



# The Implications of SCAP Content



Andrew Bove

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# Commentary

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- As Built

# Objective

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- Understand the issues, shortcomings, and desires\* as they relate to [SCAP] content.
- Initiate a consensus process for prioritization.
- Simple enough, don't you think?

# Abstract

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*As the adoption of the standards have grown, an ecosystem that relies on content has evolved. In order for this ecosystem to flourish we must find ways of dealing with the implications of our reliance on content. This session will focus on understanding what these implications are and which issues require immediate action.*

*Some topics to be covered are **content management**, **content dependency**, **content versioning**, **content reuse**, **content validation**, **content understanding**, **content authority/trust**, **content distribution**, and **content adaptation**.*

## Provocations/Reminders

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- "We get attached to our assumptions about how things should get done, and lose sight of what we're trying to create." -[Joseph Jaworski]
- "Whether an order is formed or not depends on whether or not information is created ... the essence of creating order is in the creation of information." – [Ikujiro Nonaka]

# Content – Many Points of View

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- Influenced by our context
  - Developers that deliver codes as projects
  - Developers that deliver code as Products
  - Developers that deliver static web pages
  - Developers that enable the delivery of dynamic web pages
  - Documenters that deliver publications
  - etc...

## Maybe Not...

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- ISO 8879 enabled Heteroglossia circa 1986
  - RosettaNet, CommerceOne, ebXML
  - ISO 11179-5
- Homoglossia Expected



# SCAP CONTENT VALIDATION

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- Work In Progress



# Mission

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- Explore methods that will ensure that published content will be processed “correctly” by all SCAP validated tools.
- Explore methods that will ensure that consumers and producers of content are in a trust relationship such that the parties are who they say they are and that content is not compromised in any manner during a transaction.

# Conventional Approach

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- Validate an XML instance document using a grammar-based language (e.g. DTD, Relax NG, XML Schema)
- Validate using a rule-based language (i.e. Schematron)
- So, What's the problem(s)?

# Well...

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- Inter and Intra File / Document Relationships
- Style Impacts Understanding
- Derived versus Declared Meaning / Intention
- Normative versus Informative

# The “Context” of Content

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- ❑ Content Relationships – Double Edged Sword
  - ❑ Inter and Intra File / Document Relationships
    - ❑ Documents and Files need to move in Lock Step
      - ❑ Versioning at Fragment Level is not possible
    - ❑ Information sharing problematic
      - ❑ Re-use and Distributed Repositories
      - ❑ Clone Rules → Maintenance Chaos
    - ❑ The most ‘insignificant’ change causes the reset to square-one
      - ❑ Version=N+1 even when there is no change
- ❑ Content Is Difficult To Validate Therefore Content Interpretation is Problematic
  - ❑ Schema Validation Barely Gets You in the Game
  - ❑ Style Impacts Understanding/Interpretation
  - ❑ Inter and Intra File/Document Relationships
  - ❑ Lack of a Ontology (Model)



# IS SCAP REALLY A SPECIAL CASE?

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## 1. XBRL and The SEC

- “Companies will provide their financial statements to the Commission and on their corporate Web sites in interactive data format using (XBRL).” - April 13, 2009  
<http://www.sec.gov/rules/final/2009/33-9002.pdf>



# IS SCAP REALLY A SPECIAL CASE?

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## 2. Health Level Seven (HL7) and Health Care

- ☐ <http://www.hl7.org/Library/standards.cfm>
- ☐ The CCOW standard exists to facilitate a more robust, and near "**plug-and-play**" interoperability across disparate applications.
- ☐ CCOW Enables Context Management



# IS SCAP REALLY A SPECIAL CASE?

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3. SCAP and [Security, Information Assurance,...]
  - ☐ Ready, Fire, Aim!

“How does one transact the business of security?”

# Transacting The Business of Security

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- Can I create a standard simple open format to describe my message structures and data content rules?
- Can my partners validate their transactions in test BEFORE they send them?
- How do people know what I will send them?
- I want something that's simple and standards based – leverages existing XML components
- Can I generate HTML documentation that is readable by business analysts?



## Expectations of Transacting Business

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- Automatic information integration has been the Holy Grail of business systems since before XML was conceived.
  - Remember EDI?
- Lesson learned
  - the ability to design transactions consistently,
  - the ability to document their usage in a clear way
  - the ability to drive software that can apply rules and test information content to ensure correct compliance.

# The Issue of Context

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- “In automating information integration, knowing and defining context of use is the single most pervasive and important factor.”

## We Are Not Alone

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- “The current semantical validation performs about 400 checks. These are checks to ensure references within the BPEL, to WSDL documents or to XSD Schemas are valid and there are checks to ensure the rules defined by the BPEL specification are not violated.”

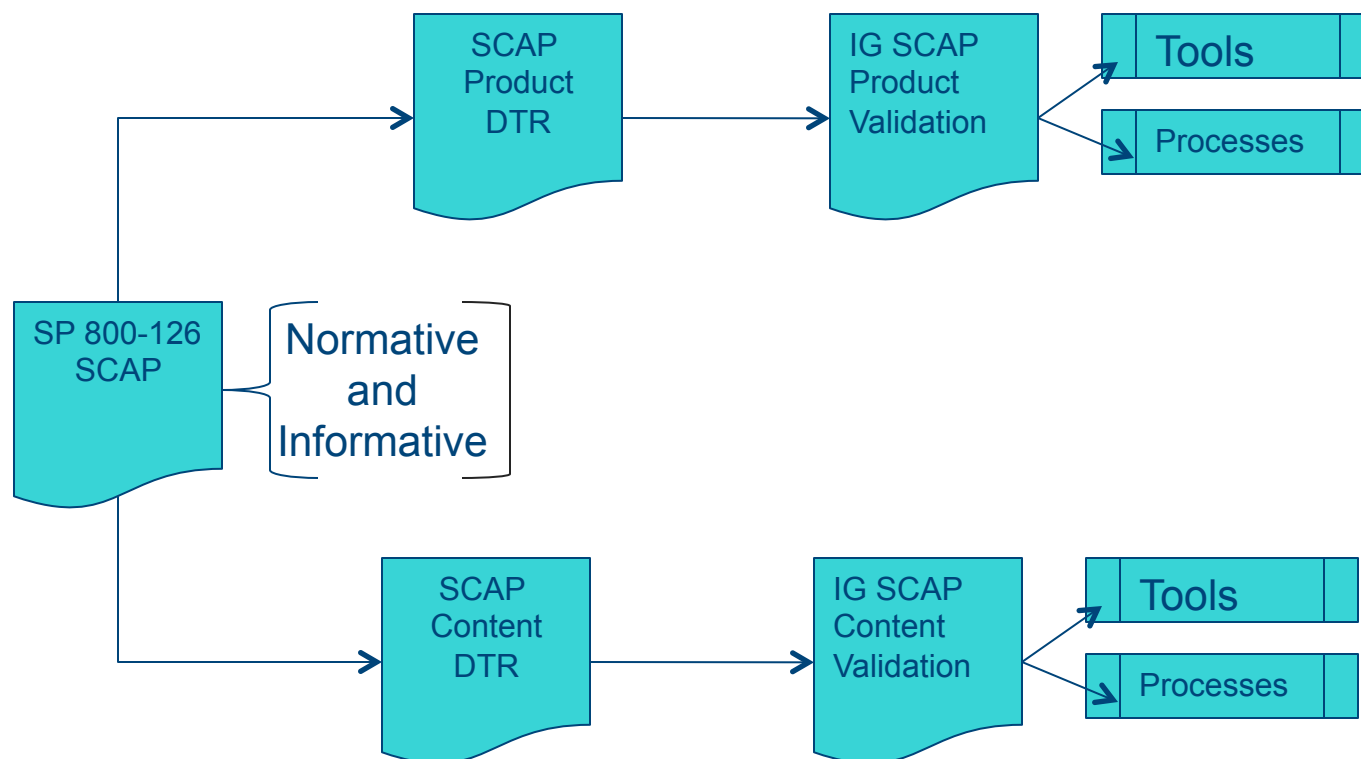
## Do We Want...

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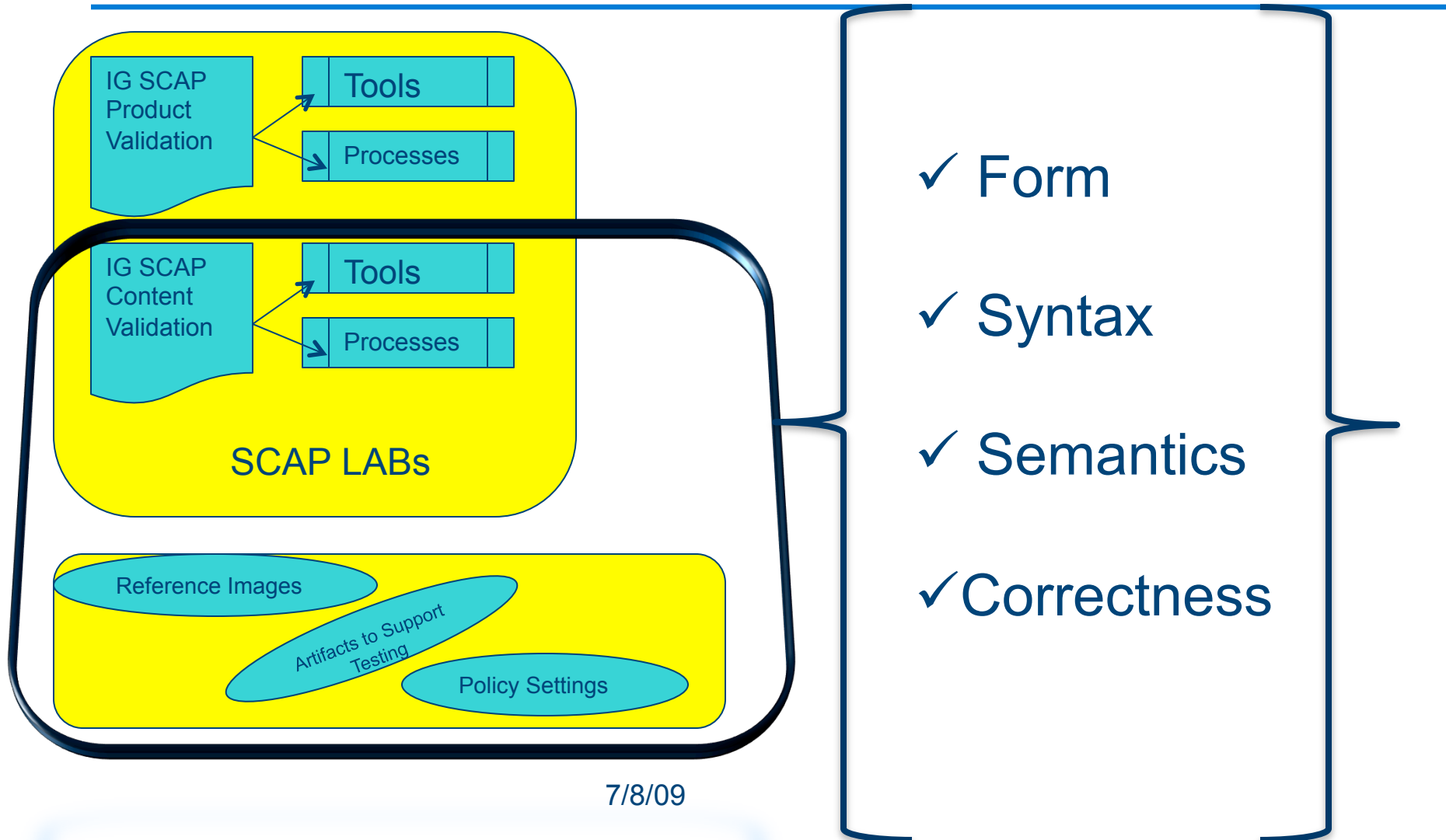
- The ability to have multiple structure instances selected by context
- The ability to include structure from sub-assembly of components
- The ability to have enhanced element semantics
- The ability to leverage semantics at attribute level consistently with elements
- The ability to version content model components

# What Are We Doing?

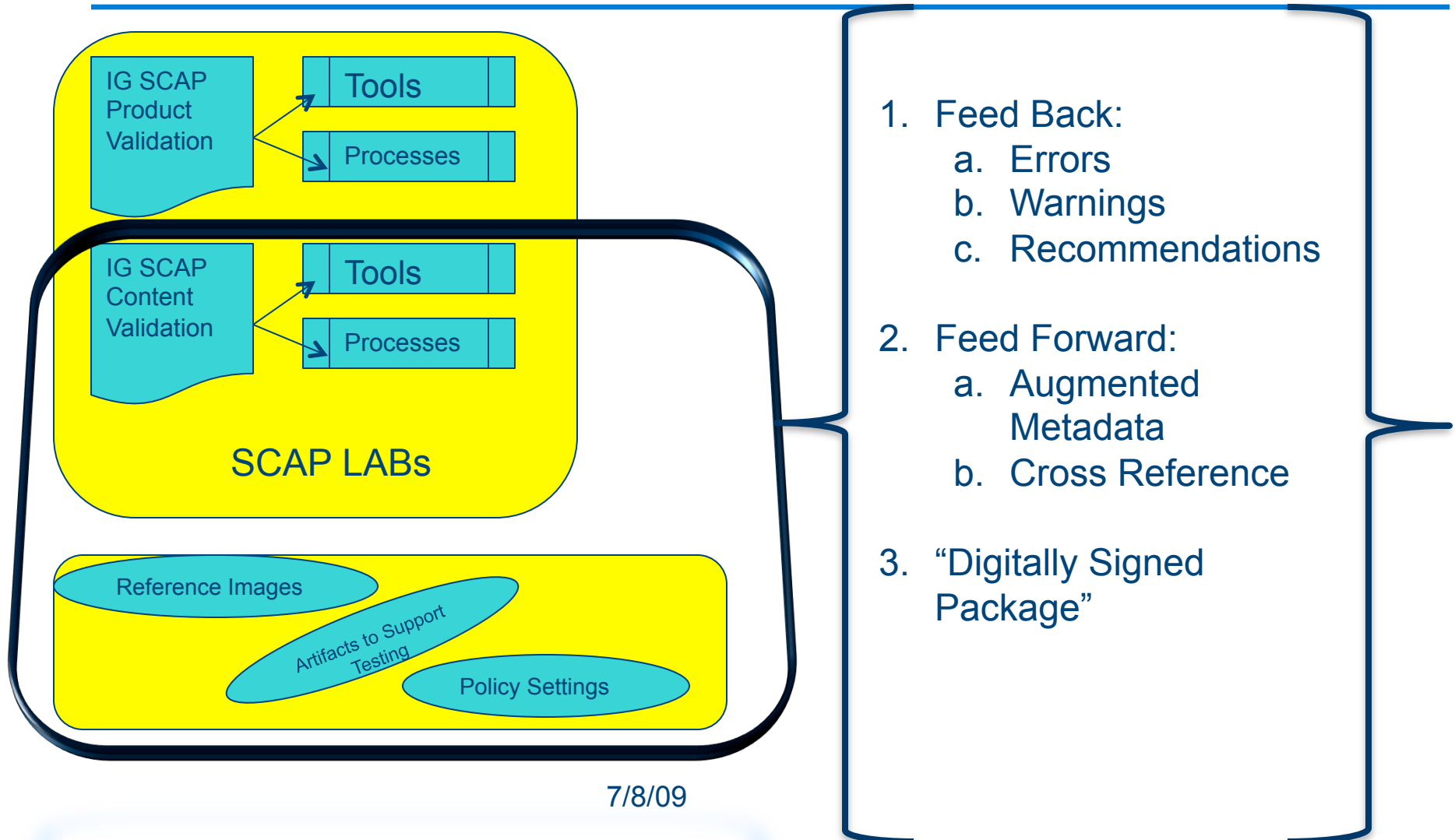
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# Content Validation Program



# Products and By-Products



# The Management Of Content

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- Life Cycle Clouds the Issue(s)
  - Development
  - Post Deployment
- Management of Code/Products
  - Influences Vocabulary
- Dependencies
  - Articulated, Reported, Managed?
- Versioning
  - At what level?



# Adaptation

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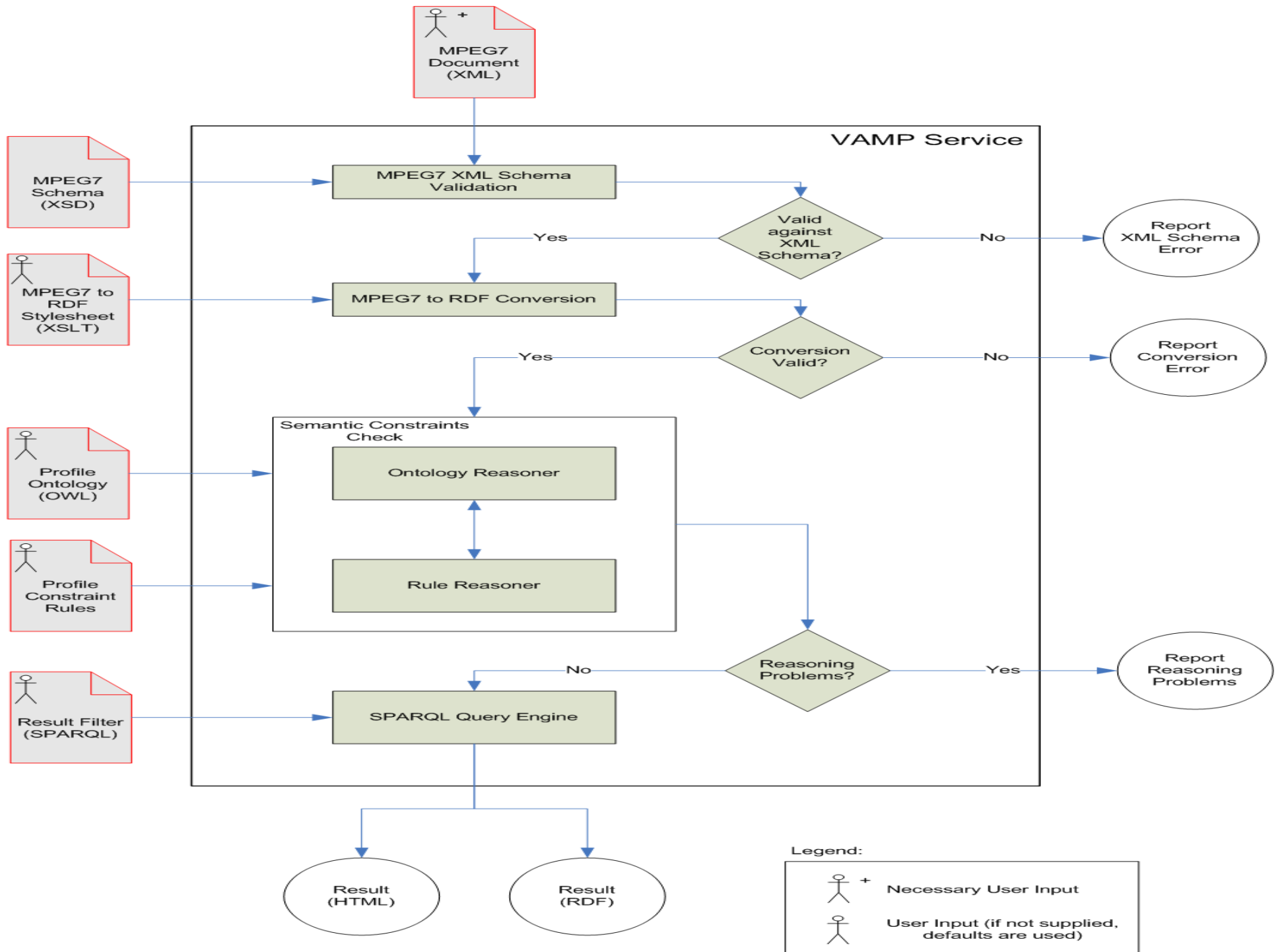
- Compliance Use Case
  - Universe of Rules Relatively Fixed
  - What “Dials” Are There
    - Which Rules Apply
    - To What Degree (value)
    - What Policy Do They Relate To
    - What Platform is Applicable



# MPEG7 and TK's Session

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- Potentially Surprising Connection?





# Answers

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- What is SCAP Validated Content?



# Contact Information

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