Europeana Space Technical Workshop

E-Space Technical Infrastructure

Nasos Drosopoulos

National Technical University of Athens

Brussels
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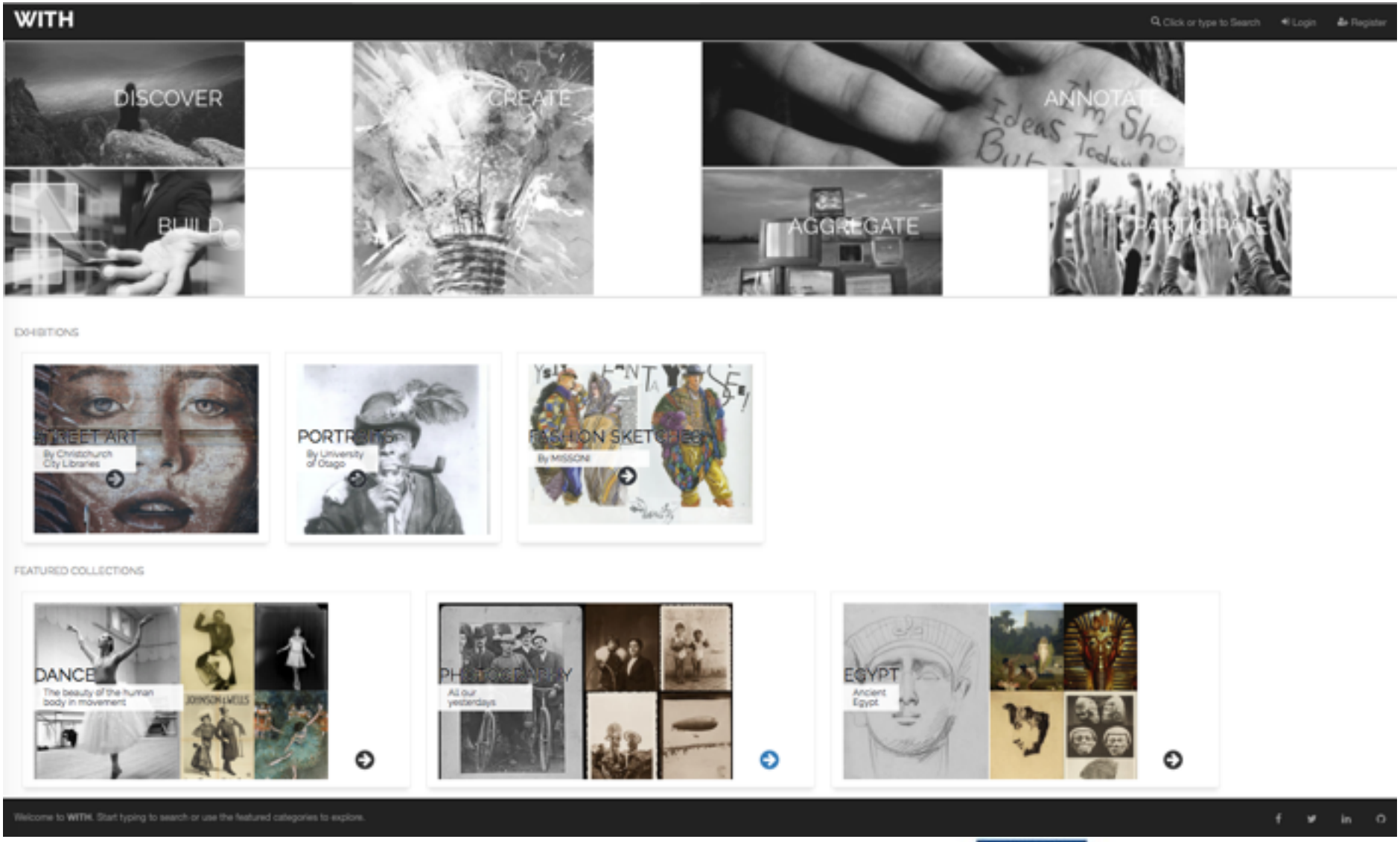
Wish

Create and curate collections of digital records:

- Aggregate multiple sources.
- Add your own content to the search base.
- Interact with metadata processing services.
- Have records available in different formats and serialisations.
- Serve collections as specific backends for specialised front-end applications.

With


WITH
Click or type to Search
Login
Register
DISCOVER
CREATE
ANNOTATE
BUILD
AGGREGATE
PARTICIPATE
EXHIBITIONS
STREET ART
By Christchurch City Libraries
PORTRAITS
By University of Otago
FASHION SKETCHES
By MISSONI
FEATURED COLLECTIONS
DANCE
The beauty of the human body in movement
JOHNSON | WELLS
PHOTOGRAPHY
All our yesterdays
EGYPT
Ancient Egypt
Welcome to WITH. Start typing to search or use the featured categories to explore.

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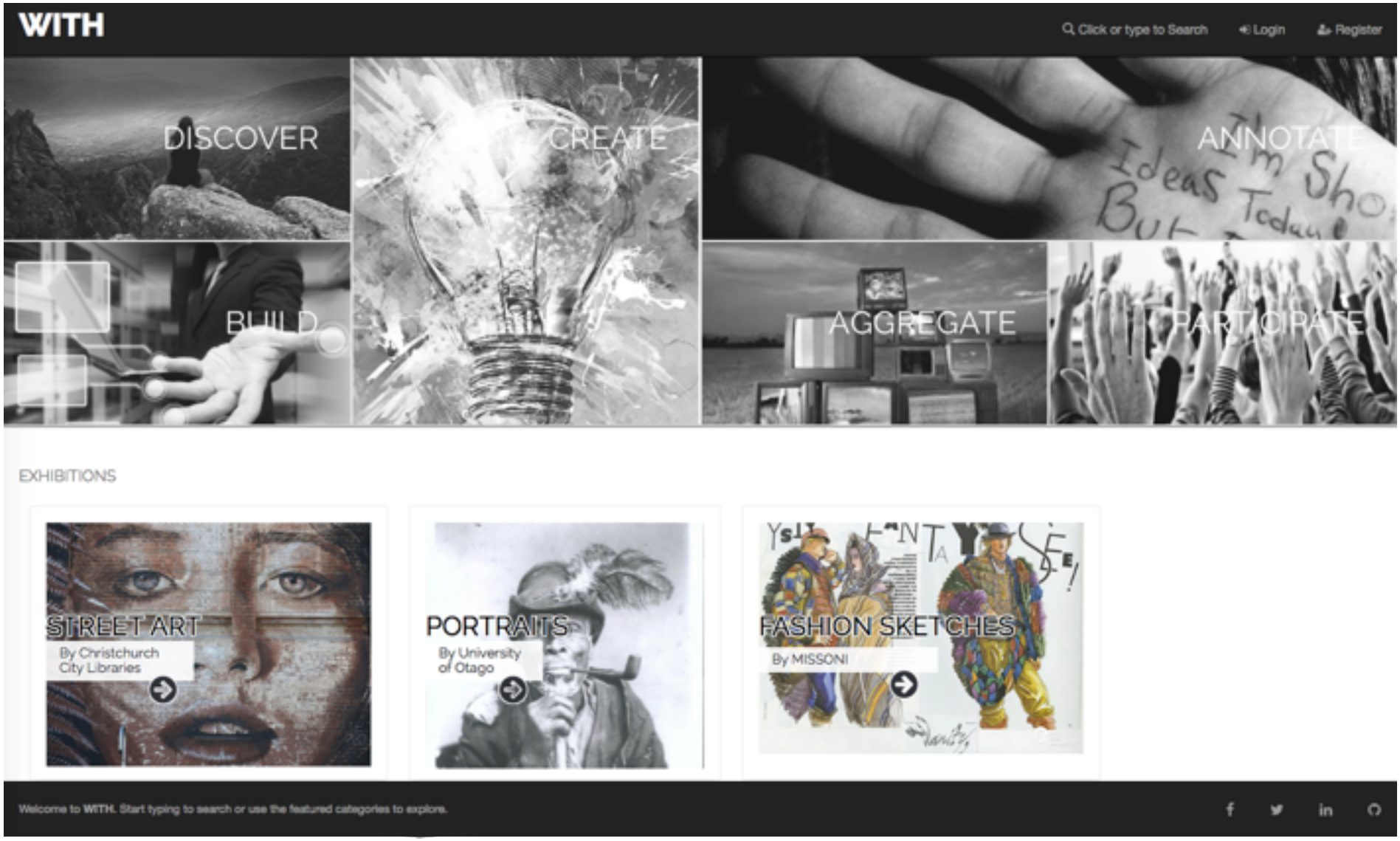
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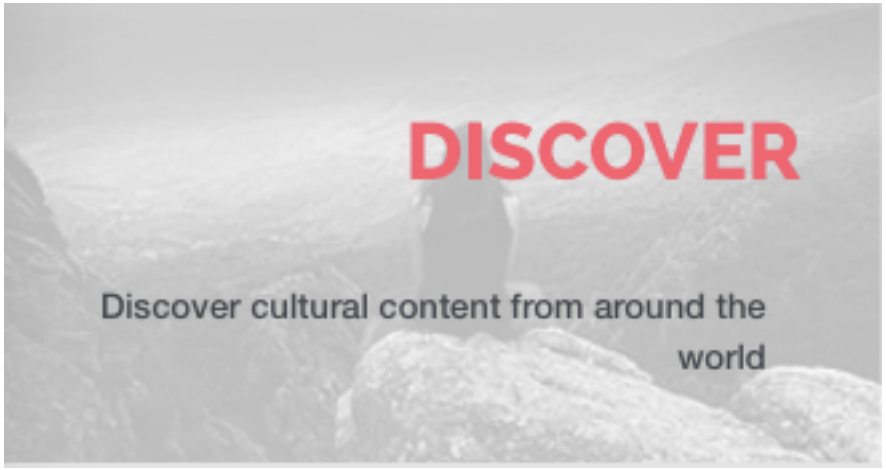

- Search for cultural heritage knowledge in distributed repositories

- Browse an expanding set of diverse sources
- Explore results and visualize distinct types of resources
- Tweak the scope of your search
- License-based search for quality content

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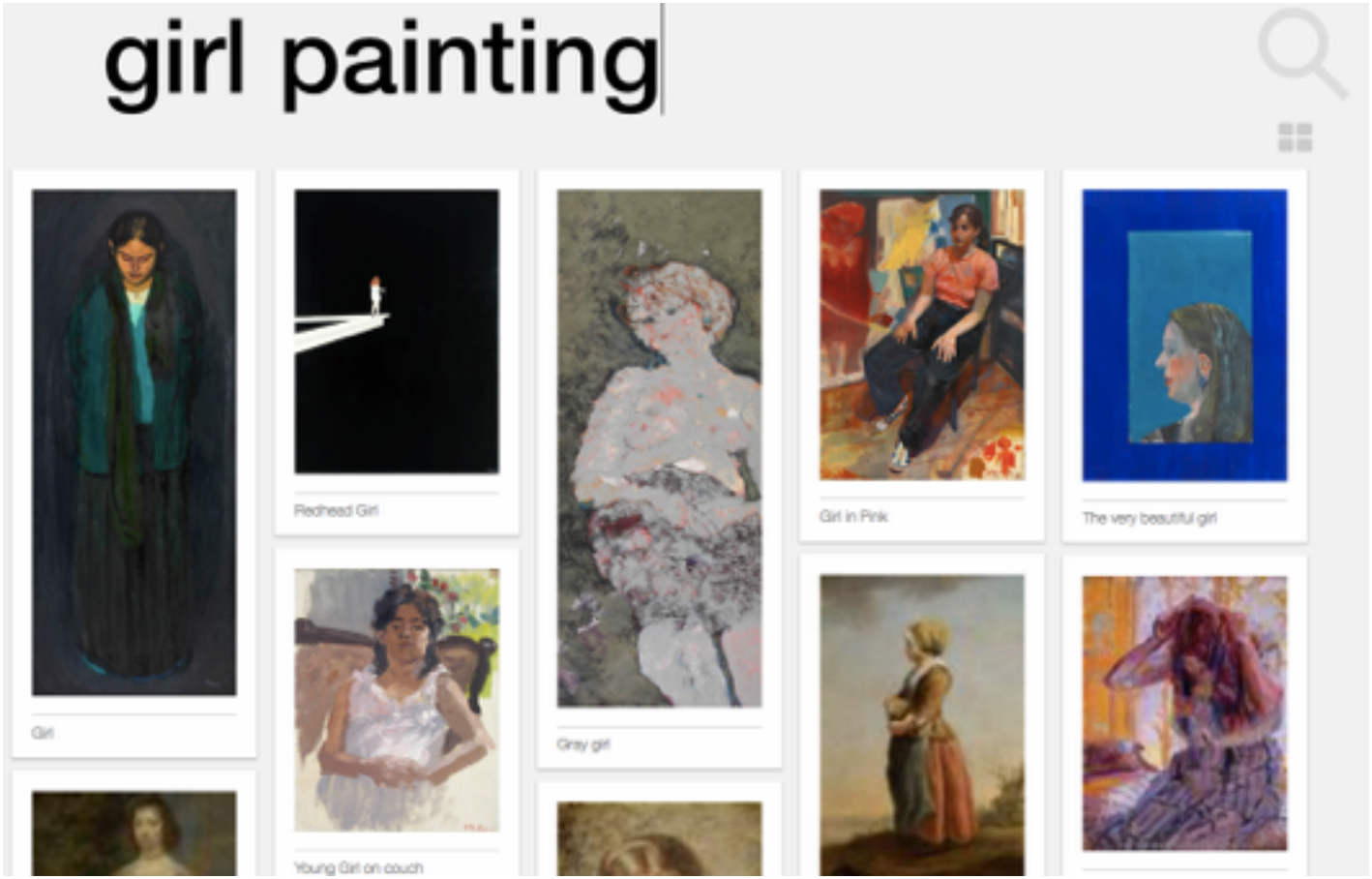
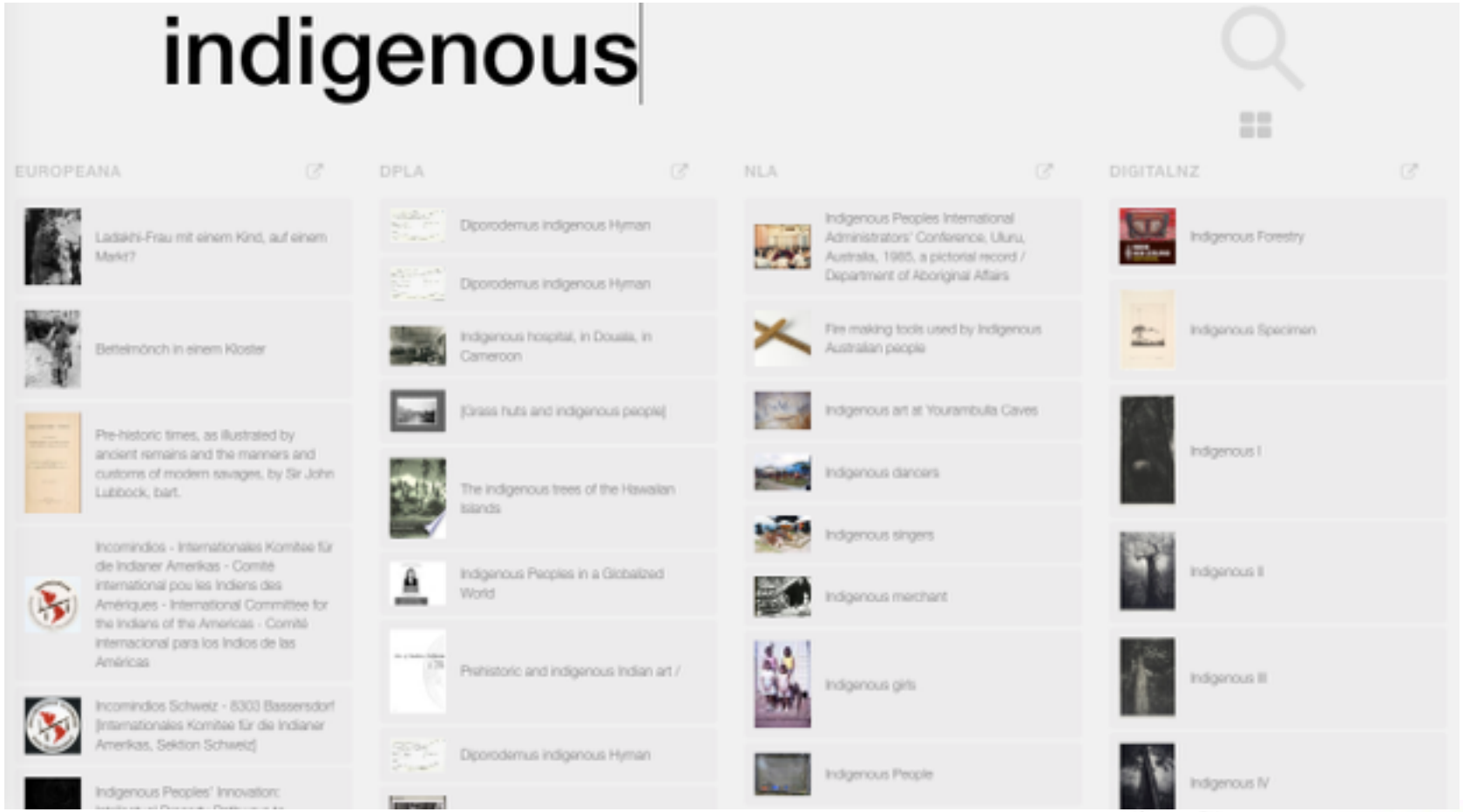
Searching


girl painting
Girl
Redhead Girl
Young Girl on couch
Gray girl
Girl in Pink
The very beautiful girl

Sources



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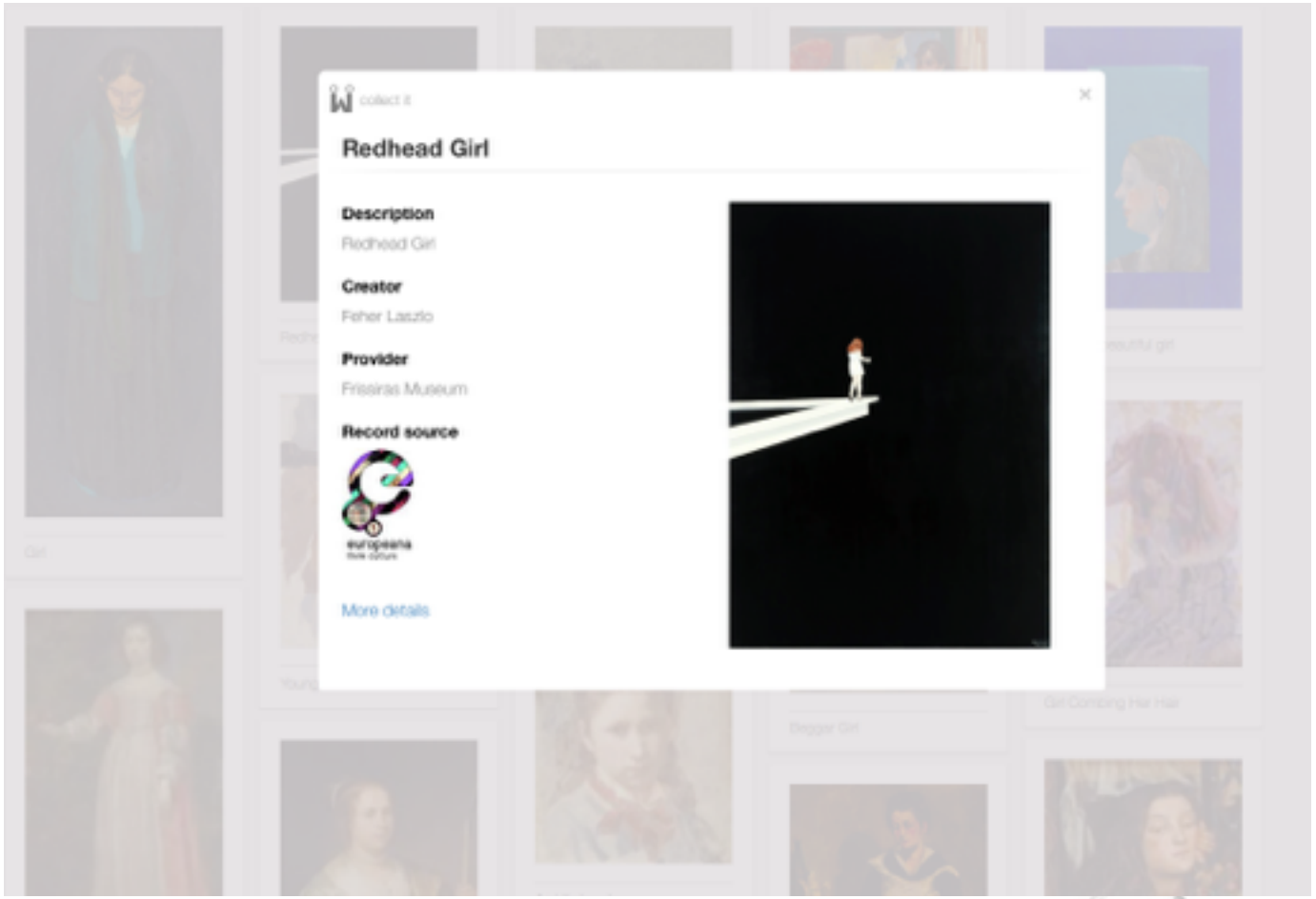
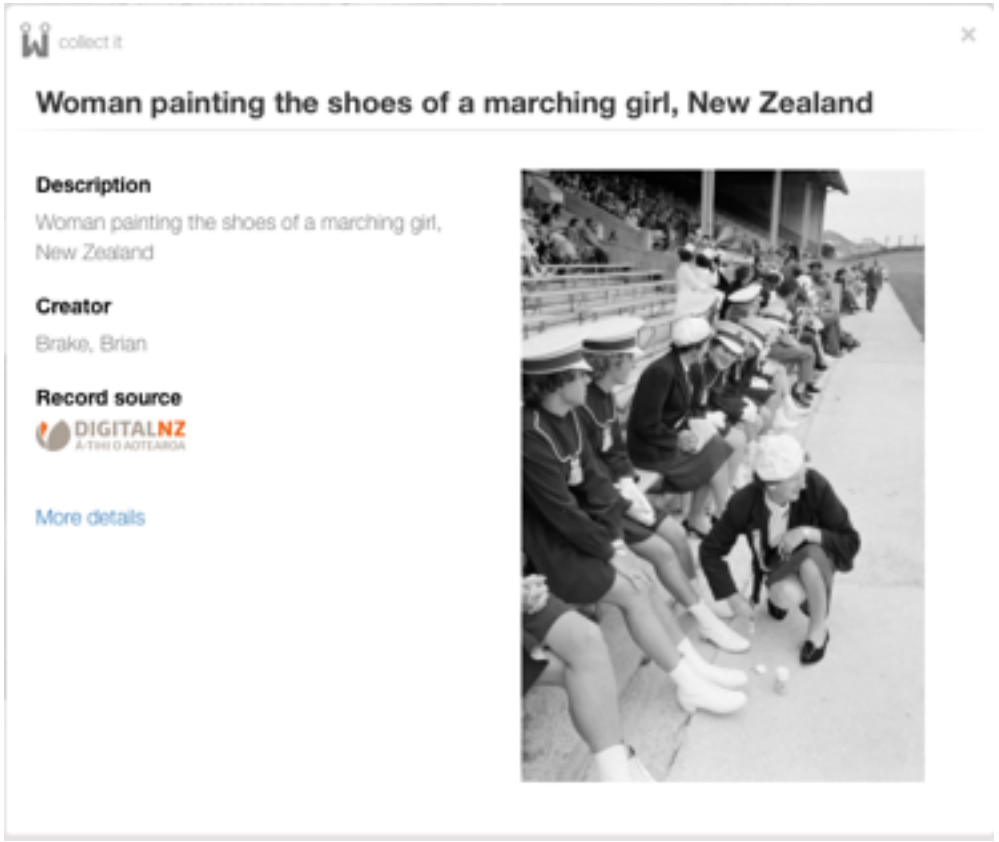
- Inspect cultural heritage content and metadata
- Compose eclectic collections
- Retrieve relevant information
- Contextualise collections, create Exhibitions

Resource view



Collect



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Featured

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More information

- See the record at the provider's site
- Download original metadata
- Get the provider API call to retrieve the item
- See the collections that use the resource
- Find annotated versions of the item
- Browse related items and linked resources

- Leverage the programmable web to help developers create applications using APIs

- HTML view of API responses
- Combined access to common functionality
- Use source-specific advanced features

- XML and JSON serialisations for metadata
- Download a collection and its items
- Publish collections, transformed and annotated records
- Access using protocols like OAI-PMH or through the platform's API

ANNOTATE

Link & Enrich with LoD sources

In a controlled (content providers) or open (crowdsourcing) environment:

- Tag; free-text or with controlled terminologies
- Enrich; combine NLP techniques, formal SKOS thesauri and semantic web technologies to add expressive power
- Link; connect collected resources, use ontologies to express relations, explore and connect to the Linked Open Data cloud

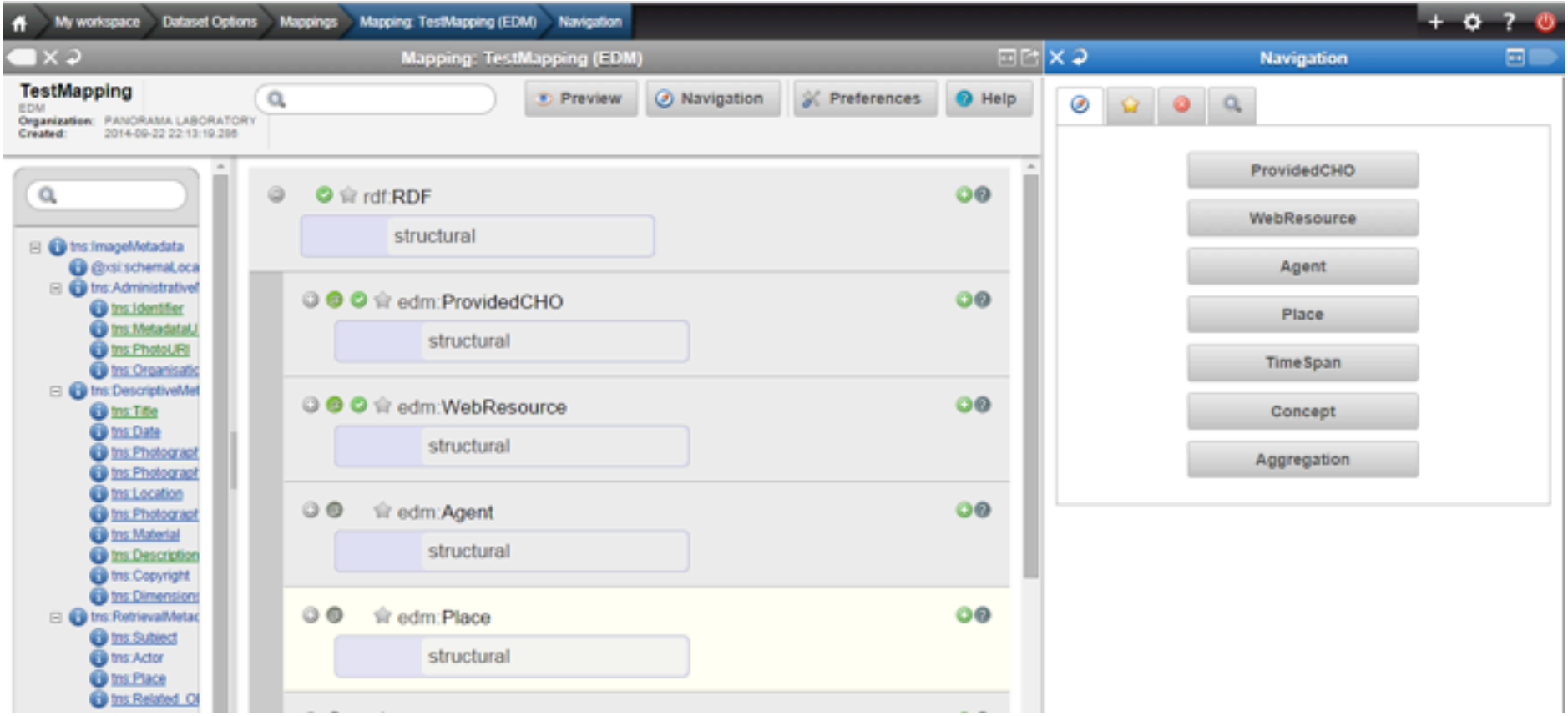
- Upload, host and showcase your content and metadata
- MINT-based aggregation gateway
- Content space media repository
- Map and transform to metadata models
- Link to high quality content
- Publish (OAI-PMH, Europeana, 3rd party portals)

Metadata Processing Unit

MINT services

- Import using identified delivery protocols
- Visual mapping editor for crosswalk generation
- Transformation
- Schema Validation
- Data Cleaning
- Reconciliation with SKOS vocabularies
- Publication

Mapping Tool



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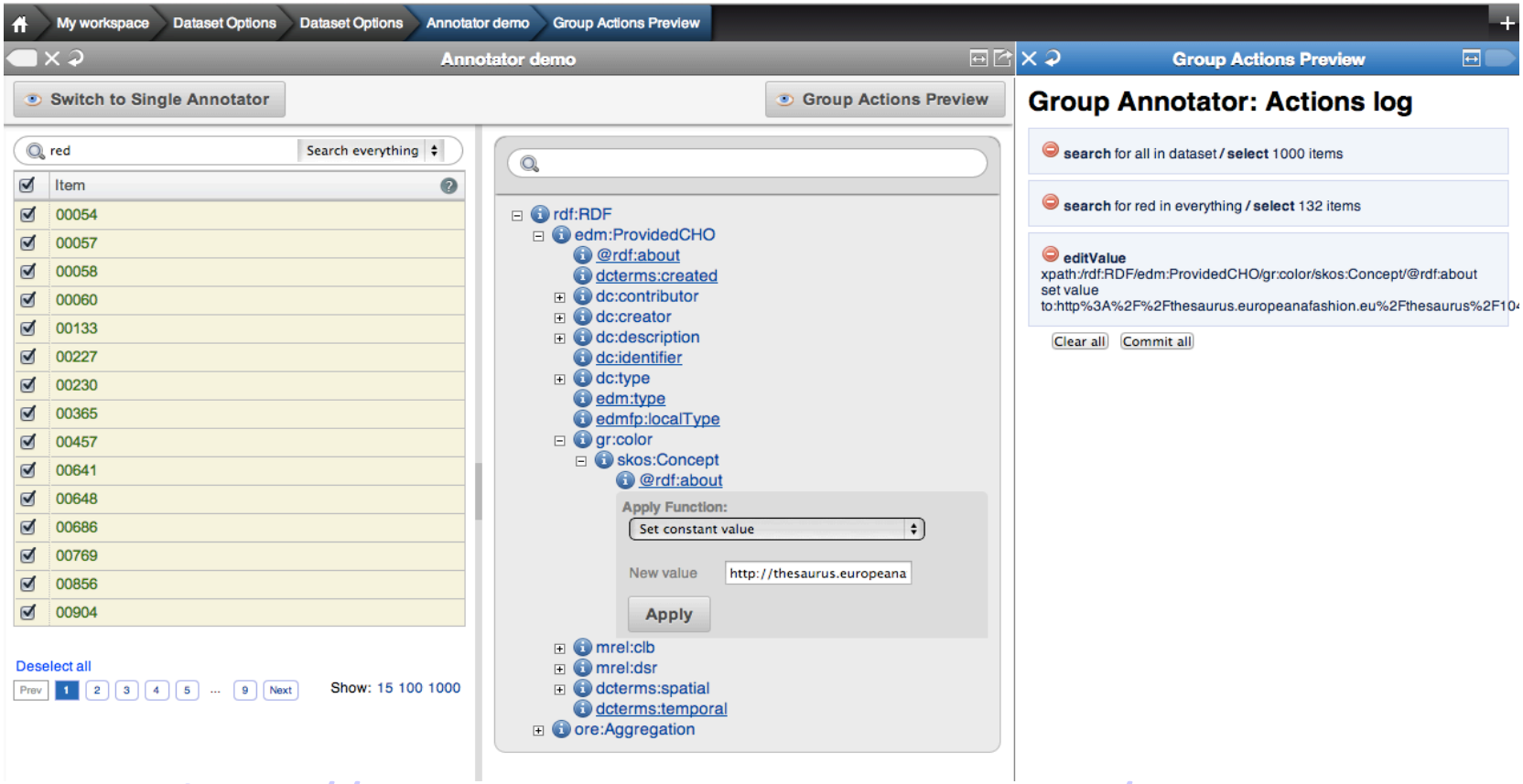
Group edit



http://mint-projects.image.ntua.gr/espace

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Media repository

Users receive an invite code, use it to register to the website, upload the images using an FTP client and, use MPU to connect with metadata records.

The system automatically processes images to extract technical metadata (i.e. width/height/ colorspace/colour palette/size) and provides a list of URLs for the images

Watermarking

- Follow content providers, contributors, collections
- Promote content and collections using social media
- Contribute to the development of the platform, integrate services, empower creative re-use

WITH infrastructure

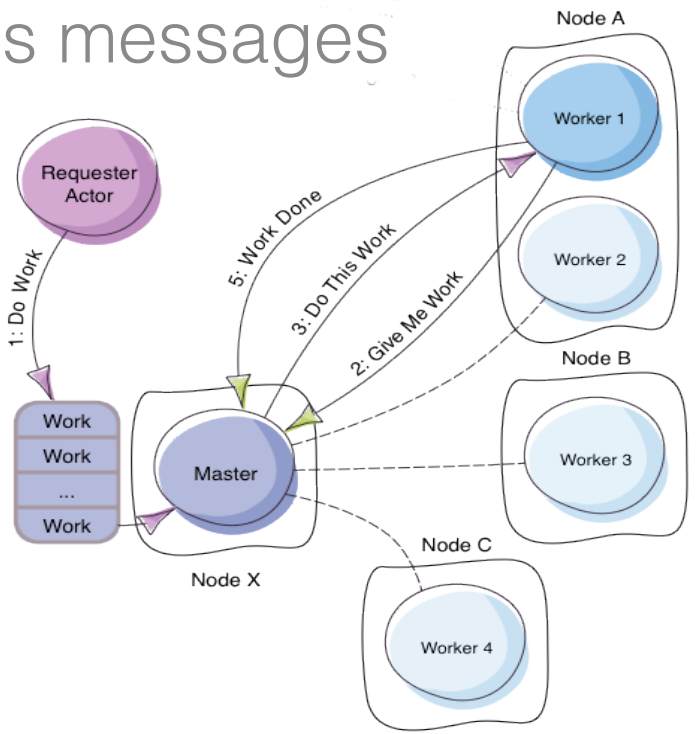
- Play server
- MongoDB database (document database with auto sharding)
- SOLR indexer (sharding support)
- Job queueing system based on Akka Actors (allow for distributed jobs)
  - Scale out capable system
- Single Page Application front-end
- REST-style calls to the back-end

Distributed data processing

- Using Akka Actors for highly scalable and distributed data processing
  - Transform Metadata from different serializations into each other (XML <-> JSON <-> RDF …)
  - Validate XML records against schemas.
  - Indexing of records
  - Enrichment

Akka Actors

- Akka is a toolkit and runtime for building highly concurrent, distributed, and resilient message-driven applications on the JVM.
- Actors are very lightweight concurrent entities. They send, receive and process messages asynchronously using an event-driven receive loop.
- Simple concurrency and distribution, high performance elastic, resilient



More wishes

- Personalized search
- Content providers space
- Users modify/annotate Records
- Customize API
- Create templates to visualize Collections
- Track changed responses to the same search.

Discuss

- Sources and integration
- Resource types
- Search history
- Collection attributes & scenarios
- Resource context, relations, annotations & Provenance
- Metadata serialization and access
- From tagging to linking

Thank you

For more information

http://europeana-space.eu/

Prototype:

http://ipa.image.ntua.gr:9010/assets/index.html

ndroso@image.ntua.gr

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