

# System Wide Information Management (SWIM)

## **Interoperability Basic Profile**



Version Number 1.0

June 8, 2009

**SIGNATURE PAGE**

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**DOCUMENT CHANGE HISTORY**

<b>Version</b>	<b>Date</b>	<b>Description of Changes</b>
1.0	06/08/2009	Initial document

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# 1 Purpose

This policy establishes the System Wide Information Management (SWIM) Interoperability Basic Profile (SIBP) for all SWIM Implementing Programs (SIPs) and SWIM compliant services within the NAS. The SIBP primarily composed from the WS-I Basic Profile 1.2 ( <http://www.ws-i.org/Profiles/BasicProfile-1.2.html> ). The SWIM Interoperability Basic Profile (SIBP) tailord the clarifications, refinements, interpretations and amplifications which promote interoperability, found in the WS-I Basic Profile including the referenced specifications within the profile. The SIBP has been made to improve the interoperability of SWIM implemented services and SWIM compliant services within the NAS environment.

## 1.1 Scope

The organizational scope of this policy covers all FAA NAS programs developing FAA SWIM compliant services within the NAS including prototypes.

The technical scope of this policy adheres to the conventions outlined in the WS-I Basic Profile 1.2 and mandates the adherence to this profile unless otherwise specified below.

# 2 Delegation of Authority

The SWIM Program Office has delegated responsibility to assess adherence and management of all SWIM Policies.

# 3 Related Documents

The following is a list of related publications:

1. WS-I Basic Profile 1.2 ( <http://www.ws-i.org/Profiles/BasicProfile-1.2.html> ).

# 4 Policy

1. SWIM compliant services shall comply with all “MUST”, “MUST NOT”, “SHALL”, and “SHALL NOT” statements within the WS-I Basic Profile 1.2.
2. SWIM compliant services shall attempt compliance with all “SHOULD”, “RECOMMEND”, “RECOMMEND NOT” and “SHOULD NOT” statements within the WS-I Basic Profile 1.2.

3. SWIM compliant services shall comply with all “MUST” and “MUST NOT” statements outlined below:

Requirement No.	Requirement Text	Justification
<b>SOAP Faults</b>		
R1004	When an ENVELOPE contains a <code>faultcode</code> element, the content of that element MUST be either one of the fault codes defined in SOAP 1.1 (supplying additional information if necessary in the <code>detail</code> element), or a Qname whose namespace is controlled by the fault's specifying authority (in that order of preference).	This requirement will promote more complete documentation and ease problem resolution.
R1031	When an ENVELOPE contains a <code>faultcode</code> element the content of that element MUST NOT use of the SOAP 1.1 "dot" notation to refine the meaning of the fault.	This will minimize problems due to backward compatibility and customization of fault codes.
<b>Use of SOAP in HTTP</b>		
R1141	A MESSAGE MUST be sent using HTTP/1.1.	HTTP1.1 utilizes Keep-Alives which lowers the overhead of opening and closing connections vs the mechanism used in HTTP 1.0
R1140		Requirement no longer required as a result of the update to requirement R1141.
R1120	An INSTANCE SHOULD NOT use the HTTP state mechanism ("Cookies").	This would minimize the need for client side support and enhance scalability on the server.
R1122	An INSTANCE using Cookies MUST conform to RFC2965.	Promotion of interoperability.
<b>Document Structure</b>		
R2026	A DESCRIPTION MUST NOT include extension elements with a <code>wsdl:required</code> attribute value of "true" on any WSDL construct ( <code>wsdl:binding</code> , <code>wsdl:portType</code> , <code>wsdl:message</code> , <code>wsdl:types</code> or <code>wsdl:import</code> ) that claims	Requiring extension elements will complicate interoperability. Some consumers or providers may not be able to support certain

Requirement No.	Requirement Text	Justification
	conformance to the Profile.	extensions.
<b>Types</b>		
R2115	A DESCRIPTION MUST NOT contain multiple global element declarations that share the same qualified name.	This will minimize conflicts in schema qualified names.
R2116	A DESCRIPTION MUST NOT contain multiple type definitions that share the same qualified name.	This will minimize conflicts in schema qualified names.
<b>SOAP Binding</b>		
R2740	A <code>wSDL:binding</code> in a DESCRIPTION MUST contain a <code>soapbind:fault</code> describing each known fault.	This requirement will promote more complete documentation and ease problem resolution
R2741	A <code>wSDL:binding</code> in a DESCRIPTION MUST contain a <code>soapbind:headerfault</code> describing each known header fault.	This requirement will promote more complete documentation and ease problem resolution
R2724	If an INSTANCE receives an envelope that is inconsistent with its WSDL description, it MUST generate a <code>soap:Fault</code> with a faultcode of "Client", unless a "MustUnderstand" or "VersionMismatch" fault is generated.	This would ensure that envelopes are consistent with their WSDL descriptions.

Table 1 – SIBP Requirements

## 5 Distribution

This order is distributed to all SIPs and all SWIM compliant program offices.