

NSF Grant DUE-0226157 Scott Stevens & Dean Zollman www.physicspathway.org

Pathway is creating a proof-of-concept demonstration of a new type of digital library for physics teaching. Combining Carnegie Mellon University's digital video library technology with pedagogical advances developed at Kansas State University and with materials contributed by teachers, Pathway goes beyond creating a collection of teaching and learning materials. It provides continuously improving assistance and expertise for teachers and students of all levels. Pathway builds on a unique collaboration between several longstanding research projects in digital video libraries, advanced distance learning technologies, collaboration technologies, and nationally known experts in physics pedagogy and high quality content.

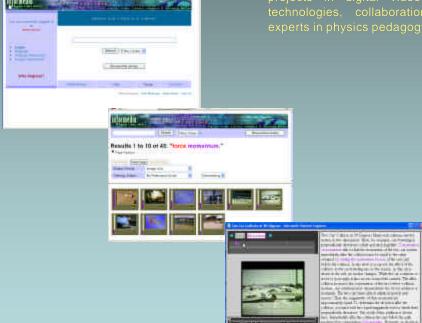
## Synthetic Interviews

**Synthetic Interviews** provide the teacher with an interface that is very similar to conversing with an expert. The video and other information are stored in a database and are presented when a teacher asks a question.



## Informedia Digital Video Library

The *Informedia* digital library automatically extracts metadata from video and audio. This information is used to create a database of video information which can be searched in a variety of ways.



The Informedia physics database contains a large number of digital video scenes that have been created during the past 20 years for physics instruction.

Three well-known teachers – Paul G. Hewitt, Charles Lang & Roberta Lang – provide expert advice through the Synthetic Interview.



