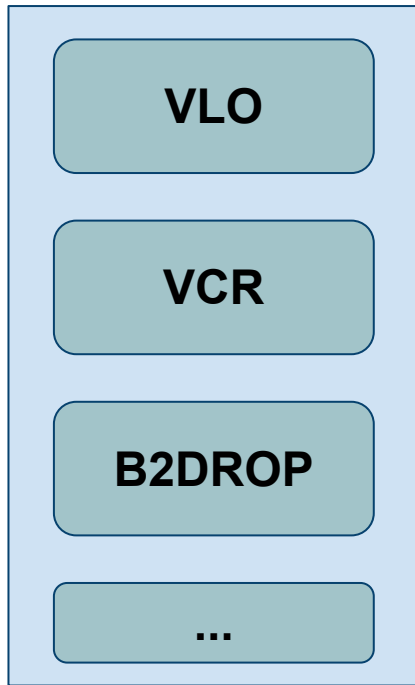


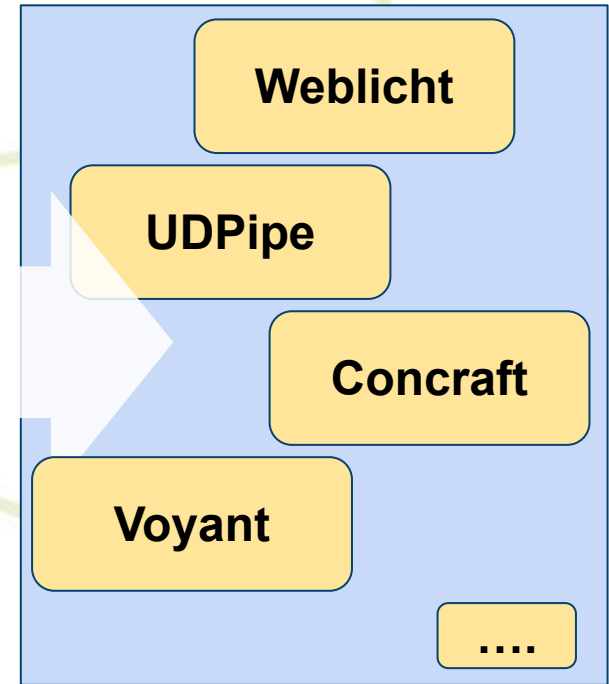
Connecting your tool to the Language Resource Switchboard

Resource providers
(repositories, catalogues)



Switchboard

Tools



Connecting resource providers to the Switchboard

Demo of VLO & other existing cases

Close-up look at integration case + hands-on session

Twan Goosen (CLARIN-ERIC)

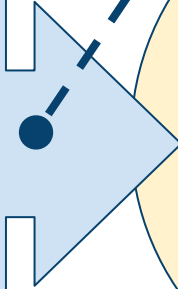
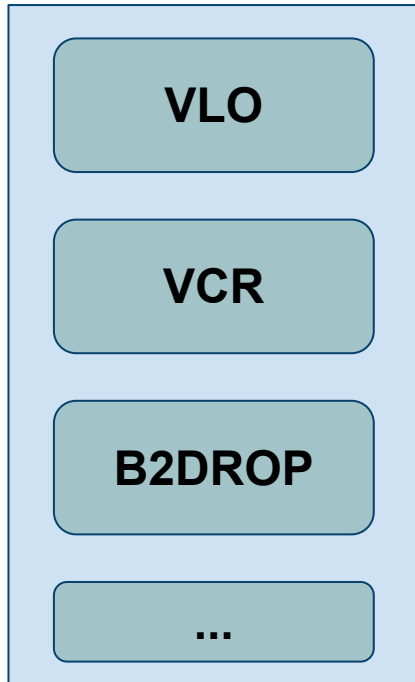
CLARIN Centre Meeting 2020

31 March 2020



'Sending' a resource to the Switchboard

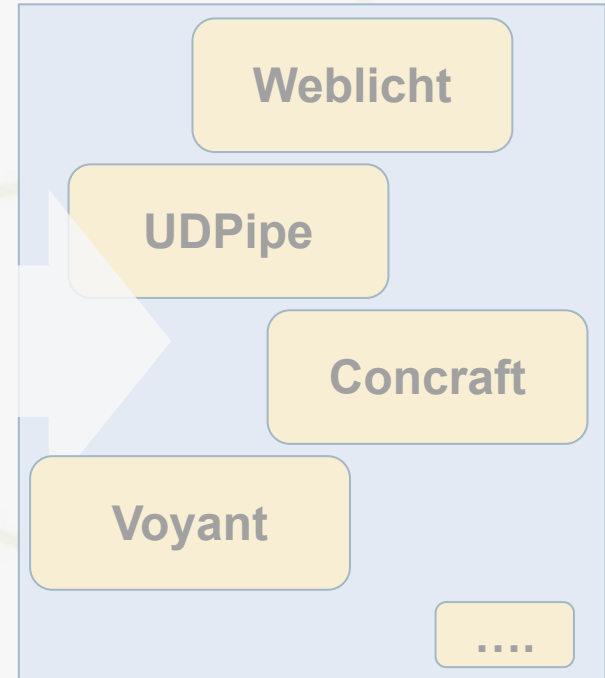
Resource providers
(repositories, catalogues)



Switchboard

- PID / URL
- Media type
- Language

Tools



<https://switchboard.clarin.eu/#/{app}/{uri}/{mediatype}/{languageCode}>

VLO to Switchboard

VLO / Faceted search / Search results / Record: MWE Reymont, Chłopi


Record 1 of 9

MWE Reymont, Chłopi

Record details | Links (2) | Availability | All metadata | Technical details

Name	MWE Reymont, Chłopi
Description	Reymont
Collection	CLARIN-PL
Language	Polish
National project	CLARIN-PL
Resource type	corpus
Data provider	CLARIN-PL Language Technology Centre
Record identifier	HDL 11321/109@format=cmdi
Creator	Reymont, Reymont


More like this...



HDL 11321/109

Landing page

Linked resource



reymont_chłopi_1908.txt

VLO to Switchboard

The image shows a user interface with a list of items on the left and two main cards on the right. The top card features a house icon, the text 'HDL 11321/109', and a 'Landing page' button. Below it is a 'Linked resource' section containing a document icon, a three-dot menu, and the filename 'reymont_chlopi_1908.txt'. A context menu is open over the three-dot menu, listing 'Show resource details' and 'Process with Language Resource Switchboard'. A black arrow points to the three-dot menu.

HDL 11321/109

Landing page

Linked resource

...

- Show resource details
- Process with Language Resource Switchboard

reymont_chlopi_1908.txt

Virtual Collection Registry (VCR)

Virtual Collections Browse Create Help Login CLARIN

Demo Collection - LRS integration

General

Name: Demo Collection - LRS integration
Type: extensional
Creation date: 2019-04-08
Description: This collection has been created to demonstrate the integration with the Language Resource Switchboard (LRS).
Purpose: reference
Reproducibility: intended
Persistent identifier: UNK dummy-1020
Keywords:

- demo
- lrs

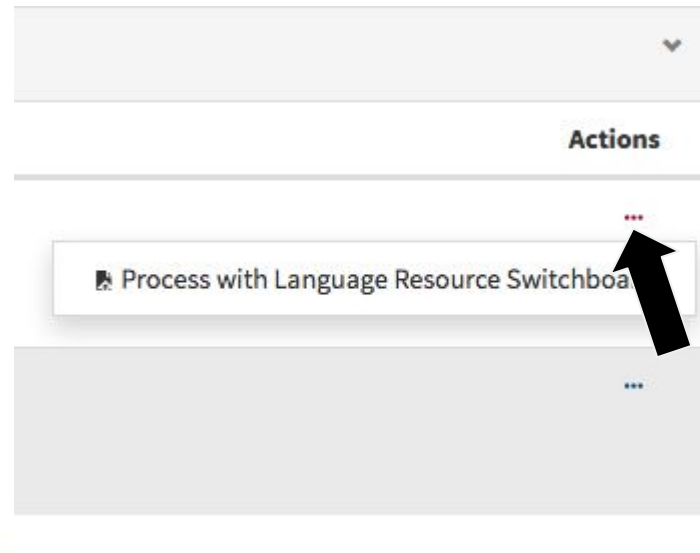
Creators

Person: Willem Elbers
Email: willem@clarin.eu
Organisation: CLARIN ERIC

Resources

Type	Reference	Actions
Resource	HDL 10744/mi_a636b9ee-a0f2-46ca-aa2a-8f829fc74dd4 Example docx resource	...
Resource	HDL 10744/mi_92af0f50-6950-4f67-b613-3d1b632f6842 Example pdf resource	...

Virtual Collection Registry (VCR)













B2DROP

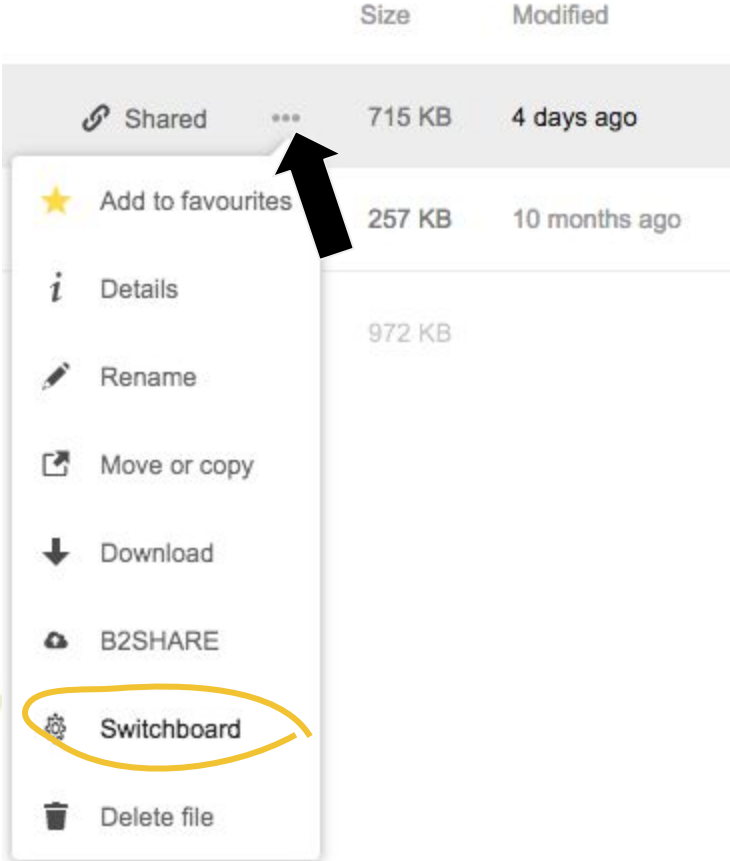
The screenshot displays the B2DROP web interface. At the top is an orange navigation bar with icons for home, search, notifications, and user profile. On the left is a sidebar with navigation options: All files, Recent, Favourites, Shares, and Tags. The main area shows a file list with columns for Name, Size, and Modified. Two files are listed: 'gimbutas.pdf' (715 KB, 4 days ago) and 'sets.json' (257 KB, 10 months ago). Both files are marked as 'Shared'. The three-dot menu icon for the 'gimbutas.pdf' file is circled in orange.

<input type="checkbox"/>	Name		Size	Modified
<input type="checkbox"/>	gimbutas.pdf Recently edited	Shared	715 KB	4 days ago
<input type="checkbox"/>	sets.json Recently edited	Shared	257 KB	10 months ago
2 file			972 KB	

B2DROP

	Size	Modified
 Shared 	715 KB	4 days ago
 Add to favourites	257 KB	10 months ago
 Details		
 Rename		
 Move or copy		
 Download		
 B2SHARE		
 Switchboard		
 Delete file		

972 KB



'Sending' a resource to the Switchboard

GET https://switchboard.clarin.eu....

Resource providers
(repositories, catalogues)

Tools

/#/{app}/{uri}/{mediatype}/{languageCode}

e.g.:

/#/vlo/http%3A%2F%2Fhdl.handle.net%2F11362%2Fmi_92af0f50-6950-4f67-b613-3d1116842/text%2Fplain/en

URL encoding!

'Sending' a resource to the Switchboard

GET https://switchboard.clarin.eu....

Resource providers
(repositories, catalogues)

Tools

`/#{app}/{uri}/{mediatype}/{languageCode}`

`decode (. . . .) →`

`vlo,http://hdl.handle.net/10744/mi_92af0f50-6950-4f67-b613-3d1b632f6842,text/plain,en`

Some code to look at: Switchboard (JS)

```
const hash = location.hash;
if (hash.startsWith("#/") && hash.length > 2) {
  const [origin, url, mimetype, language] =
hash.substring(2).split("/");
  if (origin && url) {
    this.props.uploadLink(
      decodeURIComponent(url),
      decodeURIComponent(origin));
  } ...
}
```

Some code to look at: VLO (Java + Wicket)

```
private String getLanguageSwitchboardUrl (IModel<String> linkModel,  
ResourceInfo resourceInfo) {
```

```
    try {
```

```
        //create link for this resource to the language resource  
switchboard
```

```
        final String href = linkModel.getObject();
```

```
        final String mimeType = resourceInfo.getMimeType();
```

```
        final String languageCode = getResourceLanguageCode();
```

```
        return String.format ("%s#/vlo/%s/%s/%s",
```

```
                                vloConfig.getLrSwitchboardBaseUrl(),
```

```
                                URLEncoder.encode(href, "UTF-8"),
```

```
                                URLEncoder.encode(mimeType, "UTF-8"), languageCode);
```



<https://github.com/clarin-eric/VLO/blob/master/vlo-web-app/src/main/java/eu/clarin/cmd/vlo/wicket/components/LanguageResourceSwitchboardLink.java#L63>

Some code to look at: VLO (Java + Wicket)

```
final String href = linkModel.getObject();  
final String mimeType = resourceInfo.getMimeType();  
final String languageCode = getResourceLanguageCode();
```

```
return String.format("%s#/vlo/%s/%s/%s",  
                    vloConfig.getLrSwitchboardBaseUrl(),  
                    URLEncoder.encode(href, "UTF-8"),  
                    URLEncoder.encode(mimeType, "UTF-8"),  
                    languageCode);
```

```
} ...
```

Some code to look at: VLO (Java + Wicket)

```
final String href = linkModel.getObject();  
final String mimeType = resourceInfo.getMimeType();  
final String languageCode = getResourceLanguageCode();
```

```
return String.format("%s#/vlo/%s/%s/%s",  
    vloConfig.getLrSwitchboardBaseUrl(),  
    URLEncoder.encode(href, "UTF-8"),  
    URLEncoder.encode(mimeType, "UTF-8"),  
    languageCode);
```

```
} ...
```

```
https://switchboard.clarin.eu/#/vlo/http%3A%2F%2Frepo.org%2Ftest.txt/text%2Fplain/en
```

Some code to look at: VLO (Java + Wicket)

```
final String href = linkModel.getObject();  
final String mimeType = resourceInfo.getMimeType();  
final String languageCode = getResourceLanguageCode();  
return String.format("%s#/vlo/%s/%s/%s",  
    vloConfig.getLrSwitchboardBaseUrl(),  
    URLEncoder.encode(href, "UTF-8"),  
    URLEncoder.encode(mimeType, "UTF-8"),  
    languageCode);  
} ...
```

<https://switchboard.clarin.eu/#/vlo/http%3A%2F%2Frepo.org%2Ftest.txt/text%2Fplain/en>

Some code to look at: VLO (Java + Wicket)

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    URLEncoder.encode(mimeType, "UTF-8"),
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} ...
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Some code to look at: VLO (Java + Wicket)

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    vloConfig.getLrSwitchboardBaseUrl(),
    URLEncoder.encode(href, "UTF-8"),
    URLEncoder.encode(mimeType, "UTF-8"),
    languageCode);
} ...
```

<https://switchboard.clarin.eu/#/vlo/http%3A%2F%2Frepo.org%2Ftest.txt/text%2Fplain/en>

Now your catalogue or repository?

<https://switchboard.clarin.eu...>

.../#/{app}/{uri}

.../#/{app}/{uri}/{mediatype}

.../#/{app}/{uri}/{mediatype}/{languageCode}

What (not) to send to the Switchboard?

Or: where (not) to place your Switchboard integration button

- Switchboard currently **connects *individual files with tools***
 - Individual file = bitstream with media type ('MIME type')
 - Individual file \neq collection, landing page, service endpoint
- Pragmatic consideration: look at the metadata in the **Switchboard Tool Registry**
<https://github.com/clarin-eric/switchboard-tool-registry>
- Exact choice also depends on **how well you know your content**

Source code examples for Switchboard integration from resource providing application

- <https://github.com/clarin-eric/VLO>
- <https://github.com/clarin-eric/VirtualCollectionRegistry>
- <https://github.com/clarin-eric/B2Drop2LRSwitchboard>