Choreography


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What Is BPEL?

- A language to specify business processes...
  - ...between Web services...
  - ...and as Web services
- **Same** language to define executable processes and business protocols
- Executable processes
  - Well-defined operational semantics
  - Can be “enacted” in compliant environment
- Abstract processes
  - Specify constraints of message exchange
  - Protocols between partners
BPEL Usage Spectrum

Abstract Processes

- Business protocol between partners

< Semantics

- Usage constraints for operations of single port type

Executable Processes

- Complex business processes between multiple partners

- Simple processes, "rapid prototypes" of full-blown business processes
Two-Level Programming

BPEL Process

Application

Web Services

Programming in the large: Using components

Deployment: Determining components

Programming in the small: Building components

Deployment Descriptors

Activity: Partner, Role, Port Type, Operation ...

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The flow-aspects are all the same!
- At least from a runtime perspective
- Tooling might be different

Runtime engine technology evolved over the last decade such that a single engine can run all different classes of flows
- Micro $\rightarrow$ Interruptible $\rightarrow$ People-facing

Single language suffice
- Maybe organized into single shared core plus specific extensions $\rightarrow$ BPEL 1.1 on this path
Quality of Service, Semantics?
Dynamically composed processes?
- They will come – sooner or later...
  - Depends on application area 😊

Need for semantics in process creation?
- Demand for “policies” describing execution semantics, business semantics, e.g., is there
  - Domain specific policies to be defined
    - Transactions, security, pricing, billing, ontologies,...
  - Need to incorporated references to policies into choreography, not policies themselves
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