



Integrating Symplectic Elements with DSpace

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 SYMPLECTIC

 Elements



Welcome, Dr Nina Snaith



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Edit your profile

Accepted for
Publication?



Deposit your work

My Actions (9)



1 of 9

There are **39** publications for you to claim or reject



Claim publications



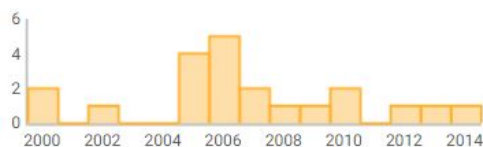
.....

My Summary



21 publications, *plus 39 pending*

+ add



h-index:

6

Web of Science

9

Scopus

How do we calculate this? ⓘ

✓ Claimed publications:

[21 journal articles](#)



0 records of impact

+ add

You have no records of impact yet.



0 professional activities

+ add

You have no professional activities yet.



0 teaching activities

+ add

You have no teaching activities yet.



0 grants

+ add

You have no grants yet.

eprints
repository software

figshare
credit for all your research

Altmetric

VIVO

Fedora™

DSpace



capture

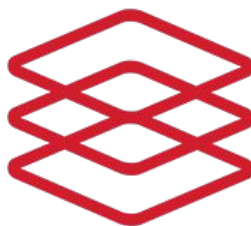
ORCID

disambiguate

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AND TRANSLATIONAL
SCIENCE CENTER

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Europe
PubMed
Central

PubMed

report

Scopus®

MLA

SSRN
Tomorrow's Research Today

CiNii

Web of Science

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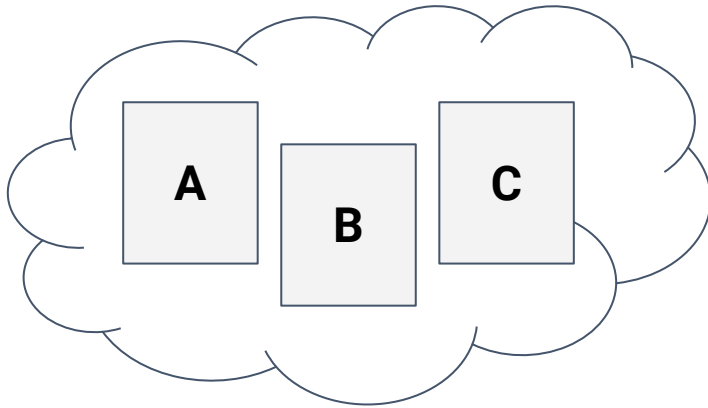
symplectic.co.uk

Publication Metadata in Elements

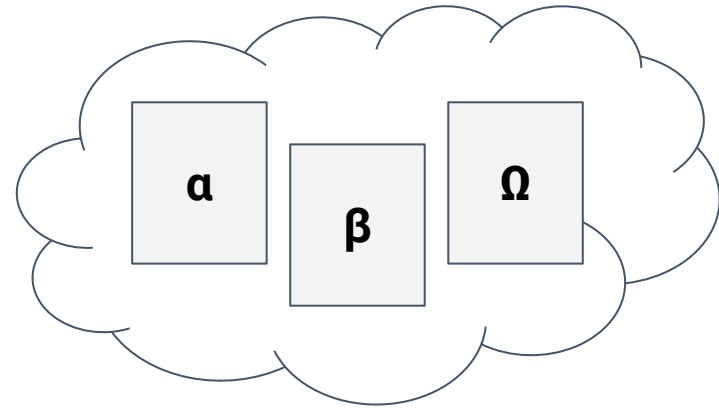
- Reads publication metadata from a variety of sources
- Deduplicates everything
- Store full copies of all metadata

Publication Metadata in Elements

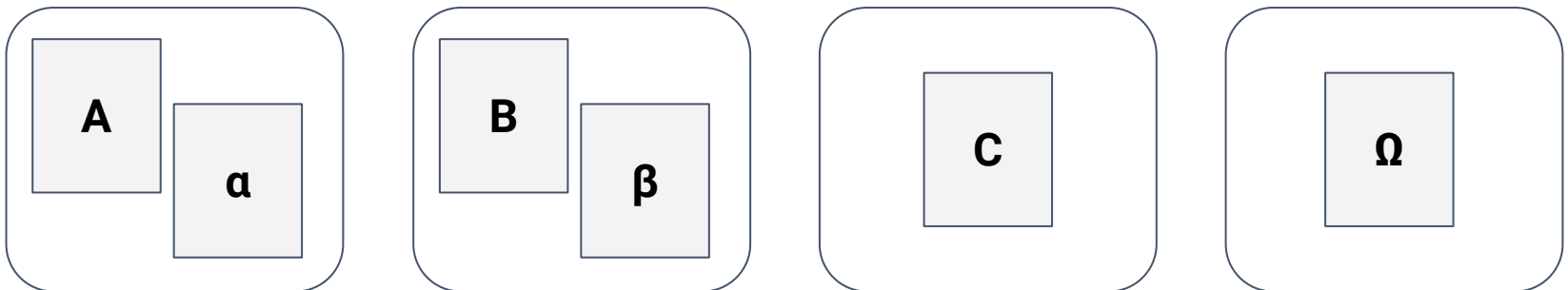
Crossref



Web of Science



Elements Publications



Repository Tools 1

Why?

- Reuse high quality metadata
- Streamlined process for academics
- Monitoring - Open Access policy compliance

Repository Tools 1

How?

- Built a repository “plugin” / custom API
- Elements pushes files and metadata to custom API
- Elements reads workflow status from custom API, stores this against a publication object.



Repository Tools 1

Limitations

- Doesn't pull item metadata into Elements
- Elements only knows about items deposited via it
- Only one repository connection possible
- Custom API is a maintenance burden on Symplectic

Repository Tools

2

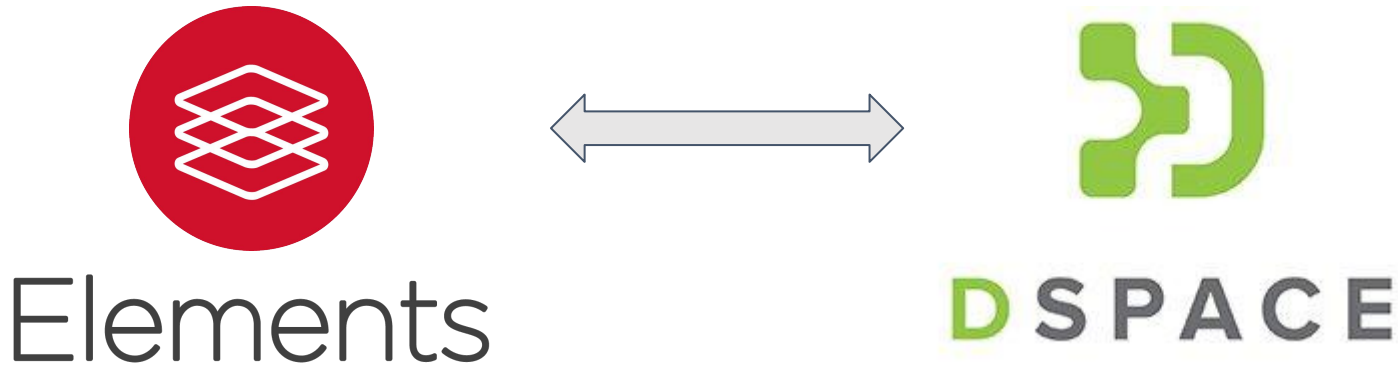


Repository Tools 2

Philosophy:

- Treat repository like any other data source
 - Read and store full item metadata
 - Multiple repository connections in Elements
- Use native APIs for writing and reading
- Configured within Elements

Integrating with DSpace

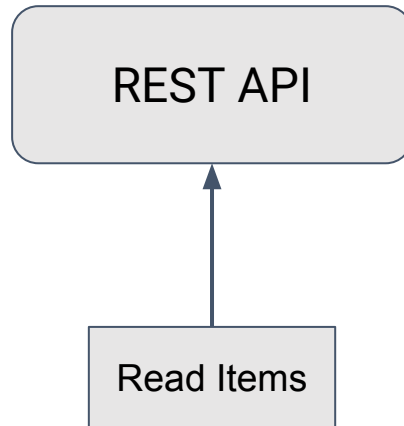


Functionality:

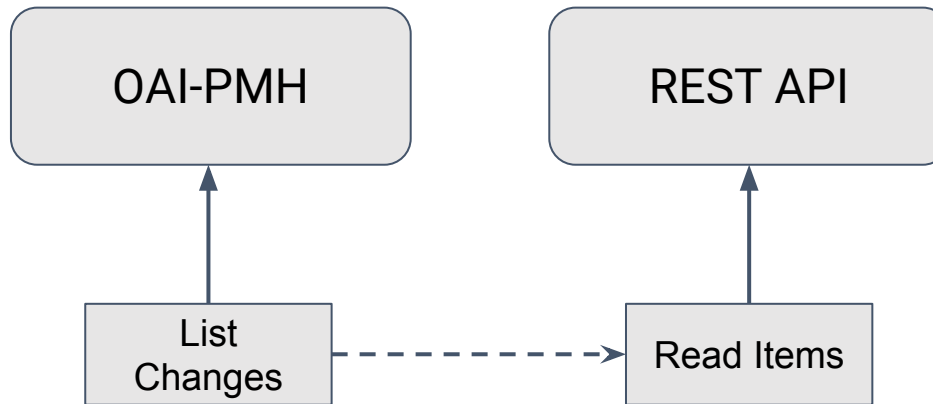
- Harvest all DSpace items; match to existing publications
- Deposit files and metadata from Elements
- Monitor for changes in DSpace
- Attach additional files to existing DSpace items

Demo

How it works: Harvest

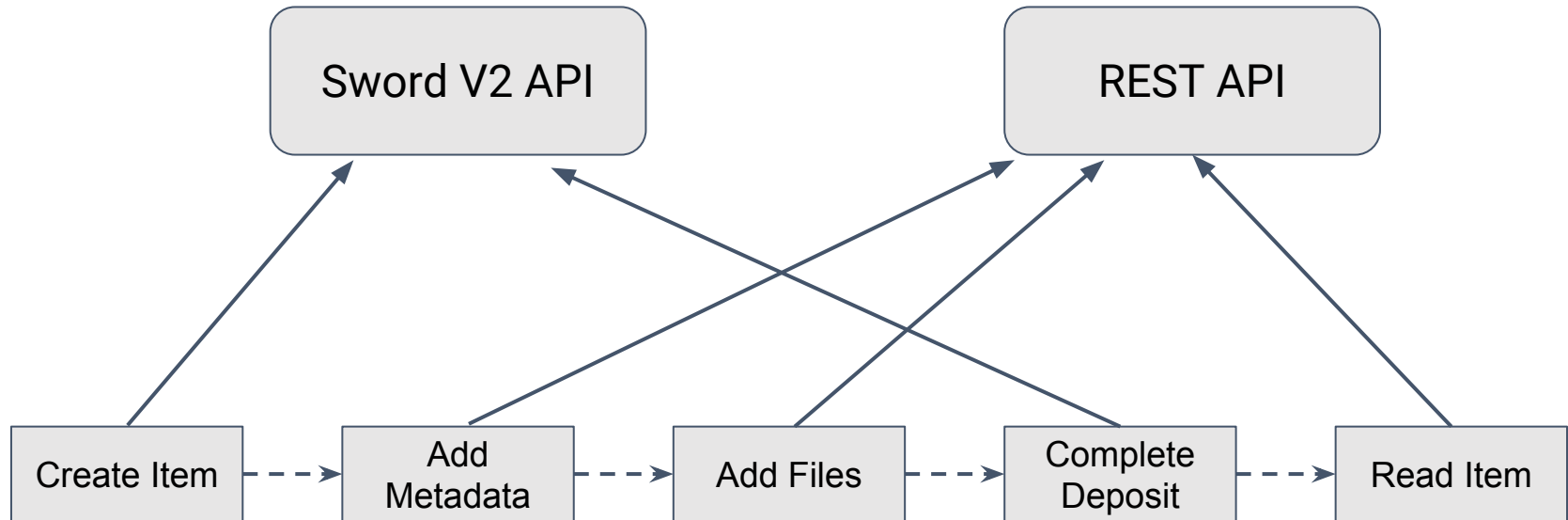


How it works: Differential Harvest



- OAI-PMH endpoint can request modified item IDs
- Only works for Live items

How it works: Deposit



- Sword V2 endpoint inserts items into the workflow
- Sword V2 endpoint allows user impersonation

Interlude: REST API Experiences

- Pretty good documentation
- Expanding feature coverage (but not fully comprehensive!)
- Occasionally suffers from bugs
- Excited for DSpace 7.x API

Interlude: Integration Testing

	5.4	5.5 - 5.5	5.6	5.7 - 5.8	6.0	6.1 - 6.2	6.3
Subsequent Deposit	✓	✓	✓	✓	✗	✗	✓
Embargoes	✓	✓	✓	✓	✗	✓	✓
Differential Harvest	✗	✓	✓	✓	✓	✓	✓
Deposit into workflow	✗	✗	✗	✓	✗	✓	✓

- Automated testing against full range of supported DSpace versions using Docker images

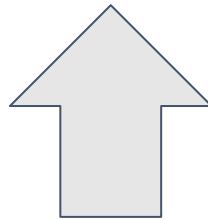
How it works: Crosswalks

- Two sets of crosswalks required
 - Inbound: map DSpace to Elements
 - Outbound: map Elements to DSpace
- Developed a format which allows comprehensive specification of metadata mappings

```
<xwalk:field-mapping to="title">  
  <xwalk:field-source from="dc.title"/>  
</xwalk:field-mapping>
```

Inbound Crosswalks

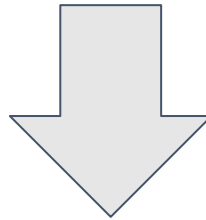
```
<api:person>  
  <api:last-name>Bender</api:last-name>  
  <api:initials>CM</api:initials>  
</api:person>
```



```
<dc.contributor.author> Bender, C.M. </dc.contributor.author>
```


Outbound Crosswalks

```
<api:person>  
  <api:last-name>Bender</api:last-name>  
  <api:initials>CM</api:initials>  
  <api:first-names>Carl M</api:first-names>  
  <api:identifiers>  
    <api:identifier scheme="orcid">0000-0002-6571-2872</api:identifier>  
  </api:identifiers>  
</api:person>
```



```
<dc.contributor.author> Bender, C.M. (0000-0002-6571-2872) </dc.contributor.author>
```

Crosswalk Capabilities

- String manipulation (split, concatenate, format, etc)
- Boolean algebra
- Map multivalued compound data types
- Dictionary lookups
- Regex!

Crosswalk Capabilities

- Regex allows powerful metadata manipulation

Kohl, D. (2007). Peer review and the academic twelfth man. *Journal of Academic Librarianship*, 33, 437-438.



ID: 31231 [More source info](#)

Status	Published
Publication date	2007
Title	Peer review and the academic twelfth man
Authors	Kohl, D.
Journal	Journal of Academic Librarianship
Volume	33
Pagination	437-438

Future Plans

- “Subsequent Deposit” - coming next week
- DSpace 7 support - when available
- Automatic Metadata Updates - later 2018
 - Automated push of new metadata in Elements to DSpace
 - Framework to support “relevant” change detection: in development

