

# Notes on WSDL

## 1. About WSDL

WSDL stands for Web Services Description Language. The current version of the specification is v1.1.

WSDL is an XML Schema document that describes the interface of a service.

## 2. WSDL and BTP

In order to use the Business Transaction Protocol over Web Services, a SOAP binding is being specified. However, this may not be enough if interoperability between distinct implementations of Participants, Coordinators, Services, and Initiators/Terminators is to be achieved (or, made easy).

The SOAP binding will specify the format of the requests and replies between two BTP Actors. It is my suggestion that WSDL documents will provide the necessary guarantees that the format of the transmitted SOAP messages is valid. This is the main reason I propose that WSDL documents for each Actor operation is included in the specification.

Although of not particular concern to this Technical Committee, I believe that the existence of WSDL documents will also make the development of applications that use BTs easier. There is a plethora of tools out there that can automatically generate code from WSDL documents. For example, developers will be able to create applications that interact with a Coordinator over SOAP with minimal effort.

An example of a WSDL document for the *enroll* operation on the Coordinator is given bellow. Please note that due to time limitations I did not use Jame's XML namespaces.

(I am not an expert in WSDL so there may be mistakes in the example.)

```
<?xml version="1.0" ?>
<definitions name="TransactionService" targetNamespace="http://tempuri.org"
xmlns="http://schemas.xmlsoap.org/wsdl/" xmlns:btp="http://oasia.org/btp"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
  <types xmlns:xsd="http://www.w3.org/2000/10/XMLSchema">
    <xsd:schema attributeFormDefault="qualified" elementFormDefault="qualified"
targetNamespace="http://tempuri.org">
      <xsd:element name="enroll">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="AtomID" type="btp:AtomIdentifier"/>
            <xsd:element name="ParticipantID" nullable="true" type="btp:ParticipantIdentifier"/>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <xsd:element name="enrollResponse">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="return" nullable="true" type="btp:EnrollResult"/>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
    </xsd:schema>
  </types>
  <message name="enrollInput">
    <part element="btp:enroll" name="parameters"/>
  </message>
  <message name="enrollOutput">
    <part element="btp:enrollResponse" name="parameters"/>
  </message>
  <portType name="TransactionService">
    <operation name="enroll">
```

```
        <input message="btp:enrollInput"/>
        <output message="btp:enrollOutput"/>
    </operation>
</portType>
<binding name="TransactionServiceBinding" type="btp:TransactionServicePortType">
    <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="enroll">
        <soap:operation soapAction="http://tempuri.org/enroll"/>
        <input>
            <soap:body use="literal"/>
        </input>
        <output>
            <soap:body use="literal"/>
        </output>
    </operation>
</binding>
<service name="TransactionService">
    <port binding="btp:TransactionServiceBinding" name="TransactionServicePortType">
        <soap:address location="SERVICE_URI"/>
    </port>
</service>
</definitions>
```