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*A mi madre, por ser una mujer con super poderes capaz de afrontar cualquier  
dificultad, siempre has estado ahí*

*A mi padre, por ayudarme a ser como soy ahora, nunca me rendiré contigo*

*A mi hermano, por ser el mejor, haces que quiera seguir superándome para  
alcanzarte*

*A Jenny, por cambiarme la vida, siempre tiras de mí cuando lo necesito*





# Abstract

*I invent, transform, create and destroy for a living and  
when I don't like something about the World I change it.*

Rick and Morty - Dan Harmon, Justin Roiland

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**Keywords:** whatever.



# Resumen

*We do what we must because we can.*

GLaDOS - Portal.

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**Palabras Clave:** las que sean.



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## Part I

# Introduction and previous considerations

This part aims to introduce the reader to the circumstances in which this project has arisen. It consists of an introduction and an exploration of the motivations of the project. Further on, it establishes a background of the areas to which this platform intends to affect. Finally, this part concludes describing the methodologies and technologies used for the implementation.



# Chapter 1

## VikTeX usage and structure

*Who Watches the Watchmen?*

Watchmen - Alan Moore

### 1.1 Document structure

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### 1.2 Configuring VikTeX

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### 1.3 Custom commands

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### 1.4 Other useful information

## Chapter 2

# Project background

The future is already here – it’s just not evenly distributed. William Gibson

### 2.1 Socio-cultural background

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[1; 2; 3; 4; 5; 6; 7; 8; 9; 10; 11; 12]

### 2.2 Technical background

#### 2.2.1 Network Architectures

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## Part II

# Decentralized Science

This part describes the platform incrementally. First, it offers a high-level outline of the behavior designed for the platform. Next, two different implementations with technical details of each of them are described. Thereafter an analysis is made comparing the final implementation with the current systems. Finally, a conclusion is offered and several ways for future work are established.



## Chapter 3

# Discussion

I am looking for someone to share in an adventure that I am arranging, and it's very difficult to find anyone. The Hobbit - J. R. R. Tolkien

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## Chapter 4

# Conclusions and future work

We don't want to change. Every change is a menace to stability. Aldous Huxley -  
Brave New World

### 4.1 Concluding remarks

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## Appendix A

### Appendix title

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# Bibliography

*You act, and you know why you act, but you don't know  
why you know that you know what you do?*

The name of the rose - Umberto eco

- [1] D. J. Ortinau, "Writing and publishing important scientific articles: A reviewer's perspective," *Journal of Business Research*, vol. 64, no. 2, pp. 150–156, 2011.
- [2] B. T. Adler and L. De Alfaro, "A content-driven reputation system for the wikipedia," in *Proceedings of the 16th international conference on World Wide Web*. ACM, 2007, pp. 261–270.
- [3] S. Anderton and L. Harvey, "Continuous publication: ready, set, cite!" 2013.
- [4] A. M. Antonopoulos, *Mastering Bitcoin: unlocking digital cryptocurrencies*. " O'Reilly Media, Inc.", 2014.
- [5] J.-P. Aumasson, L. Henzen, W. Meier, and R. C.-W. Phan, "Sha-3 proposal blake," *Submission to NIST*, 2008.
- [6] S. Nakamoto, "Bitcoin: A peer-to-peer electronic cash system," 2008.
- [7] J. Peterson and J. Krug, "Augur: a decentralized, open-source platform for prediction markets," *arXiv preprint arXiv:1501.01042*, 2015.
- [8] P. J. Piasecki, "Gaming self-contained provably fair smart contract casinos," *Ledger*, vol. 1, pp. 99–110, 2016.
- [9] J. Pokorná, L. Pilar, T. Balcarová, and I. Sergeeva, "Value proposition canvas: Identification of pains, gains and customer jobs at farmers' markets," *AGRIS on-line Papers in Economics and Informatics*, vol. 7, no. 4, p. 123, 2015.

- [10] U. Pöschl, “Multi-stage open peer review: scientific evaluation integrating the strengths of traditional peer review with the virtues of transparency and self-regulation,” *Frontiers in computational neuroscience*, vol. 6, 2012.
- [11] B. Whitworth and R. Friedman, “Reinventing academic publishing online. part ii: A socio-technical vision,” *First Monday*, vol. 14, no. 9, 2009. [Online]. Available: <http://firstmonday.org/ojs/index.php/fm/article/view/2642>
- [12] P. Resnick, K. Kuwabara, R. Zeckhauser, and E. Friedman, “Reputation systems,” *Communications of the ACM*, vol. 43, no. 12, pp. 45–48, 2000.

*Until they become conscious they will never rebel,  
and until after they have rebelled they cannot become conscious.*

*1984  
George Orwell*

*These people don't see that if you encourage totalitarian methods,  
the time may come when they will be used against you instead of for you.*

*Animal Farm  
George Orwell*

