Media is now in core: Let's use it!



Drupal Camp Asheville 2020 July 11, 2020

Presented by Chris Burge

Digital Experience Group (DXG) University of Nebraska-Lincoln

IN OUR GRIT, OUR GLORY.

About the Speaker



Christopher Burge Web Applications Developer University of Nebraska-Lincoln

Burge, a full-stack web developer, has specialized in Drupal since 2011. Prior to joining the Digital Experience Group (DXG) at the University of Nebraska-Lincoln, he spearheaded a number of higher-ed and enterprise projects as a freelance developer. He maintains a number of modules on Drupal.org and is an active member of the open-source community. As a member of DXG, he is engaged in migrating UNLcms to Drupal 8.

Media entities

- Provides default bundles
 - Audio
 - Document
 - Image
 - Remote Video
 - Video
- Fieldable entities
- Configurable form display
- Configurable display modes
- Metadata field mapping

Media entities: Metadata field mapping (Image)

FIELD MAPPING

Media sources can provide metadata fields such as title, caption, size information, credits, etc. Media can automatically save this metadata information to entity fields, which can be configured below. Information will only be mapped if the entity field is empty.

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Media entities: Metadata field mapping (Remote Video)

FIELD MAPPING

Media sources can provide metadata fields such as title, caption, size information, credits, etc. Media can automatically save this metadata information to entity fields, which can be configured below. Information will only be mapped if the entity field is empty.

Resource type

Resource type	•
Resource title	
Name	•
The name of the author/owner	
Author Name	•
The URL of the author/owner	
Author URL	•
The name of the provider	
Provider Name	T
The URL of the provider	
Provider URL	T
Suggested cache lifetime	
Suggested cache lifetime	•
Default name of the media item	
Default name of the media item	•
Local URI of the thumbnail	
Local URI of the thumbnail	•

Thumbnail width	
Thumbnail width	•
Thumbnail height	
Thumbnail height	•
The source URL of the resource	e
The width of the resource	•
The width of the resource	
The width of the resource The width of the resource	•
The width of the resource The width of the resource The height of the resource	•
The width of the resource	•
The width of the resource The height of the resource	▼ e resource

oEmbed

Providers are downloaded from <u>https://oembed.com/providers.json</u>

{

oEmbed

 Request is submitted to API endpoint: <u>https://www.youtube.com/oembed?url=https://www.youtube.com/oembed?url=https://www.youtube.com/watch?v=tFMo3UJ4B4g</u>

"height":270. "author_name": "Paramount Pictures", "html":"\u003ciframe width=\"480\" height=\"270\" src=\"https:\/\/www.youtube.com\/embed\/tFMo3UJ4B4q?feature=oembed\" frameborder=\"0\" allow=\"accelerometer; autoplay; encrypted-media; gyroscope; picture-in-picture\" allowfullscreen\u003e\u003c\/iframe\u003e", "author_url":"https:\/\/www.youtube.com\/user\/Paramount", "thumbnail_url":"https:\/\/i.ytimg.com\/vi\/tFMo3UJ4B4g\/hqdefault.jpg", "width":480, "thumbnail_width":480, "type":"video", "provider_name":"YouTube", "title":"Arrival Trailer (2016) - Paramount Pictures", "version":"1.0", "provider_url":"https:\/\/www.youtube.com\/", "thumbnail_height":360

}

Add a Remote Video

Add Remote video \because

Home » Add media item

Video URL *

https://www.youtube.com/watch?v=74TfR8mmNHA

You can link to media from the following services: UNL MediaHub, Vimeo, YouTube

Revision information No revision	Revision log message
URL alias No alias	
Authoring information By admin (1) on 2020-07-10	Briefly describe the changes you have made.

🗹 Published





Add a Remote Video

The website encountered an unexpected error. Please try again later.

• What happened?

https://www.drupal.org/project/drupal/issues/3060292

Add a Remote Video

Issues

Drupal\media\Entity\Media::prepareSave should convert URL object metadata to string before saving



Problem/Motivation

Media bundles allow for source values to be mapped to fields on the bundle. The mapping is executed in Drupal\media\Entity\Media::prepareSave. There is an issue with how URLs are processed. Sometimes the metadata value is a string. Other times it is a \Drupal\Core\Url object. When the mapped value is saved, the assumption is that the value is a string. Take a look at Drupal\media\OEmbed\Resource::getAuthorUrl. This method calls Drupal\Core\URL::fromUri, which expects to receive a string. If it receives a URL object, then the result is a fatal error.

Steps to reproduce

- 1. Create a 'Remote Video' media bundle
- 2. Create an 'Author URL' field (Link field
- 3. Map this field to 'The URL of the author/owner'
- 4. Attempt to add a YouTube video as a Media entity
- 5. Note the following error for a Link field: Recoverable fatal error: Object of class Drupal\\Core\\Url could not be converted to string in /app/web/core/lib/Drupal/Core/Url.php on line 281

If the mapped field is a text field, then then the result is a different fatal error:

Or the following error for a Text field: <code> Uncaught PHP Exception
Drupal\\Core\\Entity\\EntityStorageException: "Expected argument of type "string",
"Drupal\\Core\Url" given" at
/app/web/core/lib/Drupal/Core/Entity/Sql/SqlContentEntityStorage.php line 847

Needs review

Project:	Drupal core
Version:	8.9.x-dev
Compone	nt: media system
Priority:	Normal
Category:	Bug report
Assigned:	: Unassigned
Reporter:	Chris Burge
Created:	7 Jun 2019 at 11:08 CDT
Updated:	28 Oct 2019 at 15:02 CDT

+ Following 5 followers

Jump to comment: Most recent, Most recent file, **Add new**

Add child issue, clone issue, add change notice

oEmbed: Media integration

- Providers are downloaded from <u>https://oembed.com/providers.json</u>
- Providers are allowed/disallowed per media bundle
- Core UI only provides settings for YouTube and Vimeo

MEDIA SOURCE CONFIGURATION

It is potentially insecure to display oEmbed content in a frame that is served from the same domain as your main Drupal site, as this may allow execution of third-party code. You can specify a different domain for serving oEmbed content here (opens in a new window).

Video URL field is used to store the essential information about the media item.

Thumbnails location *

public://oembed_thumbnails

Thumbnails will be fetched from the provider for local usage. This is the URI of the directory where they will be placed.

Allowed providers

YouTube

🗸 Vimeo

Optionally select the allowed oEmbed providers for this media type. If left blank, all providers will be allowed.

oEmbed Providers (contrib)

oEmbed Providers View Edit Version control View history Maintainers Automated testing By Chris Burge on 11 April 2020, updated 11 May 2020 🛨 Star 8 🖂 All issues The oEmbed Providers module extends core's oEmbed Custom oEmbed Providers functionality: Maintainers for oEmbed • Add custom oEmbed providers via an admin user Edit + Providers interface (providers are stored in configuration) Edit v Global enable/disable of providers Edit oEmbed provider UNL MediaHul Chris Burge – 14 commits • Modify the provider list URL (which is defaulted to last: 5 days ago, first: 2 months ago https://oembed.com/providers.json) • Disable the fetching of the provider list (useful in an View all committers instance where only custom providers are used View commits Drupal 8.8.4+ is required. Issues for oEmbed Providers Supporting organizations: University of Nebraska To avoid duplicates, please search before submitting a new issue. Advanced search [18 issues] All issues ave 1 open, 18 total Allowed Providers Bug report 1 open, 6 total Statistics

https://www.drupal.org/project/oembed providers

oEmbed Providers (contrib)

- Add custom oEmbed providers via an admin user interface
 - Providers are stored in configuration entities
- Global enable/disable of providers
- Modify the provider list URL
 - Defaulted to https://oembed.com/providers.json
- Disable the fetching of the provider list
 - Useful in an instance where only custom providers are used

oEmbed: What happens if I disable a provider?

- When a provider is enabled, it can then be used for new media.
- When a provider is disabled
 - it cannot be used for new media
 - existing media for disallowed oEmbed providers are unaffected
- Since oEmbed basically facilitates an iframe whitelist, isn't that a security issue?? (Think about how input filters work.)

Media View Modes

- Remote Video: Remote Video view mode
- Image: Narrow and Wide view modes

NAME	OPERATIONS	
Full content	Edit •	
Media library	Edit -	
Narrow	Edit -	
Remote Video	Edit •	
Wide	Edit -	
Add new Media <i>view mode</i>		

Media View Modes

- Remote Video
 - Display only Video URL fields as oEmbed content
- Image
 - Narrow
 - Display only Image field using Narrow responsive image style
 - Wide
 - Display only Image field using Wide responsive image style

Switch to Live Demo

Media Library

- Provides a UI for uploading and managing media
- Provides integration with CKEditor for embedding

- Configure a filter format
 - Replace Image button with Media Embed button

TOOLBAR CONFIGURATION

Move a button into the *Active toolbar* to enable it, or into the list of *Available buttons* to disable it. Buttons may be moved with the mouse or keyboard arrow keys. Toolbar group names are provided to support screen reader users. Empty toolbar groups will be removed upon save.

Available buttons	Button divider
Active toolbar	Show group names
B I ∞ ∞ 1 = 1 >> >> Format - 0	



- Configure a filter format
 - Enable Embed media filter
 - Allowed HTML tags should be updated automatically

LIISULES LIAL LIE IALEST VEISIONS OF IMAYES UPIDAUED VIA A TEAL LUILOF ALE UISPIAYED.

C Embed media

Embeds media items using a custom tag, <drupal-media>. If used in conjunction with the 'Align/Caption' filters, make sure this filter is configured to run after them.

Filter processing order

Show row weights

- ✤ Limit allowed HTML tags and correct faulty HTML
- ✤ Align images
- Caption images
- + Restrict images to this site
- + Track images uploaded via a Text Editor
- 🕂 Embed media

Configure Embed media plugin

Limit allowed HTML tags and correct faulty HTML Enabled

Embed media

Enabled

Default view mode ▼

Default

The view mode that an embedded media item should be displayed in by default. This can be overridden using the data-view-mode attribute.

Media types selectable in the Media Library

Audio

Document

🗸 Image

✓ Remote video

🗌 Video

If none are selected, all will be allowed.

View modes selectable in the 'Edit media' dialog

Default

Full content

Media library

✓ Narrow

Remote Video

🗸 Wide

If two or more view modes are selected, users will be able to update the view mode that an embedded media item should be displayed in after it has been embedded. If less than two view modes are selected, media will be embedded using the default view mode and no view mode options will appear after a media item has been embedded.

• Let's insert a video

Page with Video	
ody (Edit summary)	
B I ⊜ ⊚ I :≣ 1≣ I I I I Normal - O Source	
body p	
Text format Basic HTML 🔻	About text formats 🔞



• Let's insert a video

Add or select m	edia	×
Image	Add Remote video via URL *	
Remote video	https:// Allowed providers: YouTube, UNL Media	Add Hub.
	Name	Sort by Newest first Apply filters
	Grid ∷ Table FARM BILL DETAILS AND DECISIONS JOINT EDUCATIONAL PRESENTATION BY: DETAILS	
	Farm Bill Details and Decisions (Glow Big Red 2020 Thank You
	• • • , ◄	
Insert selected		0 of 1 item selected



• Let's insert a video



bander Produced and and the

Needs review

https://www.drupal.org/project/drupal/issues/3092795

Issues

[regression] Restore styling for embedded media edit button in Seven theme



Problem/Motivation

ody (Edit summary)			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Vers	sion:	8.9.x-dev
Edit media	Con	nponent:	media system
	Prio	ority:	Normal
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			6 Nov 2019 at 10:51 CS
	Burger	Č	25 Feb 2020 at 12:14 C
		Concerne and Conce	11 followers nt: Most recent,
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	add	change no	otice

- Let's talk about default view modes
- When inserted, media is inserted with the default view mode
- 'data-view-mode' is dropped for default view mode
- If 'data-view-mode' is missing, then it's assumed to be the default
- What happens if the default view mode changes?
- DATA LOSS HAPPENS





https://www.drupal.org/project/drupal/issues/3109289

Issues

MediaEmbed conflates default view mode with user-selected view mode



Problem/Motivation

The new MediaEmbed functionality added in 8.8.0 incorrectly conflates a text format's MediaEmbed default view mode with the view mode selected by an editor when embedding the media. If the default view mode for the text format is changed, this will result in corruption of data. The implicit relationship with the embeds using the previous default view mode is now broken, and all of the previously embedded media that used the old embed are now displaying the new default view mode.

If an editor embeds media and selects what a site builder has designated as the default view mode, then that data (the 'data-view-mode' attribute) is stripped from the <drupal-media> element. The editor is unaware this happens. From their point of view, they selected a view mode and expect that selection to be honored; however, from this point forward, MediaEmbed assumes that if a <drupal-media> element lacks a 'data-view-mode' attribute, then the view mode must be the current default view mode.

The following comment from \Drupal\media\Form\EditorMediaDialog::buildForm() pretty much sums it up:

 $\ensuremath{\prime\prime}\xspace$ Store the default from the MediaEmbed filter, so that if the selected

- // view mode matches the default, we can drop the 'data-view-mode'
- // attribute.

Here's the catch. If that default view mode changes, then piece of embedded media that used the prior default view mode will now use the new default view mode. The editor's view mode selection

Needs review
Drupal core
8.8.x-dev
media system
Major
Bug report
Unassigned
Chris Burge
27 Jan 2020 at 10:18 CST
30 Jan 2020 at 18:29 CST

+ Following 9 followers

Jump to comment: Most recent, Most recent file, **Add new**

Add child issue, clone issue, add change notice

- Let's edit the embedded video
- Editor can select view mode
- Why are Narrow and Wide options?

Edit media	×
Align O None O Left O Center Right	
Caption	
Display	
✓ Narrow	
Remote Video	
Wide	
(Save)	

https://www.drupal.org/project/media_library_extras/issues/3108619

Media Library Extras » Issues

Allow View Mode Options to be Restricted on a Per-bundle Basis for Media Embed



Problem/Motivation

Media Embed provides an editor plugin and a text format filter that allow for media entities to be embedded inside CKEditor. It allows site builders to determine which media bundles can be embedded (e.g. images and remote videos but not files). When rendered, media entities are displayed with a designated view mode. Media Embed allows site builders to control which view modes can be selected by end users for display; however, the list of allowed view modes is controlled on a per-text format basis, not on a per-bundle basis. This proposed sub-module modifies Media Embed to allow view modes to be designated on a per-bundle basis.

For example, a site builder has created two media bundles: 1) image and 2) remote video. For the images, two view modes are needed: 1) 'Narrow' and 2) 'Wide'. For remote videos, only one view mode is needed, 'Remote Video'. Without this module, end users would see all three view modes as options when embedding media in CKEditor for both images and remotes videos. Ideally, when embedding an image, a content editor would only be given 'Narrow' and 'Wide' as options; and when embedding a remote video, a content editor wouldn't see any options because 'Remote Video' is the only view mode allowed for remote videos. This module fills that functionality gap.

Proposed resolution

Extend the Media Embed filter/editor plugins to support this functionality.

• Use hook_filter_info_alter() to replace the filters plugin class with a custom class

Needs review		
Project:	Media Library Extras	
Version:	8.x-1.x-dev	
Component:	Code	
Priority:	Normal	
Category:	Feature request	
Assigned:	Unassigned	
Reporter:	Chris Burge	
Created:	24 Jan 2020 at 10:20 CST	
Updated:	19 Feb 2020 at 14:16 CST	
Category: Assigned: Reporter: Created:	Feature request Unassigned Chris Burge 24 Jan 2020 at 10:20 CST	

★ Following 🛛 3 followers

Jump to comment: Most recent, Most recent file, **Add new**

Add child issue, clone issue,

• Now, Media Embed configuration can be set per media bundle

Limit allowed HTML tags and correct faulty HTML Enabled	Media types selectable in the Media Library		
Embed media Enabled	 Document Image Remote video 		
	☐ Video If none are selected, all will be allowed.		
	► ALLOWED VIEW MODES: IMAGE		
	► ALLOWED VIEW MODES: REMOTE VIDEO		

Now, Media Embed configuration can be set per media bundle

▼ ALLOWED VIEW MODES: IMAGE

Default view mode

Narrow 🔻

The view mode that an embedded media item should be displayed in by default. This can be overridden using the data-view-mode attribute.

View modes selectable in the 'Edit media' dialog

🗌 Default

Full content

Media library

🗹 Narrow

🗌 Remote Video

🗸 Wide

If two or more view modes are selected, users will be able to update the view mode that an embedded media item should be displayed in after it has been embedded. If less than two view modes are selected, media will be embedded using the default view mode and no view mode options will appear after a media item has been embedded.

▼ ALLOWED VIEW MODES: REMOTE VIDEO

Default view mode

Remote Video 🔻

The view mode that an embedded media item should be displayed in by default. This can be overridden using the data-view-mode attribute.

View modes selectable in the 'Edit media' dialog

🗌 Default

Full content

Media library

Narrow

Remote Video

🗆 Wide

If two or more view modes are selected, users will be able to update the view mode that an embedded media item should be displayed in after it has been embedded. If less than two view modes are selected, media will be embedded using the default view mode and no view mode options will appear after a media item has been embedded.

 Because only Remote Video is allowed, no option is provided

Edit media	×
Align None Left Center Right Caption	
Save	

• Let's insert an image

Add or select media			
Image	Add file		
Remote video	Choose File No file chosen One file only. 100 MB limit. Allowed types: png gif jpg jpeg.		
	Name	Sort by Newest first Apply filters	
	■ <u>Grid</u> I Table		
	kb52p0wemtp11.jpg	pexels-photo-1574859.jpeg	
Insert selecte	d Sion	0 of 1 item selected	

• Let's insert an image

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B $I \mid \mathfrak{S} \mid$	🤧 🤊 Format 👻 😥 Source	
body Embedded media		
body Embedded media		About text formats 🕜

• Let's edit an image

Edit media	×
Alternate text	
More mountains	
Short description of the image used by screen readers and displayed when the image is not loaded. This is important for accessibility.	
Align	
🔿 None 🔷 Left 💿 Center 🔷 Right	
Caption	
Display Narrow v	
Save	

 How to get view-mode class on figure element? (when using a caption)

<figure role="group" class="caption caption-drupal-media align-center
figure--embedded-media view-mode--narrow">

<article class="media media--type-image media--view-mode-narrow">
 <div data-quickedit-field-id="media/8/field_media_image/en/narrow"
 class="field field--name-field-media-image field--type-image field--labelvisually_hidden">

<div class="field__label visually-hidden">Image</div>
<div class="field_item">

</div>

</article>

<figcaption>Caption goes here!</figcaption>

</figure>

How to get view-mode class on figure element? (when using a caption)

/**

* Implements template_preprocess_filter_caption().
*/

media view-mode--' . \$data_view_mode);

function custom_media_preprocess_filter_caption(&\$variables) {

// For <drupal-media> elements rendered with captions, get the view

// mode and add a corresponding class to the <figure> element.
//

```
// Convert the markup to a DOM element.
$element_string = $variables['node']->__toString();
$dom = new DOMDocument();
@$dom->loadHTML($element_string);
// Only proceed if element is <drupal-media>.
$element = $dom->getElementsByTagName("drupal-media");
if (method_exists($element,'count') && $element->count() != 0) {
    $element = $element->item(0);
    $data_view_mode = $element->getAttribute('data-view-mode');
    // Set classes on caption element.
    $variables['classes'] = trim($variables['classes'] . ' figure--embedded-
```

}

}

CKEditor integration: Limitations

- Allow CKEditor styles for <drupal-media> <u>https://www.drupal.org/project/drupal/issues/3117172</u>
- Allow dashes in Styles dropdown's element names <u>https://www.drupal.org/project/drupal/issues/2911527</u>
- If <drupal-media> is wrapped in a link, alignment is lost
- No upgrade path (yet) from Entity Embed <drupal-entity>

What about documents (e.g. PDF)?

- For documents (e.g. PDF), link text cannot be customized
- Linkit <u>https://www.drupal.org/project/linkit</u>
- Linkit Media Library <u>https://www.drupal.org/project/linkit_media_library</u>

Switch to Live Demo

Entity Usage: Keep track of your media usage

• With media embedded all over my site, how do I know where a given media entity is used?

Entity Usage



Version control View history Automated testing

By marcoscano on 4 July 2016, updated 18 February 2020

This module provides a tool to **track entity relationships** in Drupal.

Currently the following tracking methods are supported:

- Entities related through entity_reference fields
- Entities related through link fields
- Standard HTML links inside text fields.
- Entities embedded into text fields using the Entity Embed module
- Entities embedded into text fields using the LinkIt module
- Entities related through **block_field** fields
- Entities related through entity_reference_revisions fields
- Entities related through dynamic_entity_reference fields

- Entities related through Layout Builder. Supported methods: a) Core's inline (non-reusable) content blocks, and b) entities selected through the contributed Entity Browser Block module





🛨 Star 55 🖂 Followed

Maintainers for Entity Usage

marcoscano - 101 commits last: 1 month ago, first: 3 years ago

seanB - 22 commits last: 1 year ago, first: 1 year ago

View all committers View commits

Issues for Entity Usage

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

Search

Entity Usage: Keep track of your media usage

• A Usage tab can be added to entities that are tracked

Entity ເ ມີ	isage inf	formatio	n for <i>G</i>	low Big Re	d 2020 Thai	nk You
Edit	Delete	Usage	Usage			
Home » Edit	Home » Edit <i>Glow Big Red 2020 Thank You</i>					
ENTITY		ТҮРЕ		LANGUAGE	FIELD NAME	STATUS
A Custom	Block Instance	Custo	om block	English	Body	Published
Page with	Video	Conte	ent	English	Body	Published

Entity Usage: Keep track of your media usage

• Notices can be added to entity edit/delete pages

Edit <i>Remote video</i> Glow Big Red 2020 Thank Yo ਨੇ	ou la			
Edit Delete Usage				
Home				
A Modifications on this form will affect all existing usages of this entity.				
Video URL *	Are you sure you want to delete the media item <i>Glow Big Red</i>			
https://mediahub.unl.edu/media/12280	2020 Thank You?			
You can link to media from the following services: YouTube, UNL MediaHub	☆ 			
	Edit Delete Usage			
	Home			
	A There are recorded usages of this entity.			
	This action cannot be undone.			
	Delete Cancel			

Switch to Live Demo



That's all! I'm out of slides!

