USDL vs. TEXO Service Ontology

In essence the same exercise
• Pricing and Legal modules are mostly identical

Major differences
• Representation:
  • OWL instead of Ecore -> eligible for linked data

• Content:
  • Ontological Analysis
  • Schema for master data and transactional data
  • Aims at covering the whole service lifecycle

• Effort and scope
  • USDL is pragmatic and so far not positioned academically
  • TEXO Service Ontology has been published extensively
Service Ontology Overview

- Overall Approach [1][2]
- Upper Level Module
  - DOLCE foundational ontology
- Core Service Description Module
  - Ontological Foundations of Service Science [3]
  - In cooperation with N. Guarino, ISTC, LOA, Italy
- Idea Module [4]
  - www.ideaontology.org
- Pricing Module [5]
- Legal Module [6]
- Rating Module
- Classification Module
- Documentation Module

References

Service Information

Innovation
- Idea
- Factsheet

Offering
- (+ Code)
- Descriptions
- WS
description
- USDL
- Service Models
- General terms,
conditions,
licenses
- Service Level
Agreements
- Videos,
Logos
- Documentation
- Pricing Models
- Service Archive
- ...

Match-making
- Service Description
  (+ Code)
- Context information
  (e.g., service consumer)
- Provider endpoint
- (WS) Agreements

Usage
- Monitoring data
- Concrete QoS data
- Concrete Price

Usage information
- Invoice

Feed-back
- Ratings
- Customer reports
- Provider reports
- Opinions, ratings

proactive innovation
- blogs, forums
- Input from feedback
Scope of USDL
Scope of Service Ontology

Idea Module
• with Fraunhofer IAO
• with TU Munich
• published and open
• reuses microformats (FOAF, etc.)

Rating Module
• with Siemens
• built for flexibility
• builds on existing ontologies (FOAF, etc.)

Innovation

Offering

Match-making

Usage

Pricing Module
• identical to USDL model
• in addition: price fences by ontological rules

Legal Module
• identical to USDL model
• in addition: integration with Core Service Description

Classifications Module
• UNSPSC
• eClass
• SAP

Core Service Description Module
• Ontological Foundations of Service Science
• Link between all the modules
Motivation for having two approaches

**Ontology world**
- Higher expressiveness
- Formal underpinning
- Principles of ontology engineering
- Capture intended meanings of terms
- Addition of rules
- Consideration of instances
- Linked Open Data
- Additional use cases
  - Context-aware service descriptions
  - Identification of legal consequences
  - ...

**Software engineering world**
- Acquaintance of software engineer
- Established tooling + development methodologies (Eclipse)
- Existing transformations
- Ideal for software engineering
- Lower TCO
- Facilitates exploitation
Thank You!

Contact information:

Dr. Daniel Oberle
SAP Research Karlsruhe
Vincenz-Priessnitz-Str. 1, 76131 Karlsruhe
d.oberle@sap.com