Introduction

- Proof-of-concept demonstration of a new type of digital library for physics teaching.
- Combining
  - CMU digital video library technology
  - KSU Physics Education expertise
  - materials contributed by teachers

More than a collection

- Builds on a unique collaboration
  - Digital video libraries
  - Advanced distance learning & collaboration technologies
  - Nationally known experts in physics pedagogy and high quality content.
- Continuously improving assistance and expertise for teachers and students of all levels

Goal

- Problem: Many secondary school teachers are not well prepared to teach physics. They are frequently the only physics teacher in a school and have little access to advice or other help.
- Solution: Provide a digital video library by using state-of-the-art techniques for creating a video database and a virtual master teacher for advice.

PATHWAY Components

- Synthetic Interviews
- Digital Video Data Base
- Connections to
  - National Science Education Standards
  - Research in Physics Education
  - Helpful Web sites
  - ComPADRE

Synthetic Interviews (1 of 3)
Synthetic Interviews (2 of 3)

- Interface very similar to conversing with an expert
- Video and other information stored in a database
- Selected & presented when a teacher asks a question.

Synthetic Interviews (3 of 3)

- Have been created for medical advice
- “conversing with entertainment, sports and historical figures.”
- PATHWAY builds on these experiences.

Informedia digital library

- Automatically extracts metadata from video and audio.
- Information used to create a database of video information
- Can be searched in a variety of ways.
You can help

- Suggest questions to ask the experienced teachers
  - Kinematics and Dynamics
  - Other topics later
- Try the system
  - Available by the end of the month
- Give us feedback

Project Website

http://www.physicspathway.org