

xAPI Key Features

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Experience API

Track learner data of learning experiences, broadly defined



Enable machine-readable communication (interoperability), storage, and access of the data

Generic Features

Natural language allows comprehensible and extensible vocabulary

Context derivable from specific fields, metadata, history

Framework goes across platforms and technologies

xAPI = DMS

Authority

History

Accountability

**Document
Management
System**

Recovery

Process

Statement

The basic “unit” of xAPI

Statements, the tracked information in xAPI, are actor/verb/activity triples – “I Did This”

Biggest advantage of xAPI is that it is machine interchangeable

Learning Record Store

Storage for all “Learning Records” of xAPI

Authentication and authorization, but not very defined (on purpose) in spec

No mention of “lifecycle” of data

Can add/retrieve based on HTTP requests and limited querying capabilities

LRS Conformance

LRS Conformance serves need of interoperable LRS

Can also “police” Learning Records by rejecting with Error Codes

May apply to xAPI profiles in the future

Resources

Also known as “Endpoints”, seen as “Sub-APIs”, Resources have endpoints where HTTP methods are allowed and have defined behavior

State information of the learner, activities, and registrations are maintained

As well as all the aforementioned transfer mechanisms

Communication

Statements are JSON

Other Resources use generic Documents

Communication via HTTP Requests

Documents

Contains an id as well as name/value pairs

Not restricted to JSON

Has last modification date

Focus on Statements

**Each Statement has specific properties –
Actor/Verb/Object**

**Different requirements surrounding usage –
mandatory/optional , some controlled vocabulary**

Extensible in some places

Actor

Can be an individual or group, doesn't have to be human

Identified with one of four kinds of unique ids

Groups can be identified or anonymous

Verb

The action during the learning experience

Tightly coupled with tracking, a verb should always be very specific to exact meaning, not just a “token”

“Display” property used to allow different languages of the same verb

Object

Called this “Activity” earlier, but can be Actor, Statement, etc.

Even the type “activity” is broad – could be a virtual world object. “Andy drove Jeep”.

Activity Definition allows for rich metadata that moves/lives with that activity

Community Defined

The spec doesn't define what the Actors, Verbs, or Objects (even Learning Activities) are

Leave this up to Communities of Practice and profiles

Offer vocabulary guidance and best practices

Result

Measured Outcomes related to the Statement

A bit “SCORMish” in that some results are built-in

Extensions are expected to be used to track all non-traditional data

Context

Portion of Statement that allows contextual information to be supplied

Things like instructor, registration, language, etc.

Also extensible to allow CoPs to create their own

Context Features

contextActivities interesting in it allows categorization of activities to symbolize structure

Can also be used as a “tag” in defining a type – recommended for profiles

Context statement can refer to any Statement that may be useful to reference as context

Timestamp/Stored

A basic flow and knowledge of when Statements occurred is important

Stored helps to differentiate the LRSs bias on actually placing the Statement into storage

Nothing in xAPI “breaks” due to Timestamps being unordered

Authority

An Actor that asserts a Statement is valid. Expected that most Learning Record Providers would use one.

Uses authentication to validate a “trusted” relationship.

Different, but also useful is “signing” an Individual Statement

Attachments

Sometimes the “evidence” of a Learning Record is something beyond words (or just a lot of words)

Defines usage, contentType, hash, and fileURL, among others

Hasn't seen significant adoption yet

Questions?

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