

Learning On Demand—A Hybrid Synchronous/Asynchronous Approach

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Index Terms—Asynchronous learning networks (ALNs), information technology, learning environment, real time, synchronous learning.

I. SUMMARY

This paper describes and illustrates the process whereby a student can join a traditional on-campus lecture synchronously using live video and audio streams, and can also benefit from the class at a later time by accessing archived video and audio, synchronized with PowerPoint class materials. The live class is 'webcast' directly from the on-campus classroom, delayed by about 10-15 seconds of buffering and processing time, while the archived sessions are hosted on streaming media and WWW servers. In the lectures on demand framework, the PowerPoint material advances automatically in one window as the video and audio playing in another window triggers pre-determined time markers linked to the appropriate PowerPoint material. The student is also able to advance and replay all materials as well as to randomly select topics of interest from a given list of topics covered in the class. In addition the students are able to interact with fellow students and instructors via electronic conferencing or mailing lists – thus forming an Asynchronous Learning Network (ALN).

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Publisher Item Identifier S 0018-9359(01)05710-7.