Tablet PCs: A Flexible Tool for Mathematics Instruction

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From Stone to Silicone Tablets

Possible Ways to Use a Tablet PC
  - Multiple linked Representations
  - Possible Uses
    - In-Class Instruction
    - Supplemental Group Tutorials
    - Online Support

Sketchcasting
Multiple Linked Representations (with OneNote)

- Microsoft Office
  - “Review” Ribbon
  - Start Inking Command
- Linked Possibilities
  - Notebook Layout for Each Course
  - Pre-Defined Pages
  - Adding Content to OneNote
  - Copying, Pasting, Resizing Symbols

Multiplying Possibilities
- Searching through Ink
- Making more White Space
- Geometry on a Tablet
  - Built-in Features
  - Compass, Straight-Edge, etc.
Possible Uses

- **In Class Instruction**
  - Single Tablet/Screen
  - Multiple Tablet/Multiple Screens
  - Projector – Portrait vs Landscape

- **Supplemental Group Tutorials**
  - Tablet Workstations for Students
  - Connected Problem-Solving

What is Sketchcasting?

- Sketchcasting is...
  - a new way to communicate something online by recording a sketch
  - optionally with your voice speaking

- Sketchcasting is...
  - Based on principle: the whiteboard
  - sketch something to get a concept across
  - Sketchcasting was coined by Richard Ziade in July 2007

Above: Sketchcast Example of Homework Review
Why Sketchcasting?

- Benefit to Academia (Faculty and Students)
  - Archiving of classroom presentation for...
    - Future creation of content modules
    - Replay by students at a later time
    - Students online can experience same content as in-class students

Why Sketchcasting? *(cont.)*

- Maintains flexibility
  - For instruction by faculty
  - For students desiring access to higher education learning (in a more representative format of what occurs in a traditional classroom)
Sketchcasting Basics

- Ideal Tools
  - Computer (Tablet PC)
  - Microphone
  - Software Program for Sketching
    - Paint
    - Journal
    - OneNote
    - Online Whiteboard Websites
  - Software Program for Capturing Computer Screen
    - Camtasia Studio
    - Jing
    - Windows Encoder
    - Adobe Captivate

- Demo
  (This lecture is a Sketchcast)

Uses for Sketchcasting

- Lecturing
  - Capturing and Distributing Notes
  - Real-time content module creation while you teach your classes
  - Another option – create lectures and post prior to class as though this is homework – then do problems in class

Above: Lecture Sketchcasting with imported notes
Uses for Sketchcasting

- **Office Hours Online**
  - Scriblink
  - Adobe Connect
- **Demonstration of Problem Solving**
  - Homework Problems and Solutions
- **Exam Review**
  - Instead of class time, put playback of exam online.

Above: Exam Review Sketchcasting

Sketchcasting for Students

- **Pens for non-tablet PCs**
  - Bamboo
  - Livescribe
- **Pen-Enabled Monitors**
  - Wacom
- **Potential Uses**
  - Collaborate easier in online environments
  - Create Jing solutions for Wiki solutions manual
Managing Online, Hybrid, In-Class

- Decision to Consider
  - Live or Archived Retrieval (Synch vs Asynch)
- Sketchcasting with additional tools
  - Streaming while sketching
  - Classroom Presenter
  - Elluminate
  - Wimba
  - DyKnow
  - Adobe Connect
- Demo

Above: Sketchcasting with PIP, TOC, Captions & Quizzes

IT Support Needs

- Hybrid / Online Course Development Support
  - Evaluation Committee
  - Training Availability – Sharing by other Faculty
- Server Needs
  - Off-Site Server Hosting (list benefits of this)
- Classroom Technology
Links

- Classroom Presenter (free)
  - classroompresenter.cs.washington.edu

- DyKnow Vision
  - www.dyknow.com
Links

- Adobe Acrobat Connect Pro
  - www.adobe.com/connectpro

- Online Whiteboards
  - Eluminate.com
  - Scriblink.com
Links

- Live Video Streaming
  - Ustream.com

Equipment List

- Gateway Tablet PC
- Dell Tablet PC
- Wacom Tablet DTF-521
- Sennheiser Wireless Microphones EW-100G2
- Villagetronic ViBook

- Microsoft OneNote 2007
- DyKnow Vision Software
- Adobe Acrobat Connect Pro
- Camtasia 6.0
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This is a sample from Bamboo

$x^2 + x - 1 = 0$