

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

**Final Project Check-off Sheet**

**Project:** *A Two-Input Polygraph*

**Group Members:** *Archana Venkataraman, Christopher Buenrostro, Isaac Rosmarin*

**TA Name:** *Theodoros Konstantakopoulos*

**TA Signature:**

**Part I: Individual Assignments**

**Christopher:**

- Assemble and test the pulse rate and skin conductivity sensors
- Interface with ADC (to convert the analog sensor data into 8-bit digital representation)
- Interface to labkit through User I/O
- Interface to BRAM
- State transition diagrams and Block diagrams

**Archana:**

- Capture/register user inputs and route to appropriate modules
- Obtain sensor data from BRAM
- Perform digital pre-processing on data to reduce noise
- Implement algorithm to make truth vs. lie decision based on sensor data
- State transition diagrams and Block diagrams

**Isaac:**

- Display screen shot of test output on VGA monitor
- Display dynamic data (pseudo ECG and skin conductivity)
- Save and compress single frame
- Display the compressed screen shot
- State transition diagrams and Block diagrams

**Part II: Overall System Functionality**

- Verify data path # 1: sensor → digital processing → display binary truth vs. lie decision
- Verify data path # 2: sensor → dynamic output display
- Ensure that user commands are serviced appropriately (ex. *store data, question type, screen capture*)