WS-MessageDelivery

(http://www.w3.org/Submission/2004/SUBM-ws-messagedelivery-20040426/)

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Outline

- Overview of WS-MessageDelivery
- Comparison of WS-MD and WS-A
- Summary

Overview of WS-MD

- Web Service Reference (WSRef)
- Abstract Message Delivery Properties (AMDP)
- Mapping of AMDP to WSDL 1.1/2.0 MEPs
- Composite MEPs
  - Callback pattern

Overview of WS-MD (WSRef)

- WSRef answers the questions: ‘where’, ‘what’ and ‘how’
  - Where to send messages
  - What messages/operations can be sent / received /invoked
  - How to send the messages (transport/binding)
  - Reuses the syntax defined in WSDL 2.0/1.1
  - Backports WSDL 2.0 service reference concepts to WSDL 1.1

Overview of WS-MD (AMDP)

- AMDPs
  - Enables messages to be delivered to the right ‘place’
  - Enables MEPs
  - Enables correlation of messages within an MEP
  - 7 AMDPs
    - wsmd:MessageOriginator
    - wsmd:MessageDestination
    - wsmd:ReplyDestination
    - wsmd:FaultDestination
    - wsmd:MessageID
    - wsmd:MessageReference
    - wsmd:OperationName

Overview of WS-MD (Mappings/Callback)

- Mapping of AMDPs to SOAP
- Mapping of AMDPs to WSDL MEPs
  - 4 operations/message primitives in WSDL 1.1
  - 7 MEPs in WSDL 2.0
- Callback Pattern
  - Composite MEP
  - Implements the WS-I Basic Callback Scenario (http://www.ws-i.org/SampleApplications/SupplyChainManagement/2003-12/UsageScenarios-1.01.pdf)
  - Correlates two in-out MEPs or two in MEPs

Comparison of WSMD and WSA (similarities)

- Similarities
  - Purpose
  - Both define a way to reference a Web service/endpoint
  - Both define MIH/AMDP to aid message delivery
  - 6 out 7 MIH/AMDP are isomorphic (sort of)

Comparison of WSMD and WSA (MIH and AMDP)

- MIH and AMDP
  - wsmd:MessageOriginator → wsa:From
  - wsmd:MessageDestination → wsa:To
  - wsmd:MessageID → wsa:MessageID
  - wsmd:MessageRef → wsa:RelatesTo
  - wsmd:ReplyDestination → wsa:ReplyTo
  - wsmd:FaultDestination → wsa:FaultTo
  - wsmd:OperationName → wsa:Action (sort of)

Comparison of WSMD and WSA (EPR and WSRef)

- EPR and WSRef
  - WS-Policy
  - Reference properties/parameters
    - Allows one to specify additional information that must be sent with a message
  - Reuse of existing syntactic structures (place of WSDL in the architecture)
  - wsa:Address – only item that is mandatory (need additional info before accessing a WS)
  - wsa:PortType/wsa:ServiceName -- optional

Comparison of WSMD and WSA (faults/MEPs/Callback)

- WS-A defines new WS-A specific faults
- WS-MD specifies MEP mappings
- WS-MD specifies how to implement Callbacks
  - Using two in-out MEPs
  - Using two in MEPs

Summary

- Substantially similarities in intent / usecases / requirements
- MIH and AMDPs are analogous
- Structure of EPR and WSRef have syntactic and functional differences but attempt to do similar things
- MEP mappings absent in WS-A
- Callback absent in WS-A
- Faults absent in WS-MD