ACORD Web Services Profile

A Business Perspective

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Agenda

• Industry Standards Challenges
  • Traditional vs New Challenges
  • Relevant Industry Initiatives
• Interoperability and AWSP
  • ACORD Cross-Domain and AWSP
  • Example: Business Service Orientation
• Next Steps for AWSP 2.0
Traditional Industry Standards Challenges

- **Brokers:** Ease of Doing Business with Multiple Insurers
  - Single Entry
  - Real-Time Exchange
- **Insurers:** Business Retention
  - Product Rules and Edits
  - Simplify Broker Applications
  - Unify Multiple Distribution Channels
New Industry Standards Challenge

- Wring Out Integration Costs
  - Reduce Cost of One-Off Integrations
  - Technical Interoperability
  - Reuse Solutions Effectively
- Plug and Play Interoperability
  - The Next Level of Standardization
  - Encourage and Assure ACORD Compliance
Relevant Initiatives

• Plug and Play Consortium (Life)
  • Even with Adoption of ACORD Standards the Cost of Implementing System Interfaces Still Too High
  • Implementation of ACORD and WS-* Standards Not Readily Plug-and-Play-able

• Policy Placement (P&C)
  • Business Orientation of Services
  • Inconsistent Definition of Web Services Breaks ACORD Message Compatibility
ACORD Cross-Domain Standards: Bridging the Gap
(Between Data Standards and Effective Implementations)

• Vertical (ACORD) Standards
  • Defined Per Business Community/Domain
  • Business Content Rich

• Horizontal (Infrastructure) Standards
  • Defined Per Cross-Industry Standards Bodies
    • W3C, OASIS, UN/CEFACT, WS-I
  • Address Interoperability Across Vendor Platforms
  • Enable Implementations of Service Oriented Architecture and Web Services
ACORD XML Standards Architecture

- ACORD Messaging Library (AML)
- Property Casualty (PCS)
- Life Annuity Health (LAH)
- Reinsurance Large Commercial (RLC)
- ACORD Messaging Service (AMS)
- ACORD Web Services Profile (AWSP)
- Basic Profile
- Addressing Profile
- Security Profile
- SOAP Fault Usage
- Attachment Handling

ACORD Messaging Service (AMS)

- HTTP
- XML/Schema
- WSDL
- SOAP
- MTOM
- WS-Addressing
- WS-Security
- WS-Reliable Messaging
- SAML
- Core Components
- Naming and Design Rules
- Basic Profile
- Basic Security Profile
- Attachments Profile

W3C

OASIS

UN / CEFACT

WS-I
ACORD Cross-Domain Objectives

• AWSP Objective
  • Provide Independent Implementation Support for Service Oriented Use of ACORD Standards
  • Accelerate the Adoption of Web Services Standards in the Insurance Industry

• NDR Objective
  • Define Rules to Build Cross-Domain ACORD XML Specifications and Schemas

• Message Design Patterns Objective
  • Ensure Common Design Problems are Solved in Standardized Ways Across Domains
    • To Protect and Encourage Business Component Reuse
A Critical Foundation

• ACORD Web Services Profile (AWSP) Provides:
  • Interoperability Across Platforms, Operating Systems, and Programming Languages
  • Robust and Cost Effective Deployment of Business Payload (Vertical) Standards
    • All ACORD Business Domain Standards (PCS, LAH, RLC, AML) can be Implemented Using AWSP
    • WS standards provide the infrastructure functionality required by the current business standards
AWSP – ACORD Web Services Charter

• Leverage completed Web Service Standards and profiles
  • W3C core: SOAP, MTOM, WSDL, WS-Addressing
  • OASIS core: WS-Security, WS-ReliableMessaging
  • WSI and OASIS profiles
  • ACORD “profile”
  • Recommended way of applying WS standards to Insurance industry use cases.
AWSP Development Principles

- Reused Standards Must be Final W3C Recommendations or OASIS Standards
- Reused Profiles (WS-I) will be Approved, Final Specifications
- Reused Standards Must be Implemented and Available in Majority of Commercial Tools or Free Software at Publication
AWSP 1 - Benefits

• Moving to Service Orientation
  • WSDL - Standard way of exposing Business Services
• Single design for XML payload exchange
  • SOAP – separating infrastructure from business functions
  • Pre-fabricated WSDL operation templates
  • Consistent usage of SOAP Fault mechanism
• Single design for attachment exchange
• Messaging security
  • Off-the-shelf robust security solution
What’s new in AWSP 2

• Seamless Transport and Protection of Binary Attachments
  • Attachments are Included as Elements and Transformed into MIME Parts for Transport
• Business Service Orientation Using Specific ACORD Transactions
• Stronger Standardization of WSDL Interfaces
  • Better Interoperability of Service Implementations.
  • Better Predictability of Service Consumer Applications.
• Security Profile enhancements
  • Security features driven by use cases
  • Added support for SAML - Identity assertion in support of fine grained Access Control rules.
AWSP goals

• To provide guidance for Service Oriented implementation of ACORD standards
• Developing a “Profile” for usage of Web Services Standards will help ACORD members
  • by lowering the number of unique party-to-party solutions.
  • by providing interoperability rules and reduction of number of options for compatibility and cheaper implementation.
  • by building a roadmap for incremental adoption of Web Services Standards
AWSP key topics

• How do I define Web Service interfaces for ACORD Standards?
  • Basic SOAP and WSDL Profile
    • Business Message Exchange Patterns and their WS implementation
    • Basic transmission reliability
    • Guidance on WSDL interface design

• How do I solve end-to-end addressing problems?
  • Addressing Profile
    • Going through messaging intermediaries
    • Enabling asynchronous responses
    • Routing to fine grain services.
AWSP key topics

- How do I secure message flows and service access?
  - Security Profile
    - Signature and encryption
    - Identity communication
- How do I establish advanced Reliable and Secure sessions?
  - Reliable Secure Profile (for future versions)
AWSP key topics

- How do I report errors at service infrastructure level?
  - SOAP Fault Profile
- How do I deal with attachments?
  - Attachment Handling Profile
    - In-band communication
    - Out-of-band communication
- How do I deal with batches?
  - Message Groups and Batches Profile
Business Orientation Example

• Participating Parties
  • Broker
  • Insurer

• Broker Business Exchange Pattern
  • Request Multiple Policy Quotes
    • Receive Multiple Quotes
  • Request Binding of Coverage
    • Receive Coverage Acceptance
    • Notify Losing Bids
  • Request Closing
    • Receive Closing Confirmation
## Policy Placement: New Business Process

### Quote
- Broker sends out 1 or more quote requests to 1 or more insurers.
- Insurer replies with 0, 1 or many quote responses.
- Quote response indicate quoted premium or risk declined.

### Bind
- Broker binds cover by notifying the winning insurer with a bind request.
- Winning insurer responds with a policy number in a bind response.
- Upon receipt of a successful bind response, broker sends quote lost notifications to losing insurers.

### Close
- Using the policy number, broker creates invoice for client.
- A closing request is sent by broker to insurer indicating the broker’s invoice or cover number.
- Insurer records the broker’s cover number for reconciliation and post premiums to broker’s account.
Transmission with Acknowledgement

Policy Placement Example: Requesting and Providing a Quote

![Diagram showing the process of requesting and providing a quote with acknowledgment and multiple results]

Insurer can Respond with Multiple Results
Policy Placement Example: New Business

New Business Process
Result Service

Quotation client
Order client
Closing client

Quotation Result Service
Order Result Service
Closing Result Service

PolicyNewBusinessQuotationProcess
Acknowledgement
PolicyNewBusinessOrderProcess
Acknowledgement
PolicyNewBusinessClosingProcess
Acknowledgement
PolicyNewBusinessQuotationProcessResult
Acknowledgement
PolicyNewBusinessOrderProcessResult
Acknowledgement
PolicyNewBusinessClosingProcessResult
Acknowledgement

New Business Process
Service

Quotation Service
Order Service
Closing Service

Quotation Result client
Order Result client
Closing Result client
Prescriptive Service Definitions

• Prevalence of Web Services Implementations
  • Wide Variations of Business Service Definitions
    • Service Granularity (Coarse vs Fine Grained)
    • Message Exchange Patterns (Async vs Synchronous)

• Standardized WSDL Files From ACORD
  • Now Defined Directly in AWSP 2.0 Specification
  • Set of WSDL Files Included (Template)
    • For Use by Application Developers to Assure Consistent Deployment of ACORD Web Services
WSDL Basics

- WSDL – Web Services Description Language
  - XML-based language used to describe
    - the services and end points supported by an application service provider;
    - the way other businesses can electronically access those services through exchanging messages.
  - WSDL describes:
    - Message schema types (the data standards)
    - Services, Ports and Operations (the transactions)
    - Service end points and addresses (the destinations)
    - Protocol bindings: details of protocols used (the how to access)
  - WSDL is standard and consumable by systems.
ACORD WSDL component files

- Domain schema
- AWSP schemas
- Domain Messages
- AWSP Messages
- Port Type 1
- Port Type 2
- Port Type 3
- Domain Messages
- Port Types
- Standard WSDL
- Messages
- Standard WSDL
- Port Types
- Standard WSDL
- Service
- Template WSDL
- Application Platform 1

AML schema
- AML Messages
- Endorsement port
- Renewal port
- New Business port
- AML Policy Placement
- Service implementation 1
- Application Platform 1

AWSP schemas
- Messages
- Standard WSDL
- Port Types
- Standard WSDL
- Service
- Template WSDL
ACORD Standard WSDL

Broker New Business WSDL (One-Way Acknowledged)

```xml
<portType name="PolicyNewBusinessProcessResult">
  <operation name="PolicyNewBusinessQuotation">
    <input message="PolicyNewBusinessQuotationProcessResult"/>
    <output message="Acknowledgement"/>
  </operation>
  <operation name="PolicyNewBusinessOrder">
    <input message="PolicyNewBusinessOrderProcessResult"/>
    <output message="Acknowledgement"/>
  </operation>
  <operation name="PolicyNewBusinessClosing">
    <input message="PolicyNewBusinessClosingProcessResult"/>
    <output message="Acknowledgement"/>
  </operation>
</portType>
```
Moving Forward

• AWSP 2 is designed to become the master for specific implementation guides.
• AWSP 2 is ready for implementation validation: use it for pilot projects.
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