

## **Abstracts for COSC 494 talks, February 2007 (for March 9 due date) v2.0**

### Web-based Game To Teach Children Programming

Shanna Battaglia

Children program a mouse to navigate a maze to reach a piece of cheese and take it back to its hole, using a Java applet. We develop a language based on Logo to accomplish this task.

### Field Linguist's Toolbox

Danielle Books

Field Linguist's Toolbox is a freely available linguistics and anthropology data management and analysis tool created and used by Wycliffe Bible Translators to help Bible translators. We produce a Spanish version and make other enhancements to the tool.

### A PDA To Track Workouts

Rebecca Croft

We improve the process of tracking workouts that use weights by making a Palm OS application that synchronizes with a MySQL database on a desktop computer. Exercise time, weights, and repetitions are tracked.

### Synthesizer with Generative Capabilities

Benjamin Crouse

We create an open-source Java program for music synthesis. We build a real-time FM synthesis engine, controllable by both live MIDI input and a built-in programmable generative sequencer. We provide intuitive user interfaces for both the synthesis engine and the generative sequencer.

### Solar Scholars Database

Valerian Curd

We select and implement a database with a web interface to allow viewing in real time updates of logged data from a solar energy source that will be used as a solar energy training facility and will provide electricity to parts of Frey Hall.

### Artificial Creativity

Kevin Green

We explore with tangible experiments how computers simulate and use principles of human creativity, in visual art, linguistics, and music. We answer the question, "Is artificial creativity really even creativity at all?"

### Security Event Logging

William Kungu

We create a security server that generates and monitors passwords used on a network. This server manages security on client machines, not just to log security events and be a password safe, but to limit access to services over the network. Users have a way to use different types of passwords without having to remember all of them.

### Autistic Children's Educational Software

Ethan Melious

Autistic children can benefit from the patient one-on-one instruction that a computer can provide. We write an AJAX application to use games to test matching and recognition, spelling, and listening.

### Desktop on a Keychain

Devin Pohly

What aspects of cold state and hot state can be transferred from one physical computer to another, and by what medium? We investigate ways of pausing a computer while its state is written out to a USB device, and then resuming on another computer with the state being read in.

### High-End GUIs

Aaron Saraco

Which high-end GUIs have the most potential for the future: XAML, SVG, WPF, or a yet-to-be-determined technology? What practical factors shape which implementations become popular regardless of their theoretical merit?

### Multiple Computer Synchronization Software

Joshua Shannon

We write a Java program to synchronize files on three or more computers which have access to a flash memory device, in much the same way that a PDA is synchronized to a desktop computer. We do not maintain multiple versions of files, but use most recent creation date to determine which file is the master version.