Pathway Updates and Upgrades

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Physics Teaching Web Advisory PATHWAY

- A new type of digital library for physics teaching
- Combining
  - CMU digital video library technology
  - KSU Physics Education expertise
  - Materials contributed by teachers
- Offering continuously improving web-based assistance and expertise for teachers of all levels

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PATHWAY Components

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

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A New Look

- The old site is not much to look at, so we're giving it a new front end.
- And now the library.

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informatics digital library
Right now

- Over 100 clips
- 20 from the Video Encyclopedia of Physics Demonstrations
- Not downloadable

Soon*

- Add Paul Hewitt Workshops
  - 8 lessons on teaching conceptually
  - 1 lesson on cartooning
- Add contributed videos
- Perhaps add some SI videos

A Synthetic Interview

Synthetic Interview Creation
We Offer Multiple Personalities

History and Recent Update
- Started with 75+37=112 questions
- Added ~10 “global” questions
- Added 80 “basic” questions
- Added 122 “tool” questions
- Added 734 kinematics questions
- So ~946 new questions, but 20 overlap
- Now we have about 1,050 questions!

Going Past 112 Questions
- Identified topics
  - 23 chapters (+/-)
  - 247 concepts (+/-)
  - 14 tools (+/-)
- Prepared and grouped questions into templates
  - 33 chapter-level groups
  - 33 concept-level groups
  - 19 tool-type groups
- Plus some “global” and special questions

Why Templates?
- Matching / identifying questions
- Systematic numbering
- Coverage
- Creating variations
- Estimating quantity (over 9,000)
- Getting ahead of demand

Who is asking questions?
- Pre- and In-service teachers
- Meeting attendees
- Workshop participants
- Others
  - Project staff
  - Testers
- Random people?

What are they asking?
- \( n=2498 \) questions
- 70% pedagogical
- 12% content
- 8.0% single word or concept
- 6.3% miscellaneous
- 2.0% demonstrations
- 1.4% activities
- 0.2% assessment
We would like your help

- Suggest questions to ask the experienced teachers
- Try the system
  - www.physicspathway.org
- Give us feedback

Questions or Comments?

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THANK YOU!