

# xAPI Update

Accomplishments, Announcements, & Future Plans

# Agenda

1. Recent Accomplishments
2. Announcements & Future Plans



xAPI

**first part** of the architecture

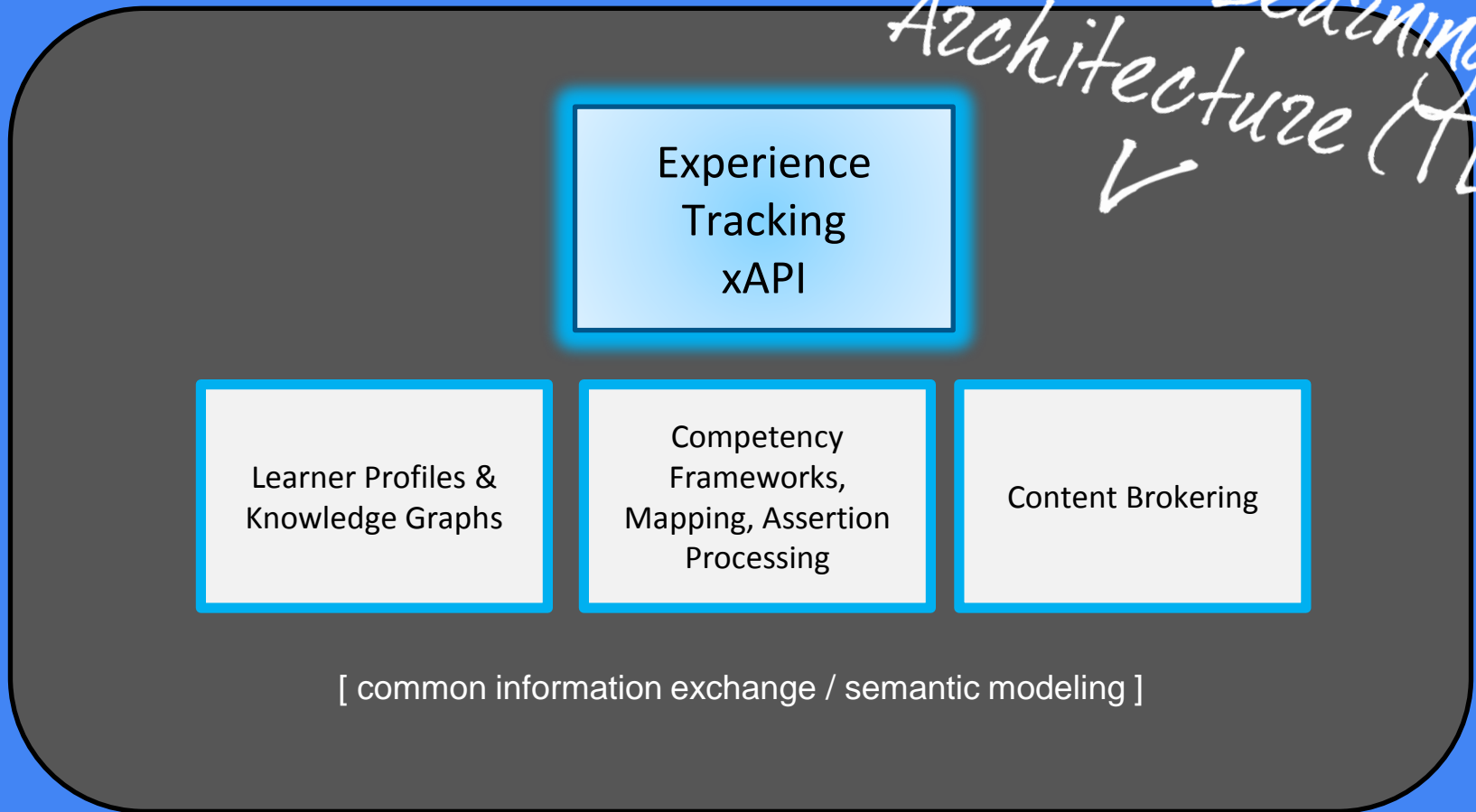
*Learning analytics was not the only need, but is often heavily emphasized as the main purpose*

# xAPI

## Top Requirements

1. Should support any content types, integration w/ other platforms
2. Should be simple to implement
3. Should support cross-domain communication
4. Should support all types of learning experiences
5. Improved access to learning data (outside of LMS) for improved analytics & reporting
6. Improved capabilities between instructors and learners
7. Improved options for supporting unique security requirements

# Total Learning Architecture (TLA) ✓



## GOALS:

*Personalized, Adaptive Learning, Recommendation Engines, Intelligent Agents,  
Personal Assistants, Machine Learning*

# Recent Accomplishments

1. US DoD Policy Update - DODI 1322.26  
<https://adlnet.gov/dodi>
2. New Version of xAPI Specification 1.0.3  
<https://github.com/adlnet/xAPI-Spec>
3. Vocabulary Companion Spec & Primer  
<https://adl.gitbooks.io/companion-specification-for-xapi-vocabularies>
4. Linked Data Server/Registry & Published Profiles: <http://xapi.vocab.pubcmi5>, [SCORM](#), [AcrossX](#), [medbiq virtual patient](#), [serious games](#), [video](#)

# Recent Accomplishments

## 5. LRS Conformance Requirements

<https://adl.gitbooks.io/xapi-lrs-conformance-requirements/content/>

## 6. LRS Test Suite

<https://github.com/adlnet/lrs-conformance-test-suite>



The background of the slide is a dark, textured field filled with a complex network of thin, light-colored lines. These lines connect numerous small, glowing orange-yellow dots, creating a web-like or molecular structure that suggests connectivity and technology. The dots vary in size and brightness, with some appearing more prominent than others. The overall effect is a sense of dynamic, interconnectedness.

# Announcements & Future Plans



# Announcements & Future Plans

1. **Profile WorkGroup** – ADL/DISC (March 28, 2017)
2. **LRS Test Suite** (Stable 1.0 Release – April 2017)
3. **LRS Certification Recommendations Report** (DISC)
4. **Official Certification Program**
5. **Profile Publishing Tools, Registry, & Linked Data Server** (Summer 2017)
6. **xAPI and/or Caliper?**

# Caliper + xAPI Interest

- 53% would like to see Caliper and xAPI converge, 33% not sure
- 78% would like to see a crosswalk/mapping of the data models and think it would be beneficial to both communities
- 38% of the respondents have already begun work on comparing the two specs and are willing to share their findings

**FROM: <https://www.imsglobal.org/initial-xapicaliper-comparison>**

# Key Areas of Compatibility w/ Caliper?

1. “xAPI and Caliper are NOT equivalent. Adoption should not be ‘one-or-the-other’, instead it is a ‘horses-for-courses’ decision”
2. Can Caliper fit inside of xAPI as a Profile for Ed Tech?
3. Can Caliper Metric Profiles and xAPI Profiles Align via a common schema and vocabulary?
4. Terminology Mapping (critical)
5. Mapping Caliper and xAPI Ontologies



# Caliper Event / xAPI Statement

Caliper event

actor action object  
eventTime  
id

optional

target generated referrer  
edApp group membership  
session federatedSession  
extensions

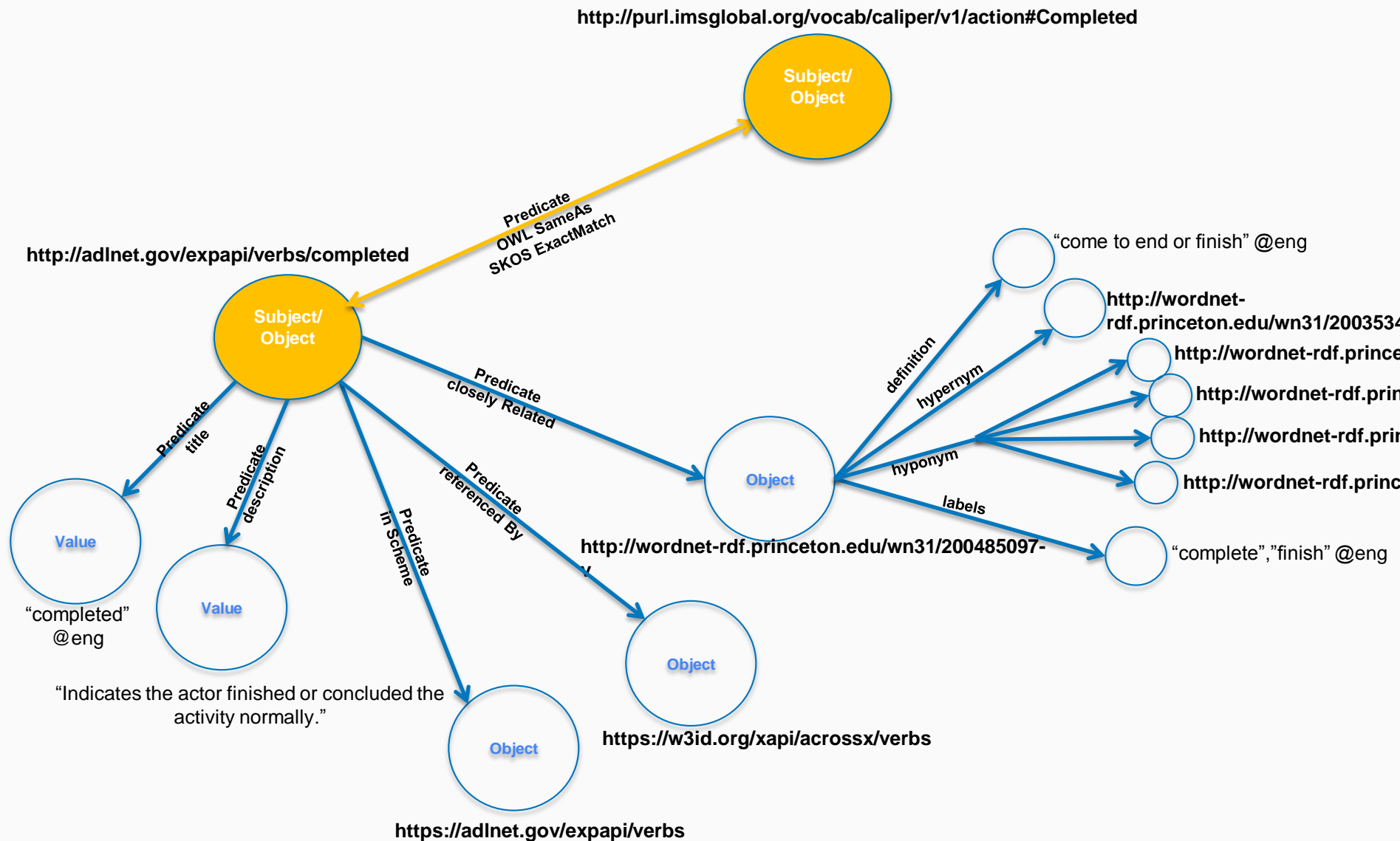
xAPI statement

actor verb object  
id stored

timestamp context result  
authority attachments  
version

Caliper *sourcedId* and xAPI *id* and *stored* property must be set by the LRS if not set by the event/statement emitter.

# Mapping Vocabularies (equivalency between xapi/caliper terms)



# We Need To Experiment, Prototype. What About Media & Video Profiles?

2.9 Media Metric Profile  
This metric profile captures the interaction with audio/video systems.

Entities			
Property	Data Type	Description	Source
MediaObject			
Media Location			
currentTime	String	The time value (from beginning of media) that indicates the current location	Media fragment URI
AudioObject			
volumeMin	String	Minimum volume	
volumeMax	String	Maximum volume	
volumeLevel	String	Level of volume	
muted	boolean	Whether the Muted the audio	
VideoObject			
ImageObject			

Actions		
Action	URI	Description
Enabled Closed Captioning	http://purl.imsglobal.org/vocab/caliper/v1/action#EnabledClosedCaptioning	The Actor enabled Closed Captioning
Disabled Closed Captioning	http://purl.imsglobal.org/vocab/caliper/v1/action#DisabledClosedCaptioning	The Actor disabled Closed Captioning
Changed Volume	http://purl.imsglobal.org/vocab/caliper/v1/action#ChangedVolume	The Actor changed the volume
Muted	http://purl.imsglobal.org/vocab/caliper/v1/action#Muted	The Actor muted the volume
Unmuted	http://purl.imsglobal.org/vocab/caliper/v1/action#Unmuted	The Actor unmuted the volume
Changed	http://purl.imsglobal.org/vocab/caliper/v1/action#Changed	The Actor

Verbs					
English Label	Description	Scope Note	ID (IRI)	Related Match	Closely Related Term
abandoned		User to express that the activity provider was able to determine that the session was terminated, however, a terminated statement was not received due to a failure. Any statement after this in the current video session is ignored.	<a href="https://w3id.org/xapi/adl/verbs/abandoned">https://w3id.org/xapi/adl/verbs/abandoned</a>		
completed		Used to express that the actor completed a video by watching all parts of the video at least once.	<a href="http://adlnet.gov/expapi/verbs/completed">http://adlnet.gov/expapi/verbs/completed</a>		
initialized		This is usually the first statement in the video session.	<a href="http://adlnet.gov/expapi/verbs/initialized">http://adlnet.gov/expapi/verbs/initialized</a>		
interacted		Used to express that the actor interacted with the player (except play, pause, seek). e.g. mute, unmute, change resolution, change player size, etc.	<a href="http://adlnet.gov/expapi/verbs/interacted">http://adlnet.gov/expapi/verbs/interacted</a>		
played	Indicates that the actor started experiencing the recorded media object.	Used when the actor generally played a video or clicked the play button.	<a href="https://w3id.org/xapi/video/verbs/played">https://w3id.org/xapi/video/verbs/played</a>	<b>closeMatch:</b> <a href="http://activitystrea.ms/schema/1.0/play">http://activitystrea.ms/schema/1.0/play</a>	<a href="http://w3id.org/xapi/video/verbs/played">http://w3id.org/xapi/video/verbs/played</a>
paused		Indicates that the actor temporary or permanently stop experiencing the recorded media object. A paused statement must be sent before a terminated or abandoned statement if not already sent.	<a href="https://w3id.org/xapi/video/verbs/paused">https://w3id.org/xapi/video/verbs/paused</a>	<b>closeMatch:</b> <a href="http://id.tincanapi.com/verb/paused">http://id.tincanapi.com/verb/paused</a>	<a href="http://w3id.org/xapi/video/verbs/paused">http://w3id.org/xapi/video/verbs/paused</a>
sought	Indicates the actor changed the progress towards a specific point.	Used in combination with time-from and time-to extensions when the Actor moves the progress bar forward or backward to a specific time in the video.	<a href="https://w3id.org/xapi/video/verbs/sought">https://w3id.org/xapi/video/verbs/sought</a>		<a href="http://w3id.org/xapi/video/verbs/sought">http://w3id.org/xapi/video/verbs/sought</a>
terminated		Used to express that the actor ended a video. Any statements after this in the current video session is ignored.	<a href="http://adlnet.gov/expapi/verbs/terminated">http://adlnet.gov/expapi/verbs/terminated</a>		
Activity Types					
Label	Description	Scope Note	ID (IRI)	Closely Related Term	
video	A recording of both the visual and audible components made available on a display screen.		<a href="https://w3id.org/xapi/video/activity-type/video">https://w3id.org/xapi/video/activity-type/video</a>	<a href="http://wordnet-rdf.princ">http://wordnet-rdf.princ</a>	
Result Extensions					
Label	Description	Scope Note	ID (IRI)		



# Additional Resources

## xAPI: A Year In Review

- <https://www.adlnet.gov/xapi-year-in-review/>

## Upcoming Profile Workgroup Kickoff

- <http://adlnet.gov/xapi-profiles-working-group-kickoff-meeting-announcement>

# My Contact Data

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