



## Physics Teaching Web Advisory

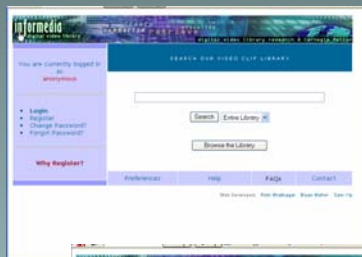
Using a State-of-the-Art Digital Video Database for Research and Development in Teacher Education

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[www.physicspathway.org](http://www.physicspathway.org)

### 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.



Pathway has created a prototype digital library for physics teaching. More than a collection of materials, Pathway combines Carnegie Mellon University's digital video library technology with pedagogical advances developed at Kansas State University and with materials contributed by teachers.

The system provides contemporary ideas about the teaching of physics and applications of physics education research. Continuously improving virtual assistance and expertise on issues of pedagogy and content can benefit 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.

We are expanding the system and will conduct research and evaluation on its effectiveness. The research effort will focus on the value of contemporary technology to address the continuing education of teachers who are working in a field in which they may not have been trained.



### 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.



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

Four teachers – Paul G. Hewitt, Leroy Salary, Charles Lang & Roberta Lang – provide expert advice through the Synthetic Interview. Additional teachers will be added soon.



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