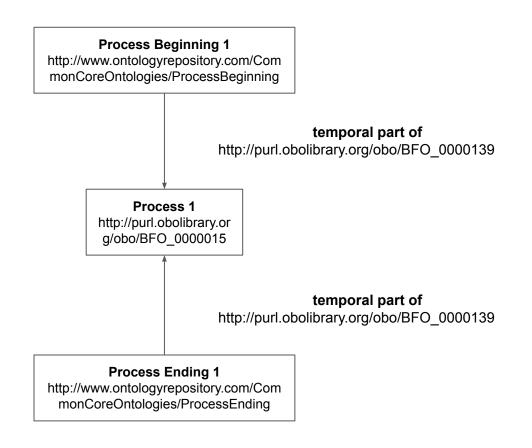
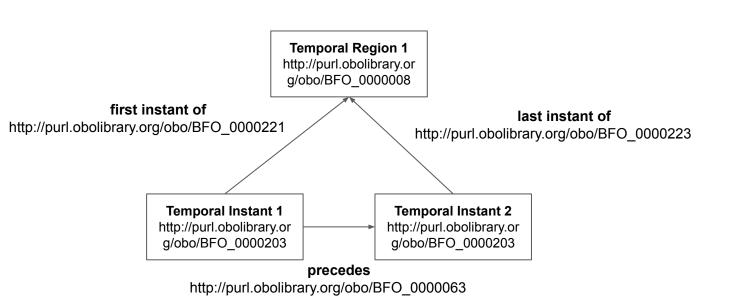
CCO design patterns

- The following slides contain design patterns for CCO and BFO to be vetted and translated into Mermaid.
- In some cases, big design patterns need to be split into more simple patterns.
- The sources of these design patterns are varied (papers, independent work of researchers, presentations). When possible, provenance of the images is shown. All credits are due to the authors of the respective patterns.

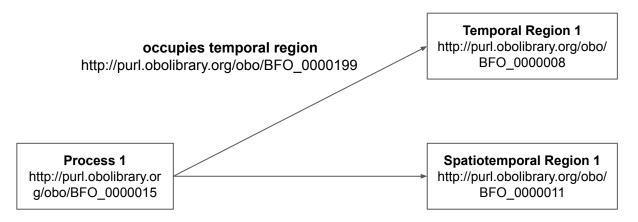
Starting and ending a process



First and Last Moments of Temporal Regions

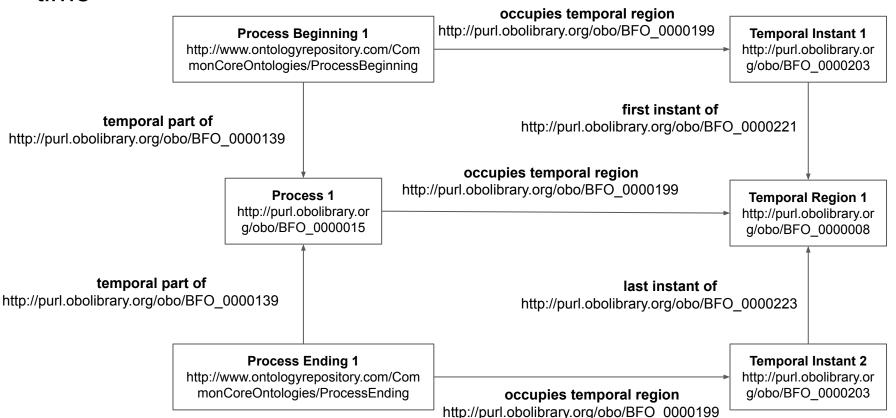


Tracking spatiotemporal and temporal information for processes

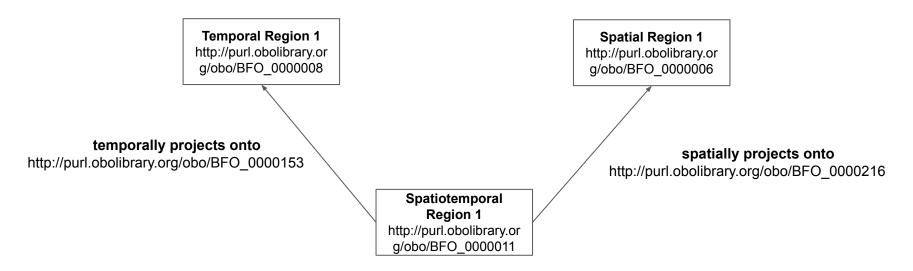


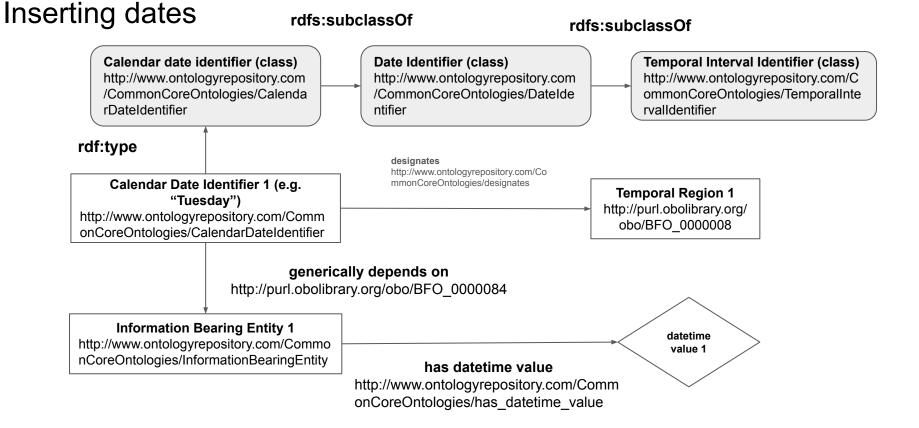
occupies spatiotemporal region http://purl.obolibrary.org/obo/BFO_0000200

Starting and ending processes in time



Separating space and time information from spacetime information





The white boxes depict instances of classes with the corresponding IRI. Arrows are relations of the corresponding IRI. Gray boxes depict classes with the corresponding IRI.

Diamonds depict instances of datatypes. Rounded boxes are classes with the corresponding IRI.

Measurement Data

Measurement Information Content Entity 1 (e.g. "Mass of Pencil")

http://www.ontologyrepository.com/Commo nCoreOntologies/MeasurementInformation ContentEntity The white boxes depict instances of classes with the corresponding IRI. Arrows are relations of the corresponding IRI. Gray boxes depict classes with the corresponding IRI..

Diamonds depict instances of datatypes. Rounded boxes are classes with the corresponding IRI.

generically depends on

http://purl.obolibrary.org/obo/BFO 0000084

Information Bearing Entity 1

http://www.ontologyrepository.com/Commo nCoreOntologies/InformationBearingEntity

has decimal value

http://www.ontologyrepository.com/Comm onCoreOntologies/has_datetime_value

integer value 1 (e.g. "8.4")

uses measurement unit

http://www.ontologyrepository.com/Common CoreOntologies/uses_measurement_unit

Gram Measurement Unit

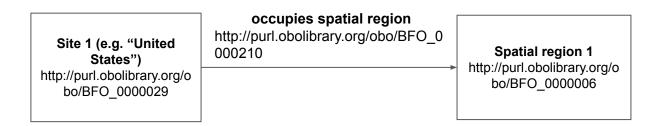
http://www.ontologyrepository.com/Commo nCoreOntologies/MeasurementUnitOfMass

rdf:type

Measurement Unit of Mass (Class)

http://www.ontologyrepository.com/C ommonCoreOntologies/Measuremen tUnitOfMass

Sites and spatial regions



Site of a Process

Process 1 (e.g. "Presidential elections)

http://purl.obolibrary.or g/obo/BFO_0000015

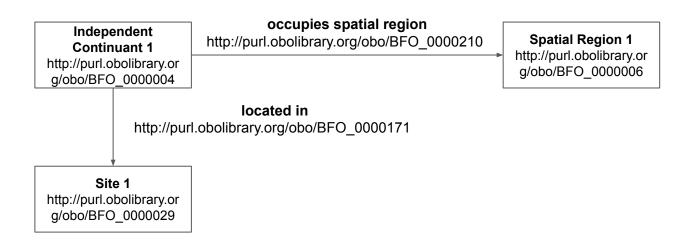
occurs at

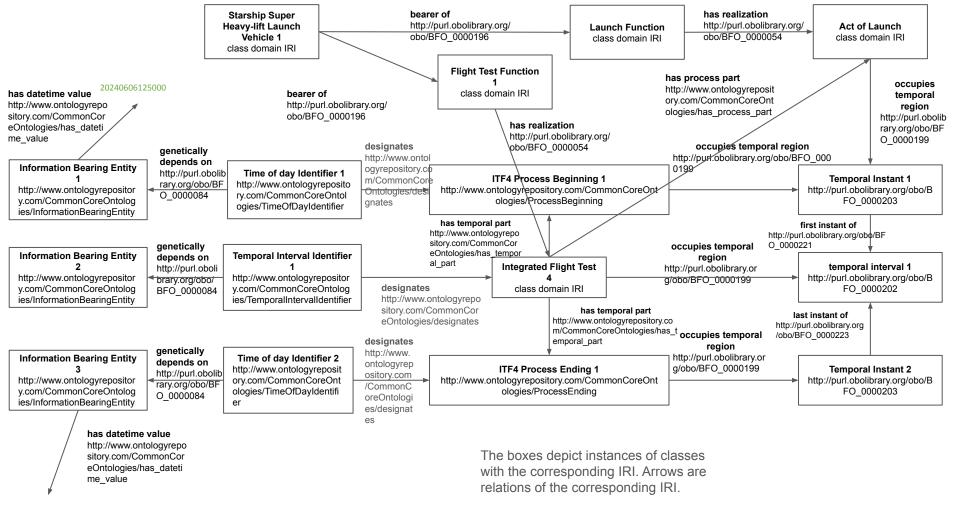
http://www.ontologyrepository.com/ CommonCoreOntologies/occurs_at

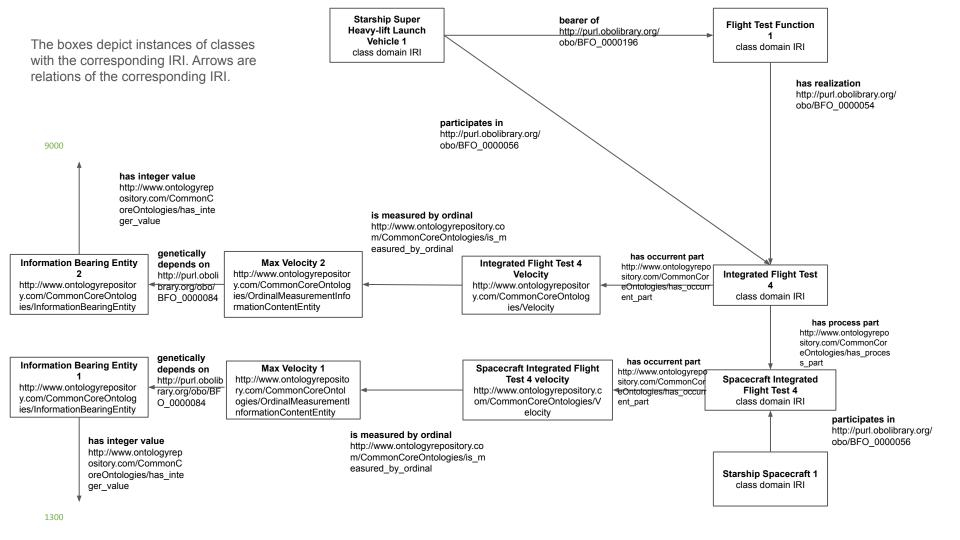
Site 1 (e.g. "United States)

http://purl.obolibrary.org/obo/BFO_000029

Location of Independent Continuants







Stages: Roles or Material Entities with Roles?

