

OntoloBridge

Connecting Ontology Users and Ontology Maintainers

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WSBO 2021

The Problem

I have
an Idea



User



Maintainer

The Problem

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User



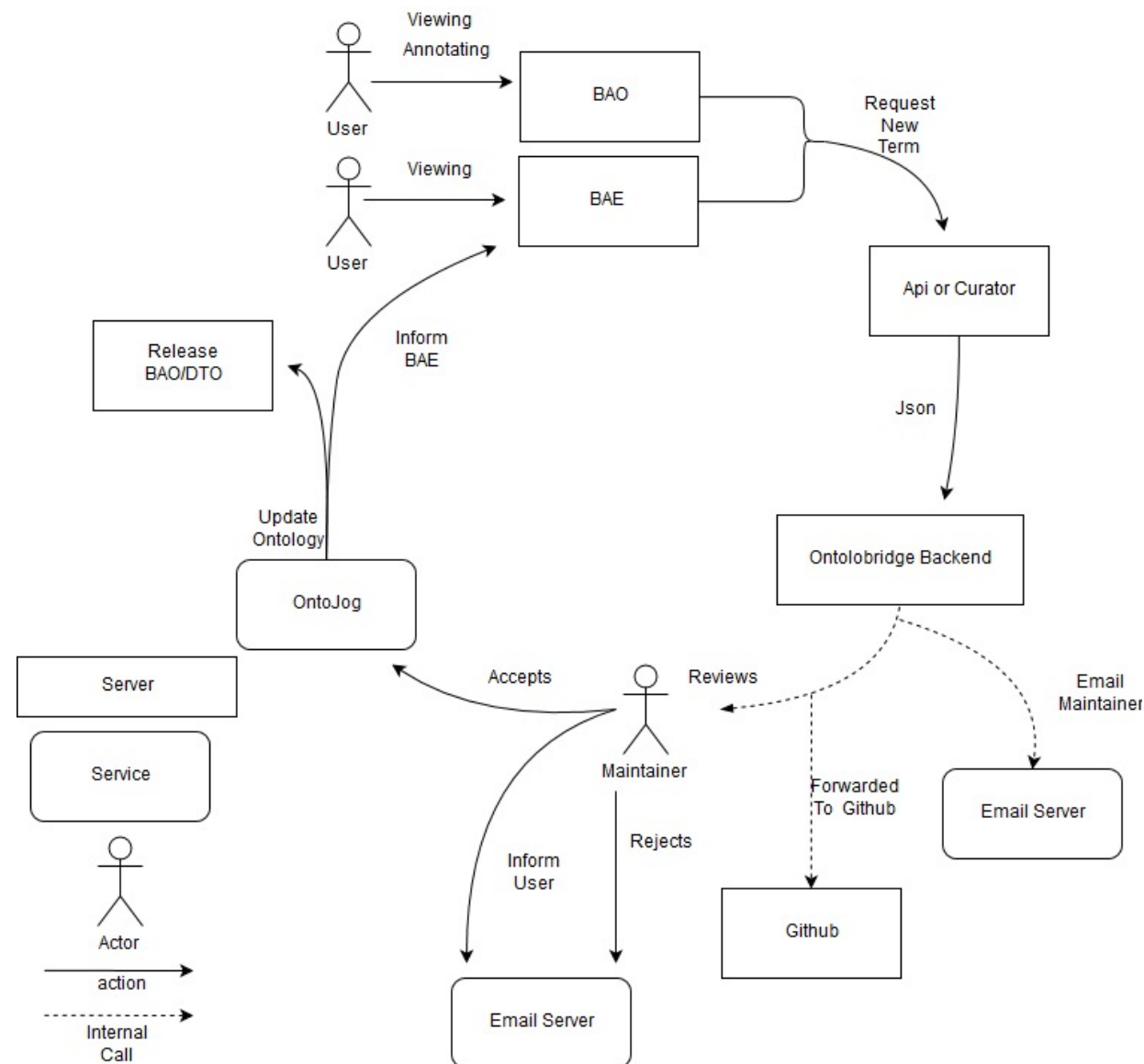
Technologist



Maintainer

Introducing OntoloBridge

- RESTful API to submit new terms
- Email Notification to all parties
- Anonymous Submission Mechanisms
- Allows CSV export
- Implements Internal Messaging System
- Allows for Quicker Iteration



auth-controller Auth Controller		>
request-controller Request Controller		✓
POST	/requests/RequestAnnotationProperty requestAnnotationProperty	🔒
POST	/requests/RequestDataProperty requestDataProperty	🔒
POST	/requests/RequestObjectProperty requestObjectProperty	🔒
POST	/requests/RequestsSetStatus termStatus	🔒
GET	/requests/RequestStatus termStatus	
POST	/requests/RequestTerm requestTerm	🔒
POST	/requests/UpdateRequest updateTerm	🔒
retrieve-controller Retrieve Controller		✓
GET	/retrieve/ontologies requestOntologies	
GET	/retrieve/Requests requestTerm	🔒
user-controller User Controller		>

Term Submission - API

- Main Endpoint for submissions
- Takes what is currently considered the main ontology fields
- Custom forms per ontology coming soon

Name	Description
anon boolean (query)	Anonymize Email <input type="checkbox"/>
description * required string (query)	Description of suggested term <input type="text"/>
email string (query)	Email of the submitter <input type="text"/>
justification string (query)	Justification if any for adding this term <input type="text"/>
label * required string (query)	Label of suggested term <input type="text"/>
notify boolean (query)	Should submitter be notified of changes <input type="checkbox"/>
ontology string (query)	Ontology Request <input type="text"/>
reference string (query)	Any references for this requests <input type="text"/>
submitter string (query)	Name of the submitter if provided <input type="text"/>
superclass * required string (query)	Parent URI of suggested term <input type="text"/>
superclass_ontology string (query)	Parent URI ontology of suggested term <input type="text"/>

Term Submission – Stand Alone

Request A New Term

Step 1:
Find An ontology

Step 2:
Find term in hierarchy

Step 3:
Describe Term

- Cell Line Ontology
- Protein Ontology
- Coronavirus Infectious Disease Ontology
- BioAssay Ontology
- Drug Target Ontology

Term Submission – Stand Alone

Request A New Term

Step 1:
Find An ontology

Step 2:
Find term in hierarchy

Step 3:
Describe Term

- assay bioassay component
- assay biology component
- assay format component
 - assay format**
 - assay phase characteristic
 - experimental setting
- assay method component
- assay result component
- assay screened entity component
- assay screening throughput

Confirm Parent Class

Do you want to select assay format(http://www.bioassayontology.org/bao#BAO_0000019) as the parent for your requests

Select Class Cancel

Term Submission – Stand Alone

Ontology Submission Form

Ontology:	<input type="text" value="BAO"/>
Superclass:	<input type="text" value="http://www.bioassayontology.org/bao#BAO_000001"/>
Label:	<input type="text" value="Test Class"/>
Description:	<input type="text"/>
Justification:	<input type="text"/>
References:	<input type="text"/>

Ontology User

Ontology Developer

Profile

Terms Waiting

Search:

Show 10 entries

Term	Ontology	Data Submitted	Email	Status	
test		2020-02-20		submitted	<div>View Request</div>
lipid fromat test		2020-03-27		submitted	<div>View Request</div>
test		2020-03-27		submitted	<div>View Request</div>
Am2.2-beta2AR/MG13-CCR5 dual cells		2020-04-17		submitted	<div>View Request</div>
Am2.2-beta2AR/MG13-CCR5 dual cells		2020-04-17		submitted	<div>View Request</div>
Am2.2-beta2AR/MG13-CCR5 dual cells		2020-04-17		submitted	<div>View Request</div>
tethering assay		2020-04-17		submitted	<div>View Request</div>
LYMP1-002		2020-05-14		submitted	<div>View Request</div>
LYMP2-008		2020-05-14		submitted	<div>View Request</div>
LYMP2-015		2020-05-14		submitted	<div>View Request</div>

Showing 1 to 10 of 224 entries

Previous

1

2

3

4

5

...

23

Next



Drug Target Ontology(DTO)

Cell Line Ontology(CLO)

Coronavirus Infectious
Disease Ontology(CIDO)



- Allows submission of requests while viewing
- Shows what is expected for the ontology

BioAssay Ontology
Last uploaded: October 16, 2020

Summary Classes Properties Notes Mappings Widgets

Jump to:

- assay bioassay component
- assay biology component
- assay format component
- assay method component
- assay result component
- assay screened entity component
- assay screening throughput
- disease
- organization
- people
- quality
- role

Details Visualization Notes (1) Class Mappings () **New Term Requests**

The BioAssay Ontology integrates with OntoloBridge, allowing community users to suggest additions to the public ontology. Complete the template below to submit a term request directly to the ontology maintainer.

Term Label (required)
Suggested term name. If a term can be described with multiple synonyms, only list the preferred name here.
Example: tissue-based format

Term description (required)
A brief definition, description, or usage of your suggested term. Additional term synonyms may be listed in this section.
Example: Involves the use of a tissue derived from a living organism and is a heterogeneous assay type.

Superclass (required)
The parent term of the suggested term. The parent term should be an existing entry of the current ontology. The superclass can be selected directly from the 'Classes' viewer on Bioportal's left tree navigation.
Example: assay format

References (optional)
Provide evidence for the existence of the requested term such as PMIDs of papers or links to other resources that describe the term.

Justification (optional)
Provide any additional information about the requested term here.

[Request New Term](#)

Label:	Illumina	Term History			
Ontology:	???	Date	Status	Action Owner	Comment
Superclass:	BAO:2091	submitted	06/25/2021	User	
Description:	A biotechnology company that develops, manufactures, and markets integrated systems for the analysis of genetic variation and biological function. The company provides a line of products and services that serves the sequencing, genotyping, gene expression, and proteomics markets. Explanation: Not currently available as a commercial company, but well known and used in next-gen sequencing circles.	accepted	7/7/2021	Maintainer	Term has been accepted
Justification:	Provided by Samantha, to test quick turnaround for OntoloBridge.				
References:					

2.7.1	(Uploaded)	07/08/2021	07/08/2021	OWL Diff
2.7.1	(Parsed, Indexed, Metrics, Annotator)	06/03/2021	06/03/2021	OWL CSV RDF/XML Diff
2.7	(Archived)	12/15/2020	12/15/2020	OWL Diff
2.6.1	(Archived)	10/16/2020	10/16/2020	OWL Diff
2.6	(Archived)	07/31/2020	07/31/2020	OWL Diff

University of Miami Schürer Lab



- **Stephan Schürer**
- **Caty Chung**
- **Vasileios Stathias**
- **Joan C. Glenny Pescov**

University of California San Francisco (Previously)

- **Julia Davies**

Collaborative Drug Discovery

- **Samantha Jeschonek**
- **Hande Küçük-McGinty**
- **Alex Clark**

Stanford

- **Mark Musen**
- **John Graybeal**
- **Michael Dorf**

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