



Massachusetts Institute of Technology

SpokenMedia Project: Creating Transcripts Automatically and Working Toward Rich Media Notebooks for Teaching and Learning

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Abstract:

Learners and teachers can easily locate materials from large, text-based collections such as Wikipedia or OpenCourseWares that they might want to use in their learning and teaching. However, it's much more challenging to find the equivalent specific video segment that demonstrates or describes a specific topic out of an hour-long online video lecture. Video and audio is currently searchable based on the textual metadata cataloged with the resource. This data is usually limited to a title and description, and perhaps a few tags or subjects. Are there tools and technologies that can be used to improve the discoverability of video, and more specifically to find individual video segments?

The SpokenMedia Project is being developed as a service to enable the automatic creation of text transcripts from video and audio lectures. Our initial goal is to improve the search and discovery of granular content inside web-based lecture videos with corresponding time-coded text transcripts, such as the hundreds of hours of video available from MIT OpenCourseWare. Secondly we believe that through automated lecture transcription we can enable a number of other useful services for open educational resources such as translation and closed caption tracks for video/audio. And, that we can bring social networking to the use of video in formal and informal settings for teaching and learning.

The tools and techniques are based on previous research at MIT in the iCampus-funded Spoken Lecture Project. Our goal is to transform this research project into a campuswide service at MIT, and make the tools available to educational community worldwide. This session will provide a brief background, demonstrate the existing technologies, progress to date and include a discussion of needs and requirements for a community-supported service.

About Brandon Muramatsu:

Brandon Muramatsu has been involved in the development of learning technologies from courseware to educational digital libraries since 1993. His interests revolve around the development, use, reuse and sharing of digital learning resources to improve teaching and learning. He is interested in the development of production-level services and tools for educators and learners. And, he is interested in the potential of open educational resources and open content to transform teaching and learning. He is currently working at the [Office of Educational Innovation and Technology](#) at MIT to transform learning technologies from innovative research to sustainable production services. Brandon Muramatsu received his B.S. (1993) and M.S. (1995) in [mechanical engineering](#) from the [University of California, Berkeley](#).

Prior to joining MIT, he helped found the [Center for Open and Sustainable Learning](#) at Utah State University and worked on tools and services to promote open content and open education. Before that, he worked at the University of California, Berkeley on the development of two educational digital libraries (NEEDS and SMETE.ORG), and has been instrumental in the development of the National Science Foundation's National Science Digital Library program (see [NSDL.org](#)). He has also worked at [MERLOT](#), through the California State University Office of the Chancellor, to develop international alliances and partnerships. He has also been involved in the development of learning technology standards and specifications with the [IEEE Learning Technology Standards Committee](#) and with the IMS Global Learning Consortium.

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