

Protecting private data in telecommunications by increasing data security and privacy in New Zealand

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ABSTRACT

This proposal presents research which is aimed at understanding the level of concern people who reside in New Zealand have over data security and privacy. The research will pertain to Information and Communications Technology (ICT) as it covers most people in New Zealand through mobile phones, telephones, tablet's and personal computer's (PC's). The study also aims at understanding whether ethical monitoring can be achieved as within the law without hurting or breaking the privacy laws that are put in place in New Zealand. The second aim of the research is to assess the areas in private communication that people are willing to be monitored. The scope of the research is pertaining to New Zealand's ICT's which form a core of the government's processes and administration.

Keywords: Data protection, Privacy, Telecommunications, Internet, Cloud computing

1. INTRODUCTION

The concept of privacy and data security is an issue with people and government's defending their own stance of what is right and what is wrong. Some researchers like Juels (2006), Diffie and Hellman (1979) have drawn conclusions from surveys that have been conducted within their research. However there is one very important factor in data security and privacy, that is, it may or may not vary depending upon which ethnicity or which country the person is from. Another important factor is the privacy policy which has been prescribed in each country. Some countries are keen on keeping close tabs on their citizens while some countries have relaxed privacy policies.

The country that this research is going to focus on is New Zealand and the privacy policy that is currently being adopted or followed is the one that was passed in 1993 and is termed as the Privacy Act 1993. The act was and is considered to be protecting the people of New Zealand from illegal monitoring of data of any individual or business. There are some concerns raised in the year 2014 when revelations were made that data within New Zealand is being monitored by the Government of New Zealand and few other countries ("Dotcom's moment of truth: Hit or miss?", 2014).

2. LITERATURE REVIEW

"Information and communications technology (I.C.T) is often used as an extended synonym for information technology (IT), but is a more specific term that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information" (Wikipedia, 2014).

Abell and Lim (1996) found that the Information Technology industry and media watchers state that there are many advantages of using the internet and many success stories have been reported. It is also important to understand the disadvantages as well. The authors have found that the research during such early years has always been biased or showed only the beneficial side of internet which is considered to be a core part of the Information Technology (IT) industry. This automatically makes the internet vital for the Information and Communication Technology industry (ICT) as well.

Creating a new framework with the help of cloud computing's modules and principles will help reduce the invasion of threats from any other outside source. The proposed model relies heavily on cloud computing which is used as the backbone alongside data enabled devices such as PC's, tablets and mobile phones.

The poster is titled "Protecting private data in telecommunications by increasing data security and privacy in New Zealand". It lists the student as Vaidyanathan Balasubramanian and the supervisor as Dr. Michael Verhaart. The abstract states: "The proposal represents a research aimed at understanding the level of concern people who reside in New Zealand have over data security and privacy. The second aim of the study is to assess the areas in private communication in which people are willing to be monitored." The research question is: "How concerned are people in New Zealand about data security and privacy while using their PC's, tablets and mobile devices?" The methodology involves finding a solution to this question by involving data collection, data analysis, and analysis of ethnicities of people living in New Zealand. The poster includes a diagram of the proposed framework, which is a mechanism using cloud computing as a pillar stone for increasing data protection and thereby privacy. The diagram shows a flow from "Data and Laptops" to "Data security and privacy" and "Data analysis". The completed tasks include literature review, data analysis, setting up objectives, research design, and research outcomes. The tasks to be completed include defining scope, data collection, and research outcomes. The poster also includes a list of references and the EIT School of Computing logo.

This poster appeared at the 6th annual conference of Computing and Information Technology Research and Education New Zealand (CITRENZ2015) and the 28th Annual Conference of the National Advisory Committee on Computing Qualifications, Queenstown, New Zealand, October 6-9, 2015. Michael Verhaart, Amit Sarkar, Rosemarie Tomlinson and Emre Erturk (Eds).

3. CONCEPTUAL FRAMEWORK

The framework which is proposed, and shown in Figure 1, is a combination of systems used by other authors. The usage of cloud along with existing procedures will have a direct influence on factors related to data; which have been explained in the previous section.

The framework that has been created is a mechanism which uses cloud computing as a pillar stone for increasing data protection and thereby privacy. The usage of trusted third party tools, client-server authentication and cryptographic data separation as suggested by Zissis and Lekkas (2012); Ko et al. (2011) suggest the usage of workflow, data and system layer. These data should correspond with laws and regulations of a country (in this case New Zealand). Combining these elements with devices that are data-enabled like PC's, mobile phones and tablets has a direct impact on factors that relate to data.

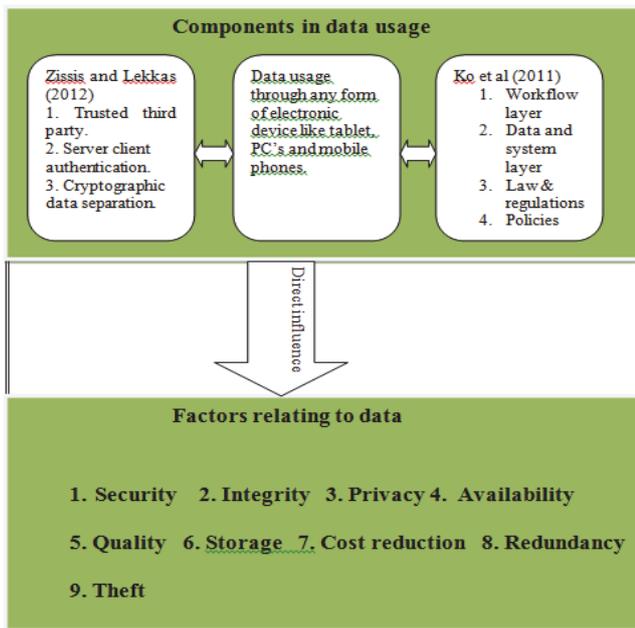


Figure 1 – Proposed framework

4. METHODS

The research will be based on the following hypothesis:

H1: *In New Zealand, data that is owned by an individual is the rightful property of that individual alone and cannot be monitored or used by another individual without consent.*

From the hypothesis the following research question was derived:

R1: *How concerned are people in New Zealand about data security and privacy while using their PC's, tablets and mobile devices?*

Methodology: Finding solution to this question will involve the data collection, data analysis and analysis of the ethnicities of people living in New Zealand. Hence both qualitative and quantitative research method is proposed for this research question. Experimentation will be a part of this study; hence the action research method will also be used.

5. CONCLUSION

It is envisioned that the findings of this study will understand the level of concern that prevails among the people living in New Zealand over data security and privacy. The study also aims to understand what kind of data people are willing to be monitored by the government. The proposed output of this research is the usage of cloud technology as per the need of the individual or business. The usage of cloud can vary between public cloud, private cloud and hybrid cloud. The proposed output can lead to increased data security and privacy among people living in New Zealand.

6. REFERENCES

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