

## A PATHWAY to Class Preparation

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## Just-in-Time Teaching

- Obtains feedback from pre-class web assignments
- Adjusts classroom lessons
- Gives rapid response to questions and problems
- Addresses student needs
- Encourages students to take more control



## But how to make the adjustments?

- Experience
- Co-workers
- An expert



## Physics Teaching Web Advisory PATHWAY

- 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

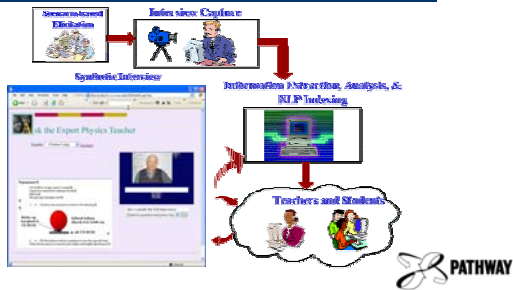


## PATHWAY Components

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



## 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:   
Ask



## To start ...



Please select who you would like to answer your question:  
Paul Hewell

Question: [What math background is needed to study kinematics?]  
Ask

Quick Questions:  
Acceleration...

History:  
Select one ...



## Choose an expert



Please select who you would like to answer your question:  
Paul Hewell  
Roberta Lang  
Paul Hewell  
Chuck Lang  
Ask

Question: [What math background is needed to study kinematics?]  
Ask

Quick Questions:  
Acceleration...

History:  
Select one ...



## Enter your question



Please select who you would like to answer your question:  
[Paul Hewitt]

Question: [What math background is needed to study kinematics?]

[Ask]

Quick Questions:

[Acceleration...]

History:

[Select one...]



## Or choose from Quick Questions



Please select who you would like to answer your question:  
[Paul Hewitt]

Question: [What math background is needed to study kinematics?]

[Ask]

Quick Questions:

[Acceleration...]

[Select one...]

[Teaching kinematics...]

[Constant force...]

[Acceleration...]



## Or select from previous questions



Please select who you would like to answer your question:  
[Paul Hewitt]

Question: [What math background is needed to study kinematics?]

[Ask]

Quick Questions:

[Acceleration...]

History:

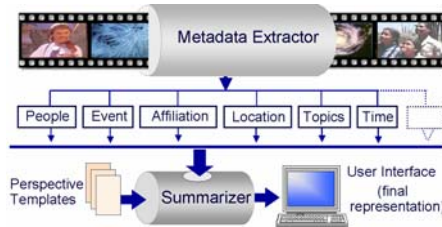
[Select one...]

[Select one...]

[When do you teach vectors?]

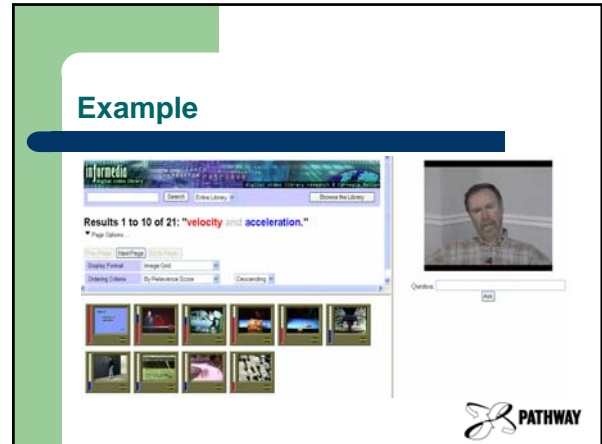
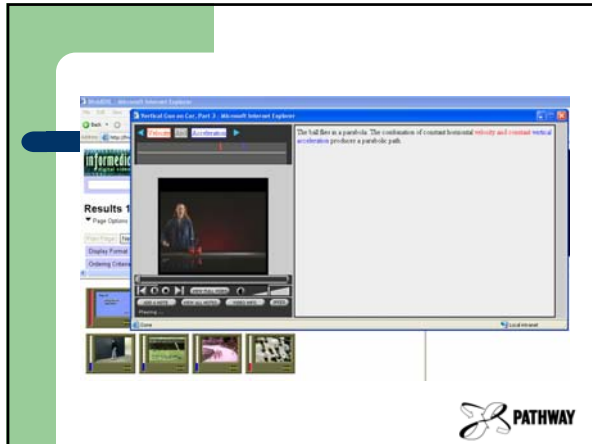


## informedia digital library



- 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 now
- Give us feedback

## Project Website

<http://www.physicspathway.org>

**Physics Teaching Web Advisory**

[>> Ask Questions about Physics Teaching](#)

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Best View: 1024x768, IE 5.0 or better | Last Updated: 20091216 | Created and Maintained by Chi-yu Chao |

## Questions or Comments?

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