

Note

Acronym List

- API: Application Programming Interface
- BPMN: Business Process Modeling and Notation
- CCTS: Core Component Technical Specification
- EDI: Electronic Data Interchange
- JSON: JavaScript Object Notation (pronounced “jason”)
- NDR: Naming and Design Rules
- NIST: National Institute of Standards and Technology (part of the United States Department of Commerce)
- OAGi: Open Applications Group, Inc. (the organization)
- OAGIS: Open Application Group Integration Specification (the standards)
- REST: Representational State Transfer
- UN/CEFACT: United Nations Centre for Trade Facilitation and Electronic Business
- WG: Working Group



Open Standards that Open Markets™



OAGi Update

CEDI Forum • 2017-05-30

Jim Wilson, OAGi Architect

Connecting enterprises for over 22 years!



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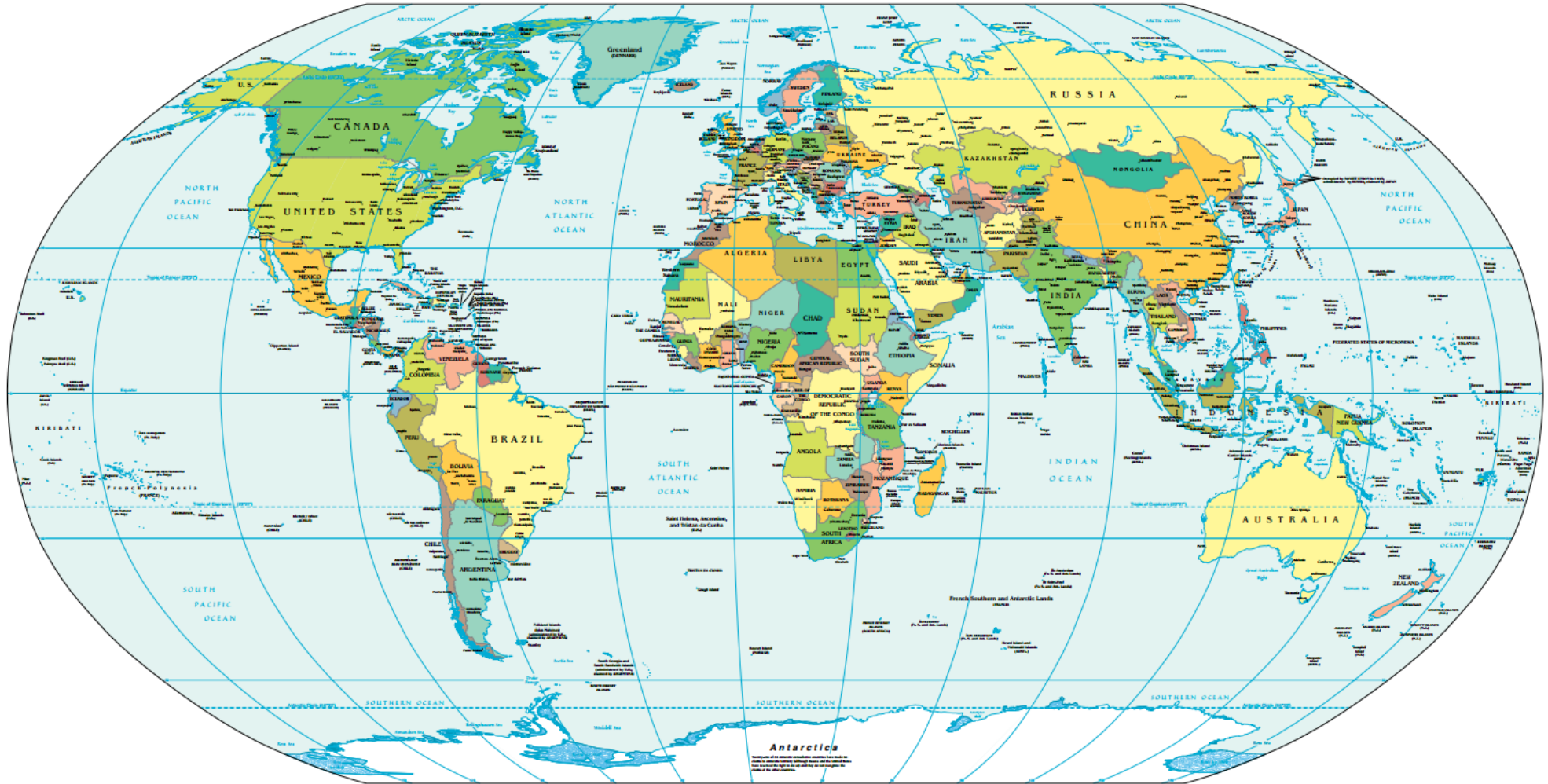
2017 OAGi Membership

- ADP
- AgGateway
- Automotive Industry Action Group (AIAG)
- Amber Road
- Archer Daniels Midland
- Austen Consultancy
- Boeing (Board member)
- Bright3 AB
- Cisco
- Command Alkon
- Data Communication Solutions
- DBI Poland
- E2open
- EDIFICE
- Emerson
- Etail Solutions
- GEFEG
- HR Open Standards
- iBASEt
- Infor (Board member)
- ISA
- Japan Petrochemical Association (CEDI)
- Justransform
- Land O'Lakes
- Liaison Technologies
- London Drugs
- NIST
- OASIS
- Odette
- OpenText
- Oracle (Board member)
- SAA Consultants
- Grupo Sancor Seguros **NEW!**
- Standards for Technology in Automotive Retail (STAR)
- Trisotech
- MESA

2017 OAGi Board Members



OAGIS Around the World – 99 Countries!



OAGIS Across Industries



Agriculture



Automotive



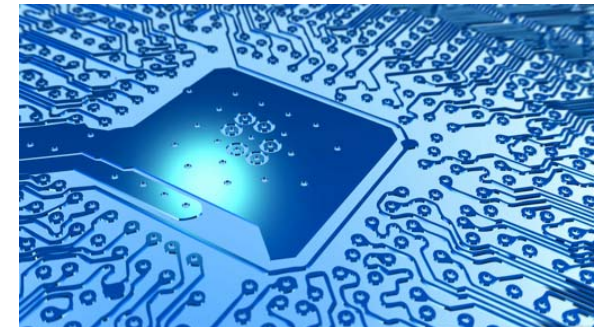
Defense



Aerospace



Insurance



High-Tech

Adoption/Implementation Examples

- High-Tech
 - CISCO
 - IBM
- Agriculture
 - Land O'Lakes
 - Archer Daniels Midland
- Automotive
 - Ford
 - Honda
 - Volkswagon
- Aerospace and Defense
 - Boeing
 - United Kingdom Ministry of Defense
- Software and Services
 - ADP
 - Oracle
 - Infor
 - IBM
 - SAP

**Used by hundreds of
companies across more
than a dozen industries!**

Who Uses OAGIS?



OAGIS Use in Agriculture

- The agriculture industry has used Chem eStandards for over 15 years, which is supported by the industry association AgGateway
- OAGi has collaborated with AgGateway for 12 years, and like CEDI, is a paying member of OAGi
- OAGIS 10 includes support for all of the requirements implicit in Chem eStandards



OAGIS Use in Agriculture

- Problem: While Chem eStandards is simple to understand, it is very rigid (not extensible)
- Solution: OAGIS is highly extensible (although with a steep learning curve)
- Increasingly, OAGIS concepts, and OAGIS messages are being supported in agriculture.



OAGIS Use in Agriculture

- Land O'Lakes led the development effort around quality testing-related messages, which support soil testing and grain testing.
- NIST is using agriculture as a source of use cases for its OAGIS-based Smart Manufacturing project.
- While the agriculture industry will continue to use Chem eStandards to support common supply chain scenarios, future messages will be developed in OAGIS.



Other OAGIS Uses

- Physical distribution (air freight, shipping company, forwarder, etc.)
 - Rich support of physical distribution messages
 - Used by DHL
 - In North America, XML standards for physical distribution are fractured. Use of EDI standards is still common.

Other OAGIS Uses

- Business-to-Business Network Services
 - GXS, IBM, F4F Agriculture, Elemica and others support OAGIS to some extent
 - These services will map between any two formats provided there is sufficient customer demand
- Internet-of-Things (IoT)
 - There is widespread agreement that IoT is an important emerging technology
 - Business implications are still being sorted out amidst steady concern of security issues
 - IoT provided a set of use cases for the development of OAGi's JSON expression of the OAGIS model.

Other OAGIS Uses

- Enterprise canonical use
 - For over 20 years large companies have used OAGIS to integrate internal systems, which is described as “using OAGIS as the enterprise canonical”
 - All systems map to/from OAGIS, sometimes using adapters
- Current big company implementations:
 - Archer Daniels Midland
 - Boeing
 - Land O’Lakes



2016-2017 Business Events

- April 2016: Member meeting hosted by the National Institute of Standards and Technology (NIST), which is a division of the United States Department of Commerce
- November 2016: Member meeting hosted by Oracle
- April 2017: Member meeting hosted by NIST
- November 2017: Member meeting scheduled to be hosted by Oracle



2016-2017 Standards Work

- Semantic Refinement and Tooling WG
- AIA EBO Migration WG
- Smart Manufacturing WG
- Mobile, Cloud, JSON WG
- Quality Content WG
- Chem eStandards Maintenance WG

2016-2017 Convergence and Collaboration

- Continue to work closely with AgGateway to meet agriculture needs
- Continue to use UN/CEFACT core component concepts as basis for OAGIS
- OAGIS is in the process of being processed and published as an ISO standard



どうもありがとうございます

Thank you very much!

BACKUP SLIDES

Current Release OAGIS 10.3

- Released in April, 2017
- New Quality Content nouns
- New Work Order Noun
- Bug fixes
- OAGIS 10.3 is backwardly compatible with all OAGIS Release 10.X versions.



EBO Working Group Status

- EBO Working Group, chaired by Scott Nieman of Land O'Lakes, continues to identify and define EBO conversion priority
- Low hanging fruit and quick hits identified and worked as the needs are identified
- "Necessity is the mother of Invention" right now, the needs of Land O'Lakes and Boeing are driving the conversion efforts

The WorkOrder Noun available in 10.3

- The WorkOrder Noun was built based on the Requisition Noun and the Oracle EBO, with Boeing and Land O'Lakes needs
- There are no “New” additions to the OAGIS standard, except the Noun
- The WorkOrder was “Assembled” using current “Standard” OAGIS Elements and Components
- Being able to search the Symantec database was the key to getting this work done quickly

The PartyAccountActivity Element to be available in 10.4

- The Party AccountActivity Element was built based on the needs of Boeing and Land O'Lakes based on the EBO CustomerPartyAccount Element
- Party "Profile" information and Party Contract information are the two main drivers for this addition
- Will now be part of the Party Element

Lots of NEW OAGIS Content in the AccountActivity Element

- **PartyAccountActivity** - Represents the desired Activities for a Party providing information for the requesting person, organization, department, or group on the associated document or line.
 - **PartyBillingProfile** - Identifies Unique Billing Profile information for the requesting person, organization, department, or group on the associated document or line.
 - **PartyCreditProfile** - Identifies Unique Credit Profile information for the requesting person, organization, department, or group on the associated document or line.
 - **PartyPaymentProfile** - Identifies Unique Payment Profile information for the requesting person, organization, department, or group on the associated document or line.
 - **PartyPrivacyProfile** - Identifies Unique Privacy Profile information for the requesting person, organization, department, or group on the associated document or line.
 - **PartySellingProfile** - Identifies Unique Selling Profile information for the requesting person, organization, department, or group on the associated document or line.
 - **PartyShippingProfile** - Identifies Unique ShippingProfile information for the requesting person, organization, department, or group on the associated document or line.
 - **PartySpecialNeedsProfile** - Identifies Unique Special Needs Profile information for the requesting person, organization, department, or group on the associated document or line.

The Contract Noun coming soon in 10.4

- New OAGIS Noun based on the following sources: SalesOrder, Quote, Oracle EBO elements, OAGIS elements, AGXML, NIST definitions, cXML, OASIS, OpenGroup, Boeing needs, and Land O'Lakes needs.
- The majority of the Contract Noun was “Assembled” using current “Standard” OAGIS Elements and Components
- There are several “New” additions to the OAGIS standard, including the Noun
- Due to the complex nature of the Contract Business Object, a generalized approach was taken allow for maximum flexibility
- Please note, Contract is a work in progress and intended to provide a starting point

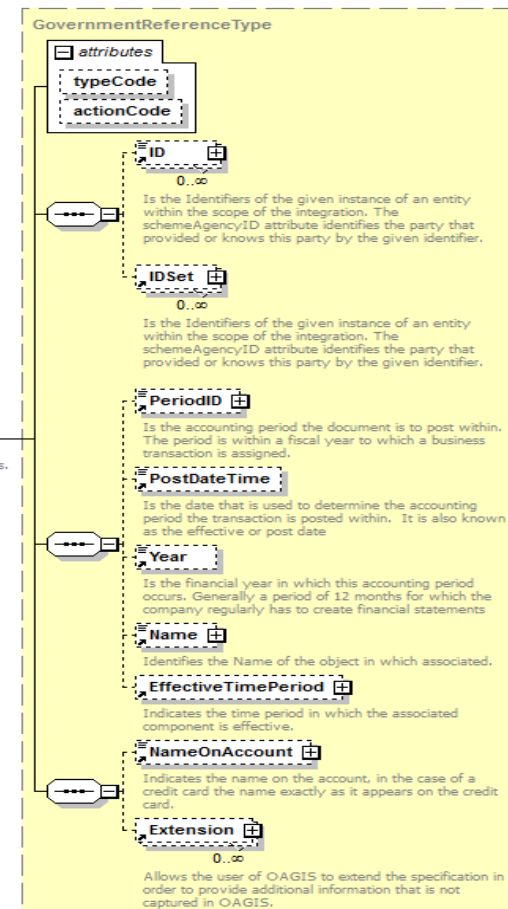
Example: New Elements in the Contract Noun

New OAGIS Element

Element GovernmentReference

**This Element was
needed by Boeing,
Land O'Lakes and
AgXML**

GovernmentReference
Used to provide Government References.



OAGIS in an RDBMS

- Part of our Semantic Enhancement and Tool Working Group
- Building software to generate objects from our Core Components based on context drivers
- To generate expressions of OAGIS in XSD and JSON
- First versions to support MySQL and Oracle
- Not replacing XML/XSD, complementing it



OAGIS Repository Release 1.0

- SQL DBMS Repository of OAGIS content
- Based on OAGIS Release 10.3
- Available to members only
- On Google drive
- Next Friday a Next meeting to show how to install



Smart Manufacturing WG

- The project helps industry address interoperability challenges for Service-Oriented Manufacturing (SOM)
- Industry requires improved message standards and their development processes
- The project team worked with industry and responded with
 - New model-driven approach to development and use of message standards
 - Software tools in support of the new approach
 - Industrial collaborations and standards development leadership
 - New research workshop series on Composable SOM

Smart Manufacturing

Traditional and Model-Driven Approach

- Traditional:
 - The design is a human-readable-only specification
 - The design is often an afterthought, implementation is priority one
 - The design is often freely interpreted by human developer leading to an implementation
- Model-Driven:
 - The design is a computer-processable model
 - The design is central – the model grows, gets extended, evolves
 - An implementation is directly derived from the model

Smart Manufacturing Working Group Members

- NIST – Nenad Ivezic, Working Group Chair
- OAGi – David Connelly, CEO
- Land O' Lakes – Scott Nieman, Enterprise Integration Architect
- Oracle – Michael Rowell, Application Architect & OAGIS Architect
- Boeing – Jeff Rice, Lead Application Architect
- NIST – Miroslav Ljubicic
- NIST – Marija Jankovic

Quality Content WG

The scope of the Quality Content Working Group is to create new OAGIS Nouns for quality and test related activities and integrations. Integrations may be between a Product Lifecycle Management system and a Laboratory Information Management System, ERPs, and external Third Party Laboratories that perform testing services.

The following Nouns we intend to publish in the next OAGIS release 10.2: InspectionOrder

- TestSpecification
- TestMethod
- TestResult

The Working Group also identified the following Nouns we intend work on for a subsequent OAGIS release:

- SamplingPlan
- CorrectiveActionPlan

Quality Content WG Members

- Scott Nieman, Land O'Lakes
- Evan Wallace, NIST
- Frank Riddick, NIST
- Bob Phare, Command Alkon
- Conrad Leiva, iBASEt
- Frank Heinrich, iBASEt
- Mike Rowell, Oracle

Mobile, Cloud, JSON WG

- Finished the NDR and REST API Design Guide
- Working with the Semantic team on JSON forms
- Next Steps
 - Build some JSON Schema examples
 - Generate it eventually from Semantic tool that is under construction

Mobile, Cloud, JSON Workgroup Members

- Scott Nieman – Land O’Lakes
- Frank Heinrich – iBASEt
- Mike Turay - Cisco
- Michael Rowell - Oracle , OAGi as Chief Architect
- Serm – NIST
- Steffen Fohn – ADP
- Jim Wilson – OAGi Staff

JSON NDR and REST API Design Guide



OAGi JSON Schema Naming and Design Rules (NDR) and REST Usage Design Guide

Authors:

Michael Rowell, Oracle, OAGi
David Connelly, OAGi

Contributors:

Scott Nieman, Land O'Lakes
Steffen Fohn, ADP
Frank Heinrich, iBASEt
Kurt Kanaskie, Invited Expert

OAGIS with Java Script Object Notation (JSON)

- Next generation from XML
- Supports Cloud, Mobile, IoT
- JSON NDR and REST API Design Guide
- Treated as an expression of OAGIS Model
- Not replacing XML/XSD, complementing it

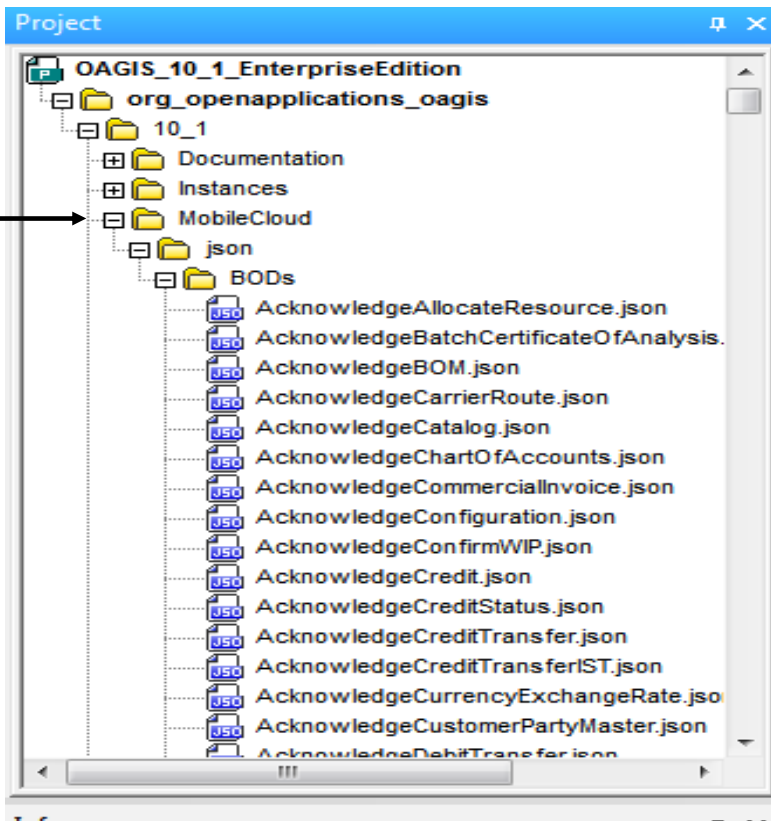
The word "JSON" is displayed in a large, light blue, three-dimensional sans-serif font. Below the letters, there is a faint, semi-transparent reflection of the word, creating a sense of depth and modernity.

JSON NDR and REST API Design Guide

- JSON Schema Decision
- Develop mapping from XML Schema to JSON Schema
- Decision to generate JSON Schema from Semantic DBMS
- NDR to be further updated
- Guidelines to generate RESTful API's

```
{json:api}
```

OAGIS with JSON



```

1  {
2
3  "getShipmentUnit" :
4  { "xsi:schemaLocation" : "http://www.openapplications.org/oa",
5    "releaseID" : "xsd:normalizedString",
6    "versionID" : "xsd:normalizedString",
7    "systemEnvironmentCode" : "Production",
8    "languageCode" : "xsd:normalizedString",
9
10 "applicationArea" :
11 {
12 "sender" :
13 { "typeCode" : "xsd:token",
14   "partyRoleCode" : "xsd:token",
15
16 "logicalID" :
17 { "schemeID" : "xsd:normalizedString",
18   "schemeVersionID" : "xsd:normalizedString",
19   "schemeAgencyID" : "1",
20   "value" : "xsd:normalizedString"},
21 "componentID" :
22 { "schemeID" : "xsd:normalizedString",
23   "schemeVersionID" : "xsd:normalizedString",
24   "schemeAgencyID" : "1",
25   "value" : "xsd:normalizedString"},
26 "taskID" :
27 { "schemeID" : "xsd:normalizedString",
28   "schemeVersionID" : "xsd:normalizedString",
29   "schemeAgencyID" : "1",
30   "value" : "xsd:normalizedString"},

```

BPMN Expressions of OAGIS Scenarios

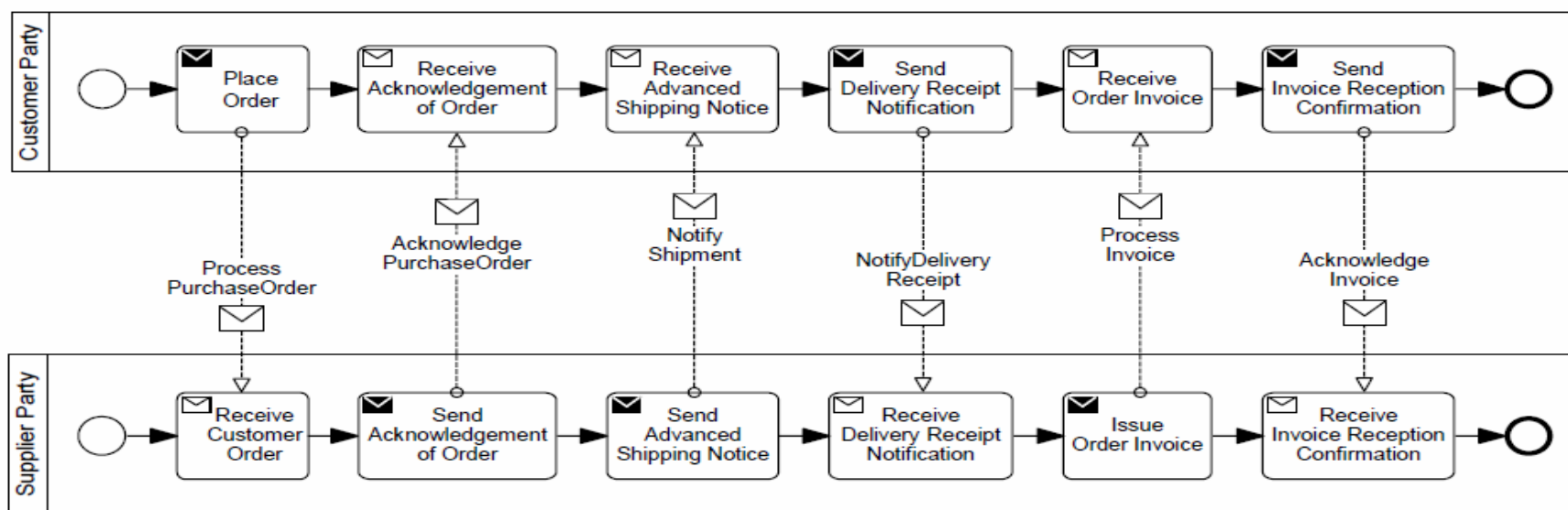


Figure 8: BPMN Collaboration Diagram with PUBLIC Processes for OAGIS Scenario 47

OAGi Members get access to our BPMN tools through partnership with Trisotech

BPMN Expressions of OAGIS Scenarios

- Work is funded by NIST, Conrad Bock is sponsor
- Denis Gagne from Trisotech is the developer
- We published their White Paper on our website
- Delivered in OAGIS 10.1
- Is part of OAGIS Enterprise Edition
- Not replacing UML, complementing it
- Recently secured access to a Cloud Tool that supports BPMN development for the membership to use

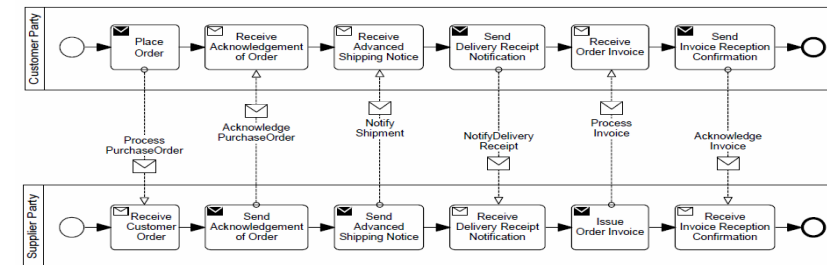


Figure 8: BPMN Collaboration Diagram with PUBLIC Processes for OAGIS Scenario 47