### **Project Report**

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Abstract

The design of a highly integrated tandem processor “TP jop” is discussed in this report. TP-JOP is

# Introduction

The design of a complex multicomponent processor is described in the following sections. In this project The design of the Tandem processor (TP-JOP) was split into three distinct parts. The following sections will describe The individual phases in terms of their design goals the objectives and the progress achieved.

-split into 3 phases why?

What are in th

# The Design Process

The project was divided into three phases, and after each of these phases the total progress made toward the end product was determined. The first of these phases was essentially the design stage in which the major components of the ReCop were to be designed.

SystemC was the desired designing language as it enables faster, higher level design capabilities.

## SystemC

* Designing of the datapath during this phase
* Control unit

# Phase II

## Converting SystemC to VHDL

* Progressing of the design of the datapath
* Control unit

# Phase III

## SimpCon

## Using arbiter to connect two CPU’s together as both act as masters

## VHDL Merge

* Final Datapath design
* Changing of the control unit to fit the interface with the jop as well as the change of the processor top level entity to work with the jop and simcon interfaces

# Discussion

## Difficulties Faced

* Simpcon connection

# Conclusions

This template can be found on the final year project website:

http://www.ece.auckland.ac.nz/~p4p\_2005/downloads.

# Acknowledgements

# References

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