WS-I Basic Profile…

…VO W_{eb} S_{ervices} Basic Profile

Reminder, Boston meeting

- **WS-I :** *Web Services Interoperability organization*
  - Open industry (IBM, Microsoft, Sun, SAP, BEA, Oracle, …) effort chartered to promote Web Services interoperability across platforms, applications, and programming languages.
  - The WS-I Deliverables **: Basic Profile, Basic Security Profile, …**

- **(WS-I) Basic Profile :** a set of non-property Web Service specifications
  - With clarifications about how to use correctly (in the same way, better for a good interoperability…) "often ambiguous" specifications.
    - **VO existing Web Services test**

- **VO W**eb **S**ervices **Basic Profile**
  - A guideline on how to use the existing specifications in the IVOA Web Services domain (conformance to (WS-I) Basic Profile and to other IVOA WGS specifications) ?

(WS-I) Basic Profile aim

- **"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**
  - **Security : mechanism which provides integrity, confidentiality authentication**

- **Only the two first points can be taken into account**
  - **IVOA Discovery not based on UDDI…**
  - **Security under discussion**

Example of conformance rules

- **Format**
  - **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

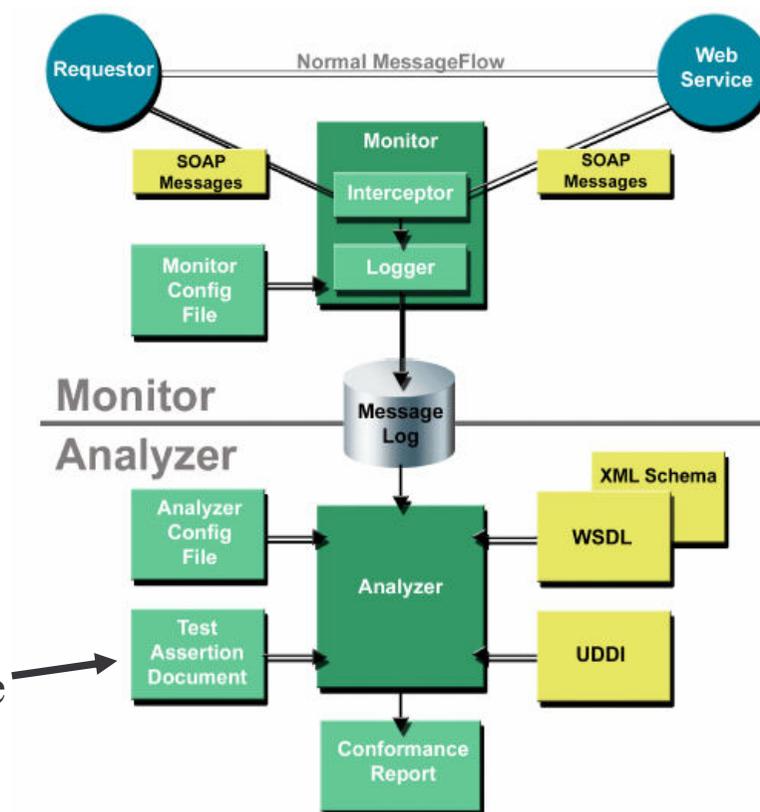 **R1141** A message **MUST** be sent using either HTTP/1.1 or HTTP/1.0

  ...

  Cf. VO WS Basic Profile 0.1 document for explanation about MUST, SHOULD, …

Conformance check : how to proceed ?

- **Manually…**

- **… or using WS-I conformance test tool (available for Java and C#)**

Each rule checking can be set/unset

A first set of services

- **Experiment has been done for the following services :**
  - **.Net**
    - Cosmic distances
    - NEDServices
    - SDSSCatalogues
  - **Tomcat/Axis**
    - VizieR
    - Sesame
    - UCD
  - **Perl**
    - eStar

example of conformance report file

- **Tomcat/Axis**

example of conformance report file (2)

- **.Net**

First results :

- **Very minor nonconformance**
  - **Tomcat/Axis :** one nonconformance found
    - **Axis 1.2** will resolve this
  - **.Net :** conformance ok
  - **Perl :** one nonconformance found but SOAP::Lite provides (may evolved) partial wsdl support
    - **SOAP::Lite** will evolve but no guarantee about the will to take the conformance checking into account

- But problems in case of interface using attachment : Attachments Profile to explore

Why so less conformance problems ?

- **Many rules are given for the "SOAP engine" developers**
  - **WSDL is generated automatically for a Web Service**
    - Recommendations about WSDL : Microsoft, Apache, … **duty**
  - **If i implement Web Services, a major part of the conformance to the Profile is implied by the server configuration (http server, soap engine, …)**

- **Nonconformity could be higher if :**
  - **I write a part (just what I need) of a SOAP engine myself**
  - **I use uncompleted implementations**
  - **…**

A step further with VO WS Basic Profile

■ **WS-I Basic Profile is just one part of it**

■ **VO WS Basic Profile :**

- ■ **Recommendations to follow when implementing Web Services**

- ■ **Not at the same level than the VO Support interfaces**

    - ■ Recommendations about the VO Support interfaces can be put in the profile

    - ■ Recommendations about data format (what kind of result (String, Object, …) ?

    - ■ …

- ■ **Useful on each side**

    - ■ Data/Service provider side : check list

    - ■ Consumer side : the service he tries to use is not completely "exotic"

Something like that…

1. WS-I Basic Profile

… IVOA Support interfaces short description… (and justification)

VOR 0001 A VO WS MUST be compliant to WS-I Basic Profile

2. VO Support interfaces

… VO Support interfaces short description… (and justification)

VOR 0051 A VO WS SHOULD implement a getRegistration interface

VOR 0052 A VO WS MUST implement getAvailability interface

…

3. …

future documents about Security, Authentication, Registry, …

… and checked with tools

- **Providing tools to check the conformance**
  - **Java and C# packages like WS-I Basic Profile ?**
  - **Perhaps better to have an online checking tool : reduce maintenance, less work for the data/service provider, …**
    - Like a language compiler : list of errors or warnings, correction, retry, …

Possible roadmap

- ## VO WS Basic Profile 0.2

  - **Conformance to WS-I Basic Profile**

  - **Conformance to VO Support interfaces**

  - **Check Attachments Profile**

- ## Testing tool

  - **Just one tool**

  - **Useful if online**

Conclusion

■ **Define a VO WS Basic Profile is probably a good thing for the future of the VO Web Services**

    ■ **WS-I Basic Profile as a very basic compliance need**

    ■ **Others like VO Support interfaces to be added**

    ■ **Tool(s) to be provided**

■ **Creating Basic Profiles (and checking tools) could be interesting for other VO WG**

    ■ **For a data/service provider : easier to follow one document than to be lost in many…**

    ■ **A complementary work for WG people but a lot of saved time for many others…**

    ■ **A useful exercise**