Integrating Diverse Student Devices into the Digital Classroom

Classroom Presenter

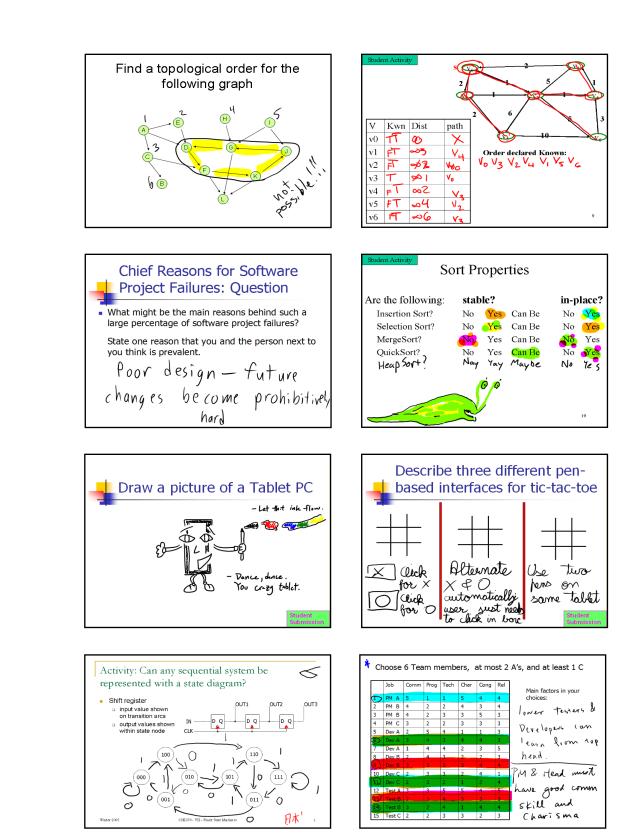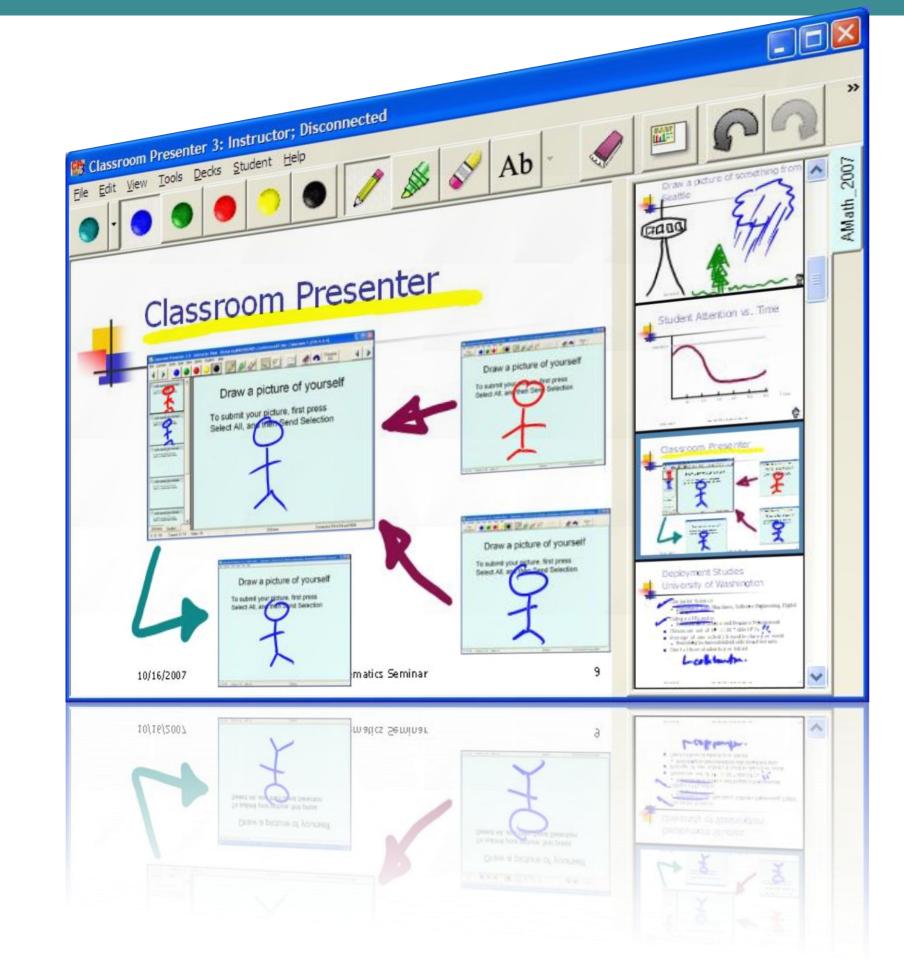Used in 100s of courses
Problem: Tablet PC Only
- Costly/Time-consuming to deploy
- Most people don't own Tablet PCs

Student Submissions

A successful pedagogy – give students in-class activities
Supports active and peer learning
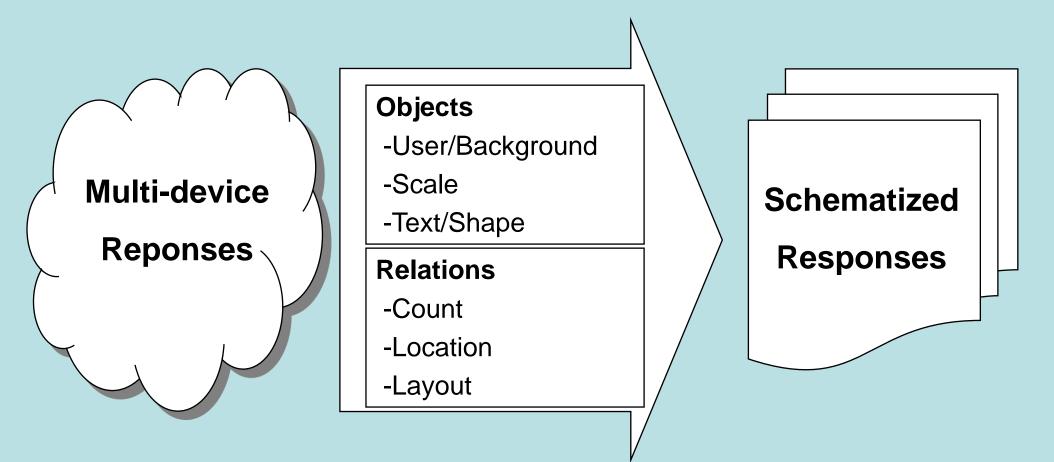Works well when the class all has Tablet PCs

Examples of Student Submissions

How do we leverage the devices people already own?

Design Issues

Questions:
- *How do you design activities for many different devices?*
- *What activities are easy/hard to support across devices?*
- *What tools will help instructors design cross-device activities?*
- *How can instructors make sense of responses from different devices?*

Multi-device Reponses

Objects
-User/Background
-Scale
-Text/Shape

Relations
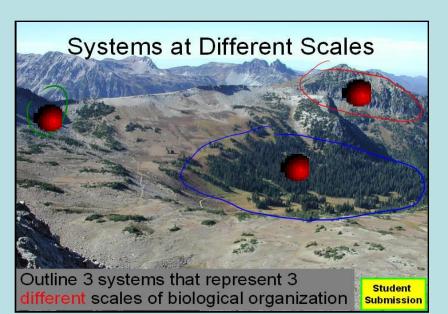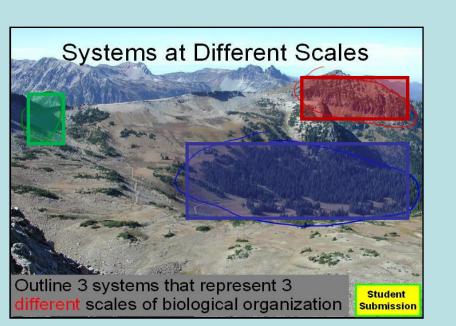-Count
-Location
-Layout

Schematized Responses

The Goal: Describe the semantics of an activity so we can select the best way for students to answer it on his/her device and do some automatic clustering/understanding.
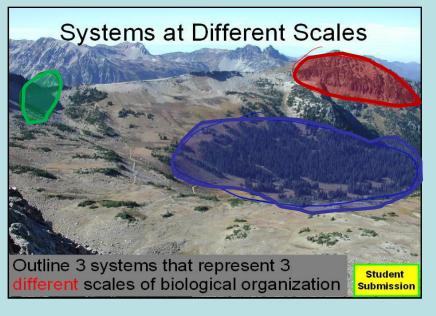
Use Issues

Explore novel input techniques for small devices.
For example:
- *Drawing points/regions/boundaries*
- *Drawing/Editing diagrams*
- *Inputting text*

Systems at Different Scales

Outline 3 systems that represent 3 different scales of biological organization — Student Submission

Points, Regions or Boundaries?: Depending on the capabilities of a device and the type of response required for an activity, the input interface used may be different.
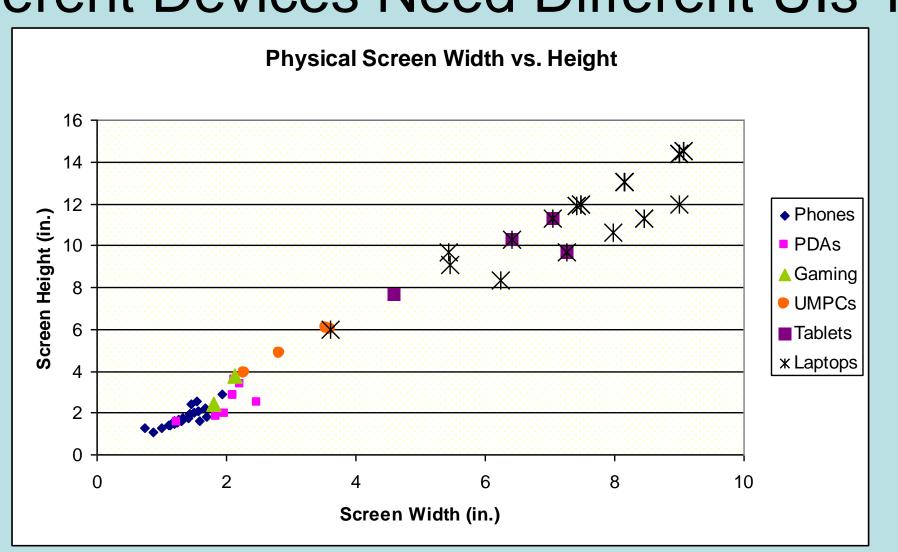
Build Issues

Each platform has uses different language and API:
- *C++*
- *C#*
- *Objective C*
- *Java*

Different Devices Need Different UIs Too!

Physical Screen Width vs. Height

- Phones
- PDAs
- Gaming
- UMPCs
- Tablets
- Laptops

Screen Height (in.)
Screen Width (in.)

More Information: http://classroompresenter.cs.washington.edu

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