

A very brief guide to writing a good technical abstract

Computer Architecture Laboratory
Jeremy R. Cooperstock

5 key points you need to make

- **what** are you going to do
- **how** are you going to do it
- **why** are you doing it (what makes it interesting and/or challenging)
- how will you **evaluate** its success
- **references** that are relevant

What

This project implements the multiplication of two integers using the convolution algorithm.

Reference

This project implements the multiplication of two integers using the convolution algorithm (**Leighton 1992**).

How

This project implements the multiplication of two integers using the convolution algorithm (Leighton 1992).

The multiplication works in a serial fashion and takes $4N - 1$ cycles to complete for an $N \times N$ bit multiplication using a convolutional approach to calculating and storing individual bits of the product.

Why

This project implements the multiplication of two integers using the convolution algorithm (Leighton 1992).

The multiplication works in a serial fashion and takes $4N - 1$ cycles to complete for an $N \times N$ bit multiplication using a convolutional approach to calculating and storing individual bits of the product.

This project has been chosen in particular to relieve the future classes of worrying about multiplication of large numbers for other algorithms by using minimum chip area for the multiplier (e.g. RSA algorithm requires a 512 X 512 bit multiplier).

But run a spell-check!

This project implements the multiplication of two integers using the convolution algorithm (Leighton 1992).

The multiplication works in a serial fashion and takes $4N - 1$ cycles to complete for an $N \times N$ bit multiplication using a convolutional approach to calculating and storing individual bits of the product.

This project has been chosen in particular to relieve the **furure classes of worrying about multiplication of large numbers for other algorithms by using minimum chip area for the multiplier (e.g. RSA algorithm requires a 512 X 512 bit multiplier).**

Evaluation

...

This project has been chosen in particular to relieve the future classes of worrying about multiplication of large numbers for other algorithms by using minimum chip area for the multiplier (e.g. RSA algorithm requires a 512 X 512 bit multiplier).

The multiplier optimizes on area and **the stress will be on beating the LPM multipliers provided in the Altera Library as far as size and scalability is concerned. Another area of stress would be the scalability of the multiplier...**

Fluff

...

The multiplier optimizes on area and the stress will be on beating the LPM multipliers provided in the Altera Library as far as size and scalability is concerned. Another area of stress would be the scalability of the multiplier **and that is where our research will be most concentrated and will result in this being a unique project. During the past few days, we have had the opportunity to go through many different types of algorithms for multiplication. Although the actual implementation should be a comparatively easy task, the design strategies will have to go in depth to explore many options in an effort to achieve desirable results.**

Is this a good abstract?

Cryptography is a security measure used to render data unintelligible to unauthorized parties. In this day and age, vast amounts of digital data is transmitted within complex communications networks, and thus cryptography becomes a necessity.

For our project, we will undertake the design of the RSA public-key cryptosystem using VHDL. We want to be able to encrypt/decrypt a message sent between two communicating parties, using both a public key and a secret key. Due to time constraints and the level of complexity of the RSA algorithm, we will not be incorporating the "digital signature" aspect of the RSA cryptosystem into our design.

I give it 2/5

Cryptography is a security measure used to render data unintelligible to unauthorized parties. In this day and age, vast amounts of digital data is transmitted within complex communications networks, and thus cryptography becomes a necessity.

(1) For our project, we will undertake the design of the RSA public-key cryptosystem using VHDL. We want to be able to encrypt/decrypt a message sent between two communicating parties, using both a public key and a secret key. (WHAT)

(2) Due to time constraints and the level of complexity of the RSA algorithm, we will not be incorporating the "digital signature" aspect of the RSA cryptosystem into our design. (HOW, or "HOW NOT")

Keep in mind that you:

- have very limited time and space
- need to convey key points quickly
- can assume a technical audience
- don't want to state the obvious
- can't afford typos (furure?)