

WebTracks

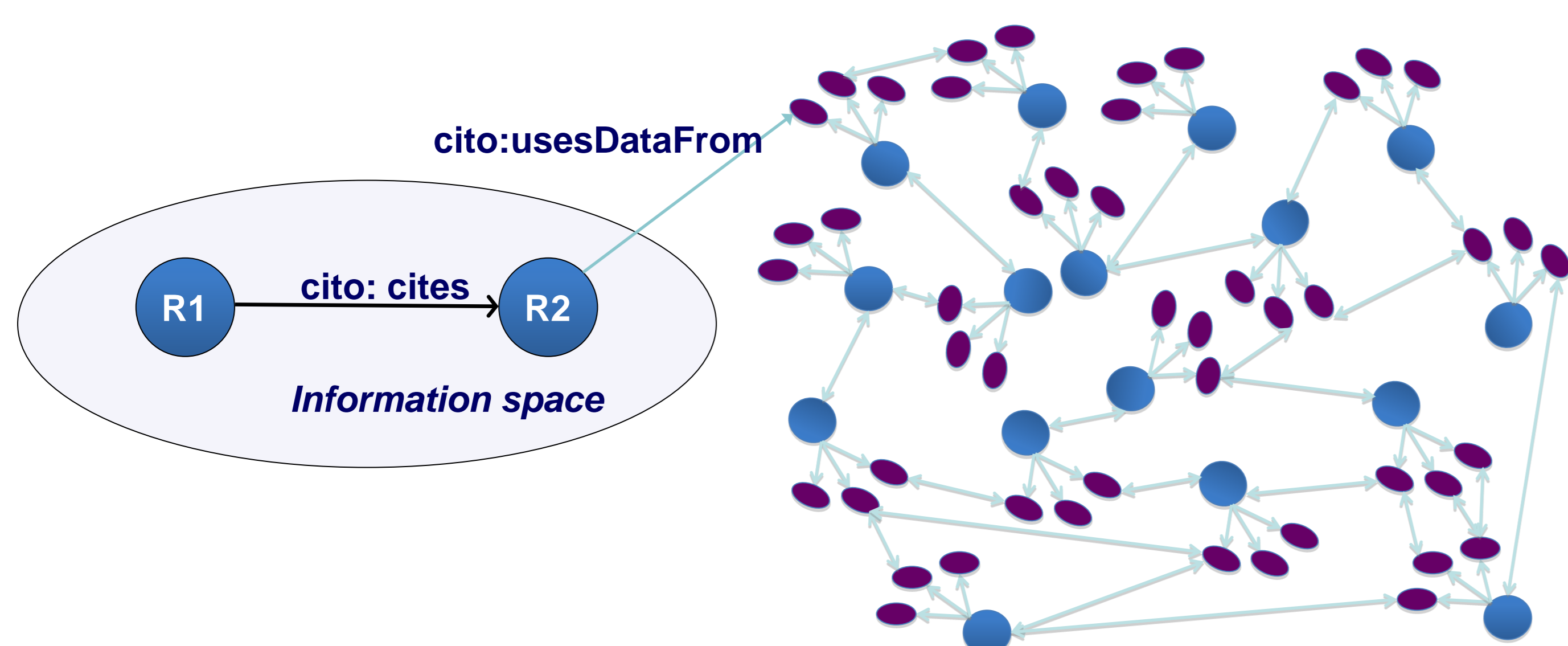
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Building a federated science web one link at a time

Webtracks' objective is to develop an approach and mechanism for constructing and propagating structured information to describe the linkage between research objects in the context of academic activities.

Each Webtracks link is an RDF triple. The source and target resources form the Subject and Object URIs of the assertion, and the link type is the Predicate. Webtracks does not specify a fixed format for the metadata ontology and it allows the metadata properties to be defined per link. A set of semantically annotated links between data resources forms a graph of citation and provenance that transverses multiple information spaces.



Expected Benefits

- Capture relationship between research resources in context.
- Decentralised knowledge stores maintained by resource hosts.
- Different types of resources can be linked within a discipline
 - linking formal publications to on-line blog posts and commentary
- Annotation can be added to facilitate intelligence linking
 - rating, ranking info ...
- Aggregates and collections can be formed across different information spaces to create a *linked web of data*.
- Relationships, provenance and priority between datasets can be established.
- Trace citation information to assess the usage and impact.
- Enable radical sharing and collaboration in research
 - ensure attribution of credits
 - accelerates the research process by encouraging timely publication of research findings.

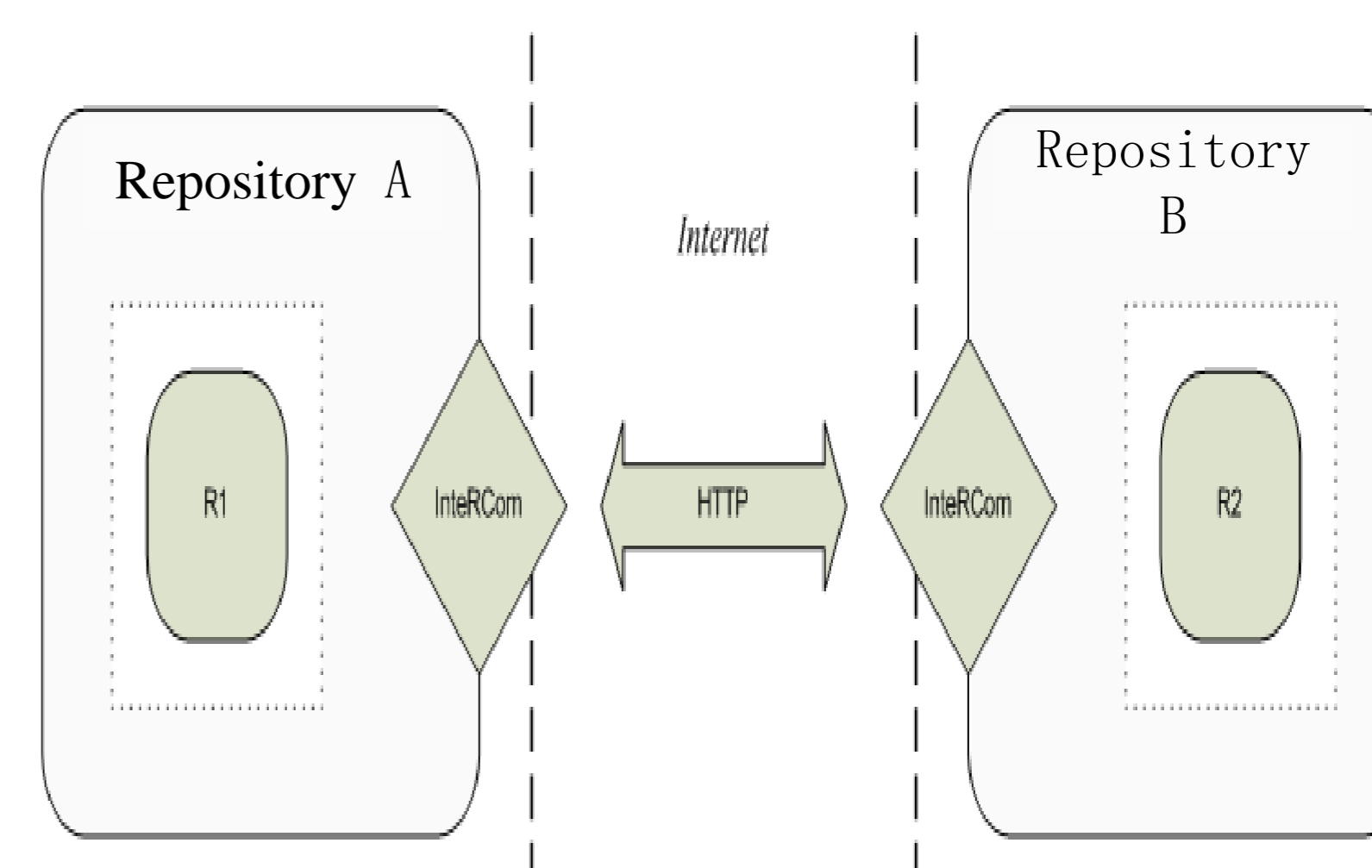
Key Outputs and Outcomes

- Specification of a general-purpose InterCom notification protocol (see right-hand panel).
- Development of a generic, open-source implementation of the InterCom Sender/Receiver services.
- Development of exemplar services involving data and publication repositories, open science notebooks and publishers.
- Specification of aggregator services based on the protocol to support value added services in search and impact analyses.
- Engage stakeholders communities in dissemination activities.

Project Website

<http://www.jisc.ac.uk/whatwedo/programmes/mrd/clip/webtracks.aspx>

Inter-Repository Communication Protocol



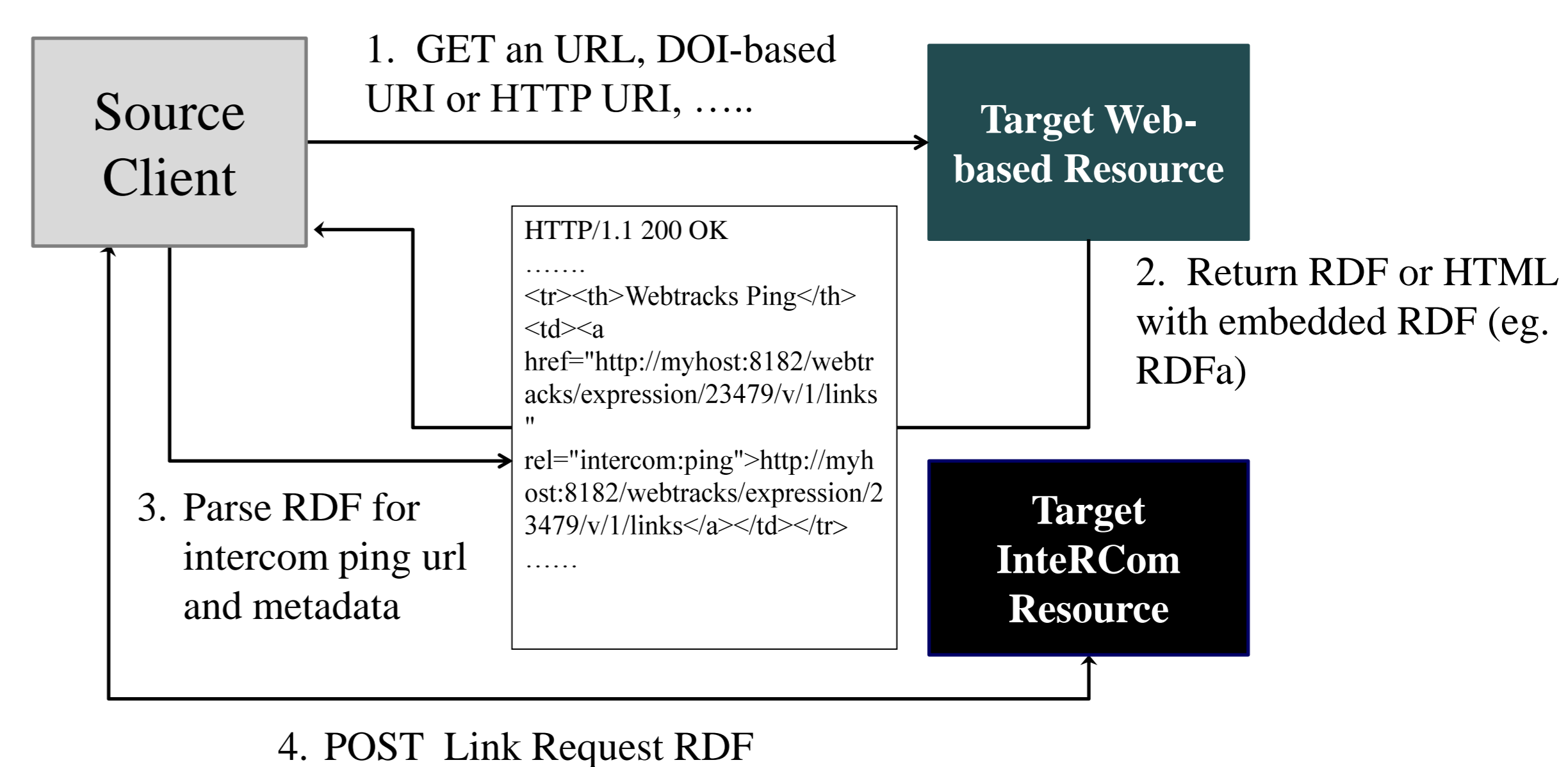
InterCom is a general purpose application layer protocol for linking digital data resources of any type. Similar to Trackbacks, a popular mechanism for tracking 'conversations' in the Blogosphere, InterCom is also a 2-stage push notification protocol. But unlike Semantic Pingback, another general purpose notification protocol which uses RPC, InterCom uses HTTP, a communication protocol championed by the Linked Data movement.

InterCom Key Features

- Leverages emerging Linked Data environment of
 - identifying and accessing Resources using de-referenceable HTTP-based URI
 - using RDF to describe Resources and how they relate to each other.
- Linking between objects in any research Resources
 - experiment, sample, data, publication, blog post, ...
- Supports domain agnostic semantic annotation to add context to the link
 - Dublin Core, SPAR ...

InterCom Use Case

A basic use case is illustrated below. A Client first uses HTTP GET to obtain metadata on the Target followed by a POST request to establish a link.



Acknowledgement

The Webtracks project is funded by the JISC Managing Research Data Programme under the Citing, Linking and Integrating Research Data theme.