Web Services Interaction Model

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What are WS Interaction Models?

- Technical Conventions that standardize interactions among Web Services over the open Internet

- They differ from regular distributed systems in a number of ways

What are WS Interaction Models? (contd.)

- They are not just an extension of Web Services

- Can have 2 different models
  - Document - Centric
  - Business Centric
Components Involved

- Components that are required to implement any interaction model are:
  - XML
  - SOAP
  - WSDL
  - UDDI

XML

- Couple of points about XML related to the interaction models
SOAP

- Couple of points about how SOAP works in interaction models

WSDL

- Couple of points about WSDL in the Web Service Interaction Models
UDDI

- UDDI and how it works with the interaction models

Components (Contd.)

1. Service advertises itself in directory service.
2. Client looks up service details in directory service.
3. Client interacts with service.
Current Implementations

- Remote Procedure Calls
  - Classic method for communication

- Messaging
  - Better than RPC because they are more loosely coupled

Proposed Implementation

- REST (Representational State Transfer)
  - The state of the resources are transferred instead of actually working on the resource across the open Internet.
Proposed Implementation cont.

- Conversation Support for Web Services
  - Conversation created using the Java Conversation Architecture
  - Uses WSDL, SOAP, etc.

Proposed Implementation cont.

- Conversation Definition Language (CDL)
  - It is an XML schema for defining valid sequences of documents exchanged between web services.
  - Will work like a firewall over the actual business logic
  - Will help in keeping the business logic transparent to the user
Proposed Implementation cont.

- Web Services User Interface (WSUI)
  - Component Model to add presentation and multistage interaction to Web Services
  - Open Standards
  - Based heavily on XML standards

Case Study

- TO DO
In Conclusion

- Still Evolving
- No standards that define what to expect
- Is closely linked to the other aspects like Web Services, Directory Services, WSDL, etc.

Conclusion (contd.)

- Security Issues
- Need real applications which really require Web Services
...?