

ISSUE:

CDL is required to enable the specification of QoS properties as well as enable changes to bindings at run time to allow dynamic participation.

ANALYSIS:

WSDL 2.0 Features and Properties (F&P) were examined as a mechanism for addressing QoS and bindings specification. The Features and Properties architecture was originated during the SOAP 1.2 work within the W3C, and was expanded and abstracted by the WSDL 2.0 working group.

In January 2004, the WS-Choreography WG submitted a letter the WSDL 2.0 working group in support of F&P as:

- F&P provides an adequate foundation for defining concrete binding information for each participating web service.
- F&P is related to a single wsdl definition, and thus could meet our requirements, outlined above.

We apparently have widespread agreement in the WG for F&P as incorporated into the WSDL 2.0 specification.

Also in January 2004, a proposal was made to introduce Compositors to the WSDL 2.0 specification. Compositors essentially enhance F&P to address their composability in a WSDL through:

- Combining F&P to express capabilities
- Enabling a feature to be composed of multiple sub-features and properties.

Combined with the Compositors proposal to the WSDL 2.0 WG, F&P appears to meet all the requirements for describing QoS and bindings as far as CDL is concerned. There are some issue that should be addressed in the F&P and Compositors proposals [1] to ensure adaptability within the WSDL 2.0 specification.

An issue arises where WSDL 1.1 support is concerned. The above-described F&P mechanism was introduced in WSDL 2.0; WSDL 1.1's capacity for specifying bindings are far more limited – these are only fully addressed at the SOAP level – while its capacity for specifying QoS is non-existent – these can only be addressed at the SOAP level. However, this could be managed by deferring QoS and bindings specifications where WSDL 1.1 is concerned entirely to the WSDL 1.1/SOAP 1.1 level.

PROPOSAL:

WSDL 2.0: CDL should defer to WSDL 2.0's F&P and Compositors proposals for specifying QoS and bindings for interactions.

WSDL 1.1: When WSDL 1.1 is used, most of the applicable QoS are not applicable, and specifying bindings is more limited. CDL should defer to the subset specified in WSDL 1.1 for specifying QoS and bindings for interactions.

[1] Web Services Capabilities, Requirements and Preference Profiles (WS-CPR Profiles):
<http://www.w3.org/2004/08/ws-cc/crpp-20040903>