

**IVOA Interop Meeting**  
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**A few words about the WS-I Basic Profile**

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# WS-I

## ■ Web Services Interoperability organization

- The Web Services Interoperability Organization is an open industry effort chartered to promote Web Services interoperability across platforms, applications, and programming languages.
- A large panel of the major companies : IBM, Microsoft, Sun, SAP, BEA, Oracle

## ■ The WS-I Deliverables :

- Basic Profile
- Basic Security Profile
- ...



# A Basic Profile ?

- A set of non-property Web service specifications \*
  - With clarifications
    - Using a specification is very well but using it correctly and in the same way than others is better for a good interoperability
    - Specifications are often ambiguous
    - A guideline on how to use the existing specifications in the IVOA Web services domain ?
  - An “interoperability guarantee” (between Axis, .NET, ...) for the future
  - On Axis webpage : “For Axis 1.2, we are focusing on our document/literal support to better address the WS-I Basic Profile 1.0 ...”

\*SOAP, WSDL, UDDI, XML, XML Schema, ...



# 4 parts

- **"Basic Profile 1.0" 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



# Recommendations

- In each part, the profile explains recommendations

- Rxxxx statement text

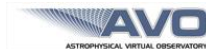
- Examples :

**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

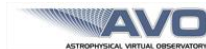
**R1141** A message **MUST** be sent using either HTTP/1.1 or HTTP/1.0

...



# Reminder : RFC2119

- **MUST** : This word, or the terms **REQUIRED** or **SHALL**, mean that the definition is an absolute requirement of the specification
- **MUST NOT** : This phrase, or the phrase "**SHALL NOT**", mean that the definition is an absolute prohibition of the specification.
- **SHOULD** : This word, or the adjective "**RECOMMENDED**", mean that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course.
- **SHOULD NOT** : This phrase, or the phrase "**NOT RECOMMENDED**" mean that there may exist valid reasons in particular circumstances when the particular behavior is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behavior described with this label.
- **MAY** : This word, or the adjective "**OPTIONAL**", mean that an item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because the vendor feels that it enhances the product while another vendor may omit the same item. An implementation which does not include a particular option **MUST** be prepared to interoperate with another implementation which does include the option, though perhaps with reduced functionality. In the same vein an implementation which does include a particular option **MUST** be prepared to interoperate with another implementation which does not include the option (except, of course, for the feature the option provides.)



# Remarks

- A part of these recommendations is given for the “SOAP engine” developers
  - WSDL is generated automatically for a Web Service
  - Recommendations about WSDL must be taken into account by Microsoft, Apache, ...
  - If i implement Web services in my data center, a major part of the conformance to the Profile is implied by the server configuration (http server, soap engine, ...)



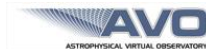
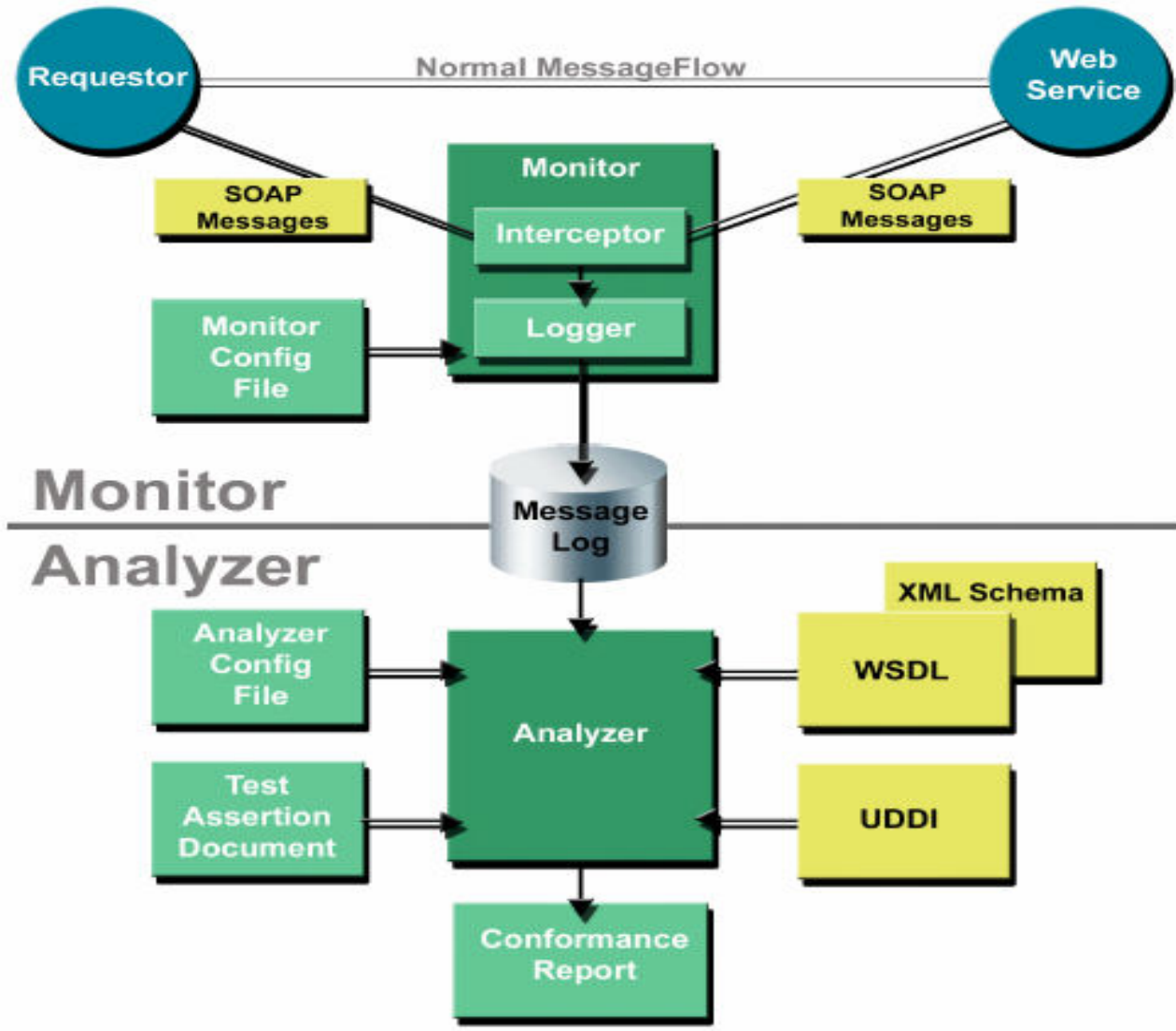
# How to check the conformance ?

- A conformance-testing tool is available
  - Monitor
  - Analyzer
  
- Experiment to be carried out
  - I will try these tools with Tomcat/Axis
  - Is somebody ready to do it with .NET ?
    - Maybe is it already done ?





# Monitor & Analyzer



# Proposal

- **It will be useful (and complementary to the WS-I Basic Profile) to define something like a VObs Basic Profile**
  - **A few recommendations to follow when implementing Web services**
  - **Not at the same level than the VObs support interfaces**
    - Recommendations about the VObs support interfaces can be put in the profile
    - Recommendations about data format (cf. discussion about VOTable result in a String or as an object)
    - ...
  - **Useful for the service provider and for the consumer**
    - A check list for the service provider
    - A “guarantee” for the consumer that the provided service is not completely “exotic”
  - **Tools could be provided for the compliance checking**



# Conclusion

- **The WS-I Basic Profile is probably a good thing for the future of the Web services**
  - **Saying that an implementation is based on soap 1.x specification is not sufficient...**
  
- **The major actors should provide interoperable implementations**
  
- **Interesting for us ?**

