BACKSTAGE
What’s Behind the Curtain

Brandon Muramatsu, Jeff Merriman & Cole Shaw
MIT Office of Digital Learning
The Problem

• MIT Faculty are investing heavily in content development (notes, videos, assessments) for edX and OCW delivery.

• Ideally, MIT should manage these resources and make them available as needed to our community for re-use.

• Solution must...
  – Support integration with edX, OCW and others
  – Be adaptable to new technologies and market products
Current Development Workflows

- MIT Course
- Faculty Production
  - Other MIT Support
- MIT Course
- Stellar Course
- Class Only
- Course Site
- OCW
- OpenCourseWare
- MITx (edX) Production
- MITx
- MITx on edX
- MIT Course from Stellar
- MIT Course from Prof.
- MIT Course for edX
- OCW Course (Scholar)
Possible Future

MIT Courses
Context
Experiences

MIT Digital Learning Infrastructure

MIT Course on Stellar
OpenCourseWare
MITx Course on edX
New Destination
Proposed Solution – Backstage Services

- “Headless” content services with published APIs
  - REST, Python, Java
- Key applications using these services
- Support a developer community
Backstage Core Service Suite

MIT Educational Content Related Services

- Assessments
- Assets
- Videos
- Learning Objectives
  - MC3

Applications

- Producer
- VCB
- Assessment Tools
- PRISM
- MIToces
Producer – Asset Management for Reuse

• Motivation
  – Support content reuse in MITx (edX) content workflow
  – Ease content search and integration
  – Explore alternative authoring tools for edX delivery

• Status
  – Proof-of-concept being tested
Producer and Backstage Services

Online Course Platforms

Assessments

Assets

Videos

Learning Objectives
  • MC3

Producer

edX

MIT OCW

Stellar

IMS Common Cartridge

Videos

Assessments

Assets

Videos

Learning Objectives
  • MC3

PORTFOLIO

Objec8ives

• MC3

Producer

edX

MIT OCW

Stellar

IMS Common Cartridge

Learning Objectives

MC3

Online Course Platforms
Assessments

• Motivation
  – Manage, share and author assessment items
  – Track usage and IRT data across assessment offerings
  – Implement APIs for taking as well as managing/sharing

• Status
  – Proof of concept drag-and-drop authoring tool (demo)
  – App to Embed Assessments (QTI assessment items)
  – Physics Question Bank (PQB) under development
Assessment Backstage Services

- Assessments
- Assets
- Videos
- Learning Objectives • MC3

Drag and Drop edX assessment item authoring
Video Concept Browser – Browse Video by Concept

• Motivation
  – Enable better use of whole-class lecture video (60-90 minutes) by segmenting by concepts/topics
  – Pre-production for MOOC courses

• Status
  – App to browse lecture videos by concepts (demo)
VCB and Backstage Services

Assessments

Assets

Videos

Learning Objectives
  • MC3

Navigate course video by concept or learning outcome
Discussion Questions

• How are you reusing course content?
  – Between MOOCs
  – From existing sources, LMS/VLE, OER, etc.
  – What tools are you using?

• Are you tracking data about asset effectiveness?
  – E.g., Did learners have difficulties answering a particular question correctly? Did learners skip materials? Etc.

• Does your course include learning outcomes and transparently link outcomes with content and assessments?
BACKSTAGE
The End!

Brandon Muramatsu, mura@mit.edu
Jeff Merriman, merriman@mit.edu
Cole Shaw, cjshaw@mit.edu