Ethics and Responsibility

Sddec24-13

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Project Overview

Design a test vehicle for Resistive Random-Access Memory(ReRAM) crossbar for proof of concept

- Utilize open-source design tools
- Submit fabrication application through Efabless shuttle program
- Create bring up plan to test device
- Create documentation for open-source tools for future users
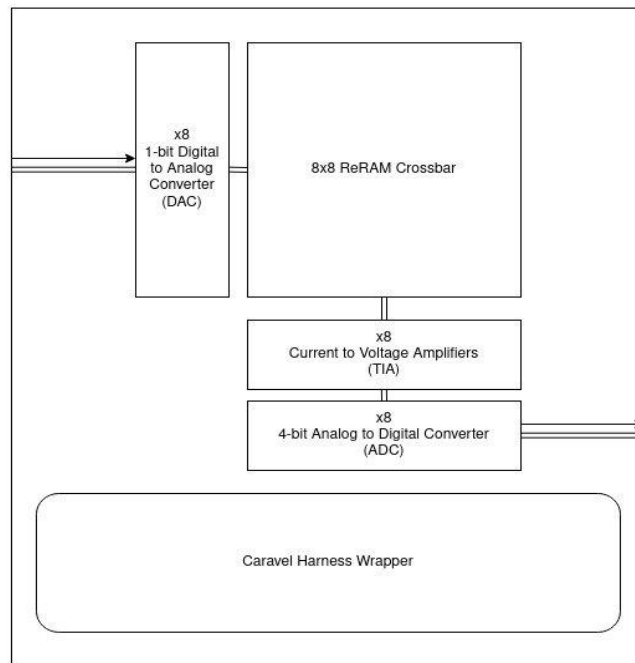
Work Competence

This is a relevant idea to our project because we are creating and working with a technology that has not had the opportunity for many use cases yet.

- Demonstrate a high quality circuit
  - Well thought out and designed sub components
- Detailed supporting documentation
- Delivered by end of the year

Approach to Work Competence

- Communicate with everyone
- Avoid cutting corners at the expense of delays
- Document as we got along
  - To the best of our abilities
- Division of tasks to keep progress flowing

Work Competence responsibilities

- Ethical Responsibilities
    - Design decisions will not have a harmful impact on our users
    - Designed with power consumption in mind
- Professional Responsibilities
    - Creating detailed documentation for those that come after us
    - Communicating our progress and ideas as a team as well as with our advisors

Sustainability

This is a relevant topic as IC design requires multiple resources from the earth to be created.

- Silicon
  - Made from sand
- Rare earth metals
- By products can be toxic to the environment
- Our design has the potential to allow for the same circuits to be built using less materials

Sustainability responsibilities

- Not the focal point of our design decisions

- There could be potentially more sustainable options for our design

- Creating something that will be used for a short period of time before it breaks or is discarded