SYLLABUS (VERSION 01.24.2013)

COURSE NAME: VIRTUAL ANALOG COMPUTING

COURSE IDS: ATEC 6390.502 and CS 6301.502

TIME & PLACE: 7PM – 9:45PM Friday, ATEC 1.606

INSTRUCTOR: Dr. Paul Fishwick, Office: 1.706 ATEC, Email: Paul.Fishwick@utdallas.edu
TEACHING ASSISTANT: Spencer Evans, Email: sge061000@utdallas.edu

COURSE SUMMARY:

The objective of this class is to conduct a research seminar class introducing students to the concept of building virtual machines which perform, or reflect, core abstract elements of computing. These elements include basic data structures, automata, and programs. The “machines” are built rather than written by leveraging game culture associated with environments such as Minecraft and OpenSimulator, which are both 3D immersive environment packages.

GENERAL INFORMATION ABOUT COURSE:


GRADING:

25% Attendance and participation
20% Report writing
20% Individual and Team Presentations
35% Projects

CALENDAR THROUGH SPRING BREAK 2013

01.18.13:

- Introduction of course topics and goals
- Introduction of students and their interests and goals for taking the course, as well as the introduction of the instructor and teaching assistant
- Buy and read (in 3 weeks, on 02.08.13) this book: http://www.amazon.com/LouderThan-Words-Science-Meaning/dp/0465028292
- Introduction to the history of virtual analog computing through previous classes in aesthetic computing at the University of Florida (videos)
- Obtaining student emails for a Google group and Google document sharing
01.25.13:
- Technologies for target representations
- Introduction to the elements of immersive environments for projects (Fishwick)
- Introduction to the mechanics and gameplay of Minecraft (Evans)
- Introduction to the mechanics of OpenSimulator (Fishwick)
- Topics for individual talks will be issued using group or document

02.01.13:
- Computing content types and examples for target representations (Fishwick)

02.08.13
- Book chapter discussion
  Individual student presentations and discussion on chapters in the book assigned on 01.18.13 (first day of class)

02.15.13
- Topic talks in representation
  Instructor presentation of select topics on representation related to class
  Ten minute individual student presentations from the pre-approved list of topics (time per student and agenda will be passed out on the list prior to class on 01.25.13)

02.22.13
- Two Invited Lectures (to be determined)

03.01.13
- Student team presentations on software projects using Minecraft or OpenSimulator

03.08.13
- To be determined

03.15.13 SPRING BREAK – NO CLASS