Resource description: The cornerstone of federation

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Agenda

- Previous FIRE Workshop
- How to represent (categorise) the resources available
- Where does XML come in?

Previous FIRE WS

- In implementing the FIRE experimental facilities they should broadly support:
  - ➔Testbeds for different stages of the research and development cycle
  - ➔to support testing the impact of changes to the Internet
  - ➔to cover all levels from fast network connectivity to service architectures
  - ➔to allow experimentation with advanced architectures of the Future Internet

Previous FIRE WS

- Begs the questions
  - ➔ How do you know the Testbeds for the different stages of the research and development cycle
  - ➔ How do you know which testbed covers which levels from fast network connectivity to service architectures
  - ➔ How do you know how your experimentally-driven research will play with other advanced architectures of the Future Internet

How to represent the resources available

- From high level view we know of
  - ➔OneLab2, PII, Vital++, Wisebed and there are others
- But do you know
  - ➔**Technical Information**: Such as their Access networks, Remote secure access, Testing resources:

How to represent the resources available

- Do you NEED to know about
  - ➔**Operational information**: Such as their Governance model, Access policies, Intellectual property handling, Repository of test results.

- And what about the **Administrative Information** of the Experimental Facility ?

Where does XML come in?

- Once we have decided on these categories

➔Can the Resource description be captured in XML?

➔If it can do we offer it in a SoA model?

Where does XML fit?

- XML is a general purpose specification for creating custom markup languages
- Helps structure and share information
- Such languages include:
  - ➔WSDL(W3C)
  - ➔SML(W3C)

What is WSDL?

- Web Service Description Language
- Defines services as collections of network endpoint or ports
- Usually used with
  - ➔SOAP – protocol for exchanging XML based messages over a network
  - ➔XML Schema – describes a valid document

What about SML?

- Service Modelling Languge
- Used to model
  - ➔structure
  - ➔constraints
  - ➔policies
  - ➔best practices
- Uses XML Schema/Schemtron

How do they match up?

Requirements	WSDL	SML
Technical Resource Information	Describes and locates web services	Models IT Resources & Services
Operational Information	-	Models Policies
Administrative Information	-	Models Best Practices associcated with Resources and Services
SoA Model Offering?	Already used in many SoA environments	Created for use in SoA environments (MS, IBM, BEA)