeholders (those that need be informed and taken into consideration)
 - i. User roles
 - 1. Site builder / Integrator
 - 2. Extension developer
 - 3. Backend user (administrator / manager)
 - 4. Site owner (decision maker)
 - ii. Contributor
 - iii. Site visitor
 - iv. Host
- g. "Our mission is to provide a flexible platform for digital publishing and collaboration" Ref:
<http://opensource.matters.org/about/organization/mission-vision-and-values.html>
- h. Need 2-3 Personas for each group publically accessible, so the community can discuss, how 'Charles' and 'Mandy' would use a feature

002 - 5098c87d-5420-430e-ac60-56bf9129131f

Timeline

- a. Idea: 400*X days of Joomla 4 (100*X days planning, 100*X days of building, 100*X days alpha to GA, 100*X days of fixing all the free bugs) X tdb defaults to 1

003 - d49fc2fb-b54e-447e-9be3-4ff92a799c68

Orthogonal system

- a. Distinguish vertical and horizontal components.
Vertical: Weblinks, Contacts, Users, ...
Horizontal: ACL, Versioning, Multilanguage, Tags, ...
- b. Any horizontal component works with any vertical component *out of the box*
being themselves agnostic about other components

004 - d1af6253-27ad-42c3-a453-8d407b81fcd3

Command Query Responsibility Segregation (CQRS)

005 - c42daa79-86f6-40d2-b7d8-ae5c3b1e4dce

Event sourcing. With which you get versioning as a bonus.

006 - 1cd0d2a0-6664-4a77-ae62-bdf2638b471d

Min PHP version

- a. Need to balance minimum viable version, vs the support for the version prevalent over the actual usable life of Joomla 4, vs general lack of hosts to upgrade.
- b. PHP 5.4 ends support 14 Sep 2015
- c. PHP 5.5 ends support 10 Jul 2016
- d. PHP 5.6 ends support 28 Aug 2017

007 - 1b99948e-b052-454e-9c14-317f0e8b2762

Namespacing

- a. Core Component: Joomla\Component\<Component>\<App>
 - i. Joomla\Component\Content\Site,
Joomla\Component\Content\Admin
- b. Third Party Extension
 - i. Component <Vendor>\<Component>\<App>:
 - 1. Akeeba\Backup\Site,
Akeeba\Backup\Admin
 - ii. Module <Vendor>\Module\<App>\<ModuleName>
 - 1. Akeeba\Module\Site\Subscriptionstatus,
Akeeba\Module\Admin\Lastbackupstatus
 - iii. Plugin <Vendor>\Plugin\<Group>\<PluginName>:
 - 1. Akeeba\Plugin\System\Backupondemand
- c. Framework Library: Joomla\<Package>
 - i. Joomla\Image
 - ii. Joomla\Controller\AbstractController
- d. CMS Library: Joomla\Cms\<Package>

i. Joomla\Cms\Mail

008 - ab175a4f-1995-444f-a6cc-9551d1d62843

Database support

- a. Mysql only/DBAL/Fix JDatabase (80-90% of the issues are queries that are incompatible e.g. GROUP BY's etc. which isn't fixed by moving to DBAL or JDatabase itself)
- b. Consider isolating the implementation of the DBAL from the API that Joomla developers use (for example, separate Doctrine with a DB Service layer so that, theoretically, you can swap Doctrine out for some other whizbangery without affect compatibility for Joomla developers - in theory anyway)
- c. Assess the performance impact of using an abstraction vs using hand-optimised queries. Same for DDL generated by an abstraction layer.

009 - 5fdebb8c-dcd2-4fc8-b059-c2755d772996

Integrating Composer for 3rd party Extensions

- a. How do we reconcile conflicting version numbers?
- b. How do we install dependencies from the web (generally: from JInstaller)
- c. How do we handle unwriteable folders?
- d. How do we handle being provided with composer.lock?

010 - f29b43b3-a30f-47d0-b4a0-1476fcb306af

Add a filesystem abstraction layer

Flysystem is the most appealing candidate.

011 - 0a3c8ba7-ec7a-42d8-a1a4-edf9a7c45f40

UCM remove/refactor/keep

- a. Use Composite Pattern for content
- b. Have a look at Elgg and their content model (worth a look for inspiration).
- c. No difference (internally) between categories and content items
- d. *Any* component producing output implements the same Content Interface
- e. Output is created using channel specific Renderers

012 - 10c453e2-0f4c-4ebb-b8c8-d51429a1a99f

Backwards compatibility management with 3rd party code

- a. Composer dependencies
- b. Core components version dependencies
- c. Third party "library" (horizontal) component dependencies

013 - 2bc0e75a-8d14-4f11-a279-01484d051f3c

Multilingual remove/refactor/keep

014 - ac1c29bb-0e83-4a72-8f62-e3382981d466

Routing

Hannes Routing hasn't been merged yet so we have one final chance to look through things and make any decisions

015 - 348b9628-95e9-4f33-a220-f8184ff5b71a

MVC architecture

- a. JLayouts/Rendering
- b. Add a service layer (separate application/infrastructure logic from domain logic)
- c. Separate persistence from the model
- d. Separate channel-specific code in controllers and views
- e. <http://nibrallab.github.io/joomla-architecture/command-structure.html>
- f. <https://github.com/nibrallab/joomla-architecture/blob/master/poc/dynamic-renderer.php>

016 - 62a2bc21-1c15-45bd-821c-48885b90ea96

Custom fields

Poor mans cck (Horizontal Component)

017- 4a2620ec-43ee-4aa2-8c16-028c89b2b8d8

Data Context Interaction

018 - 233eeee4-a38c-493c-a1c5-467598dc368f

Composition vs Extension.

- a. Classic = GOF design patterns. But DCI is in essence also about composition: behaviour is better composable than objects. Even if not using all of DCI, we could use some of it, like ideas from functional programming.

019 - 3150a74c-46cd-4cfa-b187-6ba97c5af064

Dependency Injection Container for the application

020 - f50872d1-7f3c-4ec2-ac84-8cbd06f18a81

PHP FIG refactoring

- a. PSR-7 (HTTP Messaging - Request/Response/URI)
- b. PSR-3 (Logging)

c. PSR-4 (Autoloading)

021 - 25c3303a-fee5-43b0-b18b-317b529d73bb

Behaviour Driven Development

022 - 90f11e55-c071-4a96-af77-4d639cb499a5

TDD development

a. Definitions:

- i. Unit tests - testing for small units of code generally isolated from interaction with other code (for example, testing an input filter method or class).
- ii. Integration tests - larger scale testing of code that needs to work together (for example, testing a model that interacts with the database).
- iii. Functional tests - full scale, non-browser, automated testing of the application under real world conditions (for example, running the Joomla application under a HTTP server and testing it by hitting it and testing responses).
- iv. System/behavioural tests - browser simulation tests (Selenium)

1. CodeCeption?

Probably turning the sequence around: BDD, start with the outer tests and work top-down. Behat (or CodeCeption).

b. Methodology

- i. Red/Green/Refactor
- ii. Writing a failing test (red)
- iii. Write only enough code to make the test pass (green)
- iv. Refactor both code and test
- v. For bugs: Write test to reproduce issue. Until that tests exists, an issue **cannot** be confirmed or fixed.

023 - 58f087c4-6267-46ce-af96-668171563e95

Domain Driven Design

- a. Paul Jones' ADR (Action-Domain-Response) is not a bad fit for the type of applications/extensions we build in Joomla. Other opinion: it is just another name for how MVC is used on the web; nothing new..

024 - 22ba99be-8495-4617-9fd6-4ea4ce20f430

JForm

025 - 8b882d5c-60b9-4989-bf98-da93df565867

Define custom URLs using alias field

If an alias starts with a '/', its URL is at root level.

Example: /my-article becomes example.com/my-article

If the alias does not start with '/', it gets prepended with its category. This is continued, until a leading slash is found or root is reached.

The current behavior has to be retained, however.

=====

026 - 280a3fc2-58d0-4405-9683-108412e7b602

Framework Reconciliation

Stuff gets merged both ways. CMS changes seep up into the framework profiler session and language.

Misc to be used elsewhere

029 - b2355ab4-3cc3-4604-acca-99a6c3f134e7

Implementation

030 - 16c33723-401c-476c-a5f3-a88f9056b804

Architecture academic

031 - ab2c6af3-b9cb-405d-b723-9dd028be1c73

Architecture practical

032 - ca8e4cef-9292-4ea9-b4b2-ff684f2ff7bc

Not touching on interface

033 - 71251317-5f25-4525-90d2-3e25b7d56344

Remove core extensions

- a. implement them as core supported extensions in JED
- b. Provide 'Core' components (e.g. Users, Contacts, ...) during installation (checkbox)

034 - 391acf50-3aaf-4972-bcbe-9e67b89ff19b

Supported features

- a. Current features
- b. Top 3 of ideas.joomla.org
- c. Search
 - i. Look at reworking search plugins to align more with indexing search engines (add an item to the index, remove an item from the index, search the index, get suggestions from the index).

035 - 34d54960-39d4-4efb-a1e7-82cb9480ff7e

Plugin Events registry

036 - a5a19fa0-575e-403e-9b96-c403be04970f

ACL caching

027 - 74e9c7a3-21ef-4493-bb2f-07ef872ae470

APIs everywhere

028 - 3c660996-4490-47a1-b31d-25a2db9a9fc0

restructure / add