

EU-OSHA

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EU-OSHA Translation workflow

Author Bilbomática, an Altia Company

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1 Introduction

This document by Bilbomática, an Altia company, aims to provide a technical analysis of the Translation workflow module developed in Drupal 9 and updated to Drupal 10 and 11. This module has been installed and is currently used in the following EU-OSHA websites:

- EU-OSHA corporate website.
- Healthy Workplaces Campaign.
- OiRA.
- OSHwiki eguide.
- NAPO website.

Since several Agencies have shown interest in the translation tool developed by EU-OSHA (from now on, the "EU-OSHA translation tool"), this document will help them understand it and show them how to adapt it to their systems.

2 Scope

This document covers:

- **Technical pre-requirements**: Detailing the technical prerequisites and constraints needed to integrate the EU-OSHA translation tool in an existing Drupal CMS installation.
- Modules required: Detailing the modules needed for the EU-OSHA translation tool.
- Functionalities of the EU-OSHA translation tool: Describing the main functionalities of the EU-OSHA translation tool as user stories.

2.1 Technical pre-requirements

This section describes the requirements that must be accomplished to use the EU-OSHA translation tool:

- Drupal version: The EU-OSHA translation tool has been implemented in Drupal 10.3 and Drupal 11.
- Translation level: The EU-OSHA translation tool uses field-level translation.
- **EU-OSHA translation tool source code**: The tool's translation workflow module source code is available on EU-OSHA GitHub: https://github.com/EU-OSHA/EU-OSHA-translations-tool/.

2.2 Modules required

This section describes the list of modules that the EU-OSHA translation tool needs to be installed to ensure that this tool can be used. The list below presents the required modules:

- Translation Management Core.
- Locales Source.
- Export / Import File.
- Drupal user.
- Content Entity Source.
- Interface Translation.
- Content Translation.
- Configuration Translation.
- Translation workflow (Custom module with the improvements in the tmgmt module).

Moreover, since the EU-OSHA translation tool has been developed based on the <u>Translation Management Tool</u> module, the following list of modules must be installed:

- ✓ Entity.
- ✓ Chaos Tools.
- ✓ Views Bulk Operations.
- ✓ Rules (for node translation).

Additionally, the following extensions have to be installed:

- symfony/dom-crawler
- symfony/css-selector

3 Installation & configuration of EU-OSHA translation tool

The source code of the **EU-OSHA translation tool module** is available on the EU-OSHA GitHub. After downloading and having installed it on a Drupal 10 and 11 CMS, we need to take these steps to configure it:

- Configuration of the Drupal entities.
- Configuration of the providers.

3.1 Configuration of the Drupal entities

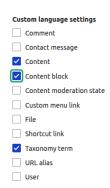
The EU-OSHA translation tool allows the translation of the following Drupal entities:

- Content (nodes).
- Taxonomy terms.
- Blocks.
- Menu links.
- Literals.

Any other entity not included in the Drupal entities listed above will not be translated using this EU-OSHA translation tool.

Once the EU-OSHA translation tool module is installed in Drupal, we need to configure the Drupal entities (among the list above) that will be translated using this tool. We present the steps that must be followed to configure the Drupal entities:

- Access to the Content language and translation page (admin/config/regional/content-language).
- Select the content types:

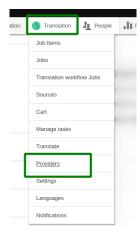


• For each content type. Select the fields that can be translated:

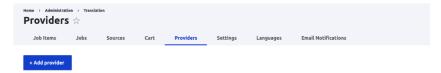


3.2 Configuration of the provider

The last step is to configure the providers. To achieve this goal, we need to access the providers' screen, which can be accessed by clicking on the corresponding menu item:

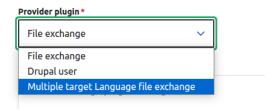


Click on the Add provider button:



A form is displayed where the user can add the following information about the provider:

- Label (mandatory): XML CDT.
- Provider plugin: Select multiple target languages.



• Export to format: Select to export XML and Download method in case more than one download method is configured in the website.

Once all the fields mentioned above have been filled in with the values detailed, we need to click on the Save button to create the provider:



3.3 Translation: Step by step

This section describes the steps to follow to translate a node using the EU-OSHA translation tool:

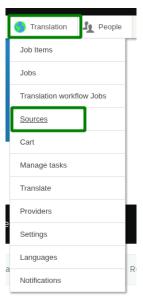
- 1. Select content to be translated.
 - ✓ Adding multiple nodes to the translation cart as a bulk.
 - ✓ Adding one node to the translation cart.
- 2. Go to the translation cart.
- 3. Create a translation job.
- 4. Download the translation package (XML file).
- 5. Translation process by CDT [external].
- 6. Upload XML file(s) containing the translations.
- 7. Preview translation and validate layout for each job item.
- 8. Review and validate translation for each job item [optional].
- 9. Accept (publish) translation and update node.

3.3.1 Select content to be translated

The first step is to select the nodes (among the available list of content types that can be sent to be translated using the EU-OSHA translation tool). There are two ways to select the nodes:

Adding multiple nodes to the translation cart as a bulk

By clicking on the corresponding menu item: Sources:



After clicking on this menu item, a new page containing the list of nodes available to translate is displayed. The table shows the following columns:

- Node title.
- · Content type.
- Languages in which the contents are translated.

Notice that developers can customise this listing by modifying the view tmgmt_node_selection_view.

The translation process starts when a node(s) is selected from the list.



After selecting the list of nodes, please click the Add to cart button.



After clicking the button, the following message informing the number of nodes added to the translation cart is displayed.

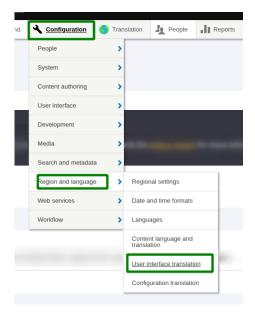
The Sources page contains a filter section:



It allows filtering by:

- Content type.
- Free text (inside the title and body).
- By language in which the node is not translated.

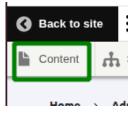
The **content selection page for literals**. Suppose a literal does not appear in the list. In that case, the user must make sure that the web page containing that literal has been requested in another language. The list of literals contains both front-end and back-end literals because they cannot be separated:



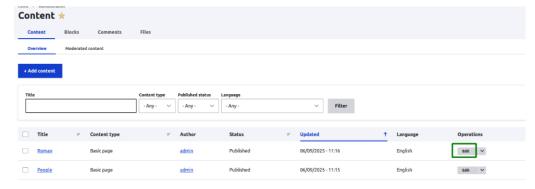
Adding one node to the translation cart

In case you only need to send one node to translate, please follow the next steps:

Access to the Content view on the backend.



• Click on the corresponding "Edit" button.



Click on the translate tab:



- The following page, which contains the following features, will be displayed:
 - ✓ The Add to cart section.
 - ✓ The list of languages that this node can be translated into.



Please click the corresponding 'Add to cart' button to add individual nodes.



Afterwards, a message informing about the new item has been added to the cart is displayed:



Notice that the languages table consists of the following columns:

- The column "Language" shows the language.
- The column "Translation" shows the translated title (if a published translation is available) or "n/a."
- The column "Status" shows the node's status regarding translations (if the node is translated in the corresponding language).
- The column "Pending translations" shows the status of the corresponding translation job item (if the current node is included in an active translation job or not).



3.3.2 The translation cart

It is essential to highlight that when a node has been added to a translation cart, the "Add to cart" button displayed on the "Translate" tab is disabled:



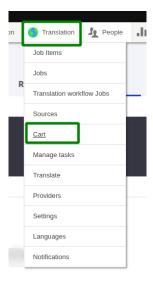
Moreover, the corresponding Edit tab displays an information message informing the user that this node has been added to a Translation cart.



This message is vital to prevent content changes during the translation process.

View the translation cart

The content added to the translation cart can be viewed by clicking on the following menu item: Cart (available under the Translation menu item).



This page contains the list of the nodes added to the translation cart. For each of them, the following information is displayed:

- Type: The type of content (it can be one of the following: node/taxonomy term/menu item/literal).
- Content: The title of the node (as a link to the node view page.
- Language: The source language.
- Character Count: Number of characters.
- Page Count: Number of pages to be translated added to the translation cart.

It is possible to configure the translation job by selecting the following features:

Priority (Low/Normal/High), default Normal (using the Job priority filter).



Request translation into language/s: Target languages (one or more of the enabled languages).



• Notice that the "Select all languages" option must be checked if the content must be translated into all the available languages.

If the item's source language will be the same as the target language the item will be ignored.

Select all languages

The content to be included in the job (by selecting the checkbox for each item).

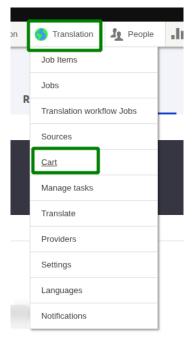


The authorised user has to check the node from the list and select the languages into which he wants to translate the content. Using Ctrl and buttons, different languages can be selected simultaneously.

3.3.3 Create translation job

Once all the nodes to be translated have been added to the translation cart, we need to create a translation job. We will describe in detail the steps to be followed to create the translation job:

Access the Cart page by clicking on the corresponding menu item Cart:



As mentioned in the above section, the list of nodes added to the translation cart is displayed.

- Select the languages for translating the nodes on the corresponding field: Request translation into language/s; please use the keyboards: Ctrl and the arrows to select multiple languages. In case all the languages should be chosen, it is feasible to select all of them by checking the "Select all languages" option:
- Click on the "Request translation" button.

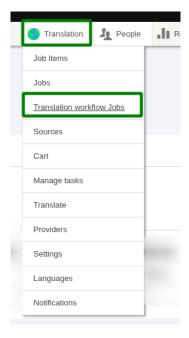


The corresponding translation job (an XML file containing the nodes to be translated) will be generated. A message will inform the user about the creation of the Translation job and provide a link to download it.



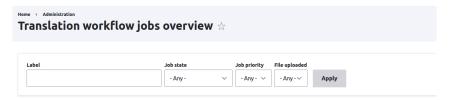
3.3.4 Download translation package (XML file)

The translation job can be managed by clicking the following menu item: translation workflow jobs.

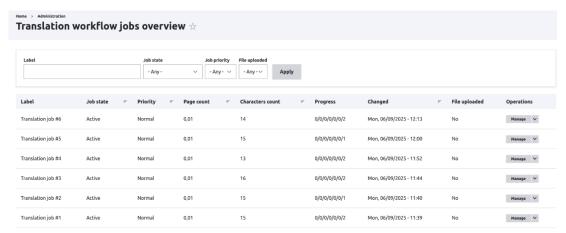


This page consists of a list of the existing translation jobs and a filter section:

- Filters:
- ✓ Label.
- ✓ Job state.
- ✓ Job priority.
- ✓ File uploaded.

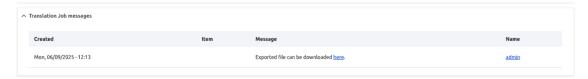


- List of the existing translation jobs. For each of them, the following information is displayed (details of the translation job):
 - ✓ Label.
 - ✓ Job state.
 - ✓ Priority.
 - ✓ Page count.
 - ✓ Characters count.
 - ✓ Progress.
 - ✓ Changed.
 - ✓ File uploaded.
 - ✓ Operations:
 - Manage.
 - o Delete.



When the authorised user clicks the "Manage" button, a new page displays all the nodes included in the translation job and its details.

Moreover, the XML file can be downloaded on this page by clicking the "here" link.



3.3.5 Translation process by CDT [external]

This is an external step; once the XML is sent to the translation Centre, they start working on the page translations and generate one XML file for each language.

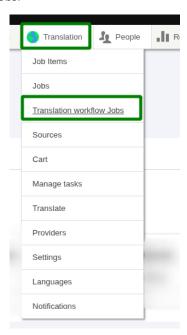
3.3.6 Upload XML file(s) containing the translations

Once the Translation Centre finishes the translation process, the XML with the content translations must be uploaded to the Drupal CMS.

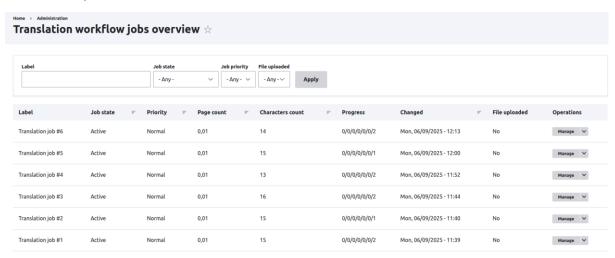
Uploading the translation file to Drupal:

- The translation centre can email the Zip file containing all the XML files, and the authorised user can upload the XML files to Drupal.
- The translation centre can access the file (with their user with a specific role) and upload it independently.

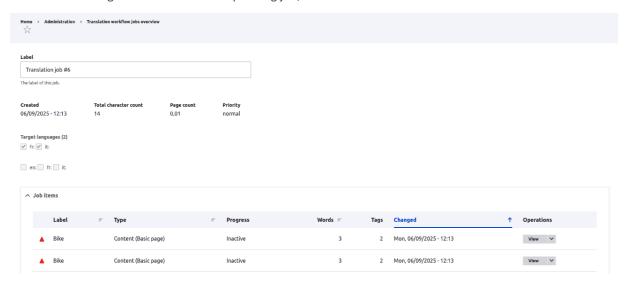
The authorised user (after logging into Drupal CMS) can upload the file by clicking on the corresponding menu item, Translation workflow jobs.



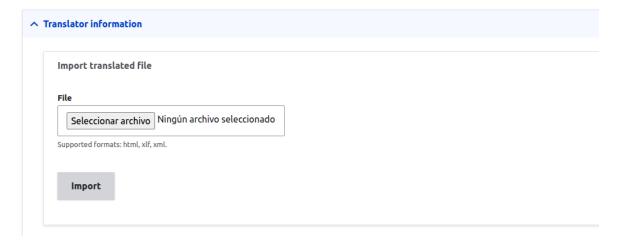
Search for the job number on the list:



Click on the Manage button of the corresponding job,



Go to the bottom of the page where the section Translation Information is displayed:

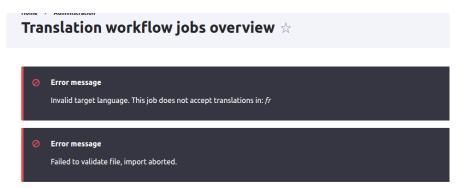


The authorised user clicks the Choose File button to upload the local system file.

Once the file is uploaded to the system, the validation process is started to ensure that the uploaded file is valid. The validation files check:

- The structure of the XML file.
- The contents of the XML file are validated.

If the validation process is unsuccessful, an error message is displayed informing the user and providing details of the validation error.



If the validation process finishes successfully, the file is imported into Drupal, and a message (log) is displayed to inform the user of the uploaded file and the job items included in the file. (Note: one XML file doesn't need to contain all translations; several files, for instance, one per language, can be uploaded sequentially):



The following actions are now available for nodes (depending on the user):

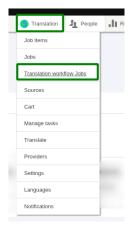
- Review enter the job item detail page and see each field's original text (English) and uploaded translation.
- Preview layout review the translated page before publishing.
- Delete delete the job item and the corresponding translation.

Depending on the job item state and the current user's permissions, one or more buttons are enabled on the job detail page. The previous chapter, "States and transitions of job items," provides a complete state diagram and possible actions.

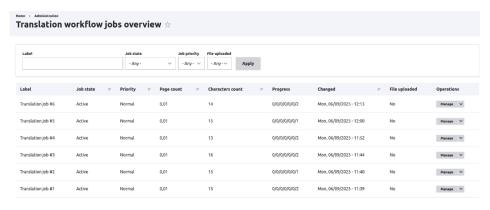
3.3.7 Preview translation and validate layout for each job item

Once the translations are uploaded, the authorised user can preview them to ensure they have been uploaded correctly.

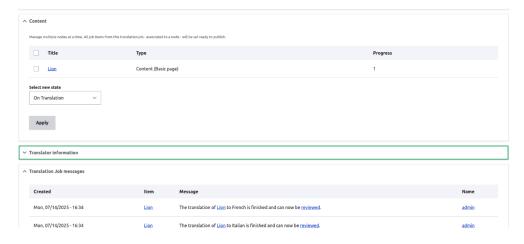
To preview the translations, the authorised user must click on the **Translation>Translation workflow jobs menu item**:



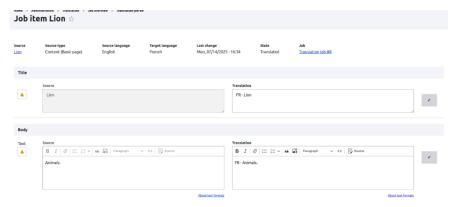
Search for the job number on the list:



Click on the Manage button of the corresponding job. The user can see the translations of the content included in the translation job in the corresponding section.



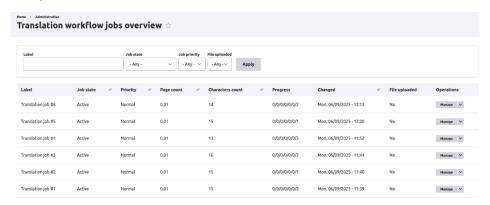
To see the translation in a specific language of an item, the user needs to click on the corresponding item link, and the English version and the corresponding translation in the selected language are displayed on a new page:



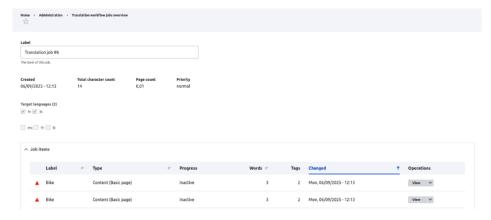
3.3.8 Review and validate translation for each job item [optional]

This step is optional; the authorised user can check and validate the translations by clicking the menu item **Translation>Translation workflow jobs.**

Search for the job number on the list:



Click on the Manage button of the corresponding job,



Some actions can be executed (based on the user's rights) at the bottom of the page.

3.3.9 Accept (publish) translation and update node

Once the translations have been moved to Ready to Publish, a final revision can be done before publishing.

The authorised user can enter the corresponding node by clicking on the Content menu.

Select the node from the list and click on the corresponding Edit button.

Click on the translate tab, and the authorised user can check the translations. If everything is correct, the authorised user clicks on the Edit tab and moves the status to Published by selecting the dropdown list: Change to.



Click on the button Save All translations to make the translations of the node available to the general public:

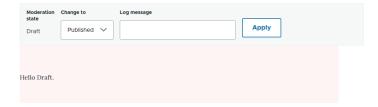


Special note about the "Published" state of the job item.

When a **published** node is sent for translation, the "Published" state of the job item means that the translation is attached to the node and is visible to everybody.

Two scenarios are possible:

- When a **published** node is sent for translation, the "Published" state of the job item means that the translation is attached to the node and is visible to everybody.
- When a non-published node (or a draft revision of a published node) is sent for translation, the
 "Published" state of the job item means that the translation is attached to the draft revision. Still,
 the revisions (both English language and translations) are not yet visible to everybody until someone changes the global status of the revision to "Published".



3.4 Retranslation

This section will describes describe the functionality of the "Re-translate" feature. This feature allows to add parts of a page, or parts of different pages, to one single translation job.

Whenever the content of a page is changed partially, we could send for translation just the affected paragraphs or headings and even merge them with other complete pages or parts of other pages in the same translation job.

The main advantage of this functionality is the ability to translate content partially. In some cases, the content of a node is updated (for example, some lines in a paragraph). In these cases, the Re-translate functionality allows sending to translate only the part updated in the content instead of the complete node.

The Re-Translate functionality, called "re-translation", can identify changes in previously translated content and request the translation for those changes (to reduce the total amount of text to be translated), by adding identifiers to the different parts of the content directly in the code. The translations module adds itself an ID to each heading, paragraph or list in the content of a page. This way, the system can know where to add the translations received.

Note that for a first time created content the IDs are added sequentially. If a paragraph is deleted and then replaced by another one, it does not inherit the ID from the previously existing paragraph, but gets another ID. For instance, on a page with four paragraphs, we delete number two and replace it by a new one. This one would have ID 5 instead of ID 2, and the system would know that ID 5 is between ID 1 and ID 3. Besides, it will recognize that ID 2 has been deleted and will delete it from the translated versions too.

TIP: Take care of not changing the paragraphs in the translations manually, as it might cause a misfunction of the module when re-translating.

The Re-Translate functionality consists of:

• Compare the node's current revision with its latest published revision in the source language (English) to identify the changes made in the current revision.

This feature is available for the nodes' content type already translated after editing and clicking on the Retranslate tab:

View	Edit	Retranslate	Delete	Revisions	Translate

After clicking on the Retranslate tab, the page is displayed. For each field that can be sent to re-translate, a checkbox is displayed:

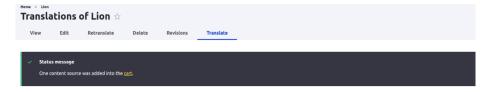
Re-translation for Lion Choose the fields and text that you want to re-translate Titte Lion Moderation state published Body Animats.

The authorised user checks all the paragraphs that must be sent to the translation centre.

Click on the Save button.



The content is added to the cart, and the system redirects to the Translate tab, and a message informing the user that the content has been added to the cart:



You can check the cart by clicking on the link in this message to see the added content.

The authorised user can add all the content that needs to be translated. Once the chart is complete, the authorised user can create the translation job by following the above mentioned steps.

Notice that this functionality is only available:

- Content types: Nodes, so they have enabled the "Create new revision" in the content type settings.
- Fields: the "body" field of the node (presumed to be in Full HTML format).
- Top-level HTML elements (, , , etc.) and first-level children of <div> elements (recursively).

Notice that the following advice must be considered to re-translate content:

• Keep the counter on the HTML field "tmgmt-<counter>": To identify changed text, the tool adds for each HTML element an id attribute in the format "tmgmt-<counter>". An error can occur if this counter is changed when the translations are loaded into the system.

- Keep the id attribute of HTML elements: The HTML structure must be identical in the source and target languages.
- The node must have a published revision and another that is not published.
- The user must ensure that the tmgmts (HTML tags) are the same in English and in the language requested by the retranslate. Otherwise, translations may be lost. This happens because the retranslation works through the tmgmts; if the tmgmt-1 is sent, it will update that block if the tmgmt-1 exists in the translation.

There is a tab called Retranslate that allows you to use this functionality. The user will be redirected to the translation page if there is no previous translation.

4 States and transitions of job items

This section describes the translation workflows for the different types of content:

- Translation workflow for nodes.
- Translation workflow for taxonomies.
- Translation workflow for menus and literals.

4.1 Translation workflow for nodes

The translation workflow defined for nodes is the most complex. The diagram below shows the complete workflow, indicating the status and the transitions that the content to be translated follows.

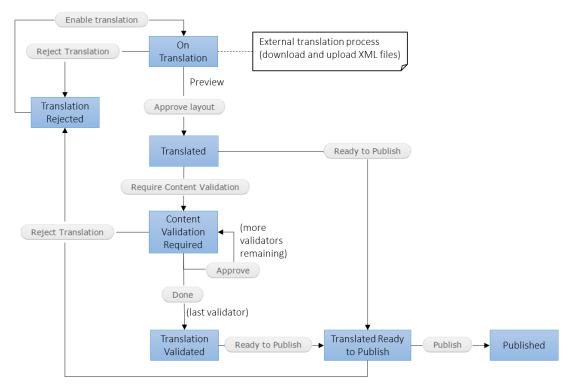


Figure 1 State diagram of translation job items (statuses are blue, actions are grey buttons)

The status (transition) from the diagram above is related to a role (permissions) that can be assigned to one or more roles to define the needed workflow.

EU-OSHA uses a complex workflow where the following roles are involved:

- TranslationManager (EU-OSHA WebTeam): This role can create new translation jobs, decide if content validation is required, assign content validators, and trigger any transition (plus all permissions of the roles below)
- TranslationLiaison (EU-OSHA): This role can see translation jobs and download XML files (sending them to CDT by e-mail or other communication channels outside Drupal)

- LayoutValidator (CDT): This role can upload translations, preview and validate the layout, and edit the translated text if necessary.
- ContentValidator (EU-OSHA or Focal Point): The Translation Manager can optionally assign this role to validate the actual translation (per language), edit the translated text if necessary, add comments, and approve or reject translations. When more than one ContentValidator is assigned to one job item, the last one decides.

Other Agencies that might implement the translation tool will be able to define their roles using Drupal's standard Role-Permission assignment feature. This document's "Security – permissions and roles" chapter presents a complete list of available permissions (and can also be found in the osha_tmgmt.permissions.inc source file) that can help define the roles.

4.2 Translation workflow for taxonomies

The translation workflow for taxonomy terms and literals is simplified to "On translation" and "Published" (the translation is imported directly immediately after the upload of the XML file):

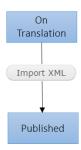


Figure 2: State diagram of translation job items for literals and taxonomy terms.

4.3 Translation workflow for Menus and literals

For menu items, the layout validator role can preview how the translated page looks before publishing the translation:

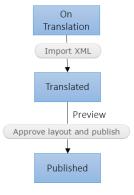


Figure 3: State diagram of translation job items for menu items.

5 Security – permissions and roles

Drupal's built-in system of roles and permissions allows for flexible restriction of each action of the translation workflow.

The default roles and permissions are listed in the table below (also available in Drupal at /admin/peo-ple/permissions/roles). The roles can be customised according to the actual needs of the Agency:

Role	Translation - manager	Translation li- aison	Layout valida- tor	Content vali-			
Permission	- manager	disori	toi	uator			
Custom permissions provided by module osha_tmgmt							
Administer TMGMT							
Upload translation file	Х		Х				
Preview	Х		Х				
View the list of translation jobs and job details	Х	Х	X	Х			
View the job item details	Х		Х	Х			
Edit job item (no matter the state)	Х						
Can be a content validator				Х			
View the list of content validators	Χ			Х			
Assign and edit content validators	Х						
Manage groups of content validators	Χ						
Can validate layout	Х		Х				
Can set the job to the Translated state	Х		Х				
Can set the job item to Require Content Validation	Х						
Can set the job item to Translation Ready to Publish	Х						
Can abort a job item	Х		Х				
Publish translation (osha tmgmt accepts job item translation)	Х						
Permissions provi	ded by module tr	ngmt					
Accept translation jobs	Х		Х	Х			
Create translation jobs	Х						

Role	Translation manager	Translation li-	Layout valida- tor	Content vali- dator
Permission	managei	dison		
Submit translation jobs	Х			
Other permission	ns (from Drupal core or con	trib modules)		
View the administration theme	Х	Х	Х	Х
Access administration pages	Х	Х	Х	Х
Access content	Х		Х	Х
Access toolbar	Х	Х	Х	Х
Use text format filtered_html	Х		Х	Х
Use text format full_html	Х		Х	Х
Translate admin strings	Х		Х	
Translate any entity	Х			
Translate user-defined strings	Х			

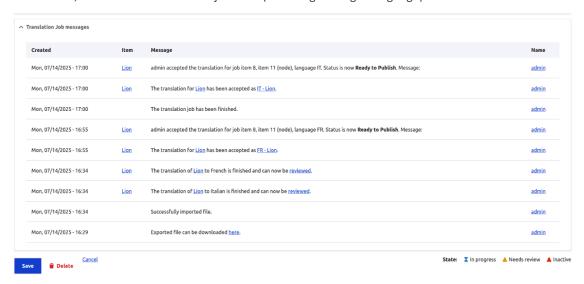
Note: during the translation process, editing the node is disabled until the corresponding job items are published (only allowed for user = admin).

This restriction is implemented from the source code (function osha_tmgmt_node_access) and cannot be overridden from the web interface.

6 Logging

The translation job management page contains messages for every performed action related to that job: file uploaded, layout validated (per item), content validated (per item), etc.

Each change of status for any job item generates a corresponding message in the log containing the date of the event, the user and the related job item (including its target language):



7 Translation jobs and job items

Translation packages are managed in Drupal as "translation jobs."

One translation job has the following attributes:

Field	Туре	Set by	Notes
State	Active / Aborted / Finished	Automatically	
Priority	Normal / High / Low	Chosen by the user who has created the job	Included in the XML file used by CDT
Target languages	One or more languages	Chosen by the user who has created the job	
Contents	Job items		Explained below
Total character count	Integer	Calculated automatically when the job is created	Not multiplied by the number of target languages
Total page count	Decimal number	Calculated automatically when the job is created	One page is equal to 1500 characters

Field	Туре	Set by	Notes
File sent to CDT	Yes/No	Set by the user	After the source XML file is downloaded
File uploaded	Yes/No	Automatically	After the first target XML file is uploaded
ID	Internal id	Automatically	
Label	Text	Automatically, it can be edited	By default, "Translation job #ID"
Date created; date changed	Datetime	Automatically	

Each translation job contains several job items (one for each content and each target language). For example, if two nodes are added in a translation job and the user has selected 24 target languages, then there will be 48 job items.

Each job item has the following attributes.

Field	Туре	Set by	Notes
State	Predefined values, explained below	Automatically	
Туре	Node / Taxonomy term / Menu link / Literal	Automatically	Based on the type of content
Source language	language code, sin- gle value	Automatically	Based on the original language of the content (usually English)
Target language	language code, sin- gle value	Automatically	Based on the list of target languages for the job
Character count	integer	Calculated automatically when the job is created	Not including HTML markup
Page count	decimal number	Calculated automatically when the job is created	One page is equal to 1500 characters

Internal fields, only for developers

Field	Туре	Set by	Notes
Id	Number	Automatically	The internal ID of the translation job item
tjid	Number	Automatically	The internal ID of the parent job

Field	Туре	Set by	Notes
Item id	String (for menu links) or number	Automatically	Id of the content (node id, taxonomy term id, menu link id)
data	Serialised PHP array	Automatically	The actual text to be translated + metadata
eid	Id of the group of content validators assigned	Automatically	Hidden field
vid	Revision id	Automatically	Hidden field
			The revision ID of the node
merged	0/1	Automatically	Hidden field
			1 if the translation was accepted (at-
			tached to the node). It is set when the job item is published, and the node is
			also published
is_full_translation	0/1	Automatically	Hidden field
			0 if the content of the job item was added for re-translation
Date changed	Datetime	Automatically	

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