

Problem

There were 12.2M distance education enrollments in the '06-'07 school year, much of which delivered via online video. As this number continues to grow, it is imperative that interaction among online-learners increases to simulate live, classroom experiences in a simple and easy way.

“ [F]ew changes are taking place in the university structure...to accommodate the special needs of the distance-learning student. ”

Richard Bothel, Troy State University

Background

In 1999, Microsoft launched its MRAS project which was designed to support annotation of multimedia content about a lecture asynchronously. Although this project was deemed a failure, we believe that it was 10 years ahead of its time.

With the explosion of browser-based online video systems such as YouTube and Hulu, commenting and annotating have become intertwined with the online video experience. Expansive websites such as these show that the technology is scalable and feasible and with this in mind, we have chosen to revisit the MRAS idea.

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iitOnline⁺_U

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putting ^ in the classroom

Objective

To improve online video education by creating an interactive and easy to use system utilizing video annotations and comment threads. It is believed that with such a system, user satisfaction will increase from its current levels and the online video education experience will be bettered.

“ The isolation that results from the distance learning process can complicate the learning process... ”

Jill M. Galusha, University of S. Mississippi

Methodology

The project was split into three phases: Planning, Implementation, and Documentation. As the name implies, the Planning phase was used to plan and map out the remainder of the semester. The Implementation phase was broken down into three sub-teams, each with defined roles, that worked together to develop IITOnline+u. The final phase, Documentation, included the wrap-up of the Implementation phase and documenting each piece of the project.

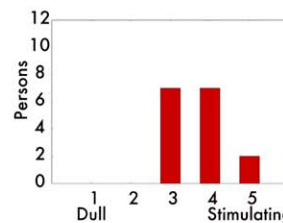
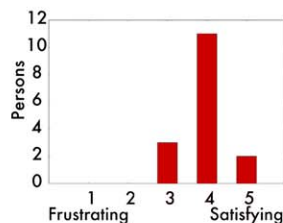
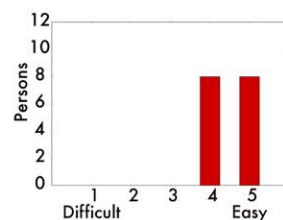
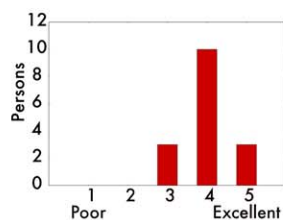
Feature	MRAS	MIT	OCW	YouTube	EDU	iTunes U	iitOnline+u
OS independence			✓		✓		✓
Discussion forum	✓				✓		✓
Time-stamped comments	✓				✓		✓
Unified interface					✓		✓
Comment timeline							✓
Slide viewer							✓
Synchronized slides							✓
Email notifications	✓						✓

Results

A school-wide survey was conducted to gauge the current use of IIT Online and the Blackboard discussion board. Suggestions on paths for improvement were solicited to determine desired functionality of a new system.

Desired Features:

- Class interaction
- Eliminate OS dependency
- Improve the multimedia quality



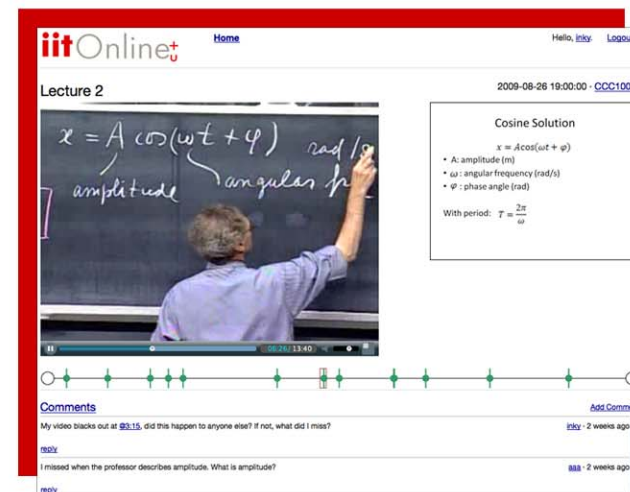
Once the system was developed, user testing was conducted to determine the success of the interface. Users' overall experience was rated (see graph) and their likes and dislikes were solicited.

Attributes Users Enjoyed:

- Simple design
- Quick commenting
- Interaction with classmates
- Time-correlated comments

Results show that IITOnline+u is an intuitive and easy to use system with 100% of users rating that they would remember how to use the system in a month's time and 75% of users not requiring a tutorial.

Although the physical quality of the multimedia is beyond the scope of this project, IITOnline+u helps to clarify uncertain areas by allowing users to comment on and explain said areas.



Future Work

IITOnline+u will be deployed in several classrooms next semester and its educational impact will be measured. Further development should be dependent upon the system's reception by the classes utilizing it. The hope is IITOnline+u will expand beyond IIT and become available globally, for all educational institutions with distance education programs.