



R.E.A.D

How to Select the Right Modules

2015.badcamp.net/node/169

Badcamp 2015

#badcamp

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Exp: Working with Drupal since 2008.

Acquia Grand Master. 2014 Acquia MVP.

Twitter: @mikemiles86 **Drupal.org:** mikemiles86

All the Places: mikemiles86

[mike-miles.com](#)

Goals of this Session

- Outline steps to decide between contrib, patched or custom module.
- Demonstrate the effectiveness of R.E.A.D
- Teach great habits for making module selections

What it is all About

How to make smart, timely and informed decisions.

Why this is Important



All projects are subject to these three constraints. Need to be able to quickly and correctly make the right decisions for how to build functionality.

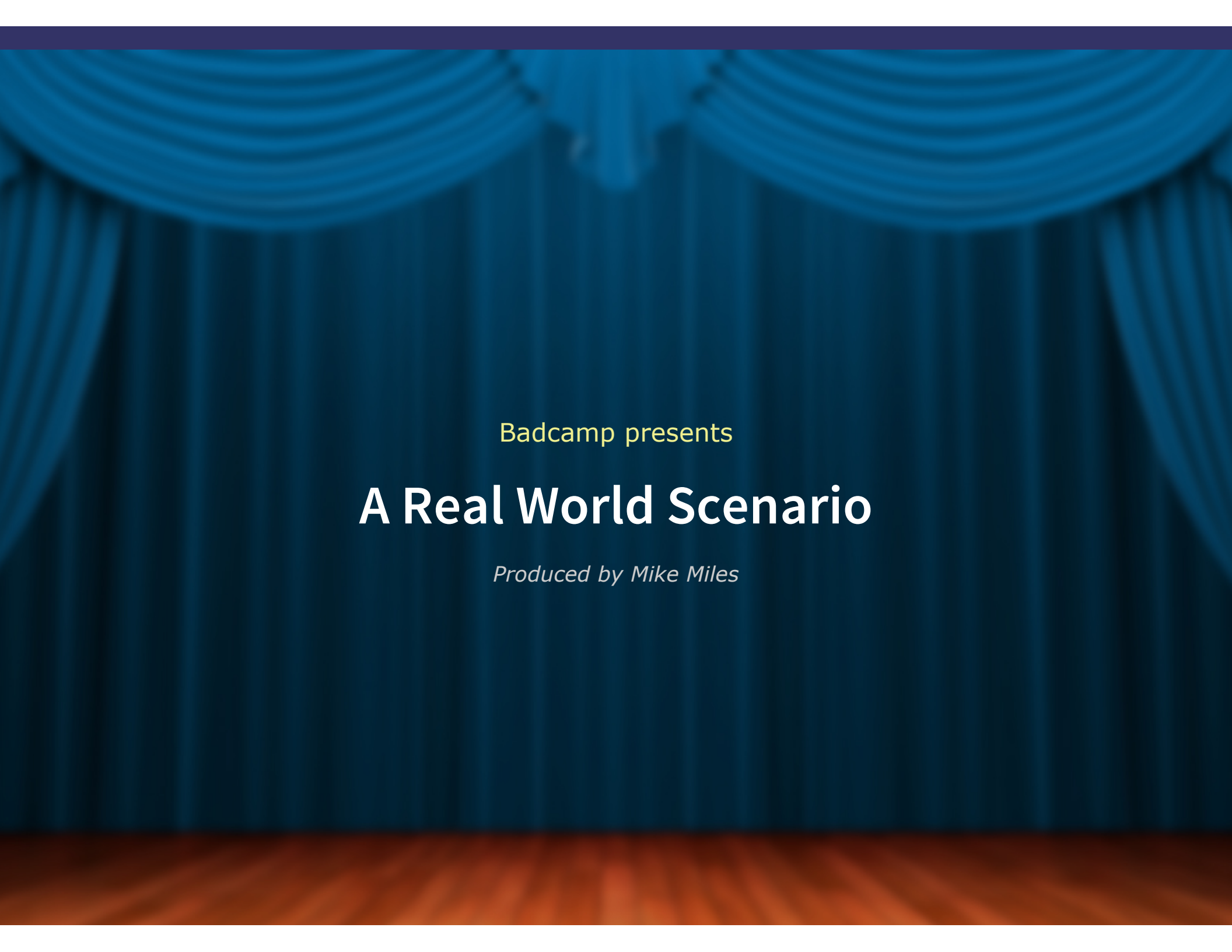
R.E.A.D

Research what exists

Evaluate the options

Analyze the gaps

Determine changes



Badcamp presents

A Real World Scenario

Produced by Mike Miles

Starring

A Drupalist



Everyones favorite hero. Will see him go through the 4 steps of R.E.A.D to make a decision on how to build the required functionality.

Research What Exists

How and where to find modules to meet your needs.

Isolate Functionality Keywords

- Gather all documentation, specs, notes, etc...
- Ask questions about any assumptions
- Highlight, circle, mark unique nouns and verbs

Perform Searches

- 30K+ modules on Drupal.org
- Favorite Search Engine, "Drupal [keywords]"
- Drupal.org, "[keywords]"

Utilize the Community

- Ask for help on IRC: #drupal, #drupal-support
- Find Drupal group on favorite social network(s)
- Talk offline at meetups, camps and cons.

Act 1: Research What Exists

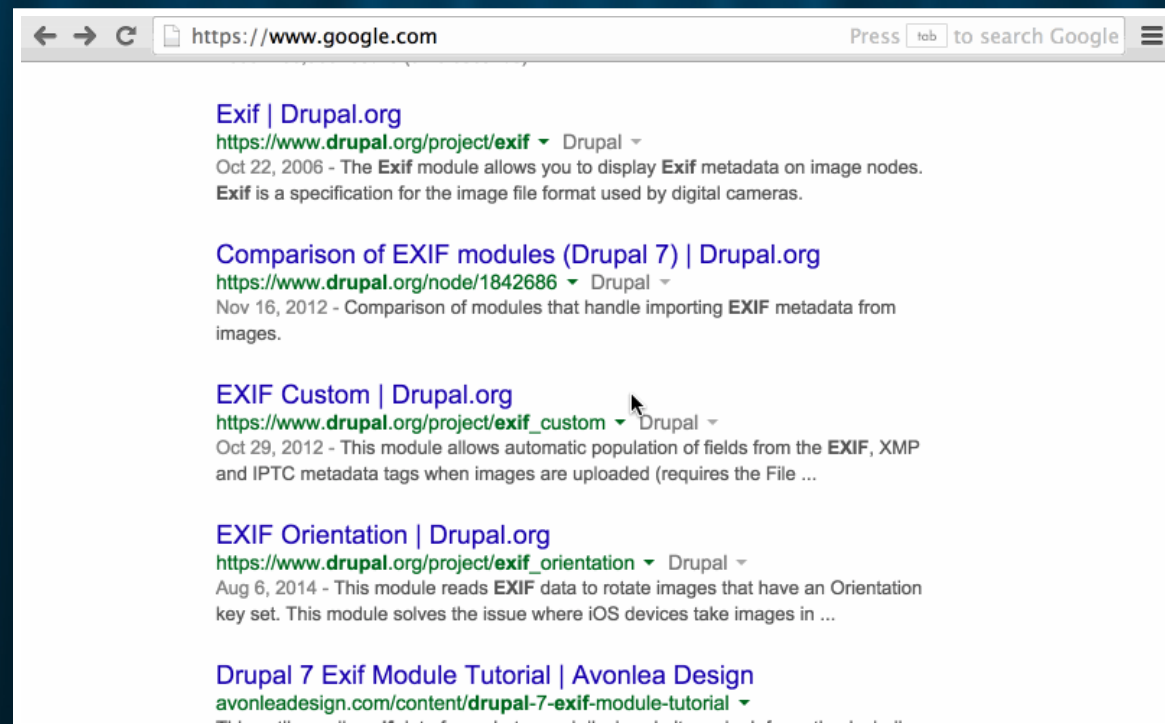


Act 1, Scene 1: *Isolate Keywords*

WHEN saving a **file entity**
AND it is a **jpeg image**
THEN the **exif meta data** needs to be **captured**
AND **mapped** to **custom fields**
AND these mappings need to be **exportable** using **features**

Compiling information about his requirements, our Drupalist highlights the terms he thinks are important, terms that he can search for modules with.

Act 1, Scene 2: *Perform Searches*



Drupalists takes the keyword "Exif" and performs a Google search. Immediately has a list of potential modules to use.

Act 1, Scene 3: *Utilize the Community*

	» The topic for #drupal is: #drupal is for general chitchat, quick questions, and community talk
drupalist	Does anyone know how to capture exif data from jpeg images?
typhonius	drupalist: Running it through Imagick would probably get you exif.
chargingHawk	drupalist: What are you trying to do with the exif data?
drupalist	chargingHawk: When a user is uploading a jpeg I need to map the exif data to some custom fields.
chargingHawk	drupalist: Are you using File Entities? or just an image upload field?
	peebz is now known as afk_peebz
chargingHawk	Because Exif Custom might do what you are looking for
chargingHawk	Exif Custom?
Druplicon	Exif Custom module allows automatic population of fields from the EXIF, XMP and IPTC metadata tags. http://drupal.org/project/exif_custom
woogman	masher: Did you ever write that migrate class?
drupalist	chargingHawk: I am using File Entities. Exif Custom sounds like it does what I might need. Thanks!
drupalist	chargingHawk++

|

Our Drupalist signs onto the #drupal IRC channel and talks to the community for help. Community offers a potential module.

Evaluate the Options

Using metrics to determine the best fit.

Gain General Understanding

- Read the description and linked documentation
- Answer "What does it do and not do?"
- Answer "What does it depend on?"

Community Adoption

- Downloads vs. Installs vs. Age
- Activity of the issue queue
- Issues and bugs are good! (to a point)

Maintainer Activity

- Participation in the issue queue
- Acceptence of feedback
- Regularity of commits and releases

Act 2: Evaluate the Options



Our Drupalists takes a potential option "Exif Custom" and evaluates it.

Act 2, Scene 1: *Gain General Understanding*

https://www.drupal.org/project/exif_custom

EXIF Custom

[View](#) [Version control](#) [Revisions](#) [Automated Testing](#)

Posted by [edwbaker](#) on October 29, 2012 at 7:23pm

This module allows automatic population of fields from the EXIF, XMP and IPTC metadata tags when images are uploaded (requires the [File Entity](#) module).

Any number of custom mappings between image metadata tags and image fields can be created and saved and it is easy to manage what mapping is used on a site-wide and per-user basis.

To create a new mapping an example image file is uploaded – the available EXIF/XMP/IPTC fields are then listed and can be mapped to the fields attached to an image file entity.

Related Resources

- [Installation instructions](#)
- [Comparison of image metadata modules](#)
- [Some example images for testing](#)
- [Some further example images for testing](#)

References

- Baker, E. (2013) EXIF Custom: Automatic image metadata extraction for Scratchpads and [Drupal Biodiversity Data Journal](#) 1.

This module was developed as part of the [eMonocot](#) and [Scratchpads](#) projects.

Project Information

Maintenance status: [Actively maintained](#)
Development status: [Under active development](#)
Module categories: [Content](#)
Reported installs: 475 sites currently report using this module. [View usage statistics](#).
Downloads: 4,183
Automated tests: Enabled
Last modified: December 1, 2014

Maintainers for EXIF Custom

[edwbaker](#) – 23 commits
last: 3 months ago, first: 2 years ago
[View all committers](#)
[View commits](#)






Issues for EXIF Custom

To avoid duplicates, please search before submitting a new issue.

[Search](#)

[Advanced search](#)
All issues
23 open, 51 total
Bug report
13 open, 31 total
[Subscribe via e-mail](#)

Statistics

New issues  0
Response rate  0 %
1st response  0 hours
Open bugs  13
Participants  0
2 year graph, updates weekly

*Drupalists reads the description and quickly knows what the module does and what it depends on.
Describes much of the functionality he is looking for.*

Act 2, Scene 2: Community Adoption

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Sees that it has not been downloaded or installed much. But it is a specific use case. Issue queue seems to have some activity.

Act 2, Scene 3: *Maintainer Activity*

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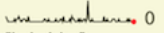

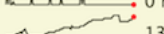
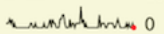
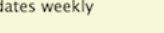
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From issue queue, Drupalist sees that maintainer participates. Also notices that maintainer seems active and releases updates.

Analyze the Gaps

Understanding what it does vs. what you need it to do.

Test the Module

- Download into a sandbox (simplytest.me)
- Discover what is offered out of the box
- How does it meet your needs

Discover Missing Functionality

- What does the module not do?
- Missing 20%? Missing 80%?
- Bigger the gap = larger amount of effort

Check for Community Solutions

- Look at the issue queue
- Search "Drupal [module] [functionality]"
- Close gaps with community help

Act 3: *Analyze the Gaps*



Drupalist has evaluated "Exif Custom" to be a best fit. Needs to see what gaps it may have.

Act 2, Scene 1: *Test the Module*

EXIF:COMPUTED:Width	1200	none
EXIF:COMPUTED:IsColor	1	none
EXIF:COMPUTED:ByteOrderMotorola	1	none
EXIF:COMPUTED:Copyright	© Copyright Notice	none
EXIF:COMPUTED:Thumbnail.FileType	2	none
EXIF:COMPUTED:Thumbnail.MimeType	image/jpeg	none
EXIF:IFD0:ImageDescription	Description	none
EXIF:IFD0:Orientation	1	none
EXIF:IFD0:XResolution	720000/10000	none

Downloads to local environment and can quickly setup and map exif data to fields

Act 2, Scene 2: *Discover Missing Functionality*

Provide a short description of what users should expect when they enable your feature.

Package

Features ☐

Organize your features in groups.

Version

Examples: 7.x-1.0, 7.x-1.0-beta1

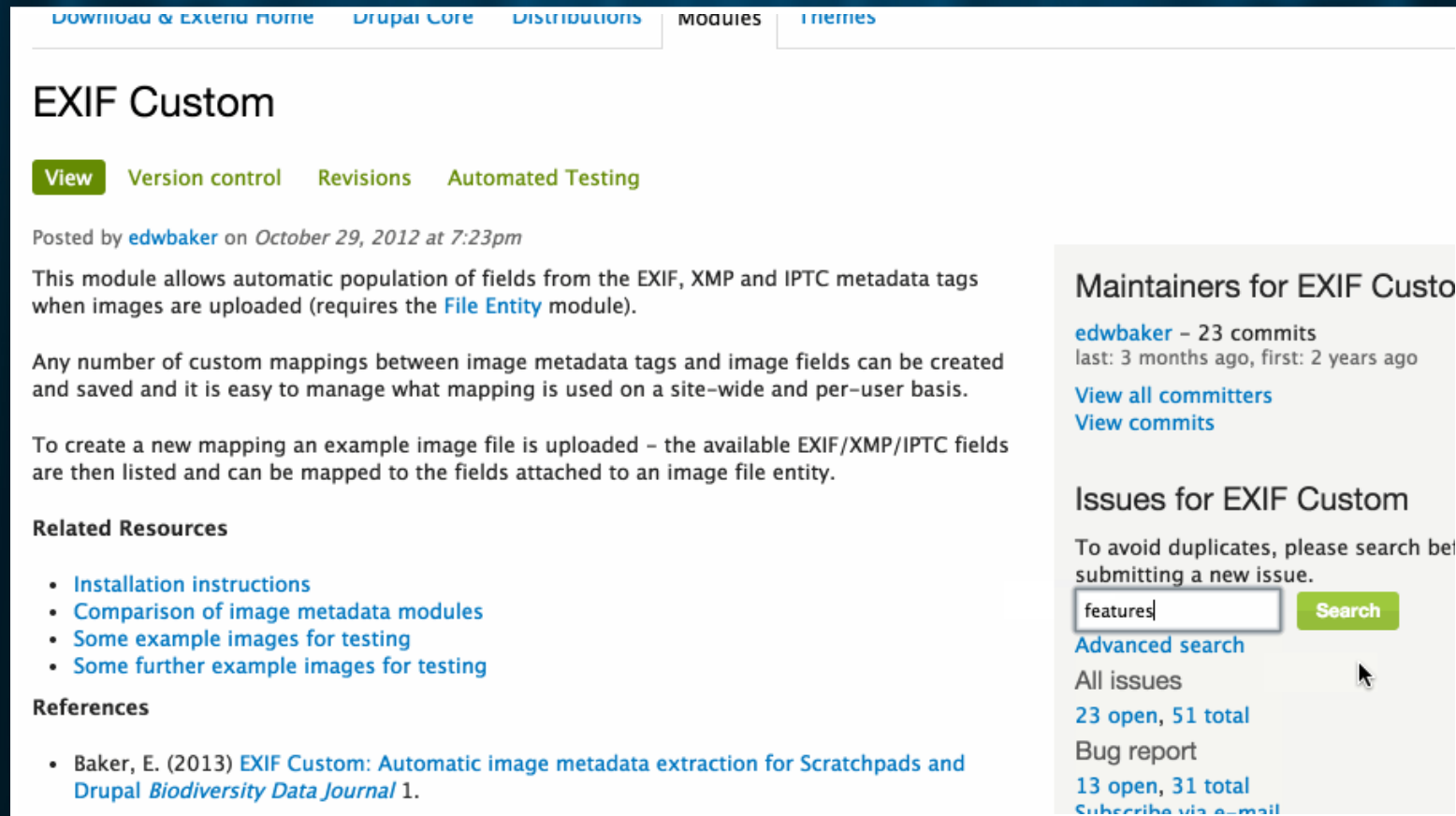
▸ **ADVANCED OPTIONS**

Download feature

- **BLOCK SETTINGS (76)** (fe_block_settings)
- **BRIGHTCOVE (1)** (brightcove_player)
- **CUSTOM KEYWORD SETS (25)** (custom_keywords_sets)
- **DEPENDENCIES (221)** (dependencies)
- **ENTITYQUEUE (2)** (entityqueue_queue)
- **FEATURE OVERRIDES (33)** (features_override_items)
- **FEATURE OVERRIDES (INDIVIDUAL -- ADVANCED) (144)** (features_overrides)
- **FIELD BASES (7)** (field_base)
- **FIELD INSTANCES (9)** (field_instance)
- **FILE ENTITY (1)** (file_display)
- **LANGUAGES (1)** (language)
- **MENU LINKS (163)** (menu_links)
- **MENUS (4)** (menu_custom)
- **METATAG (37)** (metatag)
- **MINI PANELS (1)** (panels_mini)
- **PAGE MANAGER (11)** (page_manager_pages)
- **PERMISSIONS (382)** (user_permission)

Discovers that there is not Features support, so mappings cannot be exported to other environments.

Act 2, Scene 3: *Check for Community Solutions*



The screenshot shows the Drupal.org page for the EXIF Custom module. The page layout includes a top navigation bar with links for 'Download & Extend', 'Home', 'Drupal Core', 'Distributions', 'Modules', and 'Themes'. The main content area is titled 'EXIF Custom' and features a 'View' button and links for 'Version control', 'Revisions', and 'Automated Testing'. The post is attributed to 'edwbaker' on 'October 29, 2012 at 7:23pm'. The description states that the module allows automatic population of fields from EXIF, XMP, and IPTC metadata tags when images are uploaded, requiring the 'File Entity' module. It also mentions that any number of custom mappings between image metadata tags and image fields can be created and saved, and that it is easy to manage what mapping is used on a site-wide and per-user basis. A section for 'Related Resources' lists links for 'Installation instructions', 'Comparison of image metadata modules', 'Some example images for testing', and 'Some further example images for testing'. A 'References' section cites a paper by Baker, E. (2013) titled 'EXIF Custom: Automatic image metadata extraction for Scratchpads and Drupal Biodiversity Data Journal 1'. On the right side, there is a sidebar with 'Maintainers for EXIF Custom' showing 'edwbaker' with 23 commits, last 3 months ago, first 2 years ago, with links for 'View all committers' and 'View commits'. Below this is the 'Issues for EXIF Custom' section, which includes a search bar with the text 'features', a 'Search' button, and links for 'Advanced search', 'All issues', '23 open, 51 total', 'Bug report', '13 open, 31 total', and 'Subscribe via e-mail'.

Download & Extend Home Drupal Core Distributions Modules Themes

EXIF Custom

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Maintainers for EXIF Custom

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Drupalist turns back to the issue queue, to see if the general use case of Features has been solved. Is not able to find a solution to the gap.

Determine Changes

What is needed to close any gaps.

Review the Code

- Does it follow standards?
- Is it extendable with APIs & hooks?
- Understand how functionality works?

Evaluate Changes

- How much code needs to be changed?
- Would changes extend?
- Would changes alter?

Estimate Effort

- How complex are the changes?
- How confident in ability to make changes?
- Is there enough time to make changes?

Act 4: *Determine Change*



After discovering the gap of Features support. Drupalist needs to determine how much would have to change.

Act 4, Scene 1: *Review the Code*

```
<?php
//...
function exif_custom_get_mapping(){
    //First try and get users default
    $mid = exif_custom_get_user_default();
    //Else use site default or item 0
    if($mid === FALSE){
        $mid = exif_custom_get_mid(variable_get('exif_custom_default', ''));
    }
    $sql = "SELECT * FROM {exif_custom_mapped_fields} WHERE mid = :mid AND";
    $return = db_query($sql, array(
        ':mid' => $mid
    ))->fetchAllAssoc('img_field');
    return $return;
}

function exif_custom_mappings(){
    $output = '';
    $mappings = _exif_custom_get_maps();
    if($mappings == false){
        $output .= '<p>You have not yet created any mappings.</p>';
    } else {
```

Drupalist notes that code follows standards. He can read and understand what functions he'd need to use to build in Features support.

Act 4, Scene 2: *Evaluate Changes*

Have to add Features support

Requires adding machine_names

would be extending the module

Drupalist questions what changes he'd need to make to implement Features support.

Act 4, Scene 3: *Estimate Effort*

Changes to module are minimal

Lots of Features documentation, confident can add code

Will not take a lot of time.

Drupalist determines changes are minimal as is the effort. He has enough skill and time to make the needed changes.

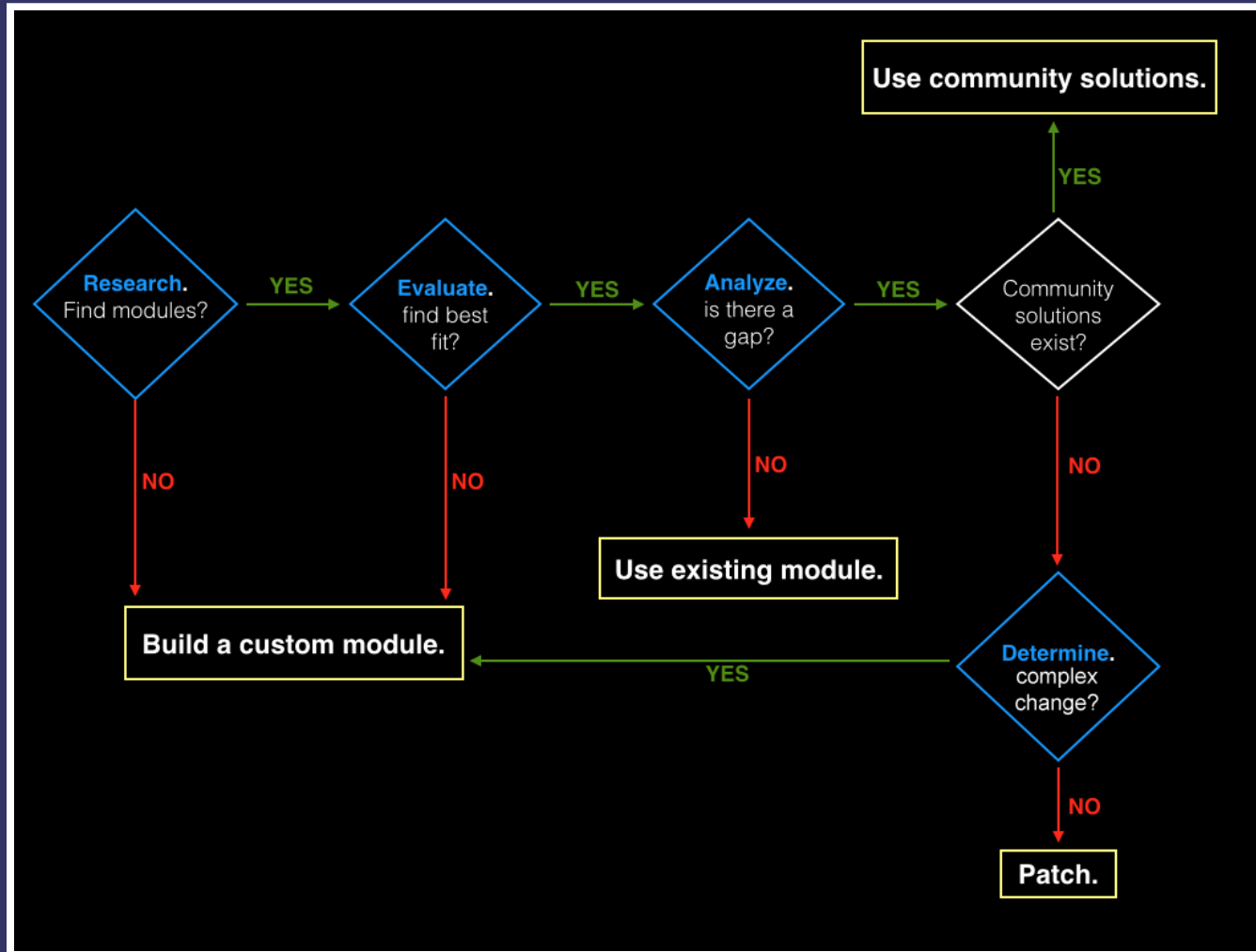
Making The Choice

What to do with all the data

Potential Solutions

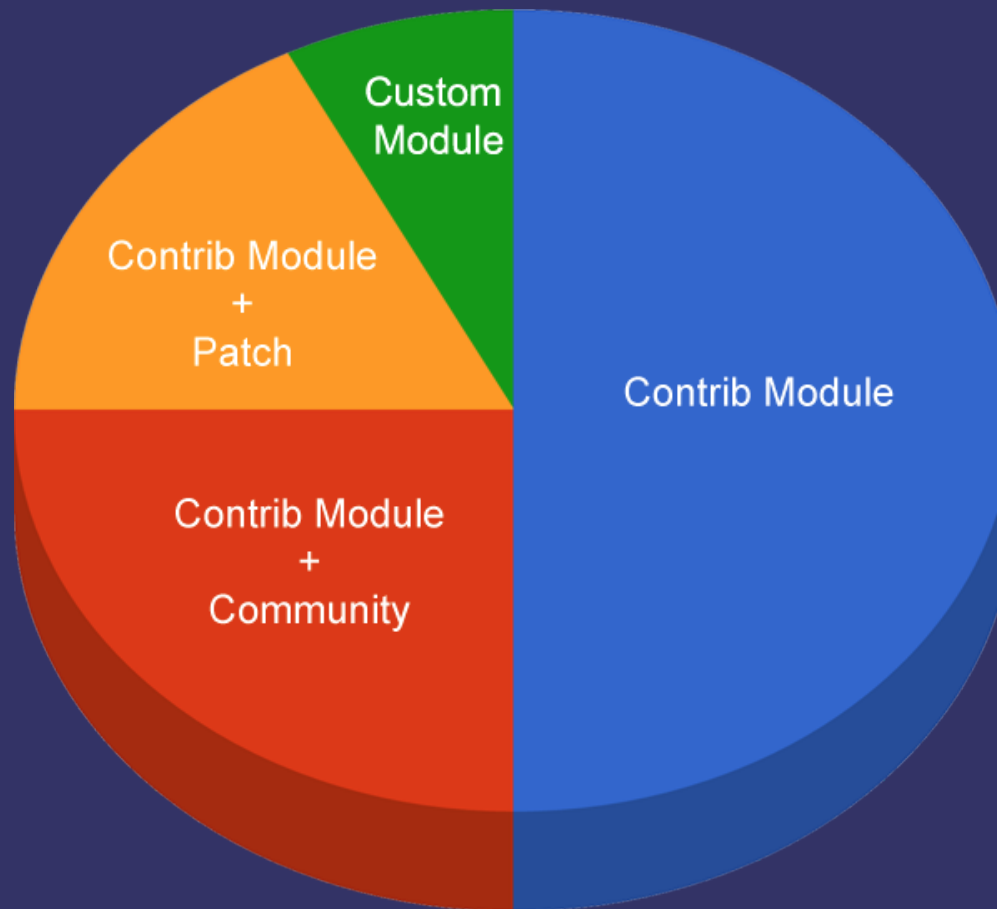
- Use a contrib module
- Use a contrib module with community solution
- Patch a contrib module
- Build a custom module

Go with the Flow



R.E.A.D is a flow you can follow to reach the right solutions. Each step is ultimately a question.

Solution Percentages

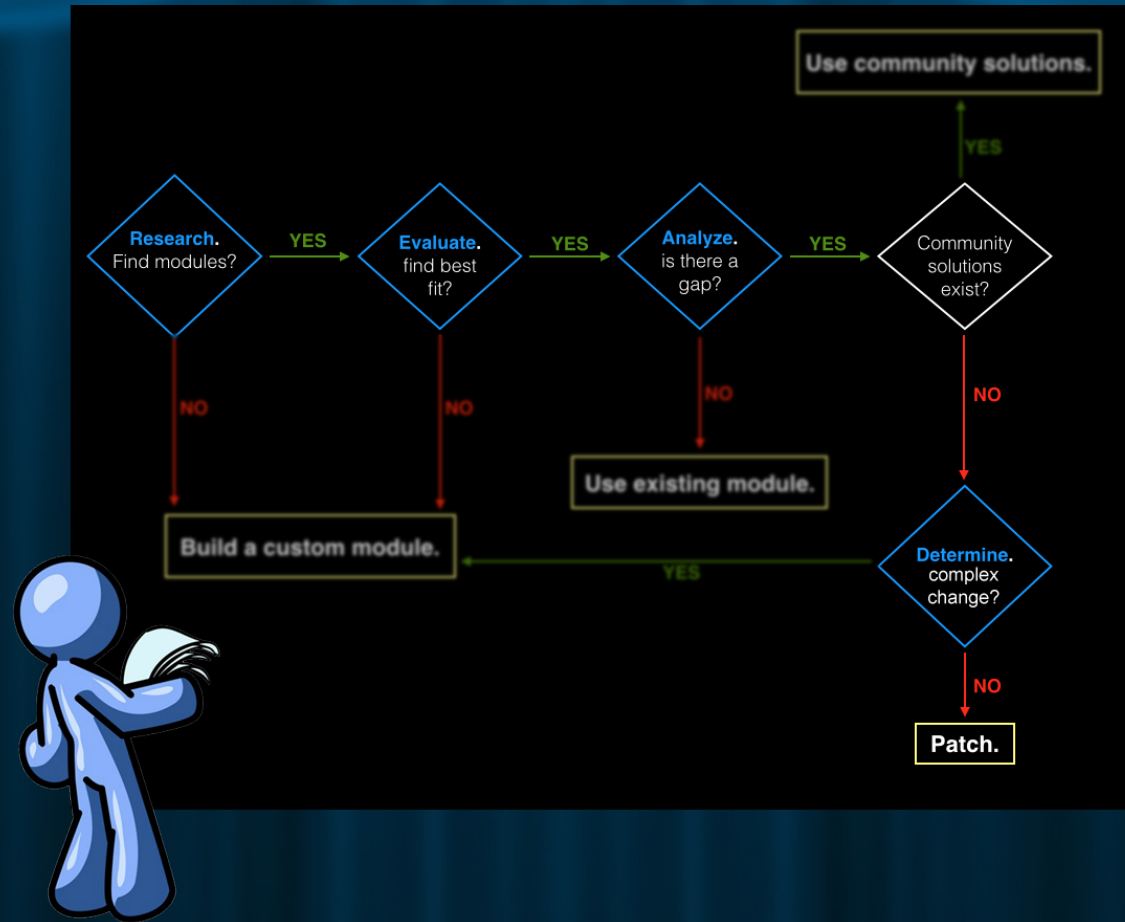


*In general most likely will use a contrib module with or without community solutions or your own patch.
Very rarely will you need to write a custom module.*

Act 5: Making The Choice



Act 5, Scene 1: *Go with the Flow*



Going through each steps and asking himself the questions our Drupalists decides that the correct path is to use Exif Custom and patch in Features support.

Act 5, Scene 2: Solution

[EXIF Custom](#) » [Issues](#)

Features integration

[View](#) [Edit](#) [Revisions](#) [CLONE ISSUE](#)


Posted by [drupalist](#) on November 21, 2013 at 11:47am

It would be very helpful if this module had features integration so that mappings could be exported to code so that they could be managed. For example, sharing across development environments, or pushing field mapping updates to other environments.

Files:

Comment	File
#1 drupalist	exif_custom-features_integration-2141235-1.patch 10.26 KB REVIEW SIMPLYTEST.ME

Comments

 [drupalist](#) Credit commented about a year ago #1

Status: Active » Patch (to be ported)

Status	File
new	exif_custom-features_integration-2141235-1.patch 10.26 KB REVIEW SIMPLYTEST.ME

Here is a patch that will add features integration into this module.

One thing worth noting that I changed was to have the 'exif_custom_default' variable store the name value instead of the serial id.

[edit](#)

Closed (fixed)

Project:	EXIF Custom
Version:	7.x-1.13
Component:	Code
Priority:	Normal
Category:	Feature request
Assigned:	Unassigned

[Update this issue](#)
Last updated on Feb 4, 2014 at 9:40am

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[Most recent attachment](#)
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Being a good member of the community, the Drupalists provides his Features patch back to the module. The active maintainer sees the benefit and merges it in.

R.E.A.D

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Slides & Notes

- bit.ly/bc15READ
- bit.ly/bc15READslides
- bit.ly/drupalREAD

Thank You!

Feedback

@mikemiles86

#badcamp

Questions?



#badcamp



@WeAreGenuine

R.E.A.D / Michael Miles