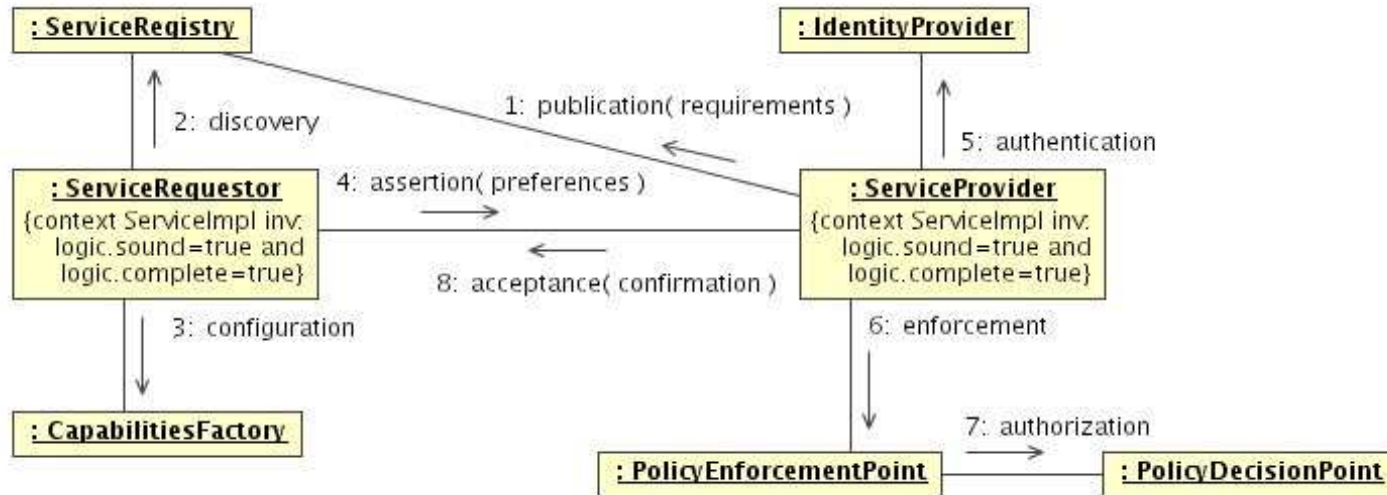


GSA Policy Engine

Architecture and Artifacts

Contract Negotiation



Foundation for
collection, maintenance, use, and dissemination
of machine readable privacy policy

Policy Engine Context

- WS-Reliability, SAML, US Privacy Act
- Policy Intersection
- Service Provider/Consumer Provisioning

Privacy Act of 1974

- The Privacy Act (PA) of 1974, Public Law 93-579 (5 U.S.C. § 552a), regulates the
- collection, maintenance, use, and dissemination of personal information by Federal
- agencies. The PA was amended by the Computer Matching Privacy Protection Act
- (CMPPA) of 1988 (P.L. 100-503, 5 U.S.C. § 552a(a)(8) - (13), (e)(12), (o), (p), (q), (r),
- and (u) (1994)), and the Computer Matching Privacy Protection (CMPPA) Amendments
- of 1990 (P.L. 101-56, 5 U.S.C. § 552a(p)). These amendments set forth computer
- matching activity requirements for Federal agencies

Privacy Model

Dean's Tax Example
k-operator
Policy Decision Point

Ontology Info | Species Validation

OWL Ontology: [privacy.owl](#) (Edit URI)

Annotations: (Add)
rdfs:label : privacy policy (Delete)

Imports: (Add)
<http://www.osera.gov/owl/2004/11/fea/brm.owl> (Delete)

Total Number of Classes: 114 (Defined: 29, Imported: 85)
Total Number of Datatype Properties: 10 (Defined: 2, Imported: 8)
Total Number of Object Properties: 31 (Defined: 10, Imported: 21)
Total Number of Annotation Properties: 3 (Defined: 2, Imported: 1)
Total Number of Individuals: 377 (Defined: 10, Imported: 367)

Advanced Ontology Statistics:

General Statistics	Property Tree Statistics	Satisfiable Class Tree Statistics
DL Expressivity: SHOIN(D) No. of GCI: 1 No. of Sub-classes: 115 No. of Disjoint Axioms: 0 No. of Functional Properties: 3 No. of Inverse Functional Properties: 0 No. of Transitive Properties: 0 No. of Symmetric Properties: 0 No. of Inverse Properties: 2	Properties with Multiple Inheritance: 0 Max. Depth of Property Tree: 2 Min. Depth of Property Tree: 2 Avg. Depth of Property Tree: ?	Classes with Multiple Inheritance: 0 Max. Depth of Class Tree: 9 Min. Depth of Class Tree: 1 Avg. Depth of Class Tree: 4.62 Max. Branching Factor of Class Tree: 19 Min. Branching Factor of Class Tree: 1 Avg. Branching Factor of Class Tree: 4.20

Privacy Proofs

- Axioms of OWL (SNARK)
- Axioms of Privacy Act (?)
- IW-Proof Generation (JTP)
- PML
- TMS Service in J2EE (?)

Answer #130

[/]:

(holds rdfs:subClassOf privacy.owl:ConsentedDisclosure
privacy.owl:ConsentedDisclosure)

<<

Modus Ponens Inference Step:

(holds rdfs:subClassOf privacy.owl:ConsentedDisclosure
privacy.owl:ConsentedDisclosure)

:-

(instance-of privacy.owl:ConsentedDisclosure frame)

(:has-slot privacy.owl:ConsentedDisclosure

rdfs:subClassOf)

(holds rdfs:subClassOf privacy.owl:ConsentedDisclosure
privacy.owl:ConsentedDisclosure)

Inference Bindings:

?slot : [http://www.w3.org/2000/01/rdf-
schema#](http://www.w3.org/2000/01/rdf-schema#)!::subClassOf

?frame :

<http://www.osera.gov/owl/2005/12/privacy.owl#>!::!Consen
tedDisclosure!

{{

[/.1]:

(instance-of privacy.owl:ConsentedDisclosure frame)

<<

Direct Assertion

Inference Bindings:

?subj :

<http://www.osera.gov/owl/2005/12/privacy.owl#>!::!Consen
tedDisclosure! [/.2]:

(:has-slot privacy.owl:ConsentedDisclosure

rdfs:subClassOf)

<<

Direct Assertion ...

OSERA

Open Source eGov Reference Architecture

<http://www.osera.gov/>

FEA-RMO

GSA Policy Engine
and more in FY07 ...

Contact Info

Rick Murphy

General Services Administration

richard.murphy@gsa.gov

202-557-1604