

# xAPI Data Reporting and Analytics

Steven Vergenz and Mick Muzac

Contractors with AQuate Corp. in support of the ADL Initiative

I/ITSEC Plugfest

3 December 2014

Orlando, FL

Sponsored by the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD P&R)



# xAPI in 30 seconds



- ✦ Each meaningful interaction between the learner and content is logged via xAPI calls
- ✦ Interaction statements take form “I did this”
- ✦ Logged via simple REST API
  - ✦ Any internet-enabled device can participate
- ✦ Enables big-data analytics on learner data

# Why Bother?



- ✦ It can track everything SCORM does
  - ✦ Quiz answers, course progress, etc.
- ✦ Also tracks things that SCORM can't
  - ✦ Simulations, native apps, live experiences, etc.
- ✦ Opens up learner records and prevents lock-in
  - ✦ Non-LMS systems can view/publish records

# Sample Statement



```
{
  "actor": {
    "mbox": "mailto:gia.creech@myschool.edu",
    "name": "Gia Creech" },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/answered",
    "display": { "en-US": "answered" } },
  "object": {
    "definition": { "name": "final/q49" },
    "id": "http://myschool.edu/xapi/cop-3223/final/q49"
  },
  "result": { "success": false },
  "context": { "contextActivities": { "parent": [ {
    "id": "http://myschool.edu/xapi/cop-3223/final"
  } ] } }
}
```

# xAPI Dashboard?

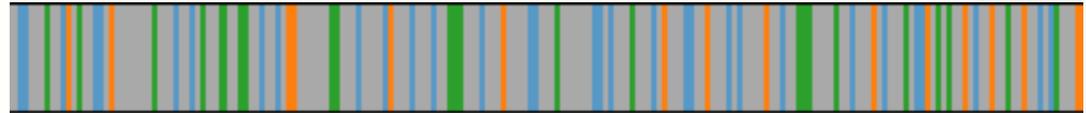


- ✦ Data manipulation
  - ✦ Basic set operations enable infinite querying combinations
- ✦ Data aggregation
  - ✦ Example: group statements by actor name, then calculate the number of statements produced by each group
- ✦ Visualizations
  - ✦ Create rich visual reports using activity data from your LRS

# Processing xAPI Statements



Raw xAPI statements



Separate relevant statements from irrelevant



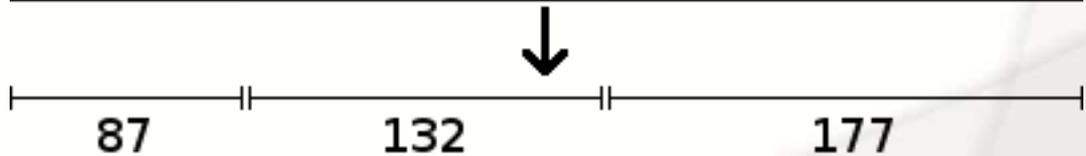
Throw out irrelevant statements



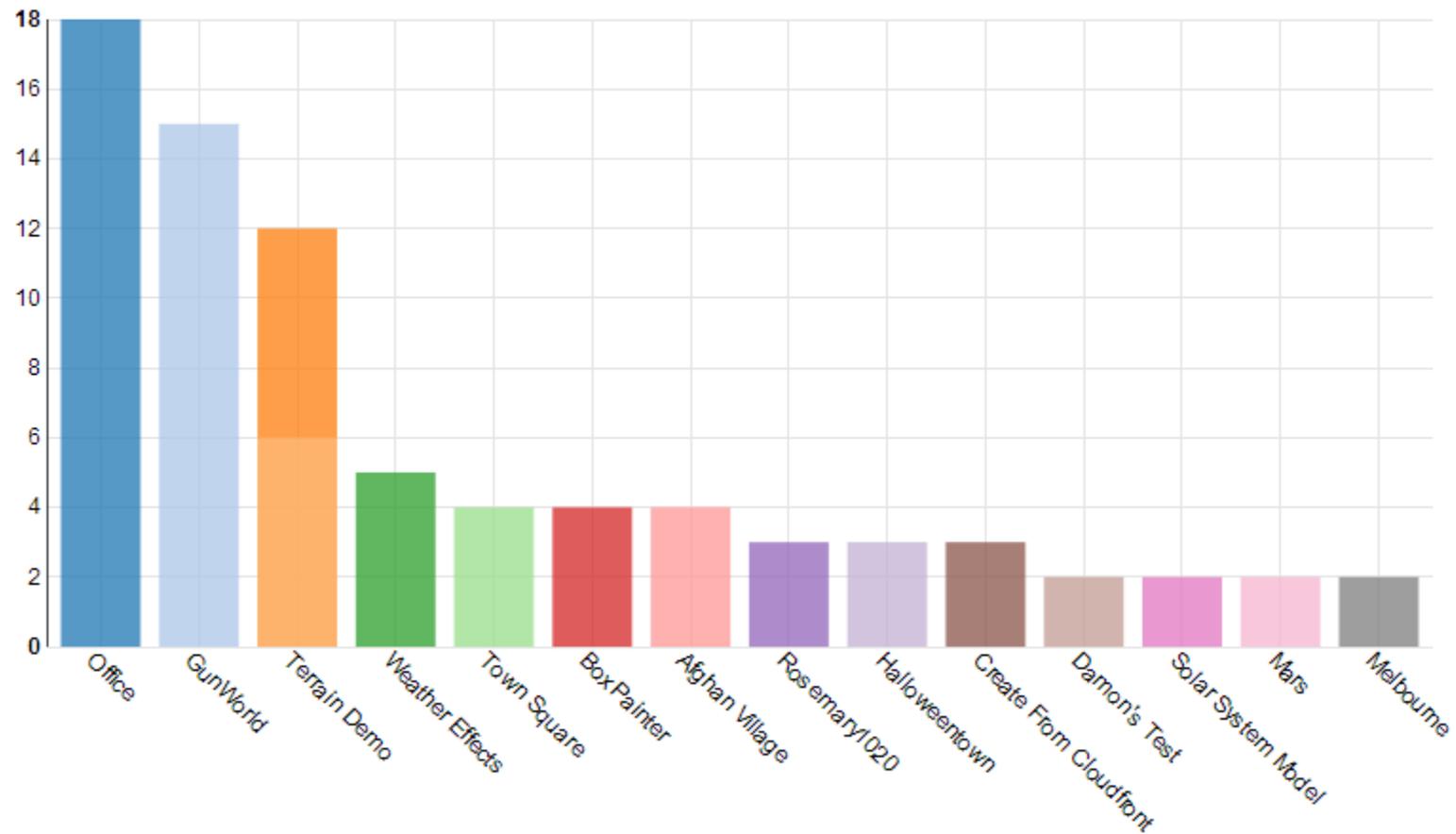
Gather like statements into groups



Aggregate each group into a single meaningful value



## Total Logins To Popular Worlds



# Contact Us



Steven Vergenz  
Mick Muzac

*Contractors with AQuate Corp.  
Supporting the ADL Initiative*

[steve.vergenz.ctr@adlnet.gov](mailto:steve.vergenz.ctr@adlnet.gov)

[mick.muzac.ctr@adlnet.gov](mailto:mick.muzac.ctr@adlnet.gov)