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THE STATE UNIVERSITY
OF NEW JERSEY

Using Linked Data to Organize Born Digital Government Information

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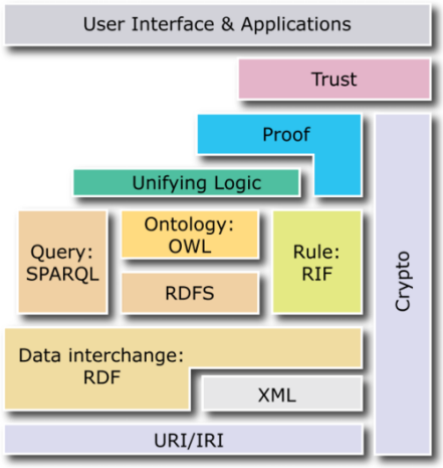
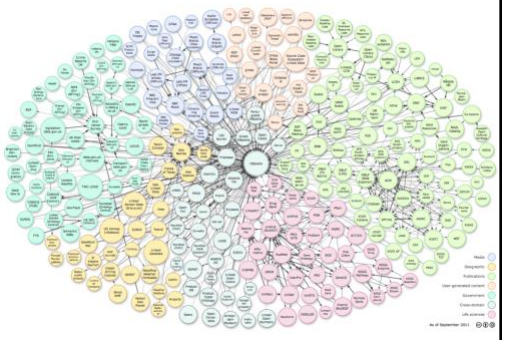
Semantic web & linked data





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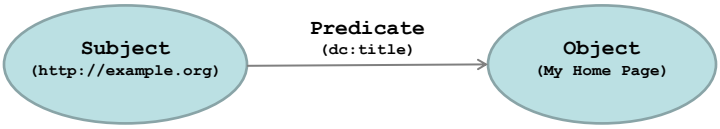
RDF (Resource Description Framework):

- URI's stand in for things (e.g. http://www.example.com#example)
- Information about resources is expressed in triples
- Triples are like simple English sentences




```
<rdf:Description rdf:about="http://example.org/">
        <dc:title>My Home Page</dc:title>
</rdf:Description>
```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OWL (Web Ontology Language):

- Builds on RDF (valid OWL is valid RDF)
- Adds vocabulary for expressing logical relationships between resources
- Designed to model domain knowledge in a way that can be understood by machines

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SKOS (Simple Knowledge Organization System):

- An example of an OWL ontology (vocabulary) developed by W3C
- Designed to describe "KOS's," i.e. schemes for expressing information about topical subjects

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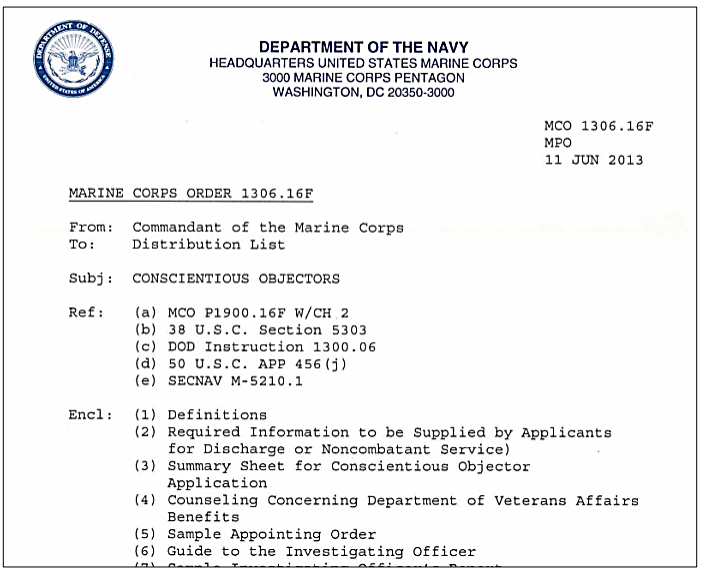

DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
3000 MARINE CORPS PENTAGON
WASHINGTON, DC 20350-3000

MCO 1306.16F
MPO
11 JUN 2013

MARINE CORPS ORDER 1306.16F

From: Commandant of the Marine Corps
To: Distribution List

Subj: CONSCIENTIOUS OBJECTORS

Ref: (a) MCO P1900.16F W/CH 2
(b) 38 U.S.C. Section 5303
(c) DOD Instruction 1300.06
(d) 50 U.S.C. APP 456(j)
(e) SECNAV M-5210.1

Encl: (1) Definitions
(2) Required Information to be Supplied by Applicants for Discharge or Noncombatant Service)
(3) Summary Sheet for Conscientious Objector Application
(4) Counseling Concerning Department of Veterans Affairs Benefits
(5) Sample Appointing Order
(6) Guide to the Investigating Officer

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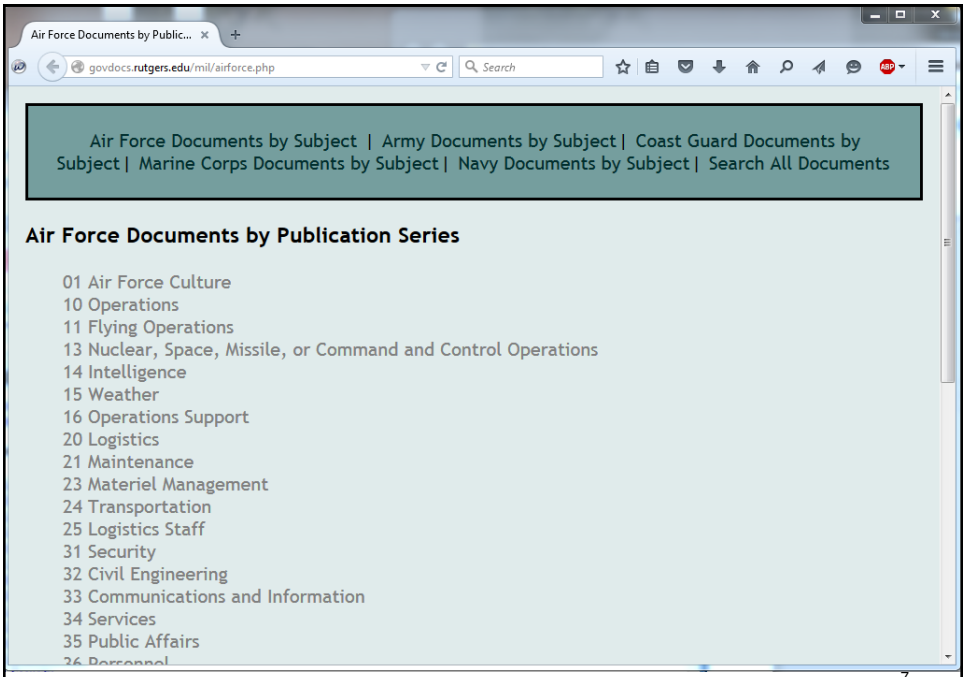
http://doni.daps.dla.mil/SECNAV%20Manuals1/5210.2%20(2012).pdf



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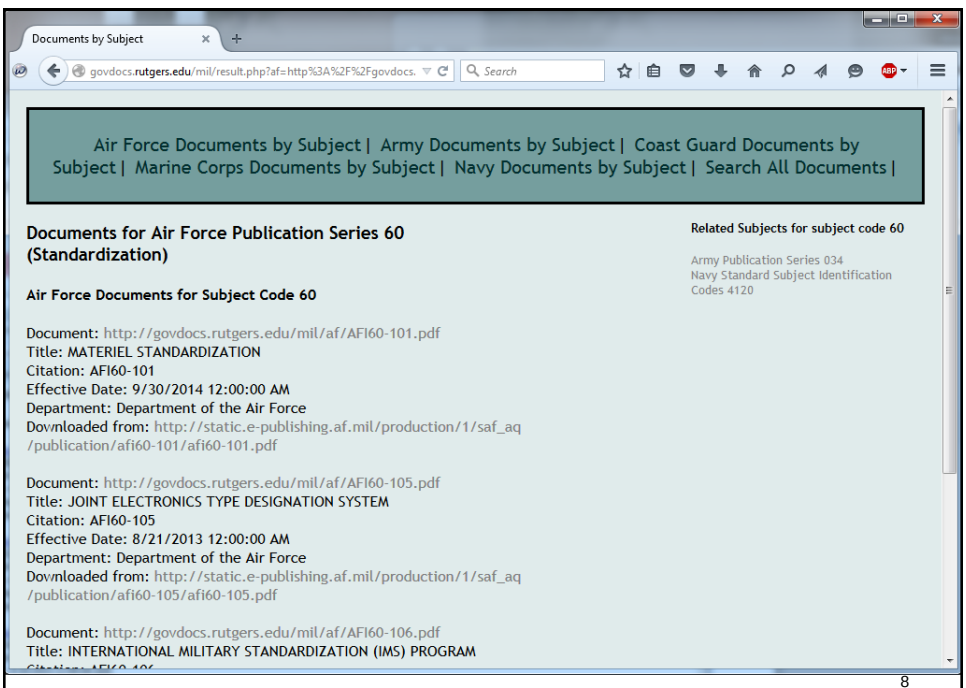

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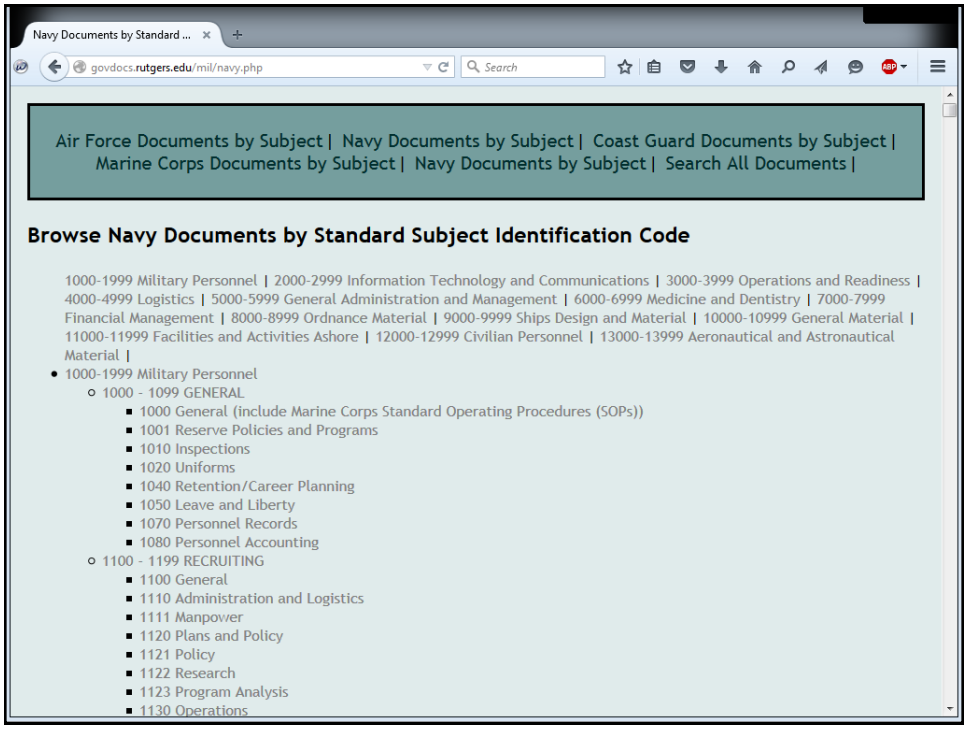
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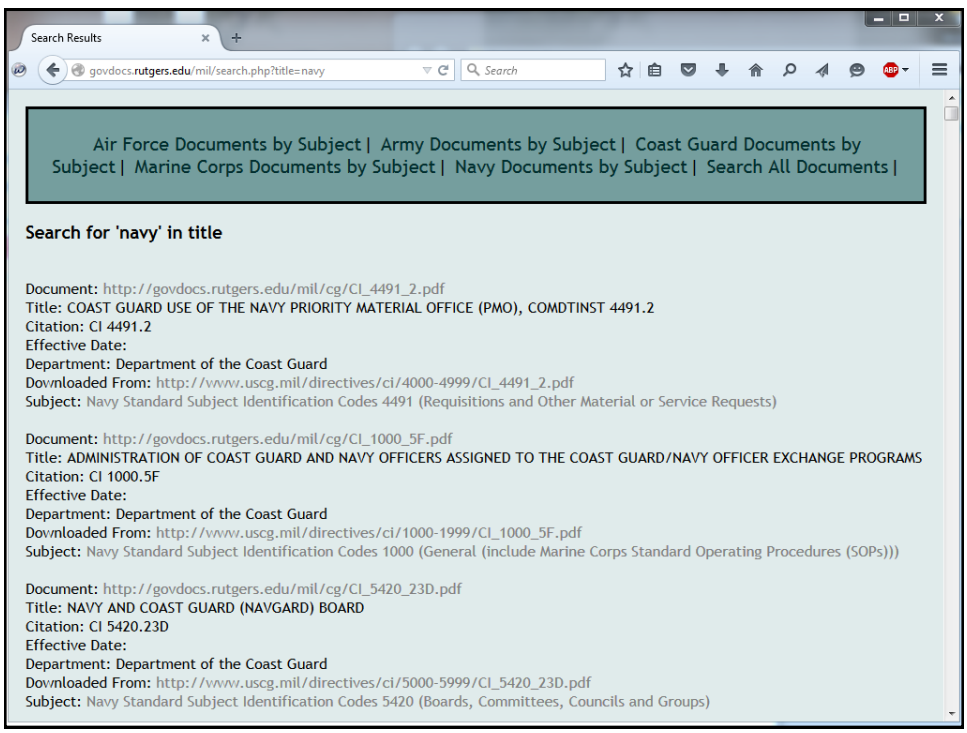
1000-1999 Military Personnel
1000 - 1099 GENERAL
1000 General (include Marine Corps Standard Operating Procedures (SOPs))
1001 Reserve Policies and Programs
1010 Inspections
1020 Uniforms
1040 Retention/Career Planning
1050 Leave and Liberty
1070 Personnel Records
1080 Personnel Accounting
1100 - 1199 RECRUITING
1100 General
1110 Administration and Logistics
1111 Manpower
1120 Plans and Policy
1121 Policy
1122 Research
1123 Program Analysis
1130 Operations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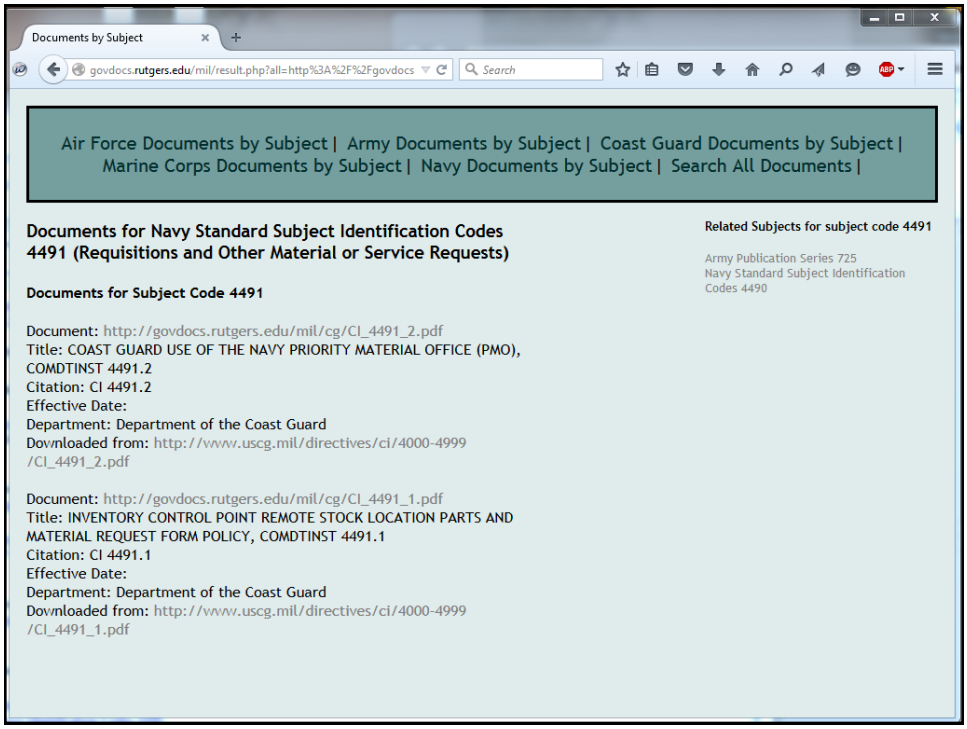
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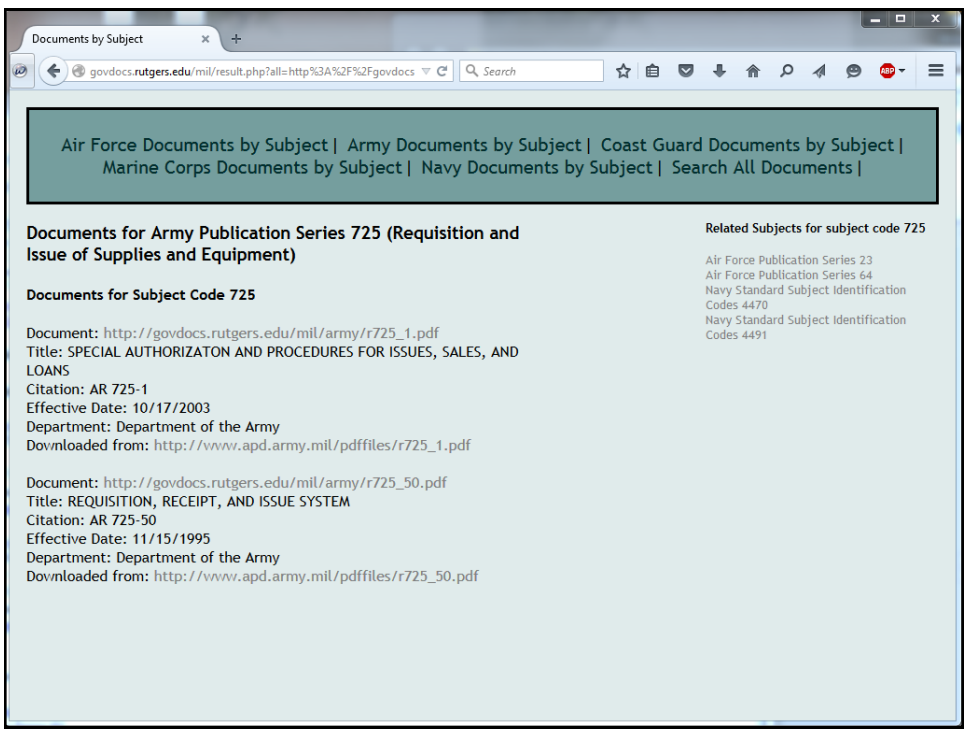
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Documents for Subject Code 725
Document: http://govdocs.rutgers.edu/mil/army/r725_1.pdf
Title: SPECIAL AUTHORIZATON AND PROCEDURES FOR ISSUES, SALES, AND LOANS
Citation: AR 725-1
Effective Date: 10/17/2003
Department: Department of the Army
Downloaded from: http://www.apd.army.mil/pdffiles/r725_1.pdf
Document: http://govdocs.rutgers.edu/mil/army/r725_50.pdf
Title: REQUISITION, RECEIPT, AND ISSUE SYSTEM
Citation: AR 725-50
Effective Date: 11/15/1995
Department: Department of the Army
Downloaded from: http://www.apd.army.mil/pdffiles/r725_50.pdf
Related Subjects for subject code 725
Air Force Publication Series 23
Air Force Publication Series 64
Navy Standard Subject Identification Codes 4470
Navy Standard Subject Identification Codes 4491

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SKOS descriptions:

- Create individual objects for each `skos:ConceptScheme` and `skos:Concept`
- Assign uri's to each individual
- assign human readable descriptions to each uri (`skos:notation` and `skos:prefLabel`)
- add additional "lexical labels" (e.g., `rdfs:comment`) if there is more information available

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SKOS semantic relations:

- use `skos:broader` and `skos:narrower` to relate concepts within a hierarchy
- use `skos:related` to suggest equivalencies within a single scheme (e.g., see also)
- use mapping relations to show relationships between concepts in different schemes (e.g. `skos:narrowMatch`, `broadMatch`, or `closeMatch`)

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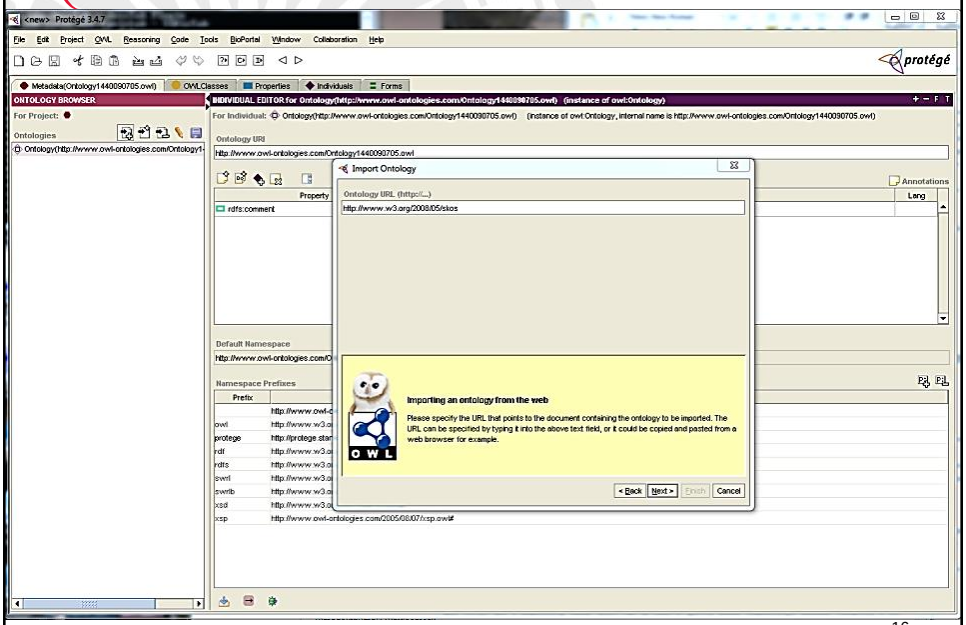
- http://www.w3.org/wiki/ConverterToRdf
- http://protege.stanford.edu/
- http://protegewiki.stanford.edu/wiki/Import



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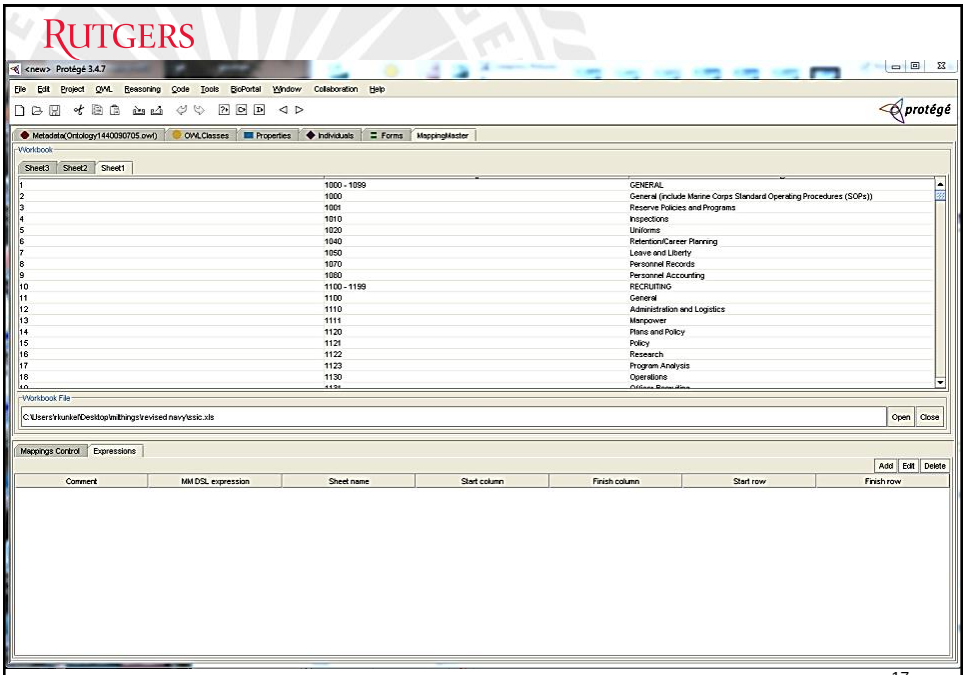

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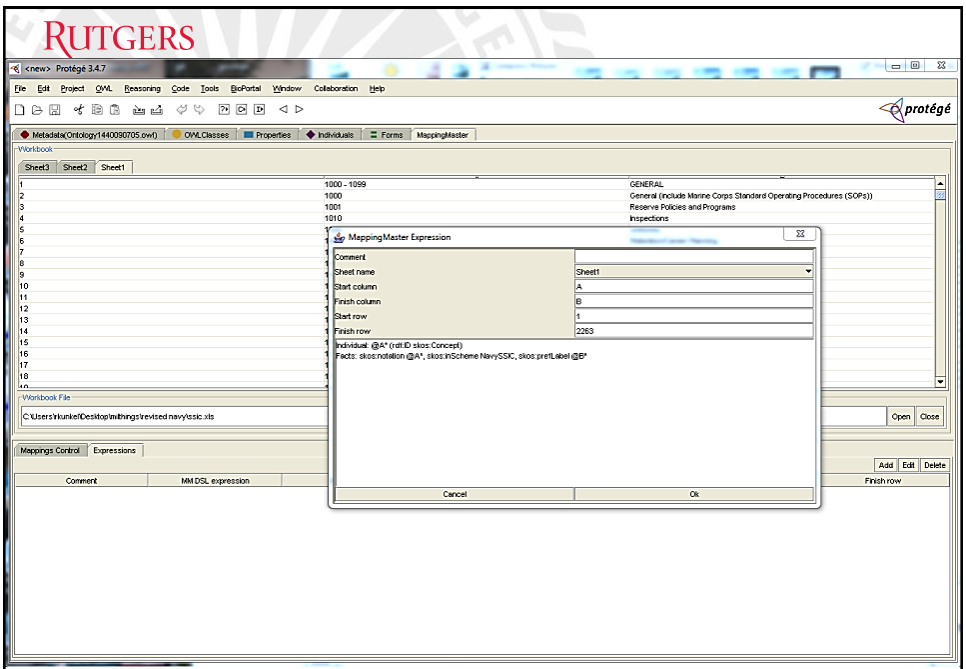

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http://protege.cim3.net/cgi-bin/wiki.pl?MappingMasterDSL

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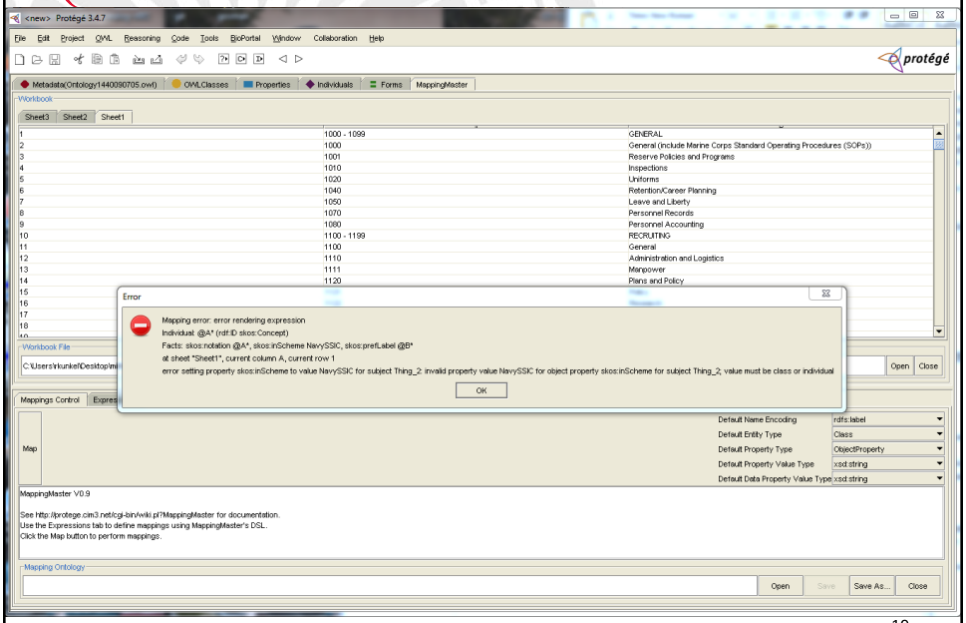

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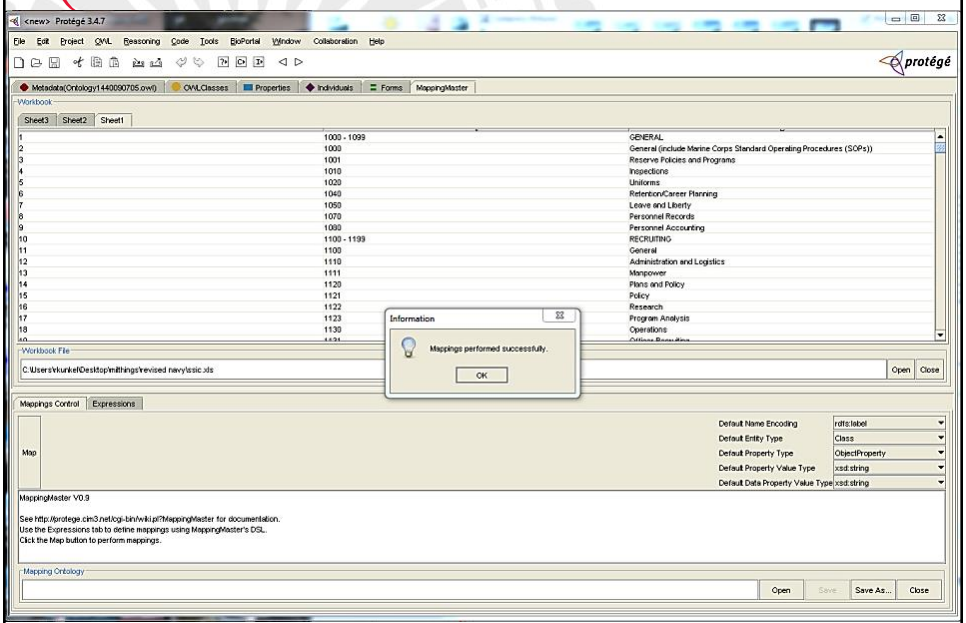

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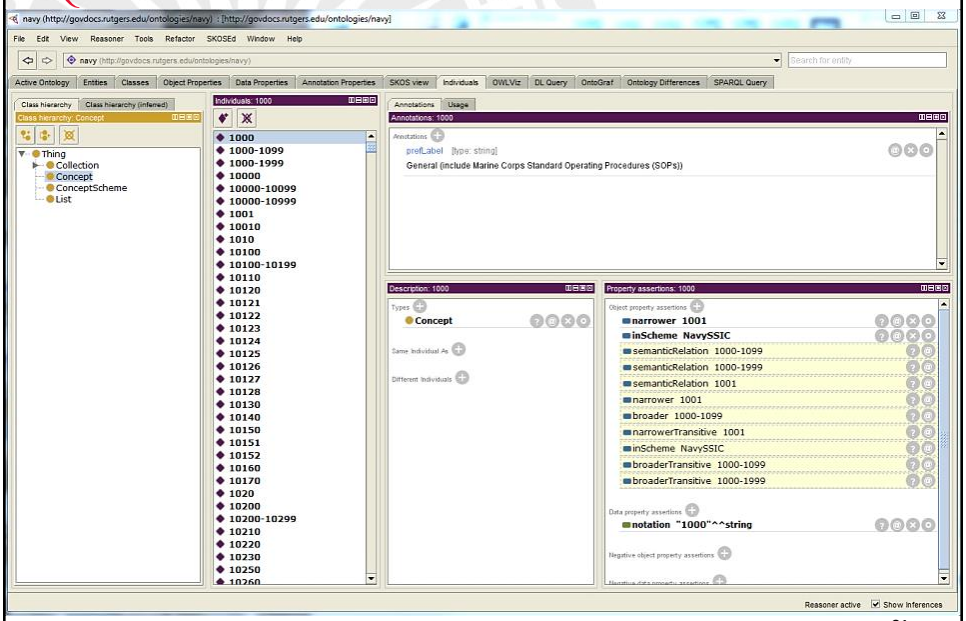

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http://govdocs.rutgers.edu/ontologies

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"On the Semantic Web the true potential of data is unleashed when it is interlinked. As concepts from different concept schemes are connected together they begin to form a distributed, heterogeneous global concept scheme. A web of concept schemes can serve as the foundation for new applications that allow meaningful navigation between KOSs"*

*Antoine Isaac & Ed Summers, *SKOS Simple Knowledge Organization System Primer*, W3C (August 18, 2009), http://www.w3.org/TR/skos-primer/.

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