



RIXML.org

Quarterly Update

2017-Q3

RIXML Standards Committee



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Highlights

from our Last Quarterly Meeting

The RIXML organization held its third quarterly members' meeting of 2017 at the 55 Water Street office of S&P Global in New York City. Jim Ulrich, RIXML Executive Director, began the meeting with his welcoming remarks.

Glenn Siriano from KPMG Cyber Services followed Jim with his presentation on "Managing cyber risk". Glenn described the *state of the union* for cybersecurity, highlighting key security trends, new threat vectors, and potential impacts on the information management marketplace. He further discussed response planning, common mistakes, and ways to address various threats. The presentation concluded with a framework for cybersecurity oversight, including cyber maturity domains, management responsibility, board engagement, and key performance indicators. We're grateful to Glenn for visiting us.

Roman Kitov from Deutsche Bank then reviewed his quarterly *RIXML Treasurer's Report*, summarizing our revenues and expenses.

At that point, the meeting turned to the topic of the RIXML v2.5 implementation and corresponding release planning. Sal Restivo from Morgan Stanley walked the attendees through each individual update, showing the specific XSD code changes along the way. Sal highlighted the steps taken to maintain backward-compatibility with RIXML v2.4, and the impact on normalization standards. Of the 32 changes initially proposed, 23 were accepted and implemented, six were deferred, and three remained under consideration. Those last three changes would be reviewed further on the next Emerging Tech call. We're approaching the home-stretch on this.

Deirdre Goldenbogen joined Jim to update the membership on progress toward our first RIXML Interactions schema. The Data Dictionary document had reached a stable state and the overall schema design reached implementation readiness. That implementation was underway and progressing well.

Later that evening, the RIXML organization hosted its annual members' dinner, which is always a great event and very well attended.



Featured Presentations



Glenn Siriano
KPMG Cyber Services

Managing Cyber Risk: Lessons from the cyber battlefield

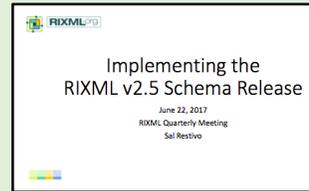


State of the union for cybersecurity: Key security trends, new vectors of threats, dynamic world of change, potential impacts and implications for the board. The five most common cybersecurity mistakes. Addressing the cyber threat. A framework for cybersecurity oversight.



Sal Restivo
Morgan Stanley

Implementing the RIXML v2.5 Schema Release



Building out the coming RIXML v2.5 Schema release. Illustrations of each change, including the new annotated XSD code. Steps taken to maintain backward-compatibility with v2.4, and the impact on normalization standards. Approaching the home-stretch.

Activity Summary

See the table below for a summary of RIXML activity that has taken place during the last quarter. More details are offered in subsequent sections of this document.

Date	Work Stream	Venue	Host	Main Topics
Jun 22	Quarterly Meeting	S&P Global NYC	Jim Ulrich	Interactions, Entitlements, v2.5
Jul 7	Emerging Technology	Call	Mark Daniels	Interactions, Unbundling Survey
Jul 11	Entitlements	Call	Michelle Roxby	Entitlement Groups, API, Linkback
Jul 11	Interactions	Call	Jim Ulrich	Interactions Schema Development
Jul 27	Marketing	Conference	RBC Toronto	RIXML, Interactions, Entitlements
Aug 4	Emerging Technology	Call	Mark Daniels	v2.5 Release Scope & Planning
Aug 4	Marketing	Call	Jim Ulrich	Release Communications
Sep 8	Emerging Technology	Call	Mark Daniels	Surveillance
Sep 11	Interactions	Call	Sal Restivo	Release Candidate Review
Sep 13	Interactions	Call	Jim Ulrich	Release Planning
Sep 14	Componentization	Call	Dave White	JSON-LD, RDFa Lite, Microdata
Sep 21	Quarterly Meeting	Deutsche Bank	Roman Kitov	Interactions, v2.5

Emerging Technology

The group held three calls since the last Quarterly Meeting. They mostly covered progress and plans within active work streams, including Interactions, Schema Development, and the Unbundling Buyside Survey.

The Unbundling Buyside Survey was a frequent topic. We shared feedback to refine the set of questions that make up the survey. Ultimately, it settled down to 24 questions aimed at discovering the nature of research spending and consumption, MiFID II applicability and planning, research valuation, pricing models, budget allocation strategies, and payment methods. It also asks participants about expected utility of interactions data, plans to use rate cards, and any corresponding vendor strategies. RIXML will report on results once the survey is finalized, responses gathered, and analysis completed.

Sal used some time during the August call to discuss the three change requests that remained open on the RIXML v2.5 scope sheet:

- Research Approach & Specialty
- Social Media Messaging
- Making GICS optional

The group reached the conclusion that the first and third would be deferred. Social Media Messaging got some further consideration, but was ultimately deferred, as well. At this point, the scope became finalized at 23 changes, and all of those were already implemented and ready for release. The RIXML Standards Committee expects to have the v2.5 production release ready in time for the September Quarterly Meeting, including the full bundle of schema files and supporting documentation.

Mark Daniels highlighted the September call with a discussion on Surveillance Technology, and referred to an article in *Financial IT* about the use of machine learning at Nasdaq for its market surveillance work. Nasdaq applies these special techniques and algorithms toward detecting market abuses, and guiding investigations and analyses. Machine learning is a segment of Artificial Intelligence getting more and more attention in the Investment Research marketplace, as well. It's interesting to see it applied here in such an innovative manner.

We plan to continue with our call schedule as we enter the final quarter of the year. If you'd like to propose any topic ideas, please contact Mark or Jim. Please find references to the articles discussed during these calls in the catalog below:

Purpose
The Emerging Technology group focuses on new technologies and examines their potential impact on the Investment Research marketplace and the Financial Services industry in general. The group generally meets via conference call on the first Friday of each month.
Leader
Mark Daniels
Recent Activity
Jul 7: Call – Unbundling Survey
Aug 4: Call – v2.5 Release Scope
Sep 8: Call – Surveillance
Upcoming Activity
Oct 6: Call
Nov 3: Call
Dec 1: Call

Exchanges are employing Machine Learning to monitor activity. Another step toward market participants utilizing cognitive technologies to scale and to efficiently meet increased volumes and increased regulatory requirements.

Financial IT
June 9, 2017

<https://financialit.net/news/foreign-exchange/nasdaq-launches-new-machine-learning-technology-surveillance-efforts-nordic>



Interactions

All the great effort in the Interactions work stream is coming together. All the design deliberations and member feedback and iterating over the developing standard for expressing Interactions has reached a stable state. The Interactions Model is ready. The Data Dictionary is ready.

Jonathan Palcsesz from Visible Alpha led the effort to build the XSD rendition of the Model. He's done excellent work in translating the Model into the more structured form of an XML Schema. Sal and Jonathan had a review call to walk through it, and made some final edits. Jim helped out with the release planning and expectations for the coming weeks.

Earlier in the year, the RIXML organization announced its intention to have the new Interactions schema ready for release in Q3 2017. We are on-track for that delivery and expect to present the work product at the September meeting.

One additional point to note: On June 27, Jim had the opportunity to present to a group of Canadian Banks hosted by RBC in their Toronto headquarters. Participants included several RIXML member firms, such as RBCC and Raymond James, and also several others – BMO Capital Markets, Canaccord Genuity, CIBC, Desjardins, GMP Securities, National Bank of Canada, and Scotiabank. Fardeen Kahn did an outstanding job introducing RIXML and describing why the consortium is important to RBCC. The discussion focused on the impact of the upcoming MiFID II rules, the corresponding unbundling of execution and advisory services, and the new RIXML standard to help the industry simplify data capture and reporting processes. The presentation also illustrated the detailed interaction types, potential modes, and other key attributes to be codified within the standard. The audience was relieved that there was a standard schema in development to ease the preparation process.

Purpose
The Interactions work stream was launched to create a standard for describing sell-side/buy-side interactions that captures services rendered and services received, consumed, and valued. This will aid the industry in its efforts to comply with the coming MiFID II unbundling requirements.
Leaders
Shruti Thaker, Citi
Jim Ulrich, RIXML.org
Recent Activity
Jul 11: Call – Schema Review
Sep 11: Call – Schema Review
Sep 13: Call – Release Planning
Upcoming Activity
TBD



```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<xs:schema xmlns="http://rixml.org/corporateaccess/consumerinteraction/1.0"
  xmlns:xs="http://www.w3.org/2001/XMLSchema" id="ClientInteraction"
  targetNamespace="http://rixml.org/corporateaccess/consumerinteraction/1.0"
  elementFormDefault="qualified" version="2.1.1">
  <xs:element name="consumerInteraction">...</xs:element>
  <xs:complexType name="Interaction">
    <xs:sequence>
      <xs:element minOccurs="0" name="interactionEventID" type="xs:string"/>
      <xs:element minOccurs="0" name="interactionID" type="xs:string">
        <xs:annotation>
          <xs:documentation>
            If present, identifier must be unique across all interactions for all time.
          </xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element minOccurs="0" name="interactionName" type="xs:string"/>
      <xs:element name="interactionComment" type="xs:string" maxOccurs="1" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="AnalystMarketing"/>
      <xs:enumeration value="BankerMeeting"/>
      <xs:enumeration value="BespokeAccess"/>
      <xs:enumeration value="Conference"/>
      <xs:enumeration value="BespokeWork"/>
      <xs:enumeration value="DealRoadshow"/>
      <xs:enumeration value="FieldTrip"/>
      <xs:enumeration value="ExpertMeeting"/>
      <xs:enumeration value="ModelAccess"/>
      <xs:enumeration value="NonDealRoadshow"/>
      <xs:enumeration value="RelationshipMeeting"/>
      <xs:enumeration value="Sales"/>
      <xs:enumeration value="SalesSpecialist"/>
      <xs:enumeration value="Social"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
```

Entitlements

The Entitlements Working Group expressed the following goals:

- Drive adoption of the soon-to-be-released RIXML v2.5 schema. Broad adoption of this latest version will bring consistency to the process and help publishers avoid the need for vendor-specific variations. The RIXML organization should follow best practices drawn from past schema releases to achieve this.
- Use RIXML Entitlement elements and attributes as a long-term answer for exceeding critical mass of user groups. The RIXML organization should take steps to facilitate publisher and vendor convergence.

...and raised the following question:

- How do we handle historical Publisher Defined Entitlement Groups? Entitlement tagging after the MiFID II go-live date will be different from before the go-live date. What is the best approach for ensuring that both a publisher's back catalog and future publications follow the rules and properly represent the publisher's products?

There was one Entitlements Working Group call this quarter which covered the notion of an Entitlement API, leveraging RIXML Entitlement Groups, and converting to a Link-Back approach.

Dan Faltny from BlueMatrix had re-opened the topic of *Link-Back Landscape*, sharing some materials describing the upload, general authentication, link-back authorization, and readership processes at his firm.

Bulge-bracket research publishers are increasingly moving to a link-back model for providing consumers with access to their content. The RIXML Link-Back Working Group did a study illustrating this trend in early 2016. Most publishers are using SAML as a means for the aggregator to authenticate. The nature of the link-back URL becomes important because it plays a role in all these considerations. Some publishers send a link-back URL specific to each aggregator, while others want each aggregator to manipulate the URL before presenting it to the consumer, typically by appending a query parameter. Thomson Reuters had also shared their specification for link generation in the past. So, we know this is a key aspect of the link-back model and using it effectively in the field.

Purpose
The Entitlements work stream examines the feasibility of standardizing the authentication and entitlement process across providers. A standard process will significantly reduce the time required to manage access rights.
Leaders
Mike Bassman, Barclays
Michelle Roxby, Citi
Recent Activity
Jul 11: Call – API, Linkback
Upcoming Activity
TBD

BlueMatrix
Linkback Overview

Research Providers who do not author, distribute, or choose to give PDFs to BlueMatrix contribute content by uploading RIXML to a BlueMatrix SFTP server. The RIXML must contain a link which is either unauthenticated or serviced from a SAML Service Provider protected with BlueMatrix's IDP (sso-test@bluematrix.com). Embargoed readership data is provided on a regular basis to the same SFTP server.

Upload Process

An Ingestion process regularly polls the SFTP servers for new content and if discovered, parses the RIXML. If a PDF or TXT document is supplied, an Indexer process indexes the content. The Ingestion process moves the parsed RIXML and optional content to a queue for general consumption. The Research Manager application server polls the queue for new research. When newly contributed Linkback content arrives, an internal link is created and made available to all clients.

If there are any issues parsing the RIXML, the Ingestion process reports the error by placing the failed RIXML and a related document in the "unprocessed" folder on the SFTP server. It is the Research Providers responsibility to periodically poll this folder and reconcile any failures.

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BlueMatrix www.Bluematrix.com

Linkback – Link Generation
For RIXML Discussion

Draft 1.0
July, 2015

Componentization

The Componentization Working Group had one call on September 14 in which Dave White from Quark led a discussion of two major items. These items represent a fresh look at the Componentization topic and the beginnings of a new path forward.

The first item was an initial draft of a demonstration of a sample web portal for semantic components-driven research consumption. This would begin to show some of the value of adding semantic component definitions within the research content itself.

We are planning to show how section- and inline-level semantics can improve consumption of research content by enabling quick access to important areas, and the use of semantically aware contextual searches, such as:

Find the company name "Apple" within research section "Summary"

We'll take feedback on improvements to the portal demo and implement those, with the goal of showing the demo to the full membership at the Q4 quarterly meeting (which will be in January 2018). If this furthers interest in the topic, we'll continue with the formal execution of the semantic component specification draft, from the results outlined in the steps below.

We also propose to provide the sample portal on the RIXML website so that the buy side can have access to experiment and understand better. We can consider enhancing the portal with content which explains the why, how, and value.

The second item was a proposal for furthering how semantics are defined in the research HTML through the use of an HTML5 schema language. An overview of the three main potential markup methods – RDFa, JSON-LD, and Microdata – was presented. There are potential benefits for making this step, above current draft's use of the "title" and "class" attributes, as well as other possible paths, such as HTML5's "data-*" attribute. Then driving to a final decision of which schema language on which to standardize.

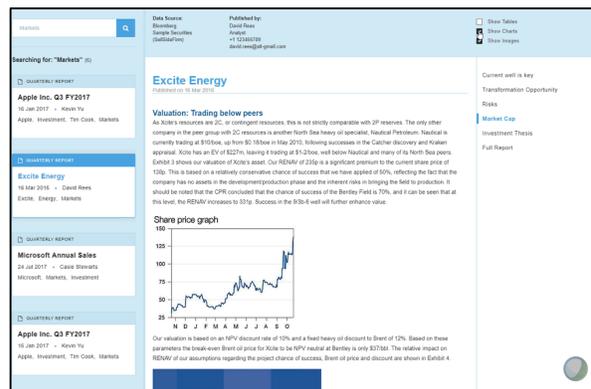
The goal for the first half of 2018 is to finalize the core semantic components specification draft – required, recommended, and optional – as well as a proposal for a publisher extensibility model. Then we will bring that draft to the broader membership in Q2 2018 for review and release.

Purpose
The Componentization work stream is about defining standards for addressing internal document components beyond the basics of title, synopsis, and abstract. By providing component-level addressability we can improve the precision of tagging and searching – and improve the overall experience of interacting with research content.
Leader
Dave White, Quark
Recent Activity
Sep 14: Call – JSON-LD, RDFa
Upcoming Activity
TBD

3 Structured Data Options

- JSON-LD: JSON Linked Data Format
 - [W3C Recommendation 16 January 2014](#)
- RDFa: Resource Description Framework in Attributes
 - [RDFa Core 1.1 – Third Edition W3C Recommendation 17 March 2015](#)
 - [RDF subject-predicate-object expressions in HTML Attributes](#)
- Microdata
 - [WHATWG HTML specification](#)
 - [Also W3C Working Draft](#)





The screenshot shows a financial research report for Excite Energy. It features a search bar at the top, a list of related reports on the left, and a main content area with a 'Valuation: Trading below peers' section. Below this is a 'Share price graph' showing the stock price from 2014 to 2017. The report is published by Quark Enterprise Solutions.

RIXML v2.5 Schema Release

One of our key organizational goals for 2017 was to complete the production release of v2.5 of the RIXML Schema. We now have the release ready for presentation at the September Quarterly Meeting, including the full bundle of schema files and supporting documentation. The RIXML v2.5 release covers change requests we've received from both members and non-members since our v2.4 release in February 2013.

Below is a listing of all the change requests considered for inclusion, along with the final status of both the scope decision and the implementation work. Of the 32 changes initially proposed, 23 were accepted and implemented, and nine were deferred.

#	Change Item		Status
1	Add "EUROSTOXX50" to the IndexEnum enumeration	✓	Implementation Complete
2	Add "CSE-COMPOSITE" to the IndexEnum enumeration	✓	Implementation Complete
3	Add "SPTSX-COMPOSITE" to the IndexEnum enumeration	✓	Implementation Complete
4	Add "BackFilled" to the StatusTypeEnum enumeration	✓	Implementation Complete
5	Add "TagsUpdated" to the StatusTypeEnum enumeration	✓	Implementation Complete
6	Add "RevisedMaterialChange" to the StatusTypeEnum enumeration	✓	Implementation Complete
7	Add "RevisedNoMaterialChange" to the StatusTypeEnum enumeration	✓	Implementation Complete
8	Add new optional sub-element ProductCategoryEntitlement beneath Entitlement	✓	Implementation Complete
9	Add new optional sub-element AssetClassEntitlement beneath Entitlement	✓	Implementation Complete
10	Add new optional sub-element OrganizationTypeEntitlement beneath Entitlement	✓	Implementation Complete
11	Add new optional sub-element AudienceSegmentEntitlement beneath Entitlement	✗	Deferred
12	Add new optional sub-element ActionEntitlement beneath Entitlement	✓	Implementation Complete
13	Allow multiples beneath the Entitlement element	✗	Deferred
14	Support named specifications for Entitlements	✗	Deferred
15	Add support for Organization Name in multiple languages	✓	Implementation Complete
16	Add support for Person Name in multiple languages	✓	Implementation Complete
17	Add support for Person Group (Team) Name in multiple languages	✓	Implementation Complete
18	Add support for Title in multiple languages	✓	Implementation Complete
19	Add support for Sub-Title in multiple languages	✓	Implementation Complete
20	Add support for Synopsis in multiple languages	✓	Implementation Complete
21	Add support for Abstract in multiple languages	✓	Implementation Complete
22	Address overlap between Research Approach and Specialty	✗	Deferred
23	Add "EventInvitation" to the ProductCategoryEnum enumeration	✓	Implementation Complete
24	Add "PostEventSummary" to the ProductCategoryEnum enumeration	✓	Implementation Complete
25	Incorporate ideas from our Social Media Messaging work stream	✗	Deferred
26	Offer a JSON-based alternative to the standard RIXML Schema	✗	Deferred
27	Support Themes (Specialties) in the CoverageUpdates Side-Car Schema	✓	Implementation Complete
28	Add a Side-Car Schema for Inventory Checking	✗	Deferred
29	Add a Side-Car Schema for Financials	✗	Deferred
30	Fix cardinality bug in TitleFormatted element in RIXML v2.4	✓	Implementation Complete
31	Add "DUNS" to the IssuerSecurityIDTypeEnum enumeration	✓	Implementation Complete
32	Downgrade the use of GICS for SectorIndustry tags to optional	✗	Deferred

Now that the schema implementation is fully complete, we have also updated the corresponding documentation for the Release Notes, Data Dictionary, and Level One Addendum. The individual files listed below constitute the “release bundle”.



RIXML-2_5.xsd

The main RIXML schema definition file in standard W3C XSD format containing the root element and other top-level elements



RIXML-Common-2_5.xsd

Supporting file for the RIXML schema with shared type definitions used in multiple places



RIXML-datatypes-2_5.xsd

Supporting file for the RIXML schema with enumerated lists and descriptions



RIXML-CoverageUpdates-2_5.xsd

Side-Car schema intended for analyst coverage updates



RIXML-RosterUpdates-2_5.xsd

Side-Car schema intended for analyst roster updates



RIXML-DataDictionary-2_5.pdf

Data Dictionary document explaining the structure of the schema and describing all the individual elements and attributes



RIXML-LevelOne-2_5.pdf

Level One definition document showing which parts of RIXML are necessary for a limited initial implementation



RIXML-ReleaseNotes-2_5.pdf

Release Notes describing the 24 changes implemented against RIXML v2.4 resulting in the new v2.5 release



RIXML-ImplementationGuide-2_5.pdf

Implementation Guide explains the concepts behind tagging with XML and specific guidance for implementing RIXML