

Ecosystem Toolkit

Glossary of Terms

Building a Trusted Environment: Event-based Attribute Assurance

Alpha Project artefact

September 2020



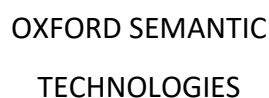
PROJECT PARTICIPANTS

The Open Identity Exchange (OIX) is a non-profit, technology agnostic, collaborative cross sector membership organisation with the purpose of accelerating the adoption of digital identity services based on open standards. OIX's broad membership and independent nature have seen it develop a significant body of digital identity research, and it is a significant influencer working towards the development of a digital identity market.

The following individuals and organisations participated in the OIX Alpha Project that formed the basis of this Report:

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- GDS: Chris Allgrove
- Food Standards Agency: Sid Kalita
- Future Borders: Ross McDonald, Stephen Cowx, Tom Robinson, Paul Evans, Jake Luscombe
- HMRC: Nick Davies, Wayne Robinson
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Action Term

The subset of terms within the [Core Ontology](#) that are associated with an [Administration Protocol](#). In event-driven architecture, Action Terms are often referred to as *command* messages. Whenever the [Owning Entity](#) writes a [Core Ontology Event](#) containing an Action Term, the [Expert System](#) must implement the [Administration Protocol](#) that is associated with that term - i.e. the [Expert System](#) does exactly what its [Owning Entity](#) has asked it to do, in line with the [Administration Protocol](#) set out in the [Core Ontology](#).

Administration

One of the [Responsibilities](#) that must be deployed to comply with the [Technical Specification](#), containing the instruction set used to provision and configure the [Expert System](#).

Administration Protocol

The execution of code by an [Expert System](#) to deliver core functionality and further configure the [Expert System](#). Administration Protocols are initiated by the writing of their corresponding [Action Term](#) by the entity interacting with the [Expert System](#).

Affordance

The possible actions that entities can take, indicating what entitlements they have at that point in time and consequently how they may interact with an [Expert System](#).

Agent

The role played by an [Expert System](#) acting on behalf its [Owning Entity](#) in all its interactions.

Assertion

The statement of a fact or a belief by an entity, in the form “X says that Y is true”. The [Event](#) aims to structure information as Assertions, in which the provenance of the Assertion is as important as its content. This provides a consistent basis for trust within the fundamental structure of information itself.

Note: the OIX Guide to Trust Frameworks and Interoperability uses a different definition for this term. Please see this definition [here](#).

Best Practice

Recommendations for the architecture, deployment and configuration of [Expert Systems](#) that do not form part of the [Technical Specification](#).

Collaboration Framework

Collaboration Frameworks structure and delineate roles within an [Ecosystem](#), setting rules, procedures, and other informational guidelines, as well as specifying the basis for enforcement. Collaboration Frameworks are shaped by the goals, mandates, incentives, structures and processes of the [Ecosystem Participants](#) that are seeking to collaborate over a common domain of interest.

Note: we deliberately do not use the term Trust Framework (as defined by the OIX Guide to Trust Frameworks and Interoperability) as a Collaboration Framework may be predicated on an *absence* of trust. The default settings of the Rules of Engagement are an example of such collaboration: i.e. predicated on a “take it or leave it” basis.

Condition

A Boolean condition that can be evaluated as True or False by an [Expert System](#). Together with [Filters](#), Conditions are used to construct [Scopes](#), which describe a conditional scope of action.

Core Ontology

The concepts that are used by the [Technical Specification](#) to describe the domain of interest comprised of provisioning, instantiating, configuring and operating an [Ecosystem](#). The concepts are given meaning in that domain by the description of the properties that they hold and the relationships between them.

Core Ontology Event

An [Event](#) that includes a term from the [Core Ontology](#) in its body. A Core Ontology Event therefore describes a facet of the [Administration](#) and/or configuration of an [Expert System](#).

Directory

The discovery, identity proofing and certification of entities that have deployed an [Expert System](#). The current [Technical Specification](#) does not include Directory as a required [Responsibility](#), but it represents a potential future extension of scope.

Domain of interest

A particular field of thought or activity in which one or more entities has an interest.

Ecosystem

A community of entities that collaborate to share information over a common domain of interest via the deployment of two or more [Expert Systems](#).

Ecosystem Ontology

The concepts that are used by a given [Ecosystem](#) to describe the domain of interest that is common to those [Ecosystem Participants](#).

Ecosystem Participant

Entities that use the [Ecosystem Toolkit](#) to collaborate. Two or more Participants collaborating together are collectively referred to as an [Ecosystem](#).

Ecosystem Toolkit

The collective term for the [Technical Specification](#) and [Rules of Engagement](#) which aim to make it easier for entities to collaborate as an [Ecosystem](#) through the deployment of repeatable patterns.

Entitlement

The fact of having a right to something, or having been granted permission to do something.

Event

A piece of information consistently structured as a machine-readable [Assertion](#), including key aspects of the [Assertion's](#) provenance as well as its content. For more detail, refer to the [Refinery](#) section of the [Technical Specification](#).

Event Producer

The [Legal Entity](#) that is responsible for the system acting as [External Feed](#), and which generated the [Assertion](#) being refined into an [Event](#).

The Event Producer is often the sole [Rights Owner](#) over the resulting Event, although this is not always the case. An Event Producer may be operating an [External Feed](#) that has been used to capture an [Assertion](#) on behalf of another [Rights Owner](#) (e.g. a customer of the Event Producer).

The [Technical Specification](#) requires that the Event Producer is identified for every [Assertion](#) that is refined into an [Event](#).

Note: In the context of the OIX Trust Framework, the Event Provider may be considered equivalent to the (Evidence) Issuer or Identity Provider role.

Event Provider

The [Expert System](#) that refines an [Assertion](#) into an [Event](#), and publishes it to a given [Ecosystem](#).

The [Technical Specification](#) requires that the Event Provider is identified for every Event that is shared between [Expert Systems](#) within a given [Ecosystem](#).

Note: In the context of the OIX Trust Framework, the Event Provider may be considered equivalent to the Broker role.

Event Store

One of the [Responsibilities](#) that must be deployed to comply with the [Technical Specification](#), relating to the persistent storage of [Events](#) written to the [Expert System](#).

Exchange

One of the [Responsibilities](#) that must be deployed to comply with the [Technical Specification](#), the Exchange acts as the gateway connecting an [Expert System](#) to the outside world, and through which the [Owning Entity](#) configures and instructs the [Expert System](#).

Expert System

A deployment of all the [Responsibilities](#) required under the [Technical Specification](#).

External Feed

A system that acts as an external source used to input information into an [Expert System](#).

Filter

A set of [Filter Elements](#).

Filter Element

A component of a [Filter](#) that represents one or more variable arguments in an [Event](#).

Legal Entity

An individual, company, or organization that has legal rights and obligations.

Ontology

The definition of the concepts and their relationships that are used to describe a given domain of interest.

Owning Entity

The entity that deploys and provisions an [Expert System](#). The [Expert System](#) acts on behalf of its Owning Entity in all its interactions.

Participant

See [Ecosystem Participant](#).

Protocol

The execution of code by a system (or collection of systems) to deliver given functionality.

Reasoning Engine

The execution of logic-based reasoning to infer conclusions from a given set of information. The current [Technical Specification](#) does not include a Reasoning Engine as a required [Responsibility](#), but it represents a potential future extension of scope. A [State Machine](#) is an example of a type of Reasoning Engine that could be deployed.

Note: an Assurance Model (as defined by the OIX Guide to Trust Frameworks and Interoperability) would be deployed as a Reasoning Engine, as it defines the types of evidence and methods required to achieve a give level of assurance. For example, a

Boolean Reasoning Engine might be used to evaluate whether a given attribute or set of attributes met the conditions set out in a given Assurance Model to meet a given Level of Assurance.

Refinery

One of the [Responsibilities](#) that must be deployed to comply with the [Technical Specification](#), relating to the transformation of information into a machine-readable representation of an [Assertion](#) in the structure of an [Event](#).

Registry

One of the [Responsibilities](#) that must be deployed to comply with the [Technical Specification](#), providing a registry of all the 'things' that have been declared as nodes, including the [Ecosystem Participants](#) that form part of an [Ecosystem](#) and their associated [Entitlements](#).

Responsibilities

Functional areas of concern that collectively deliver the minimum required to deploy an [Expert System](#) support an [Ecosystem](#).

Rights Owner

The [Legal Entity](#) or Entities that exercise rights over the content of an [Assertion](#).

The [Technical Specification](#) requires that any [Rights Owner](#) (other than the Event Provider) is identified as part of the structure of an [Event](#).

Rules of Engagement

The document specifying the default collaboration framework that must be deployed in order to collaborate as part of an [Ecosystem](#).

Scope

A resource that describes a set of sets of pairs of [Conditions](#) and [Filters](#), defining a potential scope of action for a given entity. Once the [Condition](#) has been met, the scope of action is afforded to the entity as an entitlement.

State machine

A device that stores the status of something at a given time and can operate on input to change the status and/or cause an action or output to take place for any given change.

Technical Specification

The document specifying the technical considerations that must be deployed in order to implement an [Expert System](#).

Triple

The atomic data structure in the Resource Description Framework (RDF) data model. A triple is a set of three entities that codifies a statement about semantic data in the form of subject-predicate-object expressions (e.g. "Bob is 35", or "Bob knows John").

Tuple

A data structure consisting of multiple entities. A Triple is a Tuple comprising of three entities. An Event is a tuple comprising of (at time of writing) nine entities.