

iPod Math

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Problems

- Students have trouble learning from written text
 - Learning styles
 - Technical reading is an untaught skill
- Students tend to see a class as a bunch of unconnected pieces
 - Don't connect lecture, homework, etc.
 - Don't recognize concepts



Videos

- Not a static written presentation
 - Can help different learning styles
 - Can help explain technical writing
- Allows students to recall lectures or other activities while doing the homework



Visual Issues

- Online videos can be difficult to watch, and attention spans are often shorter online.
- Blackboards and computer monitors often don't show up well on video
- Screens students use can be very small



Screencasting

- Makes video much cleaner
- Can record labs and applets
- Using a tablet you can use it like a blackboard
- Can edit in standard video, etc.



Screencast Software

- Windows software includes
 - Windows Media Encoder (free from MS)
 - Camtasia (\$170, but worth it)
 - Tegrity (can be worth it for full lectures)
- Macs
 - iShowU, Snapz Pro
 - No Mac tablets currently
- Unix software (quite limited)
 - vnc2swf (free)



Background Software

- PowerPoint
 - Camtasia integrates directly into PowerPoint
 - Can include a video inset of the lecturer
 - Can write on slides with a Tablet PC
- Windows Journal (WJ)
 - Gives you a blank screen to write on
 - Can import backgrounds for the screen
- But you can use any software you want



Capturing a lecture

- Use a tablet/projector instead of a blackboard
 - Save pages as pdf files for students to follow along
- Use screencasting to record writing
- Use a video camera to record talking
- Edit it together at end
 - PIP (getting timing synced is fun)
 - Switching back and forth



Posting a lecture

- Cut into smaller pieces so students can find correct sections
- Posting with smaller sections loads and runs much quicker
- Real-time streaming is possible but requires more complicated software



Developing A Tutorial

- Decide on goals
 - What do you want to teach
 - How will you distribute it (this affects screen size)
 - 640x480 for YouTube
 - 320x240 for iPod
- Storyboard
 - Plan what you want to do
- Practice
 - Run through without recording (pay attention to size of area)
 - Revise your plan



Developing A Tutorial

- Record
 - Select appropriate size screen or region
 - Multiple takes will be useful (you don't need to save all the takes)
- Editing
 - Cut out starting and ending um's
 - Can splice multiple scenes/takes if you want to get fancy
 - Can add extra audio tracks (music, etc.)



Developing A Tutorial

- Publish
 - Specify format(s)
 - Flash is usually most convenient (won't work on iPhone or iPod Touch browsers though)
- Post
 - School website
 - YouTube, iPodU, etc.
 - May need to be careful with how links are structured to get things to play properly



Fine Points for WJ and Tablets

- You can get a variety of pens and highlighters
 - Be sure the fly out menus don't fly in and out of the area you are recording
- The pen tip appears is quite visible in a Camtasia recording
- The big stylus has a built-in eraser
- Erasing strokes gives fastest erasing (and still good control)

To add a background to WJ

- Select File-Import
 - Select file to bring in as background
 - Can be a word document, pdf, anything that will print.
 - WJ will "print" the file to the background
- If WJ doesn't recognize the file, you can print to WJ from the original application
- You can then write over the file. If you erase, you erase only what you wrote, not the background.

Camtasia Tips

- Camtasia has trouble with long recordings (handle a lecture by cutting into 3 pieces)
- Use Markers to define a Flash Table of Contents if desired
- If you cut out a segment, you may want to split the timeline into 2 clips and define a transition between them.
- You can use Zoom and Pan points to focus on specific parts of a large screen.
- Callouts let you add arrows, etc., to point out key features.

Adding Music

- Can get music you can use "freely" from
 - ccMixter
 - Jamendo
 - Magnatune
- Pull into the clip bin in Camtasia
- From clip bin, move to timeline

Recording Video

- You can use a standard webcam and get pretty good results for a short video.
- For recording a full lecture (even if delivered at your desk), it's nicer to get a camcorder that can double as a webcam. Look for Sony models with USB streaming. Then turn the screen to face you so you can see how you look during the lecture.