

W3C XG USDL Introduction



SYSTEMATIC THOUGHT LEADERSHIP FOR INNOVATIVE BUSINESS

Dr. Kay Kadner, SAP AG

2011-11-19

Dr. Kay Kadner

Senior Researcher | Project lead of W3C USDL XG | SAP Research Center Dresden

SAP AG | SAP Research | Chemnitzer Str. 48 | 01187 Dresden | Germany

T +49 351 4811-6127 | F +49 6227 78-44576 | M +49 172 4639220 | <mailto:kay.kadner@sap.com>

www.sap.com/research

SAP RESEARCH

THE BEST-RUN BUSINESSES RUN SAP™



- Introduction round
- What is USDL?
- What is the XG's plan with USDL?
 - Survey from Martin
 - Communication guideline
- How and where do you want to be involved?



Initiating Members

- Attensity
 - Matthias Dabisch
- DFKI
 - Massimo Romanelli
- SAP
 - Kay Kadner
 - Daniel Oberle
 - Barbara Flügge
- Siemens
 - Holger Last

What is USDL?



What is the purpose of USDL?

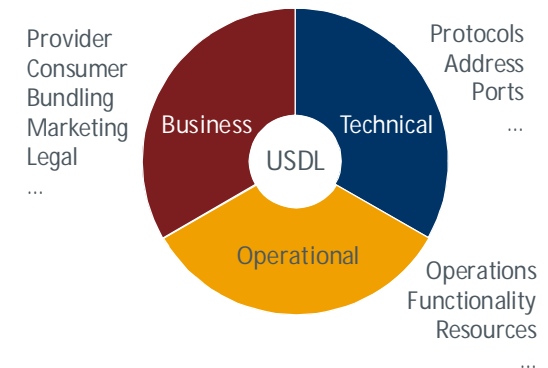
- Make services accessible, tradable, and consumable like applications in Apple's Appstore
- Formally model relevant characteristics of services to allow for IoT-enabled infrastructures

How is this achieved?

- Unify the business (legal, marketing, etc.), operational (functional, behaviour, etc.) and the technical (interfaces, WS*-protocols) perspectives of services in one description
- USDL complements current service technologies and semantics
- Extensible according to industry-specific requirements

Why are current standards not enough?

- Description languages do not contain business and marketing related information (e.g, WSDL, SML, SoaML, SOA Reference model)
- They only refer to electronic services, not services in general (e.g., OWL-S, WSMO)
- Comparison of services only by "what?", not by "how?" and "when?" and "how long?"

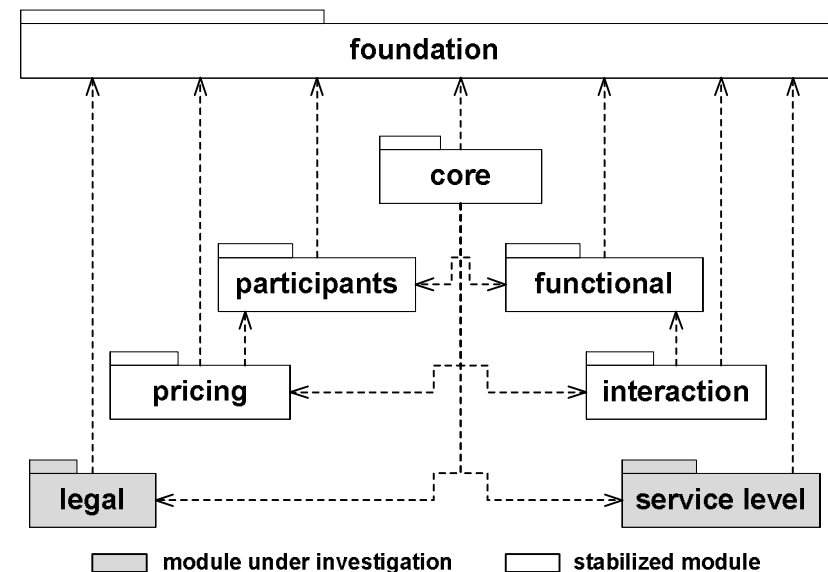


Current specification of USDL



Divided into modules

- **Core** (concepts that are core to all others like *Service* and *Service Bundle*)
- **Foundation** (concepts independent to services but crucial for all others, like *Organization*, *Person*, *Resource*, *Time*, *Location*, etc.)
- **Participants** (contains roles like *Provider*)
- **Functional** (technical interface)
- **Interaction** (business protocols, behavior)
- **Pricing** (price models, price plans, discounts)
- **Legal** (legal issues with this service)
- **Service level** (service quality, reliability, etc.)



Additional modules under consideration
(*marketing*, *performance*)

Editor available in beta version

<http://www.internet-of-services.com>

Project work plan overview



Work packages

- WP1: Related work analysis
- WP2: Specification of USDL
- WP3: Proof-of-concept phase
- WP4: Administration

Milestones

Milestone 1 (end of 12/2010)

- Related work finished (T1.1 – T1.4)
- Requirements finished (T2.1)

Milestone 2 (end of 02/2011)

- Requirements on the standardization format elaborated (T2.2)
- Begin of USDL rework (T2.3), TEXO work on USDL will be finished in USDL M5 Spec

Milestone 3 (end of 05/2011)

- Major rework of USDL done
- Reference cases identified, implementation begins

Milestone 4 (end of XG, 09/2011)

- Final report and decision how to proceed

WP	Task	Task Title	Begin	End	Lead	Contributor	2010												2011																																													
							October			November			December			January			February			March			April			May			June			July			August			September			October																					
							1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12																						
WP1	T1.1	Relation to Semantic Web Services and Linked Open Data	1	3	SAP	OU	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43					
	T1.2	Relation to OASIS standards	1	3																																																												
	T1.3	Relation to W3C standards	1	3																																																												
	T1.4	Relation to other Service Description Languages	1	3																																																												
WP2	T2.1	Requirements on the specification from our side	1	3																																																												
	T2.2	Requirements on the specification from W3C side	4	5																																																												
	T2.3	Rework USDL and consider existing standards where applicable (WEBify)	6	12																																																												
	T2.4	Review of USDL rework	6	12	Attensity																																																											
WP3	T3.1	Specification of reference test cases	1	3	Siemens																																																											
	T3.2	Evaluation of reference test cases with current USDL (TEXO Version)	4	8	Siemens																																																											
	T3.3	Evaluation of reference test cases with new USDL (W3C Version)	9	12	Siemens																																																											
WP4	T4.1	Project management	1	12	SAP																																																											
	T4.2	Communication	1	12	SAP	DFKI, Siemens																																																										

Empirical Evaluation: Requirements to a service description language (Martin Matzner)



- To elaborate requirements to a service description language ***in general***.
- To reach a consensus among respondents on estimations.
- To establish a well-accepted criteria catalogue that founds the basis for evaluating the USDL specification and for exploring fields for further development.

Martin Matzner, MScIS

Westfälische Wilhelms-Universität Münster

European Research Center for Information Systems

Leonardo-Campus 3 ▪ 48149 Münster ▪ Germany

Phone: +49 (0) 251 83 - 38088 ▪ Fax: +49 (0) 251 83 - 28088

<http://www.wi.uni-muenster.de/is/> ▪ <http://www.ercis.org/>



Delphi study: A multi-level survey



Questionnaire 1: now

- Structured questionnaire on high-level req.
- <10 min.

Analysis by SAP Research: early 12/2010

- Aggregation of the respondents estimations
- Feedback on estimations of all respondents is made available

Questionnaire 2: 12/2010

- Answer against the backdrop of first-round results.
- Goal: reaching a consensus among respondents on estimations and/or identification of divergences
- <10 min.

Delphi study for exploring requirements to a service description language

F-1

Questionnaire: Requirements to a service description language

General remarks

- Please answer all questions of the questionnaire.
- There is a six point scale provided for answering many of the questions. Please indicate your degree of consent from "completely disagree" to "completely agree". Respectively, you might indicate that you can't state an opinion.
- For sending back the questionnaire, please press the corresponding button on the last page of this questionnaire.

Section 1: Existing experience

Which service descriptions are so far in use (e.g., product catalogues, process models)? Which methods do you apply?

Which information systems process service-related information?

To which extent have you yet modeled in USDL (e.g., number of services and considered variants)? Which are the services you modeled?

W3C dissemination guidelines:

*The Team is responsible for managing communication within W3C and with the general public (e.g., news services, press releases, managing the Web site and access privileges, and managing calendars). Members **SHOULD solicit review by the Team prior to issuing press releases about their work within W3C.***

- External communication should to be approved by the TEAM
 - Matthias Dabisch, Massimo Romanelli, Kay Kadner, Holger Last

- May we send you the survey?

Thanks for your participation!