

Proposal for defining TRP bindings in WSDL

Submitted by: *Matthew MacKenzie* matt@xmlglobal.com

Introduction

Web Services Description Language (WSDL) defines a way of binding messages to a transport protocol in the form of a “binding” element. These bindings allow the WSDL author to define how and what information (typically information specified in the “types” section of the WSDL) maps into the transport protocol at hand. This proposal aims to provide a “best practice” recommendation on how to describe a web service, which is exposed using ebXML TRP.

This proposal, as you might notice, is not complete. Its purpose is to stimulate conversation on this topic, and possibly lead into specification of an abstract web service description in WSDL that can be used by the ebXML / Web Services community.

How to Write a WSDL Definition to Support TRP Binding

The key to defining a TRP bound web service in WSDL is defining the appropriate message elements, so that the binding section of the WSDL can map all of the types that are required to form a conversation. Since TRP is basically SOAP w/ Attachments (SWA), WSDL-TRP binding is implemented by properly mapping the various pieces of a TRP message into a MIME binding. To see a non-ebXML specific example of this, visit <http://www.w3.org/TR/wSDL#Toc492291085> .

The first thing that needs to be done is to import a W3C schema which defines the ebXML TRP elements defined in the MS spec in section 8.2.3, such as the MessageHeader and Manifest elements. These elements could also be defined inline under the WSDL “types” element. These are needed so that they may be assigned by name later on in the TRP binding.

Next, the message elements for the request and response. This is done by defining part elements that map to the message header’s content (eb:MessageHeader), the messages body (eb:Manifest) and a part for each attachment, each of which have been defined as types in the WSDL.

Writing the Binding Section of the WSDL

With the vital pieces of the WSDL file in place, as discussed in the previous section, the binding element can be composed. I envision that it will look something like this:

```
<binding name="trp" type="this:trpPortType">
  <operation name="DoSomething">
    <input>
      <soap:body parts="trp:Manifest" />
      <soap:header parts="trp:MessageHeader" />
    </input>
    <soap:operation soapAction="http://foo.com/ebxml/msh" />
    <output>
      <mime:multipartRelated>
        <mime:part>
          <soap:body parts="messageHeader" use="literal" />
        </mime:part>
        <mime:part>
          <soap:header parts="manifest" use="literal" />
        </mime:part>
        <mime:part>
          <mime:content part="payloadOne" type="text/xml" />
        </mime:part>
      </mime:multipartRelated>
    </output>
  </operation>
</binding>
```

(a complete WSDL example will be made available later on.)

The example above may not be correct, particularly with regard to the input element's circumvention of the "message" concept, mapping XML types directly to parts of the SOAP envelope.

Conclusion

I would like to invite any other individuals who are interested in taking this further to help evolve this document into something that is more concrete. Feel free to contact me directly if you have any questions, corrections or complaints.