Project Greenfield

A New Way of Thinking about OpenCourseWare and Open Educational Resources for MIT

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The MIT Office for Educational Innovation and Technology

• Dean for Undergraduate Education

• Support innovation cycle

• Novel uses of technology to support teaching and learning

• Academic computing without the LMS/VLE

We’re at MIT, but we’re not MIT OCW
Wouldn’t it be great if MIT OCW…?
What might be possible with MIT OCW?

- Download a course?
  ✔ MIT OCW provides downloads

- Get an RSS feed of new courses?
  ✔ MIT OCW supplies quite a few RSS feeds
What might be possible with MIT OCW? (cont.)

- Ask a question? Participate in a discussion?
  Remember, MIT OCW does not provide access to professors
  - Experimented with community-based discussions on 10 courses with OpenLearningSupport in 2004-2006
  - Currently Videolectures.net and Academic Earth support discussions/feedback for videos
  ❌ All require(d) going to an external site

What do **YOU** wish were possible with MIT OCW?

Blue Sky!
What do **YOU** wish were possible with MIT OCW?

- Digg-rank up or down courses (popularity), thumbs up, thumbs down
- Comment on the content that’s there
  - Point out errors/improve the content
- Translate content
- Show localizations, same content, different culture (examples)
- Exemplar recognition
What do YOU wish were possible with MIT OCW? (cont.)

- Tag content
- RSS notification for new versions of the same course
- Sit an exam, get credits
MIT OCW is a Publication

- MIT OpenCourseWare is a free publication of MIT course materials that reflects almost all the undergraduate and graduate subjects taught at MIT.
- OCW is not an MIT education.
- OCW does not grant degrees or certificates.
- OCW does not provide access to MIT faculty.
- Materials may not reflect entire content of the course.

…but…wouldn’t it be great if MIT OCW…?
...aha!
We were asking the wrong question!

What if **WE** experimented with MIT OCW...?
Sure...OEIT can develop a custom copy of MIT OCW

- Mirror of MIT OCW site
- Within boundaries of Creative Commons by-nc-sa

✓ Project Greenfield

http://greenfield.mit.edu
Ok, so what do WE WANT to do?!??!
Launching Project Greenfield

- MIT Faculty have asked us about…
  - Interactivity
  - Tools and services
  - Innovative browse mechanisms

- OEIT’s goals are to:
  - Support MIT faculty
  - Experiment, to show what’s possible (e.g., Web 2.0)
  - Prototype tools and services for published MIT OCW

- … all with MIT OCW course materials
Experience

3 Mini-Projects

- Customizable playlists
- Improved video and transcript integration
- Integrated recommender system
Customizable Playlists for Videos

- Example: Walter Lewin’s Physics videos
  - Chapters and descriptions

- MIT faculty want…
  - Different descriptions
  - Different segments
  - Faculty created AND student created
  - Search through playlists

MIT OCW Highlights for High School

MIT Faculty: Peter Dourmashkin, Physics
Customizable Playlists (cont.)

- Building blocks are there for some videos
  - (e.g., Classical Mechanics)

- What’s needed?
  - Modern video player
    - (MIT OCW is also working on this)
  - Tools to create chapters/bookmarks
  - Video player to watch the videos
Improved Video Players

- All MIT OCW videos have 99% accurate transcripts
  - Displayed as captions on YouTube
  - Available to view/download on OCW site

- Playback and display on MIT OCW website can be improved
  - Embedded video and transcript as HTML
  - Transcript search not linked to playback
SpokenMedia Player and MIT OCW

I’m Walter Lewin. I will be your lecturer this term. In physics, we explore the very small to the very large. The very small is a small fraction of a proton and the very large is the universe itself. They span 45 orders of magnitude—a 1 with 45 zeroes. To express measurements quantitatively we have to...
Integrated Recommender

- Recommender relates content
  - MIT OCW Courses -> MIT OCW Courses
  - MIT OCW Courses <-> OERs

- Based on Folksemantic.com/OER Recommender
  - Currently overlay of OCW/OER sites

MIT Faculty: Dave Pritchard, Physics & Haynes Miller, Mathematics
Topics covered: This lecture is about units, dimensions, measurements and associated uncertainties, dimensional analysis, and scaling arguments.

Instructor/speaker: Prof. Walter Lewin
Some other thoughts…

- Smart cut and paste with reuse tracking
- Intrasite hyperlinking (link within the site)
- Import into WordPress, Moodle
CAPRETT
(Cut and Paste Reuse Tracking Tool)

- Cut and paste from a lecture?
  - ✔ Simple cut and paste supported from HTML pages
  - ~ Simple cut and paste possible from PDF/Word/etc.

- What about tynt.com-style support
  - ? When the user highlights text, an automatic linkback to exact location in original page is created
  - ? Extend tynt.com to add attribution information automatically and pasted with text

Tynt Insight

Source: tynt.com
Intrasite Hyperlinking
(Link within the site)

• Cross-reference key terms internally across all OCW content

?q Service:
  ? Could limit to OCW content, or expand to selected/all OER repositories
  ? Could link to Wikipedia for definitions

?q Development:
  ? Needs subject list, key terms, controlled vocabulary
  ? Testing with content experts for relevance of search results
Intrasite hyperlinking (cont.)
Ok, let’s think big again…
What do **YOU now** wish were possible with MIT OCW?

- IMS LTI Support to write applications around content
- Take bits from courses, and save/paste in a new course framework, including attribution and link – playlist of any kind of course materials
- Students can create their own environment and arrange content from different courses and add personal notes/comments
- Add own annotations to course materials
What do **YOU** now wish were possible with MIT OCW?

- Framework to show curriculum tracks (pre-requisites, co-requisites)
- Trace individual content through varieties of courses, this information builds across courses (flash forward/flash back)
- Tools to allow students to manage their own learning—where they’ve been and where they’re going—saved in your own user account, portfolio-plus
- Social community around content (learn with, ask questions, motivate, support network)
- Recognition (formal or informal) for going through the materials
What do YOU now wish were possible with MIT OCW?

- Visual map of the content, and similarities between materials, and way to navigate through those materials
- Let the way to navigate through the map be social (capture user activity, and suggest pathways)
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