Interactive learning system to improve and develop higher keyboard techniques skills.

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Overall Need

• The PT2009X system will provide the proper training required to play keyboards via an array of LED's and graphical display.

• Milestones
  • LED Array implementation 9-25-09
  • Universal Asynchronous Receiver/transmitter (UART) Design 10-8-09
  • Display Completed 10-8-09
  • Complete Music Timing MCU 10-25-09
  • Design Assembly 11-8-09
Tasks Completed

- Website competed – Ready to upload
- Research VGA Signals/Methods
- Implement text/graphics on VGA display using Spartan3E starter board
- Researched/Initially programmed MCU to be used for UART
Ongoing/Pending Tasks

• LED-Array Encoder CCT completion / troubleshooting 9-25-09
• Research methods / materials for LED strip 9-25-09
• Finish static graphics and add code to current VHDL design to display notes on VGA display 10-5-09
• UART Code Design 10-05-09
Upcoming Tasks

- Continue UART code design
- LED array strip design
- Continue graphic design for VGA display
VGA Display – Using Spartan 3E Starter Board

• VGA Task Completion:
  – Display Text Anywhere on screen
  – Created a Hit/Miss Note Counter
  – Displayed Treble Clef Graphic
  – Displayed Bar Lines

• Upcoming
  – Finish note graphics
  – Create a timing system
Questions?