A Media Player for Use in Distance Education

Kai Huang[1], Charles E. Leiserson[1], and Luis F. G. Sarmenta[2]

[1]MIT Computer Science and Artificial Intelligence Laboratory,
200 Technology Square, Cambridge, MA 02139, USA.

[2]Department of Information Systems and Computer Science,
Ateneo De Manila University, Loyola Schools,
Loyola Heights, Quezon City 1108
Metro Manila, Philippines

Abstract— **We have developed a media player for use in distance education. The player can incorporate several time-indexed sources, including video, audio, PowerPoint, and text index. We have converted all the SMA 5503 *Introduction to Algorithms* lecture videos for use with the player. Student response to the player has been excellent.**

The media player's graphical user interface (see Fig. 1) permits a student viewer to navigate a video by the text index. The text index can be produced either automatically by a PowerPoint plug-in developed by David Mycue of MIT's Academic Media Production Systems, or manually by a teaching assistant using an ordinary text editor. The student can flip easily through PowerPoint slides, invoking the video only when needed, rather than being forced to watch video presentation of material the student already understands.

The player also allows playback to be accelerated up to twice real-time speed without changing the speaker's tone, thereby allowing the student to watch a video in much less time that would otherwise be possible. A single-click button allows the student to skip backward in the video a few seconds, easing the replay of critical material. Another single-click button allows the user to skip forward.

Although none of the features in this media player are unique or original, their combination provides a platform for lecture viewing, superior to the one currently being used by SMA. Ongoing work on the player includes adding more features to the player, such as allowing students to add multiple streams of other information (e.g., notes, snapshots of the lecture, etc.) which will be synchronized with the video in the same manner as the text indices and the slides in the current version.
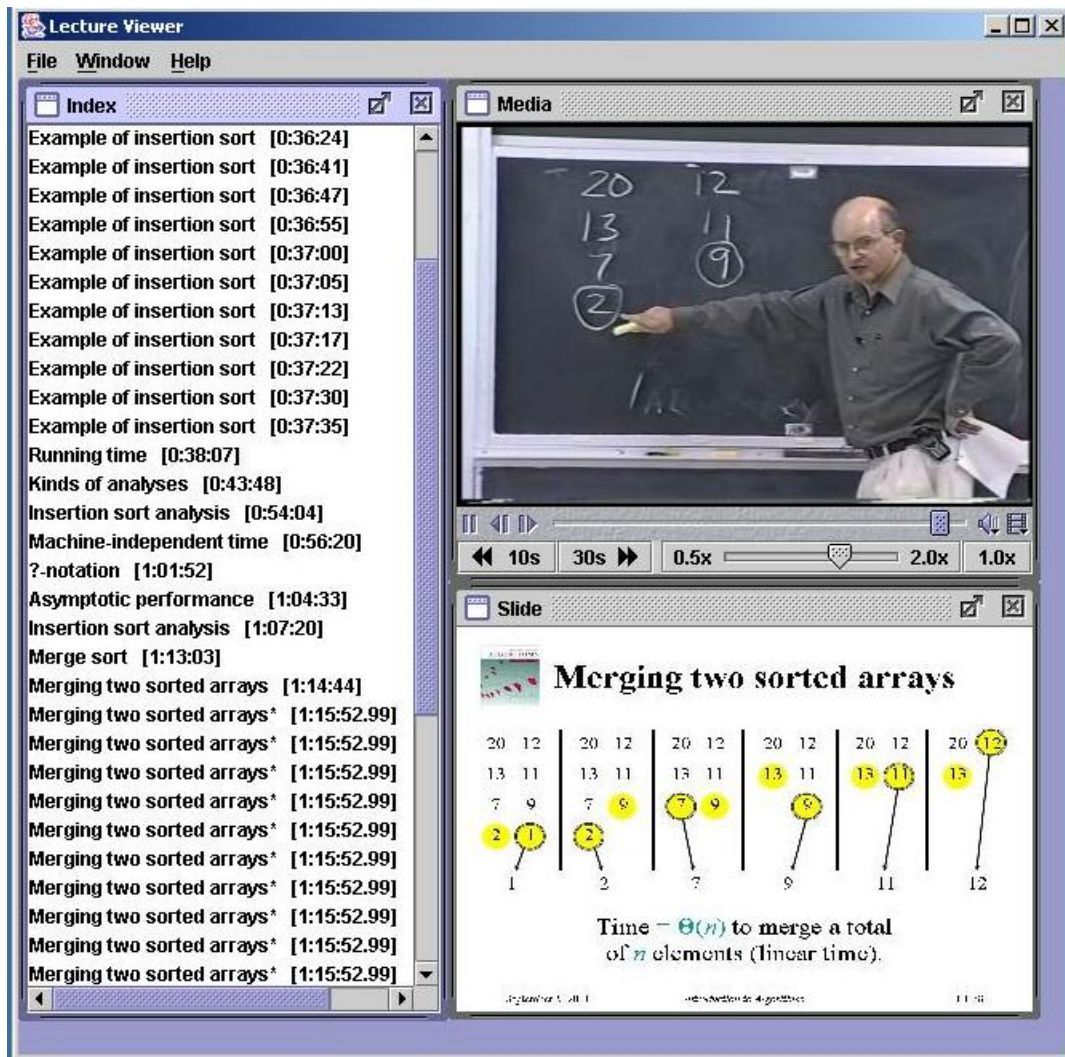
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Figure 1. Screenshot of the Lecture Viewer