**The Great Firewall in China: Past Present, Future**

**A detailed review of the Internet structure and censorship in China**

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**Abstract**

*Keywords*: censorship, GFW, internet measurement

**Introduction**

With the technologies developed over a long time, the internet provides humans with a brand-new method to recognize this world. As a bridge for the flow of information, it carries the thoughts, ideas, opinions and needs of all people, pushing the boundaries that we can reach.

However, the free flow of information likewise brings with it a host of pitfalls and security considerations. There is a lot of information that people don't want others to know, so firewalls and Internet censorship were born. It exists to act as a kind of virtual customs in the Internet era, reviewing imported and exported network traffic and blocking information that could harm the interests of the state and/or social actors, on the premise of national security and social stability. Many countries have set up such Internet customs, the most typical of which is China's The Great Firewall. In this article, we will analyze and understand its past and present in detail and discuss its future development and social significance. We will also discuss its impact on freedom of information and the general application of the technology in a broader sense.

**Table of Contents**

Abstract……………………………………………………………………………………………2

Introduction…………………………………………………………………………………..........3

Table of Contents……………………………………………………………………………..........4

Part I. The History Of GFW

* Section I. The origin of GFW………………………………………………………...5
* Section II. Previous Research on GFW……………………………………………...10
* Section III. The Development of GFW……………………………………………..13

Part II. Current GFW

* Section I. Methodology of blocking………………………………………………...17
* Section II. Carrier Interference……………………………………………………...20

Part III. Future GFW

* Section I. How will it evolve………………………………………………………...23
* Section II. How will the policy change……………………………………………...25
* Section III. General application from this…………………………………………...28

Part IV. Legal and Social Issue

* Section I. Political Correctness……………………………………………………...30
* Section II. Socially Acceptable……………………………………………………...35

Part V. Influence on freedom of information: Do we need it now? ………………………………38

Part VI. Government Perspective: Govern people or people to govern? Parental Society?.............40

Conclusion……………………………………………………………………………………….41

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Since this is a dynamic system, it is always changing to keep up with whoever the laws, regulations, and policy needs are. Therefore, we review the work done by previous scholars on this topic and add the current legal and regulatory situation. Through a series of DNS, IP, and address experiments to detect the current deployment and operation of GFW in China. At the same time, we will also analyze and evaluate the necessity of GFW's existence in the current social environment, considering the characteristics of the current Chinese society, starting from the daily use of the application.

**Section I.I The origin of GFW.**

**References**