Open Applications Group

Development Methodology

- Project Definition
- Construction
- Publication
- Review and Approval
Open Applications Group Development Methodology

Introduction

The purpose of the document is to describe the Open Applications Group development methodology, including the process for building an integration specification. This document assumes an overall familiarity with the Open Applications Group. This includes the technology, the architecture, and the current deliverables, including The Open Applications Group Integration Specification (OAGIS), the OAGi XML Architecture.

OAGIS is downloadable from our web site at: http://www.oagi.org.

This document describes several topics:

1. Open Applications Group development process and principles.
2. How the development meetings are run.
3. When to choose a Working Group due date.
4. How to propose a specification to the Open Applications Group.
5. How to design the specification content.
6. How to leverage the principle of re-use.
7. How to build the specification in the OAGi formats.
8. How to get an interface specification approved and published by the OAGi Working Group.

NOTE: This methodology is primary oriented for building content. If your project is about adding or changing technology, we ask you follow the spirit on the methodology and use your best judgment on applying it to your Project. If you have any questions or comments, please write us at info@oagi.org or visit our web site at http://www.oagi.org.
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Development Principles

Introduction
The Open Applications Group is focused on delivering practical specifications defining business software component interoperability to real and present problems for customers and vendors.

Because of this, the development methodology of the Open Applications Group is focused on:

- Short time frames where possible to build and deliver the content necessary to specify the integration for targeted scenarios.
- Date driven Working Groups that drive for quality solutions based on real content.
- The Working Group leader/proposer of the Working Group picks the date when they wish to have the project completed, subject to meeting schedules. Dates for project completion should be chosen by the end of the Construction Phase of the development methodology that is described later in this document.

The Open Applications Group Development Methodology is based on rapid application development principles. The methodology draws upon best practices learned from experiences these principles. The specific techniques used to enable this are:

- Joint Application Design (JAD)
- Prototyping
- Short project schedules
- Small Working Groups

Planning Assumptions:
1. You must be a member of the Open Applications Group to participate in a Working Group. It is possible that certain “Invited Experts” may be allowed when invited by the Working Group Leader and approved by the OAGi staff or Board of Directors.

Invited Experts:
- Must be appointed by the Working Group Chair and approved by the OAGi Architect.
- Must sign the OAGi IP Policy document and the Project Definition Signature Page.
- May contribute and render expert knowledge but not vote on working group issues.
2. It takes a minimum of three OAGi members to form a Working Group. All Working Group members must formally join the Working Group and they must have a signed OAGi Membership Agreement and Signed OAGi IPR Agreement on file with the OAGi for their organization or for themselves. The OAGi IPR Agreement and Membership Agreement are freely available on the OAGi web site at www.openapplicationsgroup.org.

3. To formally join a Working Group, the OAGi member must sign the signature page in the Project Definition. This sets the scope of contributions to the scope of the Project Definition.

4. Working Group members must participate in the process if they want their contributions to be included in the final deliverables of the Working Group. This participation may include email lists, teleconferences, and face to face meetings. It is not required that members attend all Working Group meetings in order to vote on the Working Group content. If a member misses too many meetings, though, the Working Group Leader may ask the member to abstain from voting because of their lack of knowledge and participation.

5. Projects will not be initiated unless a member asks. No projects will be initiated without specific demand.

6. Projects will not be re-started when new members join the meetings. If a member gets involved late in the process and wishes to change the Working Group content, they may propose a new Working Group to re-consider the content and they can bring the work back through a full cycle for review and approval by the Working Group.

7. No feature regression is permitted. This means that no capabilities that are available in any previous version of OAGIS may be removed in and future version.

8. Backward compatibility must be maintained. This is usually accomplished by adding to the capabilities of a scenario or a Business Object document, but not ever taking away capabilities that would render the existing implementations obsolete. This enables the current users to continue to rely on a BOD at a revision level to remain intact.

   Policy Board approval is required for any breakage of backward compatibility.

9. Content will be reused whenever possible. This is a key factor in keep OAGIS as a coherent, Canonical Model for its users. Extensions to current work are allowed and encouraged to order to extend the current specification to meet new requirements.

   The Working Group Members and the Working Group Leader are responsible for ensuring the maximum amount of reuse.

10. Consistency across Working Groups and deliverables. An OAGi architect is assigned to each Working Group for review and consulting purposes. This architect will help the Working Group leader when necessary on project as well as content issues.
The OAGi Chief Architect, working with the Architecture Council, will review all deliverables during the project to ensure maximum re-use and consistency of business content and technical architecture in all deliverables.

11. All OAGi documents must be reviewed and approved by either the OAGi Architecture Council before they are published. This includes drafts, beta, review, or final versions of documents. All drafts, beta, and review documents, when made public, must include the OAGi IPR Public Wording that defines the IPR rules associated with the document. All final documents must contain the OAGi License Agreement.

Meeting Procedures:

- Meetings may be held face to face, by teleconference, using web based collaboration tools, or in any other manner agreed to by the Working Group. The Working Group Leader will publish an agenda for the meeting.

- The Working Group Leader runs the meetings.

- Minutes are mandatory. They must include, at a minimum, Working Group name, date and time, meeting attendees, meeting agenda, decisions made, action steps, next planned meeting date and time.

- The meetings are run by consensus. Consensus is defined by agreement of the majority in sentiment or belief [syn: general agreement]. We will strive for people to get to the point where they can say; “I can live with this.”

- Anyone in the meeting may comment and make suggestions any time during a review unless otherwise stated.

- Sometimes we may ask that the Working Group holds their questions until after a presentation, but this will be stated when this is necessary.

- We ask that no negative remarks be made about any persons in the meeting.

- We ask that no negative remarks be made about any member organization during the meetings.

- No one can express negative remarks concerning a proposal or a specific point unless one has a constructive alternative proposal.

- If important issues come up during a discussion, that issue will be taken off line so the Working Group can stay on topic unless the Working Group wishes as a group to address it at that time.

- Votes are usually taken for formal approvals of specifications or proposals.

- One vote per organization. If a member company has more than one representative on the Working Group, they have a collective single vote. The rules for voting are described in the Open Applications Group bylaws.
Summary Overview of Process

Process Flow
The best way to visualize the entire process for building specifications and XML message is to review the diagram just below. This process will be described in more detail and each phase will be described with activities and deliverables.
Definition Phase

The Open Applications Group Development Methodology has four phases:

1) Definition
2) Construction
3) Review and Approval
4) Publication

This section describes the first phase, the Definition Phase. Each of the other phases are described in detail later in this document.

Purpose of Definition Phase

The purpose of the Definition Phase is to define the scope of the Working Group, pick a Working Group leader and team, develop a work plan and document what is to be done.

Deliverables of the Definition Phase

The Definition phase has three primary deliverables. The Working Group Leader is responsible for all of these deliverables.

1. Project Definition, including scope, planned deliverables, Working Group, and schedule.
2. A Power Point based template is available for the Definition Phase.
3. Working Group member signatures.

Enhancements to OAGIS

Modifications to OAGIS can come from many ways. This document primarily addresses new content, new technology, or medium to large additions or modifications. Small change requests posted through the website feedback form or email can sometimes be addressed through review of the Architecture Council only. If more opinions are required, the Chief Architect will ask 2 or 3 experts on the subject in question. This is allowed and encouraged as it is a key feedback loop mechanism to keep OAGIS vibrant and relevant.

Where ever possible, we have tried to made annotations in this document with options for those building enhancements. If you have any questions, please contact the OAGi staff and they will be glad to help out.
Of course, sometimes the project definition requires both new work, and modifications, and we support that also in one project definition. The OAGi staff can provide examples of all of the above cases.

**Process Flow of Definition Phase**

1. **Propose a Scope for Working Group**
   - Write Project Definition—ensure 3 members commit to join
2. **OAGi Staff Review**
3. **OAGi Staff to send Project Definition to Policy Board**
4. **Policy Board Approval**
5. **OAGi Staff notifies WG Chair issues call for participation**
   - No Vote
   - Yes
   - Schedule first Teleconference or Face to Face
   - Make sure members sign Project Definition
   - Setup Yahoo Group, add documents and members

**Activities of the Definition Phase**

1. **Build the Project Definition.** A template is available for this purpose. The Project Definition contains the following items:
   - Proposed Scope
   - Key Deliverables Summary
   - Scenario Diagram
   - Business Workflow
   - BOD’s/Nouns to be added
   - BODs to be changed
   - Working Group Working Group Members
   - Planned Schedule
   - Assumptions, Dependencies, and Issues
   - Outside Resources

2. **Propose the Working Group to the OAGi technical leadership staff.**

   The OAGi staff will review the Project Definition with the Working Group leader and help them finalize the scope, approach, etc. If they have any concerns, they will escalate them to either the OAGi Architecture Working Group, or to the OAGi Executive Committee for discussion and resolution.

   This process will continue until the Project Definition is approved, modified, or cancelled.
3. Bring the Project Definition to the OAGi Policy Board for final approval.

   The OAGi staff will work with the Working Group to bring the Project Definition for a 
   formal review and vote.


   When the Project Definition is approved, it is time to pick the Working Group if this has 
   not already been done.

   This can be done by asking for volunteers during a Working Group meeting or by 
   sending out an email to the Working Group members asking for their participation. The 
   OAGi CEO or an OAGi Chief Architect can help with this task if the Working Group 
   leader wishes.

   You must be a member of the Open Applications Group in good standing to me a 
   member of a Workgroup. The one exception to this policy is the invited expert role. 
   These rules are defined in detail the section describing working on workgroups later in 
   this document.

5. Set up a Yahoo Group or similar technology for Working Group Facilitation and 
   Communication.

   Go to http://groups.yahoo.com and set up a group for your Working Group. The 
   standard naming convention is: oagi-name of Working Group. An example of this might 
   be: oagi-receiving. If the project is sponsored by a council, one can add that name to 
   the prefix. An example is: oagi-arch-mobile.

6. Frequency of Workgroup meetings.

   The Workgroup leader may call teleconferences or face to face meetings to accomplish 
   the work of the Project Definition Phase and any other phase of development of the 
   OAGIS standard.

   The frequency of meetings may be determined by the team, for example once a week, 
   twice a month, one a month etc. In addition, face to face meetings may be held during 
   the OAGi face to face meetings, and in addition, at any time at the discretion of the 
   Workgroup Leader and the team.

**Special Note on Selecting Scope for the Project Definition**

**Perform Gap Analysis**

Before you decide to build a new BOD or re-use an existing BOD, you should look to 
see if an existing Scenario is similar to what you want to do. The Scenario shows the 
names of the XML Schemas that you should use to implement the scenario.
Look for a BOD that sounds like it may meet your needs and do gap analysis to determine how closely the BOD may fit your requirements. You should use the following rules of thumb:

1. Use the BOD unchanged if possible.
2. Modify the BOD if it is missing key requirements. BOD modifications can be part of the Workgroup scope as much as building new BODs and Scenarios.
3. Build a new BOD as a last resort.

If you must build a new BOD, go to the component libraries in OAGIS Platform to look for content before you build new components.

Organizing the Working Group

Once the Working Group is chosen, the two primary actions steps are for the Working Group Leader to ensure are accomplished.

1. Someone from a member company must sign the signature page of the Project Definition before the member can formally participate in the Working Group. This is done to limit the IP exposure of the member to the content of the Working Group scope.

2. A new Yahoo Group or similar technology needs to be set up at “groups.yahoo.com” or the functional equivalent. The naming convention for the Yahoo Group should be <oagis-workinggroupname>. All Working Group members should join this group. If the Working Group is sponsored by a Council, it is recommended that the naming convention is <oagi-councilname-workinggroupname>.

3. A schedule of meetings should be set up to begin working the issues and moving the project ahead. These meetings can be teleconferences or face to face meetings. The first meeting should cover the following topics:

   - Overall scope and intent of the Working Group
   - Identification of areas of interest of each member
   - Identification of Working Group member roles
   - Assigning of action steps to research or define the work to be accomplished

Please Note: More on the topic of Working Group members and their roles and efforts for Working Groups is covered in the last section of this document. The section is entitled: “Working on Open Applications Group Working Groups”.

Setting the desired completion date
If you have a specific time frame you need to finish, it is important to schedule this like any project. Of course, the duration is directly connected to the scope of work and the number of persons on the Working Group.

We encourage short durations, if possible, to drive work out the door quickly and to avoid bureaucracy. 6 months is a good target time frame.

NOTE: Some times it is desirable for the Working Group members to wait until they are in the Construction Phase before setting the project completion date. Often not enough information is known during the Definition Phase to give an accurate completion date. If a date is chosen before the Construction Phase, it should be considered a Planned Date and not a Committed Date.
**Construction Phase**

**Purpose of the Construction Phase**

The purpose of the Construction Phase is to build the content of the OAGIS deliverables and to ensure involvement of the members to obtain a quality deliverable that can be supported by the membership.

The construction phase workflow is depicted below:
Deliverables of the Construction Phase

1. Integration Scenarios

The Open Applications Group requires the use of the UML Sequence Diagram for depicting the Scenario. We also require documentation for the Scenario, including but not limited to the items below. There is a sample format available for the working group to review. More detail is included in the activities section below.

- Assumptions about the process
- Component Definitions – Description of the boxes depicting components, applications, or entities used in the Sequence Diagram.
- Business Sequence or Flow
- Exception Handling

An example of a Scenario is just below.

```
CustomerParty                SupplierParty

ProcessPurchaseOrder

AcknowledgePurchaseOrder

ShowShipment

ShowDeliveryReceipt

ProcessInvoice

ConfirmBOD
```

2. Business Object Document definitions

OAGi models the data in XML itself rather than use UML. One can start with a spreadsheet during the requirements but the construction is done directly into the schema. Most of the time the requirements are given to the OAGi Chief Architect to do the actual XML work, but sometimes for band new work the work is done by the
member and then handed to the OAGi Chief Architect for putting it into the final XML.

All modifications to Nouns, Components, and Elements must be documented.

3. XML Schema Files - BODs

The Business Object Documents must be expressed in XML Schema during this phase. New BODs may be constructed or existing BODs may be modified as part of this process. More detail is included in the activities section below.

4. XML Examples

It is incumbent upon the Working Group to develop examples of the Schema’s with a real instance of an XML document using realistic data. Most XML tools will do this automatically from the Schema.

Activities of the Construction Phase

BUILDING THE SCENARIO:

The design of the integration scenario drives the model for integration. The scenario needs to be designed and thought through before the BODs can be designed. The scenario design process leads to the “discovery” of the BODs necessary to complete an integration scenario.

When working through the problem, think of using the following as a checklist to ensure that all needs of the integration scenario are met. Come back to this list as you work through the project.

<table>
<thead>
<tr>
<th>Component Identification</th>
<th>This creates the boxes in the scenario diagram.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process mapping &amp; reconciliation</td>
<td>This creates the arrows in the scenario diagram.</td>
</tr>
<tr>
<td>Data mapping &amp; reconciliation</td>
<td>This creates the data structure and elements in the BOD chapter.</td>
</tr>
<tr>
<td>Data synchronization</td>
<td>Think of sequence in the scenario. What needs to be synchronized before transaction flow begins.</td>
</tr>
<tr>
<td>Transaction Processing</td>
<td>What are the transaction flows necessary between business software components?</td>
</tr>
<tr>
<td></td>
<td>Does this scenario require</td>
</tr>
<tr>
<td></td>
<td>What is the sequence of transactions or business events? This sequence is captured in Section Two of OAGIS in the scenario description chapters.</td>
</tr>
<tr>
<td>Query and Reporting</td>
<td>What are the requirements for asking for information between business software components? This will help determine if the Verbs Get and Show are required.</td>
</tr>
</tbody>
</table>
NOTE: Try to reuse existing content where possible.

To start building the scenario, we suggest you start with existing Scenarios for re-use. You can use any tool you prefer to build the UML Diagram, as the OAGi staff will import it into the complete OAGIS model. It would be best if you used a tool that others are using, and the OAGi staff can help you obtain the right tool.

It is very important to capture all of the information about the integration scenario, not just the picture.

It is important to capture the assumptions about the integration scenario. This includes information such as the business environment. Examples of this include single cycle or dual cycle accounting, process or discrete manufacturing, request and reply or publish and subscribe assumptions. Other examples would be whether this is an external process or an internal process. Take care; many internal processes are becoming external processes in today's world.

Other information to be documented includes the component definitions, process flow sequence and interdependencies, and any exception handling necessary under the specific circumstances.

BUILDING THE BOD:

OAGIS requires the use of the most recently approved OAGIS Naming and Design Rules for building schemas. Failure to do so will result in non-approval of the deliverables.

Once you have the data design the way you want it, it is easy to pick the Verbs you require. Use the requirements from the Scenario to make these decisions. OAGi also has a separate document on picking and using Verbs you may want to refer to during this step of the process.

Whether you are building a new BOD or modifying an existing BOD, please check with the OAGi Chief Architect to ensure that you have the most current revision of content.

When developing new Elements, Components, or Nouns, make sure that the definition is clear and concise. Use examples and synonyms where possible to clarify semantic meaning.

If there is a generally accepted definition of a term from an industry accepted body of work, use it wherever possible. Examples of this are the Financial Accounting Standards Board (FASB), and the American Production and Inventory Control Society (APICS).

Please Note: If the value or values for a Element can be specified, please define the value.
If there is a universally accepted standard for values of a Element, use the standard. Examples of previously adopted standard values include ISO639/2 for Language and ISO1000 for Unit of Measure.

Duplicate names for Elements, Components, and Nouns are not allowed. Please be careful when developing these.

When developing new element names, use the Data Types that OAGIS has included. These provide an important consistency to the OAGIS specification both inside and when mapping to other standards.

**DOCUMENTATION**

All elements, attributes, and components must be fully documented. In the final versions of OAGIS deliverables, these must be in the annotations portions of the Schema. Please look at the existing schemas for examples.
Review and Approval Phase

Purpose of the Review and Approval Phase
The purpose of the Review and Approval Phase is to create buy in from the members of the Open Applications Group, to ensure that members can and will support the work, and to ensure quality deliverables.

Deliverables of the Review and Approval Phase
1. Final version of Integration Scenarios.
2. Final versions of BODs, including all documentation.
3. Completed a 30 day or 60 day Public Review depending on the scope of changes. This decision will be recommended to the Policy Board by the OAGi staff and the Policy Board will make the final decision.
5. Approval of Public Review Change Requests by the originating Working Group.
7. Affirmative vote by the OAGi Board of Directors.

Summary of Activities of the Review and Approval Phase
1. Review final deliverables with OAGi Chief Architect.
2. Work with the OAGi Architect to finalize the deliverables for Public Review.
3. OAGi staff will execute the formal public review period.
4. OAGi staff tracks all change requests during the Public Review Process.
5. OAGi Quality Working Group staff reviews, categorizes, and consolidates the change requests from the Public Review with the related Working Groups.
6. Review and disposition the consolidated change requests with the affected Working Groups.

8. Present the results to the OAGi Policy Board for final approval.

The overall Review and Approval process is pictured below

OAGIS Public Review Process

The purpose of the OAGIS public review process is to ensure the quality of the work, to preserve the integrity of the open standards process, and to give the public a good idea of what they will be seeing in the form of the standard in the not too distant future.

The OAGi staff may bundle the work with other completed projects and merge it all into the base OAGIS for an overall planned release of OAGIS. This is done with strict source code processes and revisioning processes. OAGi manages versions of OAGIS as a software vendor manages their software releases.

The OAGi staff will build a web site page for the public review with information on the review, including a summary of the content and the duration of the review. The new version of OAGIS will be posted for download and a registration page will be built.

The public review is then announced and also made prominent on the front of the OAGi web site.

During the public review, reviewers will be able to download the version of OAGIS in question, review it, and provide feedback with a feedback form posted on the OAGi web site. OAGi staff will gather and track all comments in preparation for the close of the review.

Once the public review is completed, the release candidate of OAGIS will be taken off the web site. All comments are reviewed, and determinations made on accepting or rejecting each one. All work accepted will be incorporated in the final version of OAGIS in preparation for the Publication Phase.
Publication Phase

Purpose of the Publication Phase

The purpose of the Review and Approval Phase is to bring the document from the development process and complete final editing, translate to HTML and publish on the OAGi web site, and create downloadable zip files for downloading from the OAGi web site.

Deliverables of the Publications Phase

1. Final OAGIS Specification available for download from the OAGi web site, including Documentation, Scenarios, BODs, Component libraries, sample XML, and any other deliverables deemed necessary.

Activities of the Publication Phase

1. The OAGi staff Architect will merge the work of all of the Working Group leaders into a final version for publication.

2. All identified defects will be fixed at this time.

3. A press release may be constructed and published announcing the new release of OAGIS.
Working on Open Applications Group

Working Groups

Introduction

You must be a member of the Open Applications Group to participate in a Working Group. All Working Group members must sign the Project Definition that Working Group.

It is possible that certain “invited experts” may be allowed when invited by the Working Group Leader and approved by the OAGi staff or Board of Directors. These “invited experts” must also sign the IP Policy Agreement and the Project Definition signature page as all Working Group members do in order to participate.

Working Group members must participate in the process if they want their contributions to be included in the final deliverables of the Working Group. This participation may include email lists, teleconferences, and face to face meetings. It is not required that members attend all Working Group meetings in order to vote on the Working Group content. If a member misses too many meetings, though, the Working Group Leader may ask the member to abstain from voting because of their lack of knowledge and participation.

NOTE: All face to face meetings and teleconferences must take attendance and note in the meeting minutes.

Working Group Leader Role:

The Working Group leader may come from any OAGi member if good standing.

The Working Group Leader is usually the primary author of the Working Group deliverables. This is not required if other members of the Working Group are willing to collaborate on developing deliverables.

The Working Group Leader presents the status of the project at Working Group Meetings. Usually between face to face meetings the Working Group Leader may call one or more teleconferences with the Working Group Members to continue the work remotely.

The amount of effort that goes into this activity is determined by the capacity of the Working Group Leader to this work in addition to their regular job responsibilities.

This may be driven by several factors, including the date the Working Group Leader wants to complete the project. Often the date is based on the Working Group Leader’s requirement to complete something so they can ship product for their organization.
Other Roles:

The other roles on the Working Groups generally require less time commitment, although it is important to remember that a member’s time commitment is controlled by their ability to contribute time and effort.

There are two other roles for persons on OAGi Working Groups. They include:

**CONTRIBUTOR ROLE**
The contributor is an active member of the workgroup and participates in the meetings, emails and may contribute and work on the content of the Working Group. This is a voting role as well.

All Contributors must be OAGi members with the exception of the Invited Expert Role as noted below. All Contributors must sign the Working Group specific IP Policy based on the Project Definition.

**INVITED EXPERT ROLE**
The OAGi Working Group Leader may, at their discretion and with the approval of OAGi Staff or the Board of Directors, invite certain non-member experts to contribute to the Working Group. This person must also sign the OAGi IP Policy and the signature page of the Project Definition for the Working Group they are participating in before they can participate in this role.

This is a non-voting role.