XML for Workflow

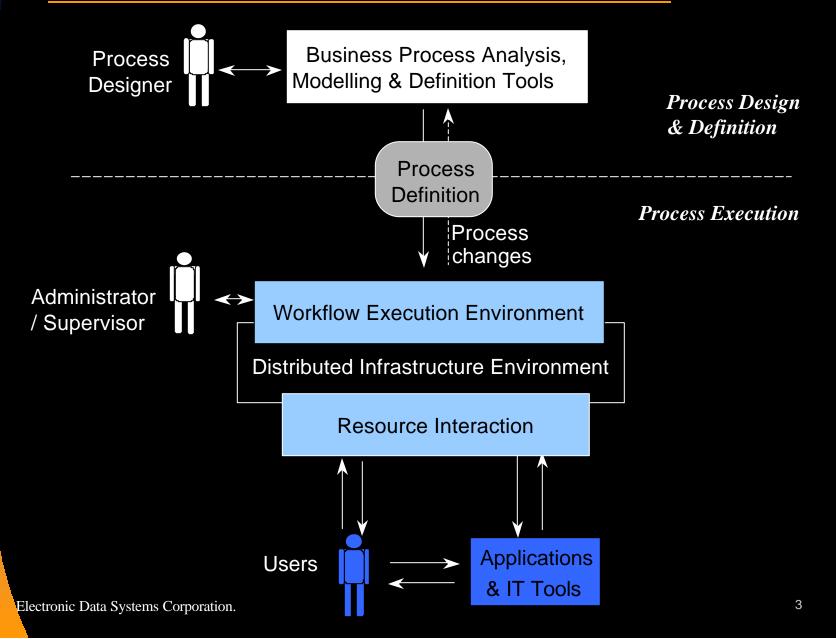
Fred Cummins, EDS October 17, 2000



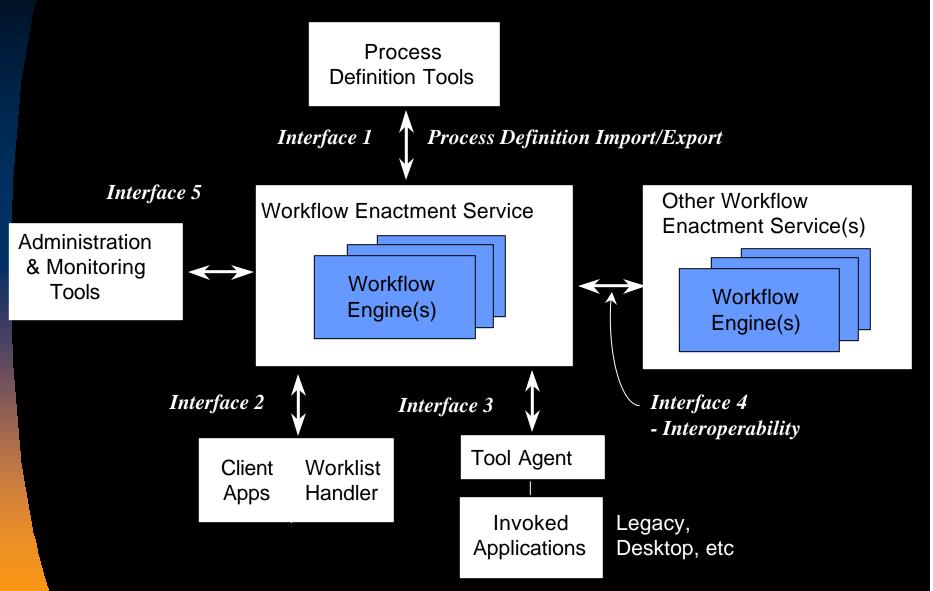
<u>Agenda</u>

- Workflow reference model
- Process Definition
- Interoperation
- Collaboration
- Meta data
- Application execution
- Process documents

Process Automation Overview



The Workflow Reference Model



XML for Process Definition

- WfMC Workflow Process Definition Language (WPDL)
- OMG UML Extensions for Workflow Process Definition (RFP)
- XMI (XML Model Interchange) from UML

XML for Interoperation

- Loose coupling
- HTTP over internet
- Heterogeneous systems
- Outsourcing and business partners

Wf-XML Specification

- Interactions between workflow requesters and service providers
 - A structured and well-formed XML message encoding
 - Synchronous or asynchronous message-handling capability
 - Independence from transport mechanism
- XML message set representing interaction requests and responses
 - Message Header: Indicates message type and target resource
 - Message Body: Operation, operation-specific parameters and error codes
- Based on existing Workflow Interoperability Standards initiatives

Example: CreateProcessInstance

```
<?xml version="1.0"?>
                                                                           Identifies process
    <WfMessage Version="1.0">
                                                                               definition
    <WfTransport/>
    <WfMessageHeader>
           <Request ResponseRequired ="Yes"/>
           <Key>http://www.complnc.com/WfSrv?id=1199827</Key>
    </WfMessageHeader>
                                                                                 Request to create
    <WfMessageBody>
                                                                                  process instance
           <CreateProcessInstance.Request StartImmediately ="true">
                      <ObserverKey>http://www.Acme.com/wfx456</ObserverKey>
                      <ContextData>
                                  <Computer>
                                             <Type>thinkpad</Type>
                                             <Series>600X</Series>
 Context data for
                                             <Option>DVD</Option>
   this process
    instance
                                                                                  Observer to be
                                 </Computer>
                                                                                notified of process
                      </ContextData>
                                                                                     updates
           </CreateProcessInstance.Request>
    </WfMessageBody>
</WfMessage>
```

XML for Collaboration

Notification/EAI messages

- Business events
- State changes
- Exceptions
- Negotiation
- Synchronization

Initiate, alter, synchronize workflow process

XML for Meta Data

- Data about data
 - File type
 - Source application
 - Date, time created
 - Context
 - Ownership
- Management of files, e.g., product design
- Incorporate in business documents
- Application inputs and outputs

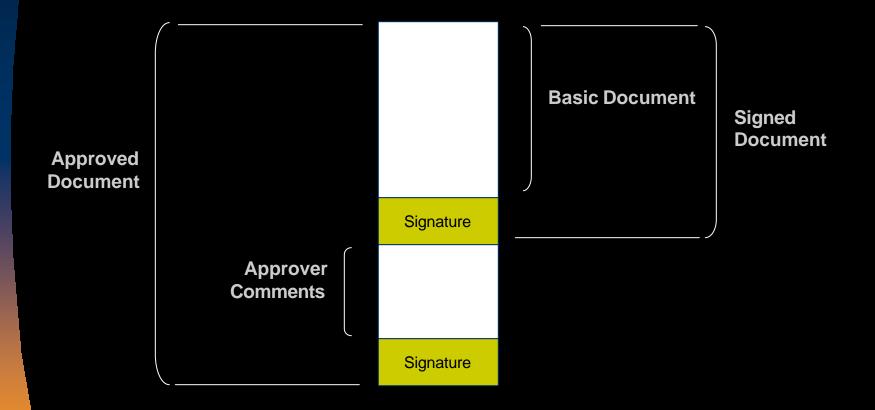
XML for Application Execution

- Execution request
 - Inputs
 - Parameters
 - Schedule considerations
 - Default templates
- Execution results
 - Outputs
 - Date, time

XML for Process Documents

- Internal business documents
- B2B & B2C agreements
- Digital signatures
- Audit and history records
- Document views and internationalization

Signed Documents



Summary: Why XML

- Flexible, extensible documents
- Technology independent form
- HTTP exchange compatibility
- Ease of browser display
- Signature support
- XSL filtering and internationalization

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