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 /edamontology/edam-bioimaging

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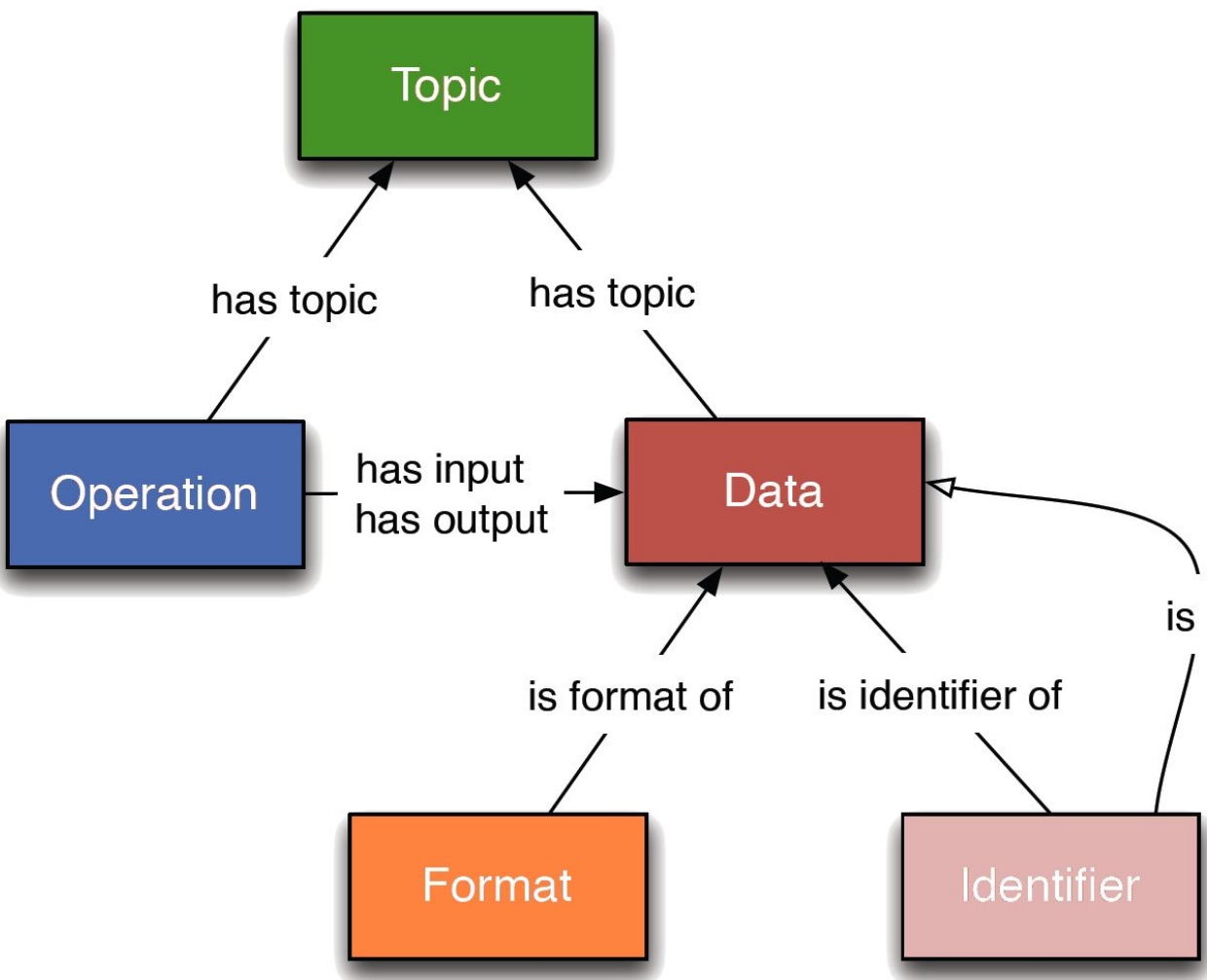
What? EDAM Bioimaging is an extension of the [EDAM ontology](#), dedicated to bioimaging, image analysis, image processing, and bioimage informatics.

Why? EDAM Bioimaging fosters open science by enabling interoperable descriptions of software, data, publications, workflows, and training materials.

How? EDAM Bioimaging is developed in an open community spirit, in a welcoming collaboration between imaging experts, scientists, and engineers.

How can I contribute? EDAM needs your expertise! Please help by posting comments with suggestions or needs for clarification ([here](#) ), by creating GitHub issues or pull requests, or by participating in a collaboration event. Please see <https://github.com/edamontology/edam-bioimaging#contributing>.

STRUCTURE OF EDAM



EXAMPLE CONCEPTS

Preferred Name	Correlative light and electron microscopy
Definition	Correlative light and electron microscopy is the combination of light microscopy (typically fluorescence microscopy) and electron microscopy of the same sample.
hasExactSynonym	CLEM
hasNarrowSynonym	Integrated light and electron microscopy (ILEM)
seeAlso	https://en.wikipedia.org/wiki/Correlative_light-electron_microscopy
subClassOf	Light microscopy Electron microscopy Multimodal imaging

Preferred Name	Filament tracing
Definition	Filament tracing operations are image analysis operations in which there is an image of a filamentous structure (it may be a tree-like structure, a filament network or an agglomeration of single 'stick-like' filaments) as input and outputs data that represent the filament, most commonly a skeleton representation of the filaments and their diameters or surfaces.
hasExactSynonym	Tubular structure extraction
hasNarrowSynonym	Biofilament tracing
hasRelatedSynonym	Curvilinear structure reconstruction Curvilinear structure detection
Related term	Neuron reconstruction
seeAlso	Neuron image analysis
subClassOf	Image segmentation

EDAM Bioimaging is used e.g. in [Biii.eu](#), the registry of bioimage analysis tools, workflows, and training materials

HOMEFORUMSABOUT BISEADVANCED SEARCHHOW TO CURATETAGGERS

Filament tracing

Fulltext search

EDAM BIOIMAGING ONTOLOGY

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Data

+

Format

+

Operation

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Alignment construction

>

Analysis

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Image analysis

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Colocalisation analysis

>

Filament tracing

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Image feature detection

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Neuron image analysis

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Object counting

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Object detection

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Object feature extraction

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Object tracking

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Optical flow

Paintera

Component

Description

Paintera is a general visualization tool for 3D volumetric data and proof-reading in segmentation/reconstruction with a primary focus on neuron reconstruction from electron micrographs in connectomics. It features/supports:

•

Views of orthogonal 2D cross-sections of the data at arbitrary angles and zoom levels

•

Mipmaps for efficient display of arbitrarily large data at arbitrary scale levels

•

Label data

◦

Painting

◦

Manual agglomeration

◦

3D visualization as polygon meshes

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Meshes for each mipmap level

•

Mesh generation on-the-fly via marching cubes to incorporate painted labels and agglomerations in 3D visualization. Marching Cubes is parallelized over small blocks. Only relevant blocks are considered (huge speed-up for sparse label data).

Paintera is implemented in Java and makes extensive use of the UI framework JavaFX

has topic

Electron microscopy

has function

Filament tracing

Image reconstruction

Image visualisation

Slice rendering

Surface rendering

REMBI

network of european bioimage analysts

... and in REMBI, the standard for bioimage metadata

REMBI

network of european bioimage analysts

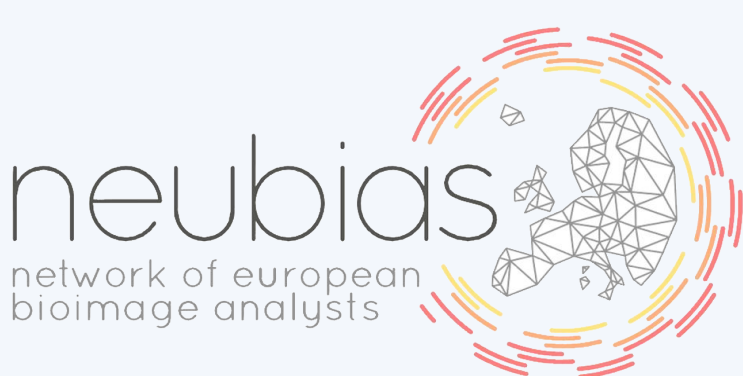
HIERARCHIES OF EDAM Bioimaging



Browse interactively at <https://bioportal.bioontology.org/ontologies/EDAM-BIOIMAGING>

Development version is in [WebProtégé](#) (free registration)

Developed with support from:



In coordination with:

