Resilient Networks

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M.S. THESIS PROPOSAL

Thesis Committee:

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Date Proposed

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Abstract

This is the abstract. Keep it one paragraph at max 150 words. The abstract shouldn't overflow one page. It should be only paragraph.

I like to dedicate this work to Homer Simpson.....

Acknowledgements

I would like to thank to my comittee members.

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Chapter 1

Introduction and Motivation

Communication networks are becoming more important and ubiquitous. This is a result of society's increasing dependance on Internet infrastructure. Continue with more introduction. Remember the rule of thumb: work on introduction section the last!

The rest of the thesis proposal is organized as follows. The subject of resilience and survivability, as well as related works in the subject area are discussed in chapter 2. Chapter 3 describes the modeling of resilient networks for simulations.

Chapter 2

Background and Related Work

Resilient networks have been studied in a variety context. Survivability is studied in [**?**], whilst resilience is studied in in [**?**].

Continue with the background and related materials for the rest of this chapter.

Chapter 3

Research Plan and Preliminary Results

The results are presented. Briefly talk about different scenarios. This section doesn't have to be the full results.

IMPORTANT NOTE ABOUT FIGURES: Plots need to be generated using gnuplot. Figures need to be produced in PowerPoint (.ppt) and converted to PDF. Don't forget that you will be asked to provide the source files for figures and plots!

3.1 Research Plan

EXPLAIN YOUR RESEARCH PROBLEM. WHAT IS THE PROPOSED SOLUTION TO THE PROBLEM. Present some timeline for the milestones.

Simulations are performeds in ns-3 [**?**]. ns-3 is a powerful tool to study, analyze, model the networks in a smaller scale.

The parameters used in the simulations can be seen in table 3.1.

Remember that this is proposal. The model and the results doesn't have to

Table 3.1. Simulation Parameters

Parameter	Value
Routing	Static
Area	150×150
Simulation time	100 [s]
Link layer	802.11

be perfect. This proposal should give some idea to your committee about what you are about to work on.

3.2 Preliminary Results

Present the baseline results. What are the metrics you are comparing? Why did you choose those metrics?

Example of a bad plot [**?**] can be see in Figure 3.1. The figure is put as an example to show the low quality plot. Plots need to be generated via gnuplot.

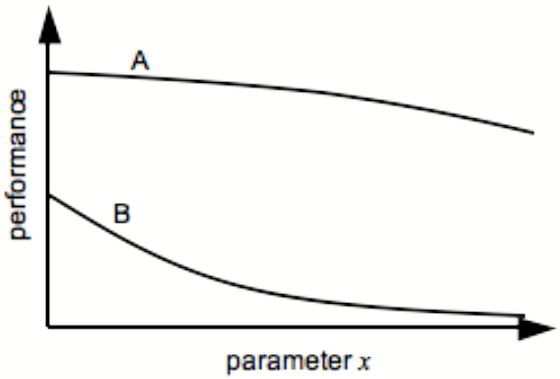

Figure 3.1. Example of a Bad Plot

Example of a bad plot created in Excel can be see in Figure 3.2. As can be seen, it does not look professional. This is not acceptable.

Put the results here for catastrophic failures scenarios. What's happenning compared to baseline scenarios?

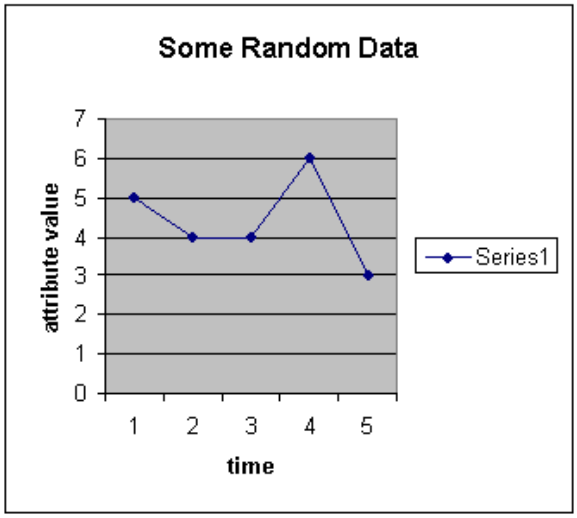

Figure 3.2. Example of a Unacceptable Plot

Aggregate rain rate under the circumstances can be see in Figure 3.3. Can you see the difference between Figure 3.3 and Figure 3.1? The plots in Figure 3.3 are produced with gnuplot. Plots should be produced in gnuplot!!!

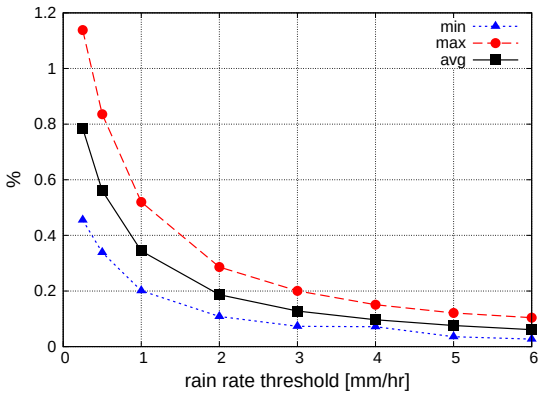

Figure 3.3. Aggregate Rain Rate

On the other hand the figures need to be generated using the PowerPoint (.ppt). The figures then need to be converted to PDF format. You will need to submit all the raw figures to Dr. Sterbenz. If you have questions about figures or format, contact to ResiliNets group.

Put the results here for non-catastrophic failures scenarios. What's happenning compared to baseline scenarios?

Frame error rate vs. CDF under the circurmstances can be see in Figure 3.4.

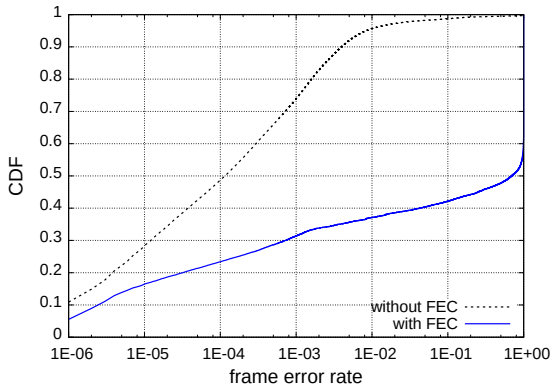

Figure 3.4. Frame Error Rate