

# Evaluating WSMO-Lite

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Service-oriented computing is heavily driven by standardization. In 2007, the W3C produced its Recommendation called Semantic Annotations for WSDL and XML Schema (SAWSDL), which only provides hooks on which semantic annotations can be attached to WSDL, the cornerstone of the so-called WS-\* family of technologies. However, SWS research and standardization has so far largely ignored the so-called RESTful Web services, a recently popularized approach to Web services through Web-native protocols and formats.

In our work, we developed WSMO-Lite, a lightweight ontology for service semantics that fits directly into SAWSDL, and we also adapted SAWSDL (and by extension WSMO-Lite) to RESTful services. Because there is no accepted equivalent of WSDL for RESTful services, we propose hRESTS, a microformat (a way of annotating mainly human-oriented Web pages so that key information is machine-readable) for structuring common HTML documentation of RESTful APIs to make it machine-processable, and MicroWSMO, an extension of hRESTS that adds SAWSDL annotation properties. Basically, hRESTS is an analogue of WSDL intended for describing RESTful services, and MicroWSMO is an analogue of SAWSDL for adding semantic annotations.

With WSMO-Lite, semantic automation algorithms can support both WS-\* and RESTful Web services. Seamless integration of the two kinds of Web services will gain importance, especially as the popularity of RESTful services increases in enterprise environments that have traditionally favored WS-\* technologies.

In the spirit of SAWSDL, WSMO-Lite is very lightweight: a) it defines a very small vocabulary for service semantics, b) the basic vocabulary is defined in RDFS with very limited reasoning requirements, but it can easily accommodate more expressive languages, especially including languages for logical expressions and rules; c) WSMO-Lite builds on WSDL, which is already well-known to Web services practitioners, and d) the two microformats that bring WSMO-Lite to RESTful services are also tightly scoped to fit already existing service documentation.

All the three pieces of our work (WSMO-Lite, hRESTS, MicroWSMO) are intended as inputs to standardization of lightweight (semantic) Web service description languages. WSMO-Lite itself is not intended as a comprehensive SWS framework that contains all the automation solutions. Instead, WSMO-Lite should be seen as a common ground on which various SWS automation approaches can be built and compared, with the goal of facilitating their convergence and possible further standardization. The convergence process was started by Sheth et al. in their WSDL-S work which led to SAWSDL.

In this presentation, we focus on the evaluation of such research work.