

Physics Teaching Web Advisory (PATHWAY)

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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 advise 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.

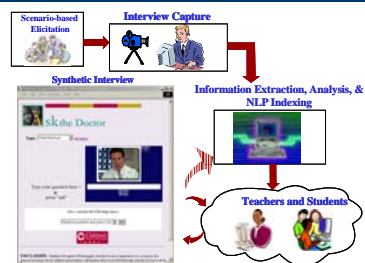


PATHWAY Components

- 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)

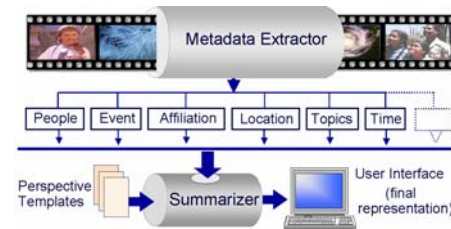
- Have been created for
 - medical advice
 - “conversing with entertainment, sports and historical figures.”
- PATHWAY builds on these experiences.



Question:



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

The PATHWAY logo is located in the bottom right corner.

Project Website

<http://www.physicspathway.org>

A screenshot of the website for the Physics Teaching Web Advisory. The page features the PATHWAY logo and the text "PATHWAY Physics Teaching Web Advisory". Below this, a small paragraph describes the project: "The Physics Teaching Web Advisory (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..." The PATHWAY logo is also present in the bottom right corner.