

Kanto Player

CSEE W4840 Final Report

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Abstract

Music is great. We program an FPGA to play and visualize it.

1 Background

2 Design

2.1 High-Level Overview

2.2 Low-Level Implementation Details

2.3 FFT Unit

2.4 Audio Buffer

2.5 Visualizer

3 Timeline & Milestone Progress

| Milestone | Date | Goal | Accomplished |
|-------------|--------|---|-------------------|
| Milestone 1 | Apr 2 | RTL design and block diagrams of all peripherals. | <i>Completed.</i> |
| Milestone 2 | Apr 16 | Individual peripherals written in VHDL and test benched. | <i>Completed.</i> |
| Milestone 3 | Apr 30 | Build interfaces between all peripherals and finish synchronization software. | <i>Completed</i> |
| Deadline | May 9 | System complete and presentation finished. | <i>Completed.</i> |

4 Contributions & Teamwork

- **Kavita Jain-Cocks**

1. item
2. item

- **Howard Mao**

1. item
2. item

- **Amrita Mazumdar**

1. item
2. item

- **Darien Nurse**

1. item
2. item

- **Jonathan Yu**

1. item
2. item

5 Challenges & Lessons Learned

6 Reflections & Prospectus

A Source Code

A.1 VHDL

A.2 C

A.3 Python