

Content Management Systems are not application platforms

By Rouven Wessling

contentful

How I became convinced nothing but an API.

that content needs to be

Hi, I'm Rouven

Developer Evangelist, lover of APIs and cake





@RouvenWessling







ANNETTE FIMPELER (Hg.)

DÜSSELDORF KÖLN

EINE GEPFLEGTE RIVALITĂT

Greven Verlag Köln



I have a history here...



In 2010 I started contributing to Joomla! to get help get 1.6 released



I stayed a while longer







| | 0 | Û | ð |) [+ |
|---------|--------|-------|-------|------|
| | Ļ | +• | 8 | • |
| 2,732 | ∛ Fo | rk | 2,687 | |
| | | | | |
| | Bro | wse f | iles | |
| 5534983 | 2033fe | 97fe | 35e18 | |
| | Unif | ied | Split | |
| | | View | • | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| _ | | | | |
| | | | | |

PHP Autoloading

Released with Joomla! 2.5

AJAX Installer

Released with Joomla! 1.7.3

| • | • | • | < |
|---|---|----------|--------------------|
| | Ç |) | jo |
| | ļ | joo | mla |
| | • | () (| ode |
| | þ | sta | 72(ging rea |
| | Ð | Sho | wir |
| | 8 | | |
| | | | 瑋 |
| | | 29 | |
| | | 30 | |
| | | 31 | |
| | | 33 | |
| | | 34 | |
| | | 35 | |
| | | 36 | |
| | | 37 38 | |
| | | 39 | |
| | | | 瑋 |
| | | 43 | |
| | | 44 | |
| | | 45 | |
| | | | |
| | | 46 | |
| | | 47 | |
| | | 48 | * |
| | | | <u>7</u> 77 |

```
0 û O
                                                                                Ċ
                                                  GitHub, Inc.
                                                                                                        🤹 + - 🕅 -
                                      Pull requests Issues Marketplace Explore
omla/jooml... autoloader
la / joomla-cms
                                                                                                        ¥ Fork 2,687
                                                                   🛨 Unstar 2,732
                                         Projects 10
   () Issues 425
                   1 Pull requests 389
                                                           III Insights
e
05] Add a true autoloader to the CMS (Rouven Weßling)
                                                                                                         Browse files
g (#1) 🔊 vPBF4 ... 2.5.0_RC1
alityking authored and dextercowley committed on Dec 9, 2011 1 parent 433a9a8 commit d754ddb774efa8f5a755349832033fe97fe35e18
ng 8 changed files with 101 additions and 21 deletions.
                                                                                                         Unified
administrator/includes/framework.php
                                                                                                           View
     @@ -29,11 +29,6 @@
      // Joomla system startup.
 29
 30
      11
 31
      -// Import the cms version library if necessary.
      -if (!class_exists('JVersion')) {
          require JPATH_ROOT.'/includes/version.php';
      -
      -}
      _
      // System includes.
 32
      require_once JPATH_LIBRARIES.'/import.php';
 33
 34
      @@ -43,6 +38,9 @@
      JError::setErrorHandling(E_WARNING, 'message');
 38
      JError::setErrorHandling(E_ERROR, 'message', array('JError', 'customErrorPage'));
 39
 40
     +// Botstrap the CMS libraries.
 41
 42 +require_once JPATH_LIBRARIES.'/cms.php';
 43 +
 44 // Pre-Load configuration.
 45 ob_start();
 46 require_once JPATH_CONFIGURATION.'/configuration.php';
```



Joomla Platform/Framework

| | GitHub, Inc. | ¢ | 0 1 |
|----------------------------------|--|------------------------------------|------------------------------|
| This repository Search | Pull requests Issues Marketplace | Explore | + - 🕅 - |
| | This repository has been archived by the owner. It i | s now read-only. | |
| joomla / joomla-framewo i | rk | Watch ▼ 78 ★ St | ar 202 [§] Fork 167 |
| <> Code () Issues 38 () | Pull requests 5 III Projects 0 III Wiki | nsights | |
| Pulse | May 24, 2009 – May 11, 2018 | | Contributions: Commits - |
| Contributors | Contributions to staging, excluding merge commits | | |
| Community | j - j - j | | |
| Commits | 100 | | |
| Code frequency | 80 60 | | |
| Dependency graph | 40 | | |
| Network | 0 2010 2011 2012 2013 | 2014 2015 20 | 16 2017 2018 |
| Forks | | | |
| | #1 | realityking 431 commits 145,959 | #2 9 ++ 161,997 |
| | 40 | | |
| | 20 | 20 | |
| | 2010 2012 2014 2016 2018 | 2010 2012 | 2014 2016 2018 |
| | si elinw #3 | mbabker | #4 |



JOOMLA BEACH

* 31st MAY - 2ND JUNE 2013 *







Care about building KICK-ass toos for developer

The Joomla! community felt differently









"I love my CMS!" said no developer ever.





Why do many developers hate CMSs?



Security/maintenance cost

Rigid extension/ templating system





Setting up environments is hard

ThoughtWorks[®]

- "We are seeing too many organizations run into troubles as they attempt to use their CMS as a platform for delivering large and complex digital applications."
- ThoughtWorks Technology Radar

Enter the

Decoupled CMS API-first CMS Headless CMS

Content Infrastructure



hosting.de



API FIRST HAPPINESS FIRST



Content Management Systems are not shitty application platforms

Page-centric model

_ =

SILOED CONTENT

Coupled to the CMS' platform

Today's CMS





Hard to change



DISCONNECTED

Content Infrastructure

Structured content



Independent of medium and platform

Microservice architecture



COMPOSABLE

Changes with your software

$\bullet \rightarrow \bullet \rightarrow \bullet \rightarrow \bullet \rightarrow \bullet \rightarrow \bullet$

AGILE



"I don't necessarily know where this content is going to live. I don't know how it's going to be used in the future. But, I do know that I have to create lots of flexible content that has metadata attached to it because I know it's going to be reused in different places." Karen McGrane, Author of "Content Strategy for Mobile"





Deliver content to any platform, not only websites

Even to platforms not yet invited... the landscape is evolving with an ever increasing pace





"TELUS Digital is very proud of our engineering culture enabled by a modern technology stack and delivery automation. Decoupling content from code was a big win ushering extreme organizational agility and drastically increasing our speed-to-market on key marketing & delivery initiatives." Andrew Kumar Sr. Technical Program Manager, TELUS



Integration with the dev-flow is key for fast moving teams



"Editors get a CMS; Developer don't have to deal with one."



Don't let a CMS get in the way of shipping software.

Contentful provides a content infrastructure that enables teams to power content in any digital product.

contentful

The missing layer of the modern stack









4 APIs are at the foundation of Contentful

Content Delivery API

Content Preview API

EL

Content Management API T



Images API

The Web App

- Management of Content for author
- Management of the Platform for Administrators
- Management of the Content Model for Developers



• • •

 \bigotimes

Content m

🕂 Ada

| | .com/spaces/mkxriy07hm7v/content_types/event | | |
|----------------------|--|---------------|---------------|
| a Prima 🗸 🥪 | Sontent model 🐼 Content 🖓 Media 杀 APIs | {္ကြို Settir | ngs 🗸 |
| odel > Event | | | |
| Event Event on board | Edit | | |
| d field | Fields (13) JSON preview | | |
| | Ab Event Title Short text | Entry title S | Settings ···· |
| | 12 Maximum Participants Integer | S | Settings ···· |
| | Venue Reference | S | Settings |
| | Event Image References, many | S | Settings |
| | EventDescriptionArticle Reference | S | Settings |
| | Related Events References, many | S | Settings |
| | Ab Event Subheading Short text | S | Settings |
| | YN bookableEvent Boolean | S | Settings ••• |
| | | | |

| | | | ۲۶ |
|--|---|----|------|
| | 6 | Le | earr |
| | | | |
| | | | A |
| | | | |



Flexible enough to handle any kind of digital product



Chatbot with product recommendations





Employee training app

Think outside the CMS box

- Multivariate testing
- Learning academy
 - Microsites



On-ship digital experiences: kiosks, displays, menus, etc.

TheBritish Museum

Audio guides

Interactive displays

Immersive website







Environments

| Contentful × |
|---|
| ← → C 🔒 Secure https://app |
| Mario's Org Orc C Playground ≡ ⊰ master |
| Environments |
| ID |
| master DEFAULT ENVIRON |
| staging [|
| develop |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

| | | | | | | | θ | - | • | × |
|------|---------------------|------------------------|--------------|-------|----------|---|---|---|---|---|
| p.co | ntentful.com/spaces | s/arqlnkt58eul/setting | js/environme | nts | | | | | ☆ | ٠ |
| ₽ | Space home | Content model | Content | Media | Settings | • | | | | - |

| | Status | Actions |
|-------|---------------|---------------|
| NMENT | READY | <u>Delete</u> |
| | IN PROGRESS 🕐 | <u>Delete</u> |
| | IN PROGRESS | <u>Delete</u> |
| | | |

ADD ENVIRONMENT

This space has 3 out of 6 environments.

Add environment

DOCUMENTATION

Environments allow you to modify the data in your space without affecting the data in your master environment.

 Read more in the <u>space environments</u> <u>documentation</u>.

Integration with the dev-flow is key for fast moving teams







```
module.exports = function (migration) {
    migration.deriveLinkedEntries({
      contentType: '1kUEViTN4EmGiEaaeC6ouY',
      from: ['profilePhoto', 'firstName', 'lastName'],
      toReferenceField: 'profilePhoto new',
      derivedContentType: 'media',
      derivedFields: ['name', 'photo'],
      identityKey: async (from) => {
        return `${from.firstName['en-US']}-${from.lastName['en-US']}`
      },
      deriveEntryForLocale: async (from, locale) => {
        return {
          name: `${from.firstName[locale]} ${from.lastName[locale]}`,
          photo: from.profilePhoto[locale]
    });
};
```

Should Joomla! be a Content Infrastructure?



The Flexible Platform Empowering Website Creators

Don't let a CMS get in the way of shipping your software.





Maybe





ROUVEN WEBLING

Twitter: @RouvenWessling Email: rouven@contentful.com

contentful