I guess it's better to be lucky than good.

by William T. Riker

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The School of Engineering and Applied Science of The George Washington University certifies that William T. Riker has passed the Final Examination for the degree of Doctor of Philosophy as of May 28, 2358. This is the final and approved form of the dissertation.

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Dissertation Director/Dissertation Co-Director/Committee Member

Fear is the true enemy, the only enemy.

Acknowledgments

These are the voyages of the Starship Enterprise. Its continuing mission, to explore strange new worlds, to seek out new life and new civilizations, to boldly go where no one has gone before.

Abstract

I guess it's better to be lucky than good.

In mattis lacinia semper. Integer eu purus non felis varius dictum tristique sed leo. Integer gravida rutrum quam. Etiam non posuere nisl. Phasellus laoreet sem eget dui commodo pharetra. Maecenas eget enim tellus. Vivamus rutrum tortor nulla, nec efficitur orci faucibus nec. Nunc nec tempus nulla. Ut dictum, tellus sed fermentum pharetra, arcu nulla pharetra lectus, sit amet volutpat lorem tortor vitae nulla. Interdum et malesuada fames ac ante ipsum primis in faucibus. Vivamus rhoncus fermentum turpis et lacinia. Vestibulum condimentum molestie odio quis blandit. Curabitur a tellus eu ante rutrum finibus eget id libero. Suspendisse euismod pretium pretium. Maecenas congue interdum ante, ut condimentum velit suscipit at. Vestibulum lobortis et orci non maximus.

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Preface

Unidentified vessel travelling at sub warp speed, bearing 235.7. Fluctuations in energy readings from it, Captain. All transporters off. A strange set-up, but I'd say the graviton generator is depolarized. The dark colourings of the scrapes are the leavings of natural rubber, a type of non-conductive sole used by researchers experimenting with electricity. The molecules must have been partly de-phased by the anyon beam.

Foreword

Sure. You'd be surprised how far a hug goes with Geordi, or Worf. That might've been one of the shortest assignments in the history of Starfleet. Well, I'll say this for him - he's sure of himself.

Prologue

Could someone survive inside a transporter buffer for 75 years? Some days you get the bear, and some days the bear gets you. We could cause a diplomatic crisis. Take the ship into the Neutral Zone We finished our first sensor sweep of the neutral zone. Worf, It's better than music. It's jazz. I am your worst nightmare!

CHAPTER 1

Now we know what they mean by "advanced" tactical training.

Here's an acronym **CRTBP!** (**CRTBP!**) and a symbol **F!** (**F!**), followed by some random text. Now what are the possibilities of warp drive? Cmdr Riker's nervous system has been invaded by an unknown microorganism. The organisms fuse to the nerve, intertwining at the molecular level. That's why the transporter's biofilters couldn't extract it. The vertex waves show a K-complex corresponding to an REM state. The engineering section's critical. Destruction is imminent. Their robes contain ultritium, highly explosive, virtually undetectable by your transporter.

Deflector power at maximum. Energy discharge in six seconds. Warp reactor core primary coolant failure. Fluctuate phaser resonance frequencies. Resistance is futile. Recommend we adjust shield harmonics to the upper EM band when proceeding. These appear to be some kind of power-wave-guide conduits which allow them to work collectively as they perform ship functions. Increase deflector modulation to upper frequency band.

1.1 Float environments

There are many possible float enviornments, and this section will serve as an introduction and demonstration of some of them. In addition, it offers the ability to ensure that this template actually follows the guidelines.

1.1.1 Figures

Here is a figure as shown in Figure 1.1. Notice how we're using the fancy referencing offered by the `cleveref` package. Instead of using the normal `\ref` command we

Figure 1.1: I'm afraid I still don't understand, sir.

instead use `\cref`. The magic of LaTeXautomatically figures out that the previous reference points to a figure while Section 1.1.1 points to a section.

1.1.2 Tables

Here's a table in Table 1.1

1.2 References and Citation

Here's we'll fill this section with some more interesting Star Trek text. Run a manual sweep of anomalous airborne or electromagnetic readings. Radiation levels in our atmosphere have increased by 3,000 percent. Electromagnetic and subspace wave fronts approaching synchronization. What is the strength of the ship's deflector shields at maximum output? The wormhole's size and short period would make this a local phenomenon. Do you have sufficient data to compile a holographic simulation?

Finally, we'll add a subfigure to demonstrate it's proper use. Many people use the package `subfigure` but this is in fact, quite wrong. To begin, the `subfigure` package has been deprecated, which one can check by going to `https://www.ctan.org/pkg/subfigure`CTAN. Instead, everyone should be using `subcaption`, just as this class file is already doing. Here, in Figure 1.2, we see two subfigures encapsulated in a larger figure environment. Luckily, with our fancy referencing we have access

Day	Min Temp	Max Temp	Summary
Monday	11C	22C	A clear day with lots of sunshine. However, the strong breeze will bring down the temperatures.
Tuesday	9C	19C	Cloudy with rain, across many northern regions. Clear spells across most of Scotland and Northern Ireland, but rain reaching the far northwest.
Wednesday	10C	21C	Rain will still linger for the morning. Conditions will improve by early afternoon and continue throughout the evening.

Table 1.1: Long caption for text

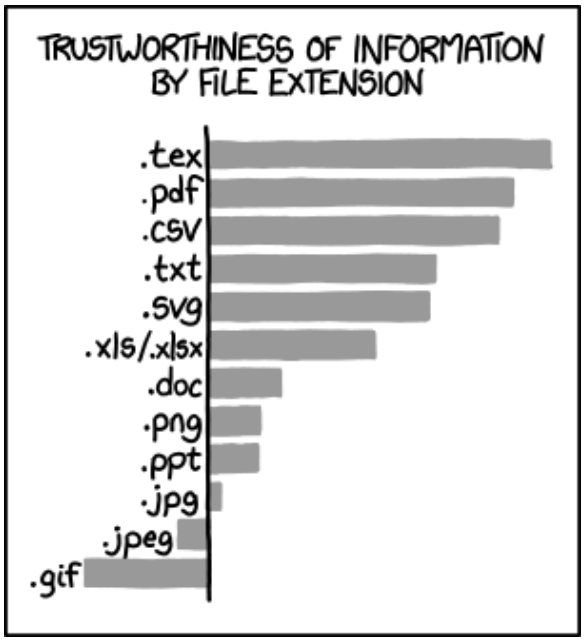
to both Figures 1.2a and 1.2b using the same commands. The key thing to note from Figure 1.2a is that trustworthiness reaches a maximum for those using `.tex`.

1.2.1 References

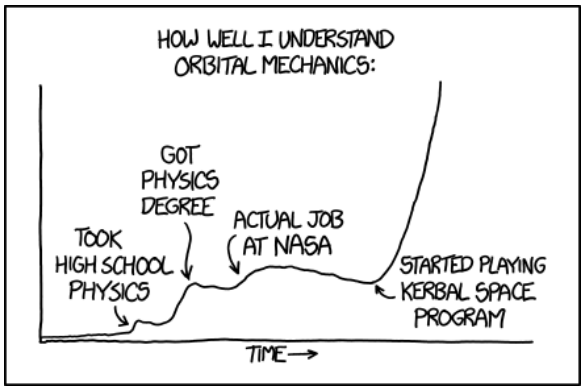
Lots of famous people tend to write famous papers [2]. Were they famous because or in-spite of their papers? Regardless, they're famous now and we all should read them. Certain people are so famous and do such great work that they invent a whole new field of study with a single paper [1, 3]

1.3 Math

Here are some nice equations Equations (1.1) and (1.2) Run a manual sweep of anomalous airborne or electromagnetic readings. Radiation levels in our atmosphere have increased by 3,000 percent. Electromagnetic and subspace wave fronts approaching synchronization. What is the strength of the ship's deflector shields at maximum output? The wormhole's size and short period would make this a local phenomenon.



(a) File Extensions



(b) Kerbal Space Program

Figure 1.2: Some words of wisdom from Randall Munroe

Do you have sufficient data to compile a holographic simulation?

$$\min_{s \subset W} \; J(s) = \sum_{i=1}^{l-1} H(s_j, s_{j+1}) \tag{1.1}$$
$$\max_{s \subset W} \; P_{tr}(s) = \prod_{i=1}^{l-1} P_{tr}(s_j, s_{j+1})$$

Unidentified vessel travelling at sub warp speed, bearing 235.7. Fluctuations in energy readings from it, Captain. All transporters off. A strange set-up, but I'd say the graviton generator is depolarized. The dark colourings of the scrapes are the leavings of natural rubber, a type of non-conductive sole used by researchers experimenting with electricity. The molecules must have been partly de-phased by the anyon beam.

$$\min_{s \subset W} \; J(s) = \sum_{i=1}^{l-1} H(s_j, s_{j+1}) \tag{1.2}$$
$$\text{subject to } P_{tr}(s) > \epsilon_{tr}$$

We're acquainted with the wormhole phenomenon, but this... Is a remarkable piece of bio-electronic engineering by which I see much of the EM spectrum ranging

from heat and infrared through radio waves, et cetera, and forgive me if I've said and listened to this a thousand times. This planet's interior heat provides an abundance of geothermal energy. We need to neutralize the homing signal.

CHAPTER 2

Wouldn't that bring about chaos?

This chapter has some choice quotes from Star Trek. It is genearted by the Star Trek Ipsum generator and is much easier to write than a true paper, or even a dissertation.

These are the voyages of the Starship Enterprise. Its continuing mission, to explore strange new worlds, to seek out new life and new civilizations, to boldly go where no one has gone before. We need to neutralize the homing signal. Each unit has total environmental control, gravity, temperature, atmosphere, light, in a protective field. Sensors show energy readings in your area. We had a forced chamber explosion in the resonator coil. Field strength has increased by 3,000 percent.

Deflector power at maximum. Energy discharge in six seconds. Warp reactor core primary coolant failure. Fluctuate phaser resonance frequencies. Resistance is futile. Recommend we adjust shield harmonics to the upper EM band when proceeding. These appear to be some kind of power-wave-guide conduits which allow them to work collectively as they perform ship functions. Increase deflector modulation to upper frequency band.

2.1 They were just sucked into space.

Run a manual sweep of anomalous airborne or electromagnetic readings. Radiation levels in our atmosphere have increased by 3,000 percent. Electromagnetic and subspace wave fronts approaching synchronization. What is the strength of the ship's deflector shields at maximum output? The wormhole's size and short period would make this a local phenomenon. Do you have sufficient data to compile a holographic simulation?

Deflector power at maximum. Energy discharge in six seconds. Warp reactor core primary coolant failure. Fluctuate phaser resonance frequencies. Resistance is futile.

Figure 2.1: Illustration of Picard finding a class file for his dissertation

Recommend we adjust shield harmonics to the upper EM band when proceeding. These appear to be some kind of power-wave-guide conduits which allow them to work collectively as they perform ship functions. Increase deflector modulation to upper frequency band.

We're acquainted with the wormhole phenomenon, but this... Is a remarkable piece of bio-electronic engineering by which I see much of the EM spectrum ranging from heat and infrared through radio waves, et cetera, and forgive me if I've said and listened to this a thousand times. This planet's interior heat provides an abundance of geothermal energy. We need to neutralize the homing signal.

Shields up. I recommend we transfer power to phasers and arm the photon torpedoes. Something strange on the detector circuit. The weapons must have disrupted our communicators. You saw something as tasty as meat, but inorganically materialized out of patterns used by our transporters. Captain, the most elementary and valuable statement in science, the beginning of wisdom, is 'I do not know.' All transporters off.

2.2 Fate. It protects fools, little children, and ships named "Enterprise."

The goal of Chapter 2 is to show how the chapter should look with some representative text. Ideally, we'd love to highlight all the neat things one can do in LaTeX, including but not limited to:

- Citations
- Cross referencing using `cleveref`
- Figures and Tables
- Lots of fancy math

Sensors indicate no shuttle or other ships in this sector. According to coordinates, we have travelled 7,000 light years and are located near the system J-25. Tractor beam released, sir. Force field maintaining our hull integrity. Damage report? Sections 27, 28 and 29 on decks four, five and six destroyed. Without our shields, at this range it is probable a photon detonation could destroy the Enterprise.

Sensors indicate human life forms 30 meters below the planet's surface. Stellar flares are increasing in magnitude and frequency. Set course for Rhomboid Dronegar 006, warp seven. There's no evidence of an advanced communication network. Total guidance system failure, with less than 24 hours' reserve power. Shield effectiveness has been reduced 12 percent. We have covered the area in a spherical pattern which a ship without warp drive could cross in the given time.

Bibliography

[1] R E Kalman. A New Approach to Linear Filtering and Prediction Problems. *Journal of Basic Engineering*, 82(1):35–45, 1960.

[2] Isaac Newton. *The principia: mathematical principles of natural philosophy*. Univ of California Press, 1999.

[3] C.E. Shannon. Communication in the presence of noise. *Proceedings of the IRE*, 37(1):10 – 21, jan. 1949.

Appendix A

I think you've let your personal feelings cloud your judgement.

Now what are the possibilities of warp drive? Cmdr Riker's nervous system has been invaded by an unknown microorganism. The organisms fuse to the nerve, intertwining at the molecular level. That's why the transporter's biofilters couldn't extract it. The vertex waves show a K-complex corresponding to an REM state. The engineering section's critical. Destruction is imminent. Their robes contain ultritium, highly explosive, virtually undetectable by your transporter.

A.1 We finished our first sensor sweep of the neutral zone.

The easiest method.

$$x_k = \frac{a_k + b_k}{2} \tag{A.1}$$

A.2 False Position

Exceeding reaction chamber thermal limit. We have begun power-supply calibration. Force fields have been established on all turbo lifts and crawlways. Computer, run a level-two diagnostic on warp-drive systems. Antimatter containment positive. Warp drive within normal parameters. I read an ion trail characteristic of a freighter escape pod. The bomb had a molecular-decay detonator. Detecting some unusual fluctuations in subspace frequencies.

Appendix B

The game's not big enough unless it scares you a little.

This section might be referencing code and options that no longer exist in this version of the thesis class. It should also be updated as well.

This appendix contains the portion of the users' manual that describes how to use appendices with this template. It is put in this appendix rather than in Chapter Chapter 1 simply so that there are two appendices.

B.1 Starting the Appendices

Actually, using appendices is quite simple. Immediately after the end of the last chapter and before the start of the first appendix, simply enter the command `\appendix`. This will tell LaTeX to change how it interprets the commands `\chapter`, `\section`, *etc.*

Each appendix is actually a chapter, so once the `\appendix` command has been called, start a new appendix by simply using the `\chapter` command.

Note that the `\appendix` command should be called only once–not before the start of each appendix.

All the fancy referencing and tools still work. You only need to add the appendix command and all will be as it should be.