VO Web Services Basic Profile

(reference document VO-WS-Basic-Profile-0.21)

Reminder, previous meetings

- **WS-I :** *Web Services Interoperability organization*

  - The WS-I Deliverables **: Basic Profile, Simple SOAP binding, Attachment Profile, Basic Security Profile, …**

- **WS-I documents :** sets of non-property Web Service specifications

  - With clarifications about how to use correctly specifications

- **VO Web Services Basic Profile**

  - A guideline on how to use the existing specifications in the IVOA Web Services domain

  - VO WS Conformance to :

    - **WS-I Basic Profile**

    - **VO Support Interfaces**

    - **?**

Reminder, previous meetings (2)

■ Work to do :

- ■ Integrate IVOA specifications like Support Interfaces
- ■ Take WS-I Attachment Profile into account ?
- ■ Testing tools

■ Remarks :

- ■ **Boston Interop** : WS-I Basic Profile 1.0 final version
- ■ **Pune Interop** : WS-I Basic Profile 1.1 was released since one month but testing tools were available just for 1.0 compliance checking (in December 2004)
- ■ WS-I Basic Profile 1.1 contains no binding (WS-I Simple SOAP binding) and no attachment (WS-I Attachment Profile 1.0)
- ■ In the WS-I philosophy, partial conformance is admitted (conformance of some interfaces)

WS-I Simple SOAP Binding (1.0)

- **Serialization of envelopes and their representation in messages**

- **Was in WS-I Basic Profile 1.0**

WS-I Attachment Profile (1.0)

- **Adds support for sending interoperable attachments with SOAP messages**

- **It defines a MIME multipart structure for packaging attachments with SOAP messages**

- **This profile cannot be mandatory if people want to use other attachments like DIME, MTOM, …, but should be used in case of MIME**

Question : which attachment do you use ?

Proposal

- **A suite of profiles :**

  - **Core document : VO WS Basic Profile (Core Profile)**

    - Conformance to WS-I Basic Profile

    - Conformance to VO Support Interfaces

    - Conformance to WS-I Simple SOAP Binding ?

    - Conformance to WS-I Attachment Profile or conformance to IVOA own rules for attachments ?

  - **Extension(s)**

    - Conformance to other IVOA Recommendation ?

    - WS-I Simple SOAP Binding, WS-I Attachment Profile if not in the core

- **A VO WS could claim his conformance :**

  - **To core document as a minimum**

  - **To extensions**

Rules (1)

- **We have to define a format for the rules we want to check**

    - **Rule or set of rules to check**

- **Something like the rule format used by WS-I ?**

Rules (2)

- **WS-I**

  - **Rules in the documents**

    - Rxxxx statement text

    - Examples :

      - **R0001** An Instance of a Web service **MUST** be defined by a WSDL service description

      - **R1140** A message **SHOULD** be sent using HTTP/1.1

      - **R1141** A message **MUST** be sent using either HTTP/1.1 or HTTP/1.0

  - **The rules are used to define Assertions in XML format for the Conformance checking (with tools).**

    - Example…

WS-I Assertion description format

```
…….
<!-- _____WSI1003_____ -->
<testAssertion id="WSI1003" entryType="anyMessage" type="required" enabled="true">
<context>For a candidate message in the log file, which has a non-empty entity-body</context>
<assertionDescription>The logged message is a UTF-8 transcript of a message originally encoded as UTF-8 or UTF-16.
The HTTP Content-Type header is either UTF-8 or UTF-16. Looking at the messageContent element of the logged message,
either (1) it has a BOM attribute which maps the charset value in the Content-Type header, or (2)it has it has an XML
declaration which matches the charset value in the Content-Type header, or (4) there is no BOM attribute and no
XML declaration, and the charset value is UTF-8.</assertionDescription>
<failureMessage>Either (1a) the message does not contain a Content-Type header, or (1b) the message contains a
Content-Type header but no charset value, or (1c) the charset value is neither UTF-8 nor UTF-16, or (2) there is a BOM
attribute in the messageContent element, but its value does not match the charset value, or (3) there is an XML declaration,
and the charset value does not match its value, or (4) there is no BOM attribute, no XML declaration, and the charset value
in Content-Type header is not UTF-8.</failureMessage>
<failureDetailDescription>Complete message.</failureDetailDescription>
<additionalEntryTypeList>
<messageInput>none</messageInput>
<wsdlInput>none</wsdlInput>
</additionalEntryTypeList>
<prereqList/>
<referenceList>
        <reference profileID="BP1">R1012</reference>
        <reference profileID="BP1">R1018</reference>
</referenceList>
<comments>The optional BOM attribute of the messagContent element is added by the Monitor into the log file, based on
the original value in the HTTP payload. </comments>
</testAssertion>
…..
```

Description used for final report

Rules to check

Something like that…

1.0 Conformance to non IVOA publications

R0001 an IVOA Web Service MUST be compliant to the WS-I Basic Profile 1.1

R0002 an IVOA Web Service SHOULD be compliant to the WS-I Attachment Profile 1.0 if it uses MIME

2. VO Support Interfaces Conformance

R0100 All VO services should implement the "getRegistration" interface.

R0101 The "getRegistration" interface SHALL return a valid VOResource document describing the metadata of this service.

R0102 A VOResource document…..

R0103 A VO service should implement the "RegistrationChangedOn" interface.

R0104 The "RegistrationChangedOn" interface shall return the date the metadata last changed.

R0105 A VO service SHALL implement the "getAvailability" interface.

R0106 The "getAvailability" interface SHALL return an XML document containing3. …

…

future documents about Security, Authentication, Registry ?

A first VO WS Basic Profile

- **See VO WS Basic Profile 0.21 available on the IVOA TWiki**

Question

- **"Basic Profile 1.1" describes :**
  - **Messaging** : exchange of Web Service protocol elements
  - **Description** : enumeration of the messages associated with a Web Service, with implementation details
  - Discovery : metadata which gives information about the Web Service => based on UDDI
  - Security : mechanism which provides integrity, confidentiality authentication

- **Discovery profile to create later with IVOA own Registry ?**

VO WS Test tools

- **With WS-I packages it is possible to check WS-I BP 1.1 alone or with SOAP Binding 1.0**
  - **Done for Pune for WS-I BP 1.0**
  - **Done again after WS-I testing tools release for BP 1.1 in November 2004**

- **VO recommendations**
  - **VO Support interfaces**
    - CDS XML WS will be upgraded to be compliant with VO Support Interfaces
      - Check tool available ASAP

- **Use cases (used for the test)**
  - **Maybe it would be nice that the service provider publish the use cases used to claim the conformance**

Conclusion and roadmap

- **WS-I recommendations**
  - Use the WS-I BP 1.1 in VO WS Basic Profile
  - Include later or use as extension other WS-I recommendations

- **VO WS Basic Profile**
  - Rules ok
  - Assertion format to define
  - First testing tool to provide quickly

- **People to experiment first beta release**
  - Java package with user friendly interface