Future STEP Project for Ontology Summit 2009

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NIST
National Institute of Standards and Technology
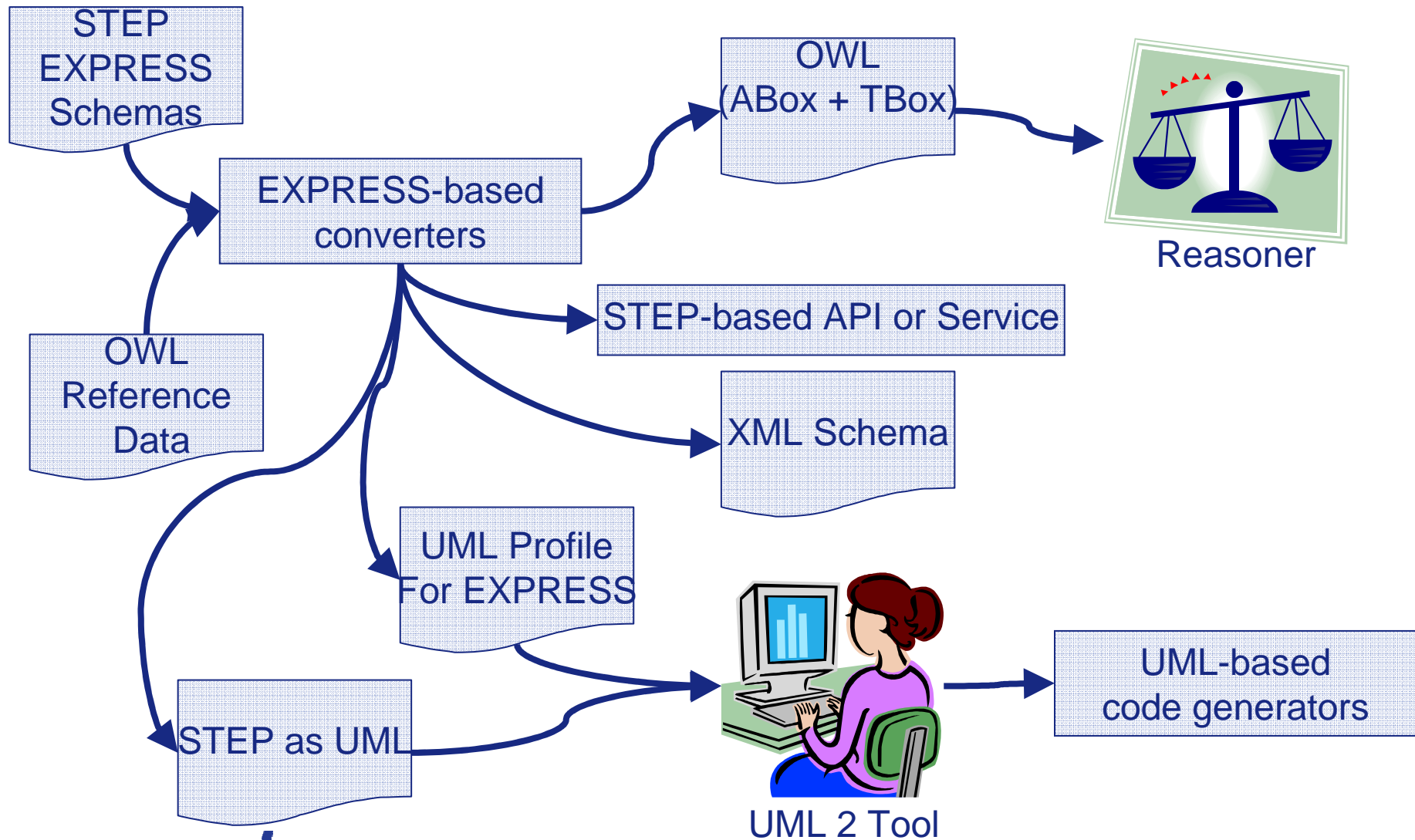Technology Administration, U.S. Department of Commerce

Project Goals

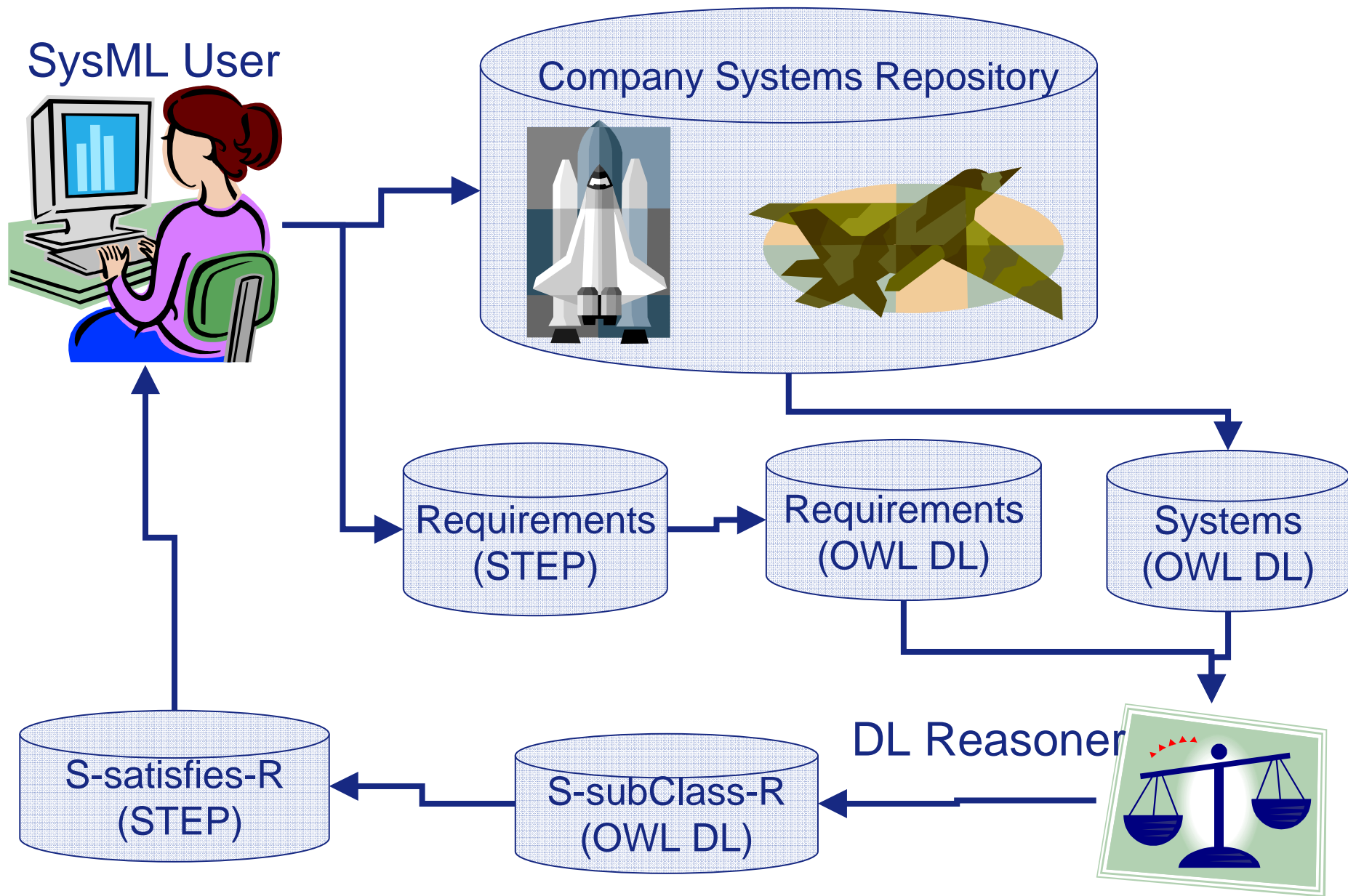» To enable enterprise integration based on inter-related data exchange, ontology and service specifications

» To enable the selective harvesting of ISO STEP standards into ontologies and other widespread modeling languages (i.e. OMG and its Model Driven Architecture approach)

» To migrate STEP content towards widespread modeling and implementation technology

– With possibility of ISO STEP harvesting improvements in OMG, W3C, etc, back as ISO standards

– With possibility of SC4 itself using that technology

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Near-Term Goal - Harvesting STEP

STEP EXPRESS Schemas

EXPRESS-based converters

OWL (ABox + TBox)

Reasoner

OWL Reference Data

STEP-based API or Service

XML Schema

UML Profile For EXPRESS

STEP as UML

UML 2 Tool

UML-based code generators

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SysML User

Company Systems Repository

Requirements
(STEP)

Requirements
(OWL DL)

Systems
(OWL DL)

DL Reasoner

S-satisfies-R
(STEP)

S-subClass-R
(OWL DL)

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End Goal – New ISO STEP Approach

Industry Extensions

SOA

Reasoning

Standardized
Core Ontologies
And Mapping

Data
Exchange

ROA

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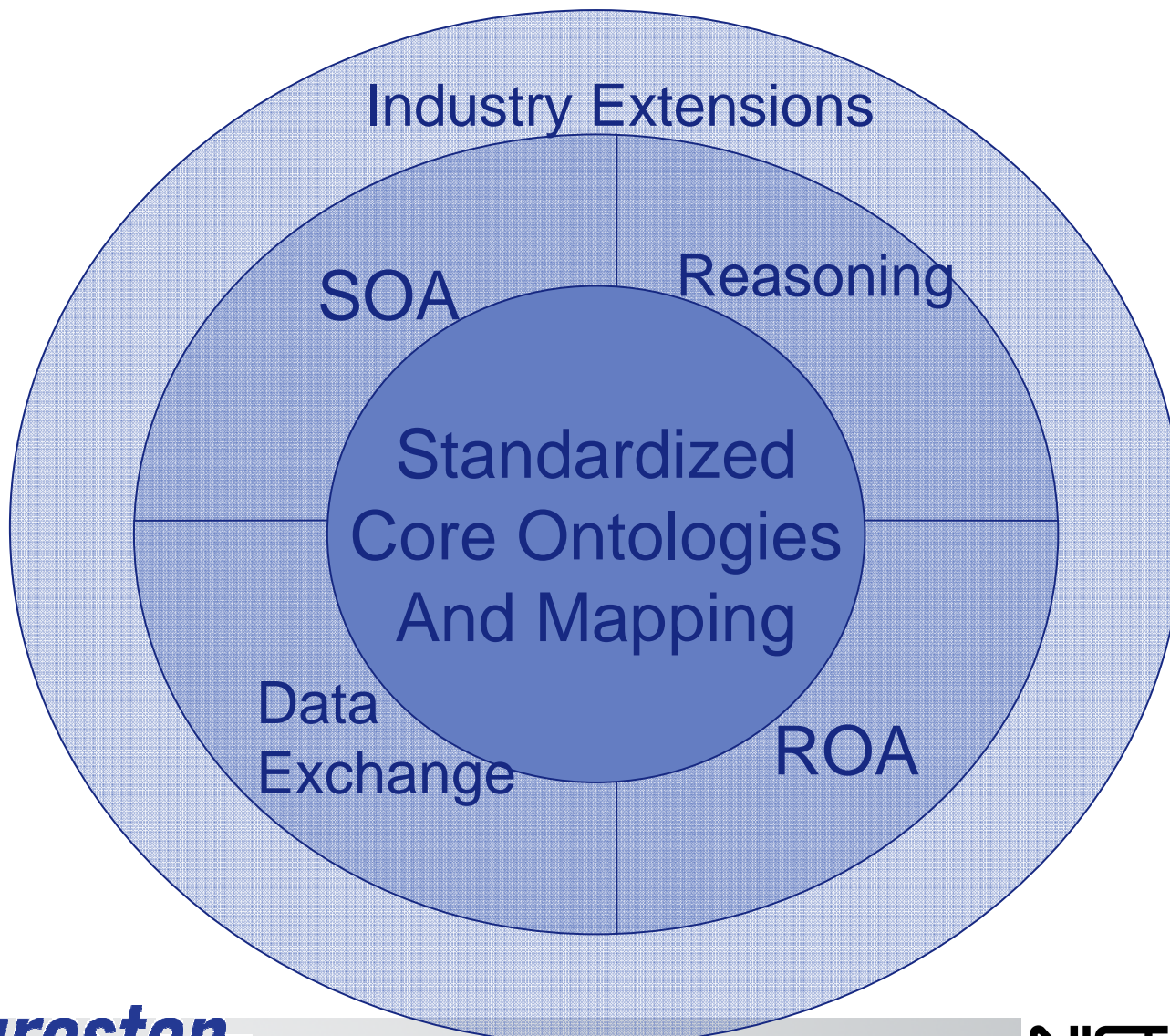
How Ontology Summit 2009 Can Help

» Add to focus on core ontologies for product data
  – Some basics are required (e.g. Units)

» Provide guidance on best-practices, and what is "doable" with respect to our goal of harmonized/aligned OWL, UML, EXPRESS, XML Schema, SOA, ROA, etc.

» Support overall objectives in communique