

# My Groovy Research Proposal Title

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THOU SHALLT NOT REMOVE  
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<sup>a</sup>This means that if you are writing a research proposal, you would be better darned sure that the your manuscript is ready, then you should modify “00.tex” and remove the lines that make this horrendously weird text.

## Abstract

With the advances in network speeds a single processor cannot cope anymore with the growing number of data streams from a single network card. The problem is aggravated in virtual computing environment, where each I/O operation requires switching context to the host on which the virtual machine runs.

Previous research employed a “side-core” in attempt to ameliorate the problem: all I/O operations are delegated to a dedicated core, whereby obviating the need for context switch. However, performance boost was demonstrated only if the number of virtual machines was sufficiently large.

This research proposal is to employ the idea of sidecores for I/O in a computing environment where there is a single virtual machine.

We show how using multiple sidecores for the I/O operations we can tremendously improve the performance of a single VM and reduce context switches to the host.

We introduce an innovative approach to route i/o streams of a single VM to several sidecores, and show how it reduces context switches to the host.

I/O operations are famous for being a bottleneck of virtualized architectures, in which many virtual machines are emulated run on a one more more hardware machines. In this research, I will explore the prospects of a new idea for meeting the I/O challenge: with “side-core(s)”, a dedicated single core (or perhaps several cores) are taken away from the hardware pool, and are dedicated to conducting I/O operations for all virtual machines.

Dan suggested that he has students that work on side-core. We allocate a dedicated‘ core for accelerating I/O operations of 12 virtual machines.operations of 12 virtual machines with one virtual machine.

There is something called TEE. We think of adding a feature to TEE. Nodes his head. Possibly to SGX Of Intel.We think of feature Gamma I/O. In hardware. We wish to see if there is something of research type that can be done with it.

## 1 Introduction

“In God We Trust” states every US currency note. In real life, however we must trust other agents, our bank web site (to be protected from hackers and evil employees alike), our keyboard (to protect against government implanted tapping devices), Until recent recent years, trust was a matter of trusting software,

which is essentially tantamount trusting programmers. In view of devious, some would say fiendish, openly publish”ed tricks [?] and those only detected in retrospection [?].

An new and exciting direction in data security is hardware support for “trusted” execution environment. The term “trusted” here means a guarantee that the executing software is immune to malware, be it as malicious as it can be. Trust is also against the operating systems.

*Trusted Execution Environment* (TEE) is a technology that combines software and hardware, in order to establish a malware free execution environment of software. One such TEE is SGX, by Intel. SGX creates an enclave in an application’s context, which is cryptographically protected and secured. The thesis is about adding a feature to the SGX, maybe a feature which will enable input and output.

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**Outline** In ?? we present some of the common metrics. ?? we suggest three new complexity metrics. In ??, we go over our research method for measuring the correlation between metrics, and comparing the new metrics to the traditional ones with regards to bug correlation. ?? concludes.

## 2 Existing Software Metrics

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## 3 Example of new Software Metrics

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## 4 Research Objectives

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## 5 Schedule and Initial Results and/or Research Questions

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