Tablet PC Capstone
CSE 481b

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Course goals

Build cool application in a team oriented project

Learn about a domain

Capstone experience

Set and achieve goals

Why a Tablet PC capstone

Interesting platform

Challenges in making pen computing useful

Wide range of directions for exploration

Course Model

- TabletSoft
  - New software company planning a broad offering of educational/entertainment TPC applications
  - Management has identified candidate products
  - Develop a set of proof of concept prototypes
    - Evaluate potential applications
    - Performance review of developers

Logistics

- Project ideas will be presented next
  - Complete the web survey to express project preferences by noon tomorrow (Jan 4, 2006)
  - Assignments will be announced Thursday, Jan 5.

Schedule

- Jan 19. Project vision
- Feb 2. Early prototypes
- Feb 23. Alpha version
- Mar 10. Projects due
- Mar 15. Final project demos, 10:30am-12:20 pm

Visual Studio Team System

- Visual Studio 2005
- Team Foundation Server
- Team Suite
- MSF for Agile Software Development

Logistics

- Department Lab Machines
  - Most Tablet PC development can be done on a Windows XP desktop machine
- CSE 003D, Tablet PC Lab
- Tablet PCs from Loaner Pool (Toshiba)
- Old Compaq Tablet PCs

The Projects . . .

- Handwriting Generation
- Playmaker
- Handwritten Slides
- Stupid Pen Tricks

- Sudoku
- Handwritten note Analysis
- Ink Replay with Editing
- Brainstorming Tool

1. Handwriting Generation

- Inverse of recognition problem
- Goal
  - System trained by an individual
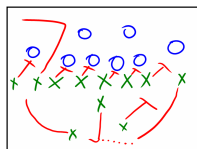 - Generate realistic appearing handwriting from typed text

He lay flat on the brown pine needled ground, his chin in his folded arms

He lay flat on the brown pine needled ground, his chin in his folded arms
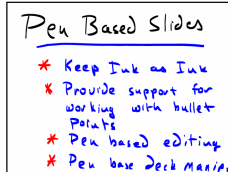
2. Playmaker

- Generate motion from diagrams
- Potential applications
 - Simulation of actions
  - Input to sports or RTS game

3. Handwritten Slides

- Create an environment to support pen creation of lecture slides
- Text can remain as handwriting
- User centered design important

Pen Based Slides
* Keep Ink as Ink
* Provide support for working with bullet Points
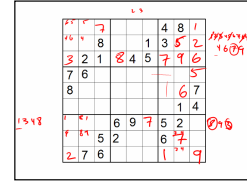* Pen based editing
* Pen base Deck Manip.

4. Stupid Pen Tricks

- Real Time Stylus allows low level access to pen to create many inking effects
- Develop a pen based game around "creative" ink
  - Pressure linked to size
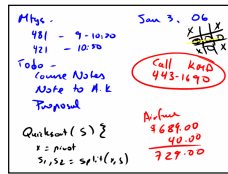 - Multiple strokes
  - Disappearing ink
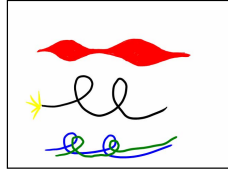
5. Sudoku

- Tablet implementation of Sudoku
- Concentrate on playability issues with ink

6. Free form note analysis

- Develop post processing for handwritten notes
- Identify structure and content
- Search and cleanup scenario
- Large collections of notes available for project use

7. Ink replay with editing

- Develop system for capturing and replaying ink
- Support editing of ink (cleanup of strokes, correction)
- Scenario
  - Dynamic diagrams for education
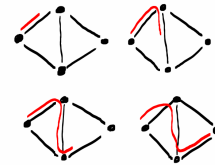
8. Brainstorming tool

- Scenario – working on a problem set
- Structured operations on free form ink
  - Persist
  - Collapse

Submit Project Preferences

- Web Survey
  abstract.cs.washington.edu/~valentin/ProjectPrefs/questionnaire.cgi

- Submit by noon, January 4

Project grading philosophy

- What do you want to get out of the course?

Grading criteria

- Prototype
- Agile Process and VSTS Tools
- Deadlines and Presentations
- Code quality
- Design methodology
- Project Architecture
- Testing methodology and execution
- Engineering quality
- User Interface
- Release quality
- Development process
- User and technical documentation
- Technical Innovation
- Business Case for Application

Implementation

- Initial weights
  - Prototype 40
  - Tools and process 10
  - Deadlines and presentation 10
- Assign remaining 40 points to at most 3 components
- Team evaluation criterion
- If team members don't agree on evaluation criterion, the default is 80:10:10