

HR-XML Consortium

3.3 Assessments

Specifications

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Assessment Overview

HR-XML's Assessments support the procurement of assessment services and the integration of assessment results.

The three key assessment schemas include:

Assessment Order: Defines a set of information necessary to execute an order for an employment test or assessment.

Assessment Report: Provides scores and other details to fulfill or respond to an assessment order.

Assessment Catalog: Contains a set of information about assessment services or tests available to a customer. Enables the discovery of "Package IDs" which are necessary to place an order using HR-XML's assessment order specification. A "Package" may consist of one or more assessment instruments. An "assessment package" is the marketable unit of assessment or testing services that may be ordered.

Enhancements

The following enhancements were made in the 2013 release. Typically, the Applicant Tracking System would be acting as the RequesterParty, the Test Assessment vendor would be acting as the SupplierParty, and the end client (the user of the ATS) would be acting as the CustomerParty.

- Added RequesterParty to Assessment Order, and Report.
- Added CustomerParty and RequesterParty to Assessment Catalog.

Actors

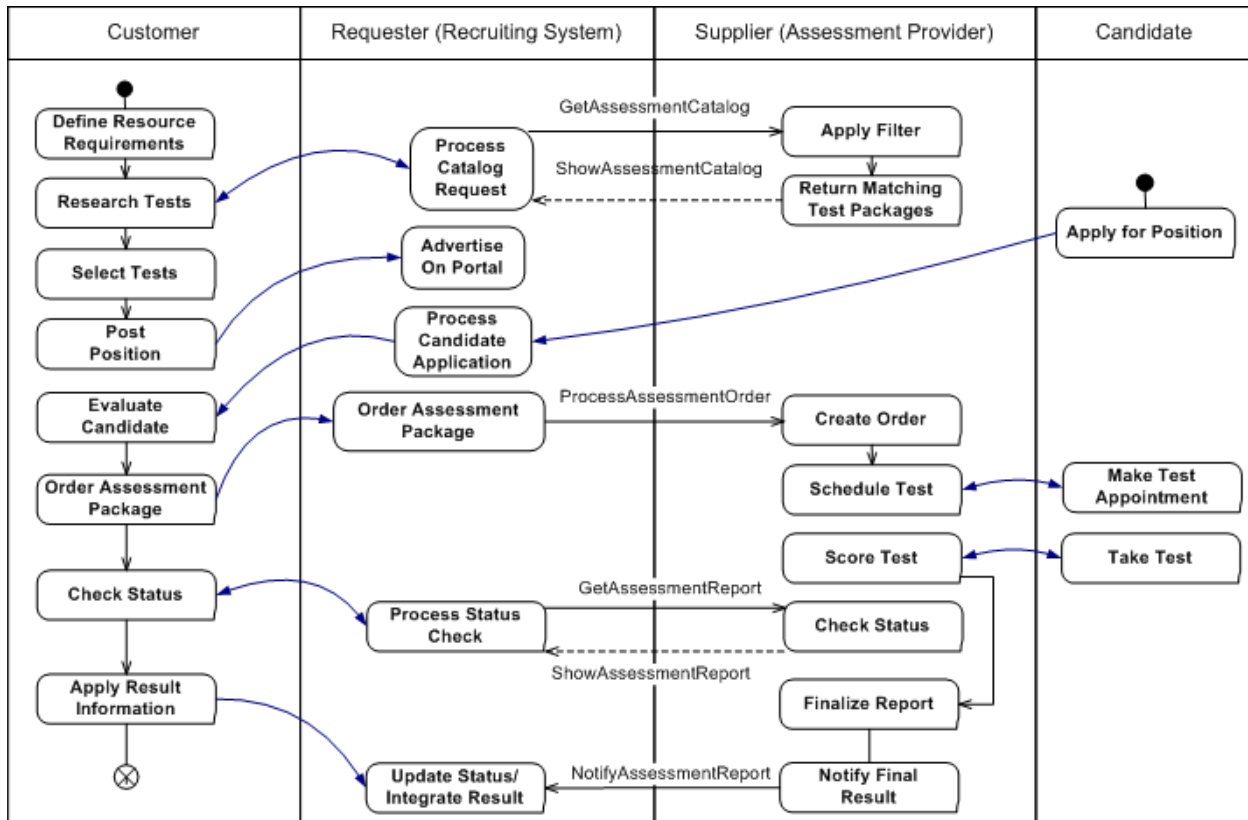
Many assessment integration scenarios are possible. In a typical scenario, the two principal system actors would be a recruiting system acting in the role of requester and an assessment provider acting in the role of supplier:

- **Recruiting System.** A system or service that provides capabilities such as hiring workflow management, position requisition creation and management, candidate intake and application portal services, applicant tracking, decision support, and integration services with external service providers. These systems most commonly are referred to as an "Applicant Tracking System". The system can be a module within a broader ERP suite or talent management system.
- **Assessment Provider.** An Assessment Provider is the organization responsible for accepting and fulfilling assessment orders. This may or may not be the same organization that is the test publisher or owner of the test content. The term "assessment" can encompass a wide variety of tests, screenings, and instruments. Assessments can include tests of both "hard skills" (generally, technical abilities acquired through training and education) and/or "psychometrics"

(a diverse range of abilities or personal characteristics such as customer orientation, analytical thinking, leadership skills, team-building skills, listening skills, diplomacy, etc.).

- **Assessment Subject.** This is often a candidate being considered for a position.
- **Employer recruiter.** The manager who places the orders and applies the results.
- **Third-party test centers.**
- **Requesters.** Core HR system, Screening Service Provider, or another Assessment Provider.

One of many possible integration scenarios is illustrated below and explained step-by-step.



1. The process begins with the identification and approval of a new resource requirement. The hiring manager together with the employer's HR staff review the knowledge/skills/abilities (KSAs) and competencies associated with the new position(s). On the basis of that analysis, the HR staff may want to research and identify assessments relevant to the selection of candidates.
2. The HR professional logs into the employer's hosted applicant tracking system, which is integrated with a number of assessment service providers via HR-XML-based interfaces. The HR professional fashions a query against one provider's catalog of assessments based on the competencies required for the position.
3. The recruiting system communicates catalog queries using HR-XML's GetAssessmentCatalog BOD. The ShowAssessmentCatalog that is returned includes assessment packages matching the query.
4. After reading, comparing options, and discussing them with one of the assessment provider's specialists, the HR professional chooses a suitable assessment and uses the associated PackageID to preconfigure the assessment within the position's hiring workflow.
5. The HR professional posts the job. Candidates begin to submit their applications through the recruiting system's employment portal and integrations with job boards.

6. After weeding out candidates that do not meet the basic position qualifications and conducting telephone screening interviews, the hiring manager advances qualified candidates to the level in the hiring workflow where assessments are ordered.
7. The particular assessment that was ordered requires proctoring and needs to be scheduled at a third-party test center. Because the assessment provider will take care of scheduling with the candidate, the assessment order includes the candidate's full contact information.
8. The recruiting system communicates orders to the assessment provider using the `ProcessAssessmentOrder` BOD. The assessment system responds with an `AcknowledgeAssessmentOrder` BOD.
9. A few days have passed. The hiring manager is eager to fill the opening and logs into the recruiting system to obtain a status on the assessment ordered for a particular candidate. `AssessmentStatus` is a property of the noun `AssessmentReport`. The recruiting system sends a `GetAssessmentReport` referencing the order ID that was returned within the `AcknowledgeAssessmentOrder`. The `ShowAssessmentReport` returned from the status inquiry shows a status of "Scheduled" - meaning that a test appointment has been made, but the candidate has not yet tested.
10. The candidate keeps his/her appointment at the testing center and takes the test, the results of which are communicated back to the assessment provider (this interaction is not shown in the above diagram and is assumed to be "out of channel," but could conceivably be accomplished using the `NotifyAssessmentResult` BOD).
11. The assessment provider receives the "raw" test results from the testing center and applies a scoring algorithm to calculate the final results. The test is automatically scored, but then reviewed by a staff psychologist before it is released to the client. (Note that this exchange is not depicted in the above diagram, but could be handled using the `NotifyAssessmentReport` BOD).
12. Thus far, the data exchange has been accomplished by the recruiting system making calls to web services hosted by the assessment provider. However, to provide the final assessment result, the assessment company calls a web service hosted by the recruiting system when it sends a `NotifyAssessmentReport` back to fulfill the order. Alternatively, the recruiting system could poll the assessment system with a `GetAssessmentReport` to retrieve any report available.

Variations

The above is one of many possible integration scenarios. Many others are possible. For example, among possible variations is for the employer or requester to pre-order a given number of test sittings (e.g., 50 assessments). The assessment provider would return the credentials or "passcodes" for access to the tests. The employer then might distribute the passcodes to prospects at a job fair or other venue.

Package IDs

The term "Package" is used to describe a set of assessment services that can be ordered as a unit. Such orders generally are accomplished by referencing an associated "Package ID." Packages may be of general applicability or they can be created based on the needs of a specific customer.

Delivery Formats and Test Access

HR-XML's assessment specifications address the procurement of assessment services and the integration of assessment results. The specifications do not address test content or delivery, nor is the use of the specifications dependent on a particular test format or type of delivery.

There are many types of assessments. Assessments can include tests of both "hard skills" (generally, technical abilities acquired through training and education) and/or "soft skills" (a diverse range of abilities or personal characteristics such as customer orientation, analytical thinking, leadership skills, team-building skills, listening skills, diplomacy, etc.). HR-XML's assessment specification is independent of test content so it can readily be used for both hard and soft skill tests.

Test Delivery and Scheduling

It is possible for assessments to be integrated directly within a recruiting process such that the candidate, after completing an employment application, is seamlessly redirected to the assessment provider's system. However, tests do not have to be delivered online nor do they have to be provided in a synchronous manner to use the HR-XML Assessment specification. Tests can be delivered at third-party testing centers, mailed or faxed to the candidate, or sent via email.

An AcknowledgeAssessmentOrder BOD is sent in response to an order request. A key way that the HR-XML AssessmentOrder specification handles test delivery and access is for the assessment provider to return the "AssessmentAccess" component within the AcknowledgeAssessmentOrder. This component identifies the communication means associated with the test and provides an access credential. This credential can be used in an online, realtime redirection from an application site to the assessment site or it could be sent to the candidate via email (or any other communications mechanism) with directions to a designated testing facility.

So while some assessments are available on-demand, others need to be scheduled. Whether the assessment supplier or the assessment requester is responsible for scheduling depends on the employer's hiring process and its arrangements with the assessment provider. If the assessment provider is responsible for scheduling, then sufficient contact details for the assessment subject must be provided within the AssessmentOrder. If the requester handles the scheduling, less information can be provided in the order. This information could even be reduced to an oblique identifier for the assessment subject instead of communicating any personally identifying information.

Overview

HR-XML's AssessmentOrder noun provides operations for creating, acknowledging, and canceling assessment orders.

Triggers

The process begins when a need for a pre-hire or employee assessment is identified and the expenditure for services authorized. Event categories that could trigger the collaboration, include:

- **Candidate Qualification:** Broadly speaking, this refers to a stage within the employer's hiring process at which the candidate is considered to have met the basic job qualifications or otherwise still remains within a pool of candidates considered for a position after the elimination of unqualified candidates. The process and policy governing how candidates are qualified varies widely from employer-to-employer. The key aspect of "qualification" as an event, is that it is likely to trigger other hiring or evaluation processes, such as the scheduling of on-site or follow-up interviews and pre-employment assessments and screenings. Qualification often is not a single threshold, but a series of graduated thresholds, each of which might serve as an event trigger.
- **Candidate Application:** A candidate or job seeker applies for a job. The legal definition as to what constitutes job application varies by jurisdiction, but broadly speaking, application is recognized as occurring when: 1. the employer has acted to fill a particular position, 2. the individual has followed the employer's standard procedures for submitting applications, and 3. the individual has indicated an interest in the particular position.
- **Employee Development Assessment:** Performance appraisals, succession management planning, career development, and similar talent management activities can require or benefit from employee assessments to inform decision making. The completion of an assessment may trigger other activities, such as the preparation of developmental plans.

Precondition

The HR-XML specification relies on the concept of an "assessment package." An assessment package is a pre-defined set of services that are sold as a unit. A package may represent a single test instrument or a combination of individual tests. A precondition for the collaboration is that the requester have a valid Package ID for the assessment package to be ordered.

An assessment customer and screening provider typically agree in advance on the scope of packages that are suitable for the customer's requirements. This agreement might come after the customer's consultation with the assessment provider's experts. Packages and their associated PackageIDs also might be discovered by querying an assessment provider's catalog of services.

Assessment Report

Overview

After an assessment subject has tested and the test score(s) calculated, a report is sent back from the assessment supplier to the requester. An AssessmentReport document also can be used to report interim status before an order is complete.

An AssessmentReport noun can contain one or more AssessmentResult components. Some assessment packages may consist of multiple tests or have multiple scored results associated with them. An AssessmentResult typically includes an overall score and detailed break-outs of component scores.

In addition to data, a report also may include formatted material, such as an image or pdf. Binary content can be embedded as binary64 encoded data or might be attached or referenced at the URI at which it is located.

Triggers / Preconditions

- **Assessment Completion:** Assessment completion generally means that the subject has completed testing and that the results have been scored. In some cases, scoring is automated and takes place in real-time immediately after test completion. In the case of other assessments, scoring may need to be completed by qualified human resource (an organizational psychologist or other expert) so that test completion and assessment completion (the return of scored results) may take place at different times. The completion of an assessment may trigger other activities, such as hiring or promotion decisions or the preparation of developmental plans.
- **Assessment Status Required:** Some assessments are completed at the time an applicant applies online and are scored and returned in near real-time. Other assessments must be scheduled so they can be taken at a testing center. Some types of assessments are subject to review by an expert after being scored. After an assessment order has been placed, a hiring manager may want to check the status of an assessment to learn if a particular candidate has scheduled a test, whether testing has taken place, or whether review is pending.

Overview

The AssessmentCatalog noun provides a way for customers to retrieve information about an assessment provider's tests and assessment services.

Retrieval of an assessment catalog could help inform the selection of an assessment instrument suited for a particular hiring or developmental requirement. Assessment services are made available as pre-defined "packages". Retrieval of an assessment catalog also provides a way to obtain the "PackageIDs" that customers need to order assessment packages. Thus, retrieving catalog information could be a step in the configuration of an assessment within the hiring work flow of an applicant tracking system.

Triggers / Preconditions

Examples of events that could trigger this collaboration, include:

- **Candidate Qualification:** Broadly speaking, this refers to a stage within the employer's hiring process at which the candidate is considered to have met the basic job qualifications or otherwise still remains within a pool of candidates considered for a position after the elimination of unqualified candidates. The process and policy governing how candidates are qualified varies widely from employer-to-employer. The key aspect of "qualification" as an event, is that it is likely to trigger other hiring or evaluation processes, such as the scheduling of on-site or follow-up interviews and pre-employment assessments and screenings. Qualification often is not a single threshold, but a series of graduated thresholds, each of which might serve as an event trigger.
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- **Employee Development Assessment:** Performance appraisals, succession management planning, career development, and similar talent management activities can require or benefit from employee assessments to inform decision making. The completion of an assessment may trigger other activities, such as the preparation of developmental plans.

Assessment Order

Refer to the related examples in the instance folder.

Process Assessment Order

This is an example of using ProcessAssessmentOrder to create an order for an assessment. Note the following:

- The actionCode attribute of ActionExpression is specified as "Add."
- The ActionExpression is specified as "/ProcessAssessmentOrder/DataArea/AssessmentOrder."
- PackageID specifies the test or set of services ordered.
- The assessment subject's contact information is provided. This would be necessary where the assessment company will contact the subject to schedule a testing time and place. Note that where the requesting company schedules the test, no personally identifying information need be communicated to the assessment provider - only an opaque identifier for the assessment subject would be necessary.

Acknowledge" is a response verb. ResponseExpressions are used to point to two new pieces of data that the provider has associated with the order: an OrderID and AssessmentAccess.

As discussed in the separate data management document, trading partners need to have well defined and understood approaches to the way they handle data. In the example below, the acknowledgement includes only the additional incremental components (OrderID and AssessmentAccess). Trading partners relying on a "snapshot" or "full-file" data management approach might provide the entire AssessmentOrder including the two modifications.

ProcessAssessmentOrder-Example-1.xml

AcknowledgeAssessmentOrder-Example-1.xml

Cancel Assessment Order

Whether and how a customer can cancel an assessment order requires an understanding between trading partners. In the scenario below, it is assumed that a "business calculation" is required regarding cancelation requests (thus the use of the Cancel verb versus using the Process verb and a Delete action code).

- An "Incremental" style update is assumed (see separate document on Data Management).
- The ActionExpression is scoped at the /CancelAssessmentOrder/DataArea/AssessmentOrder level. "Delete" is specified as the actionCode.
- The associated DocumentID is specified. No other content is provided.

CancelAssessmentOrder-Example-1.xml

Additional Examples

ProcessAssessmentOrder-Example-2.xml

Assessment Report

Get/Show Report

This example and the next show AssessmentReport used in an operation to retrieve an assessment report or status. The response communicates an interim status (that the assessment has been scheduled) in response to the above query.

GetAssessmentReport-Example-1.xml

ShowAssessmentReport-Example-1.xml

Notify Report

NotifyAssessmentReport is used to communicate a final assessment report or interim status (AssessmentStatus is a property of AssessmentReport/AssessmentResult). This generally would be sent by the assessment provider when calling a service hosted by the assessment requester. In other words, NotifyAssessmentReport is a "push" operation whereas GetAssessmentReport is a "pull":

The example communicates assessment report with an "Order Complete" status.

NotifyAssessmentReport-Example-1.xml

Get Assessment Status

AssessmentStatus is a property of AssessmentReport. The recommended way to retrieve the status of an order is with a GetAssessmentReport request that includes the appropriate data management instructions. Below is an example of such a request:

This request is designed to retrieve an Assessment Report where the following fields selection criteria are satisfied:

- OrderID = 100-777999-33
- @schemeAgencyID = AssessCo.com
- @schemeID = Test Order No

GetAssessmentReportStatusRequest-Example-1.xml

Additional Examples

ProcessAssessmentReport-Example-2.xml

ShowAssessmentReport-Example-2.xml

Get/Show Catalog

The example communicates a request to be applied against a test provider's catalog. The request communicates a query for all packages related to the competency "Verbal Comprehension." The ActionExpression scopes AssessmentCatalog/AssessmentPackage as the level to be evaluated and retrieved. Packages are selected where the field "CompetencyName" equals "Verbal Comprehension."

GetAssessmentCatalog-Example-1.xml

ShowAssessmentCatalog-Example-1.xml

NotifyAssessmentCatalog would be use to push information to a customer about changes to existing packages, the availability of new packages, etc.

Per the verb guidelines, a NotifyAssessmentCatalog would be responded to with an AcknowledgeAssessmentCatalog.

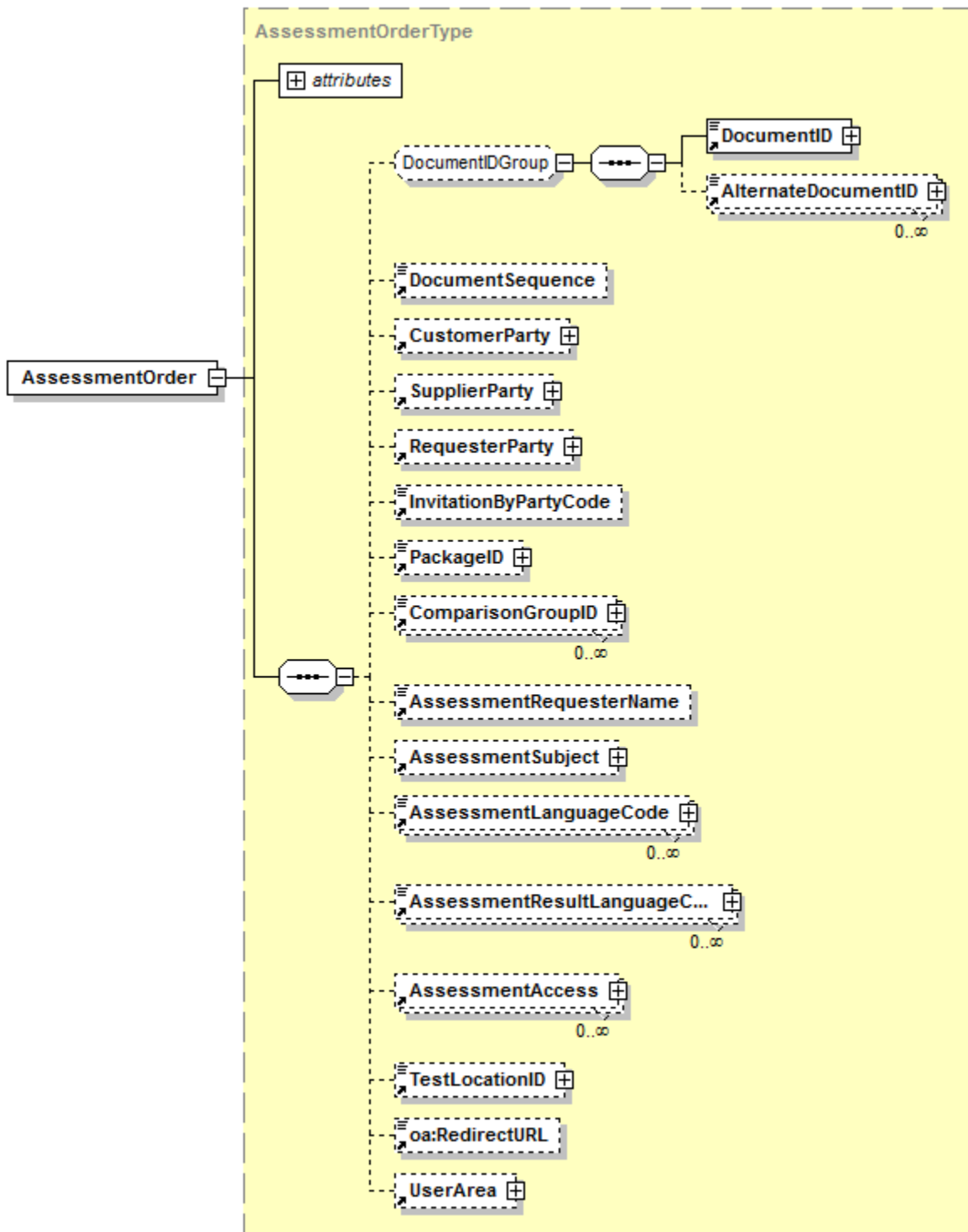
NotifyAssessmentCatalog-Example-1.xml

Additional Examples

ProcessAssessmentCatalog-Example-1.xml

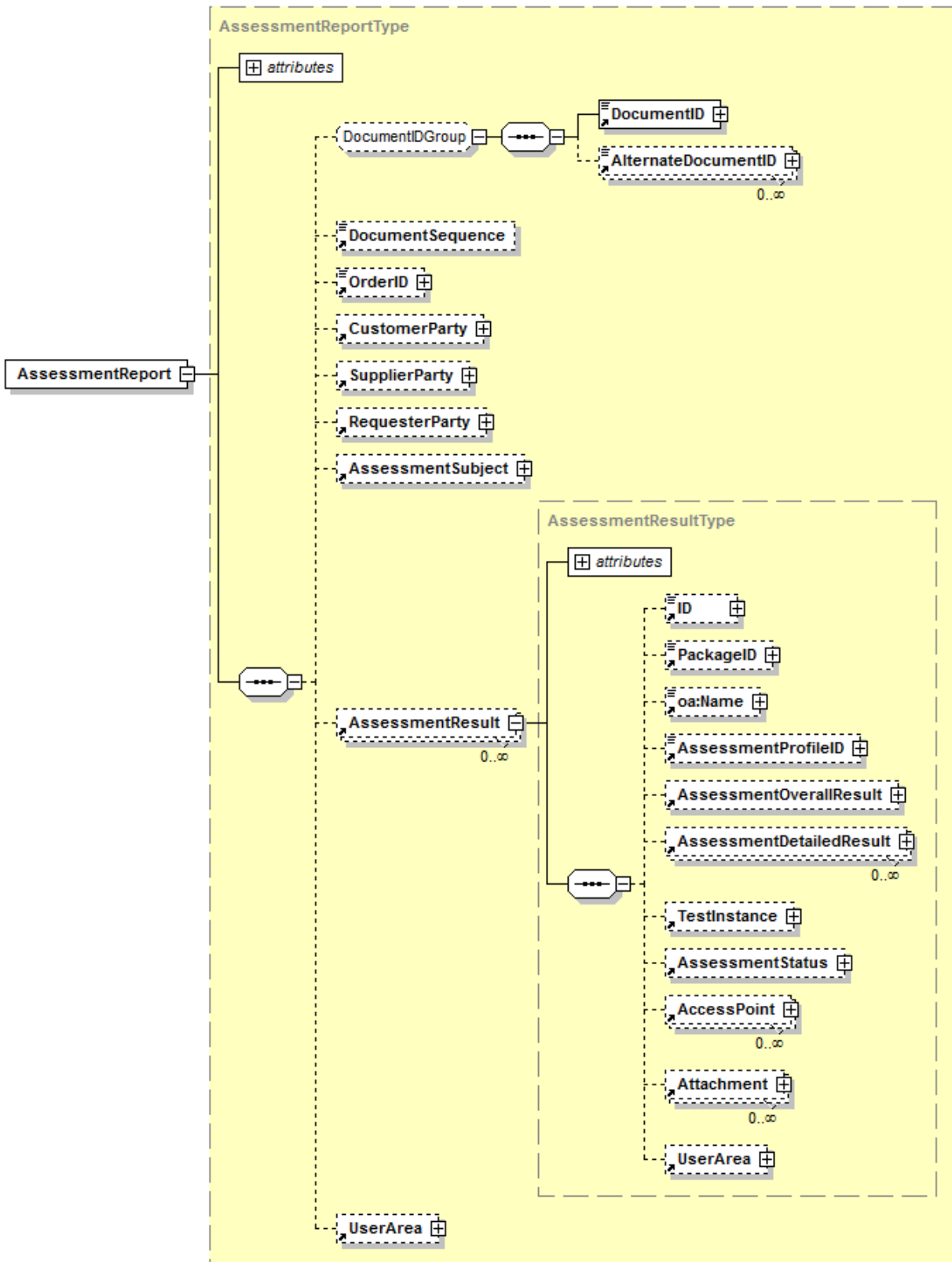
Appendix B: Noun Layouts

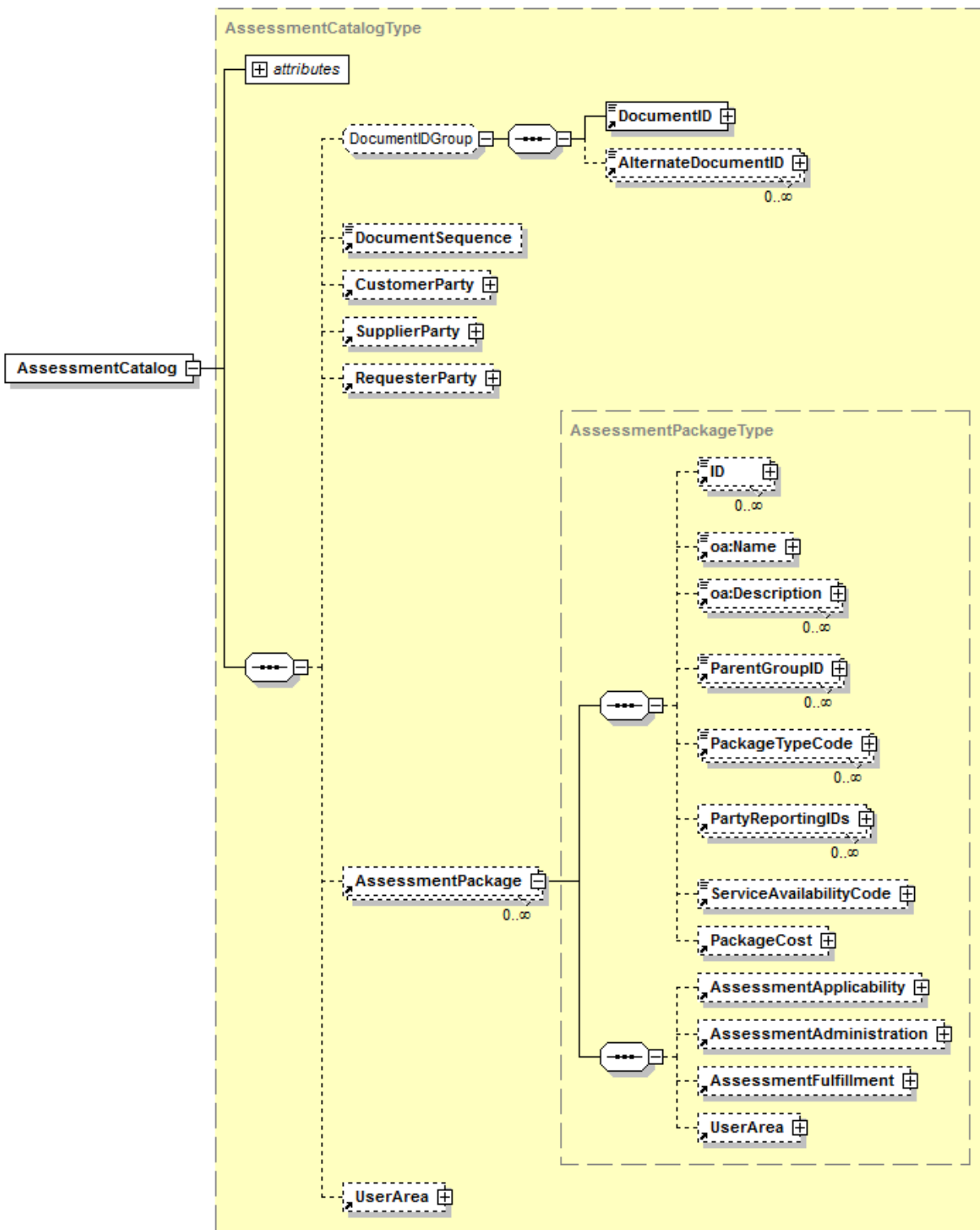
Assessment Order



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Appendix C: Business Object Documents (BOD) Diagrams

The following diagrams portray a potential set of services between a requester and supplier.

