Design and Deployment of a Semantic Virtual Research Environment

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Provenance Framework

Policy Ontology

Policy
- Policy Condition
  - Condition
  - Permission
    - Prohibition
    - Obligation
- Action Request
  - Activation Condition
    - hasActivation*
    - basedOnPolicy

Events Ontology

VRE Event
- Communication Action
- Query Action
- Resource Action
- State Change Action

OPM Provenance Ontology

Artifact
- Process
- Agent
  - CausalRelation
  - sioc:Post
    - foaf:Person

basedOnEvent

Based on the provided image, the Provenance Framework is represented with a network of interlinked concepts. The Policy Ontology includes elements such as Policy Condition, Permission, and Prohibition, among others. The Events Ontology focuses on VRE Event and its actions. The OPM Provenance Ontology contains Artifact, Process, and Agent, with relationships such as basedOnEvent and hasActivation*. The diagram also highlights a connection to Communication Action and Query Action, possibly indicating a broader interaction within the framework.
• Track the provenance of digital artefacts and processes

• Capture the provenance associated with a user's social network

• Control the behaviour of services within the application using policy-based reasoning

• Visualise provenance metadata using different modalities
Policy-based Reasoning
Conclusions

• *ourSpaces* semantic VRE
  – Provenance representation framework
  – Policy reasoning service
  – Collection of metadata visualisation and creation services
• ‘Linked data’ makes aspects of information discovery and presentation possible within *ourSpaces*
• The policy and provenance framework provides real benefits in terms of system adaptability

www.ourspaces.net