Massachusetts Institute of Technology
Department of Electrical Engineering and Computer Science
6.111 - Introductory Digital Systems Laboratory

Final Project Check Off Sheet

Project Title: Digital AM Receiver
Student Name: Hassen Abdu, Ebad Ahmed, Wajahat Khan
TA Name: Hyunjoo Jenny Lee
TA Signature/Date:

Design

- ☐ State transition diagrams, Block Diagrams, Code for Character ROM, VGA output, Major FSM, RAM Minor FSM, ADC Minor FSM. (Hassen Abdu)
- ☐ State transition diagrams, Block Diagrams, Code for Major FSM, Minor FSM1, Minor FSM2, AC'97 Codec, SRAM1-Pause/Replay, SRAM2-Bookmarks, Synchronize (Ebad Ahmed)
- ☐ State transition diagrams, Block Diagrams, Code for Downconverted-Sample-Store, 5-input 28-bit multiplier, 5-input 42-bit accumulator, Down-Conversion-Coefficients ROM, LPF Coefficient ROM, Major FSM (Wajahat Khan)

Functionality

- ☐ Demonstrate VGA display of the Digital AM Receiver GUI is working. (Hassen Abdu)
- ☐ Demonstrate that the channel selection, pause/replay, auto-tuning, and bookmarking features are working. (Ebad Ahmed)
- ☐ Demonstrate the extraction of an audio signal from a radio station, by down-conversion and low-pass filtering, is working. (Wajahat Khan)
- ☐ Demonstrate that the Digital AM Receiver which receives and plays AM radio digitally, and interfaces with the user is working.

Discussion

- ☐ How did you achieve the display of the FFT for the audio signal and AM band?
  How did you decide on the threshold value for the auto-tuning feature?
  How did you decide on the number of taps for your low-pass filter?