Agenda

• The Web Services Vision
• Web Service Execution Engine (WSEE) Overview
  – UFS Interface, UFS Request Revisited
  – WSEE 1.0 Request Interface
  – Example WSEE Request
  – A Dynamic SOAP Client
  – UFS Response Revisited
• End-to-End WSEE Demonstration
The Web Services Vision

• The Web Services model offers an exciting opportunity to connect disparate software applications and produce valuable new information systems.
• When application business logic and data is exposed as Web Services, developers will be empowered to overcome existing information barriers.
• The NEP Web Services effort can help produce a better informed, more powerful and connected Navy.
WSEE Overview - UFS Interface Revisited
The NEP will generate 2 primary types of User Facing Service Requests based on the bindingType of the registered service:
- HTTP Request -> HTTP-Bound UFS
- HTTP|SOAP Request -> WSDL-Bound UFS

The Web Service Execution Engine (WSEE) will be responsible for dynamically generating the HTTP|SOAP Request to the WSDL-Bound UFS.
• WSEE 1.0 Request Interface
  - bindingKey (required) – a valid bindingKey GUID from a UDDI Service Registry
  - operation (required) – the operation defined in the Web Service’s WSDL Document that you wish to execute.
  - operation message parts – the input parameters required to invoke the Web Service operation’s input message. Passed to the WSEE via standard HTTP form POST or Query String parameters.
  - uddiURL (optional) – the URL to the UDDI Registry that holds the Web Service registration. Defaults to the NEP Service Registry.
<HTML>
<HEAD>
<TITLE>Web Service Execution Engine Tester</TITLE>
</HEAD>
<BODY>
<P><BR></P>
<H3>A simple HTML Form POST to the WSEE that will dynamically bind to the Service Registry UDDI API and call the get_businessDetail operation</H3>
<form name="frmget_businessDetail" action="http://homeport.navy.mil/servlet/WSEExecute" method="post">
<div style="DISPLAY: none">
  <input value="78B2CCC9-D2C4-44A7-9602-18915E0B9811" name="bindingKey">
  <input value="get_businessDetail" name="operation">
</div>
<table>
  <tr><th>get_businessDetail Web Service Call</th></tr>
  <tr><td><input size="60" value="8AE56BB5-0916-49E0-A359-9E69A7D0C8CB" name="businessKey"></td></tr>
  <tr><td><input id="submit1" type="submit" value="Invoke" name="submit1"></td></tr>
</table>
</form>
<P><BR></P>
</BODY>
</HTML>

- Frees application developers from SOAP Client details and having to code to a specific SOAP interface
- Dynamically builds SOAP Client message based on registered WSDL Document
• The WSEE will dial up the WSDL referenced in the Service Registry and will dynamically generate the SOAP Client Message
  – Show WSDL example
• The WSEE will send the SOAP Message to the Service Access Point and receive a SOAP Response or SOAP Fault Message
• The User Facing Web Service is responsible for returning a valid SOAP Response message.
  - Show example of SOAP Response Message

• The User Facing Web Service is responsible for returning a SOAP Fault Message if an error occurs.
  - Show example of SOAP Fault Message
End-to-End WSEE Demonstration

- Show an example SOAP-based User Facing Web Service
- Show the WSDL Document for this example
- Show the Portlet registration for this example
- Show initial and subsequent invocation through WSEE