YOUR THESIS TITLE

THE AUTHOR

A thesis submitted in fulfilment of the requirements for the award of the degree of Doctor of Philosophy (Software Engineering)

Advanced Informatics School Universiti Teknologi Malaysia

ACKNOWLEDGEMENT

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ABSTRACT

Imagine trying to live in a world dominated by dihydrogen oxide, a compound that has no taste or smell and is so viable in its properties that it is generally benign but at other times swiftly lethal. Depending on its state, it can scald you or freeze you. In the presence of certain organic molecules it can form carbonic acids so nasty that they can strip the leaves from trees and eat the faces off statuary. In bulk, when agitated, it can strike with a fury that no human edifice could withstand. Even for those who have learned to live with it, it is often murderous substance. We call it water.

ABSTRAK

This nation, turning 100 years old, had no *Odyssey*, no St. George slaying the dragon, no Prometheus. The emerging American genius for making a lot of money was a poor substitute for King Arthur and his knights (although the Horatio Alger myth of rags to riches was good for a lot of mileage). Without a mythology and set of ancient heroes to call its own, America had to manufacture its heroes. So the mythmaking machinery of nineteenth-century American media created a suitable heroic archetype in the cowboys of the Wild West. The image was of the undaunted cattle drivers living a life of reckless individualism, braving the elements, staving off brutal Indian attacks. Or of heroic lawmen dueling with six-guns in the streets at high noon. This artificial Wild West became America's Iliad.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

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1.2 Problem Statement

(Chang, et al., 2008) We thrive in information—thick worlds because of our marvelous and everyday capacity to select, edit, single out, structure, highlight, group, pair, merge, harmonize, synthesize, focus, organize, condense, reduce, boil down, choose, categorize, catalog, classify, list, abstract, scan, look into, idealize, isolate, discriminate, distinguish, screen, pigeonhole, pick over, sort, integrate, blend, inspect, filter, lump, skip, smooth, chunk, average, approximate, cluster, aggregate, outline, summarize, itemize, review, dip into, flip through, browse, glance into, leaf through, skim, refine, enumerate, glean, synopsize, winnow the wheat from the chaff and separate the sheep from the goats.

1.3 Project Research Aim

(Han, Haihong, Le, and Du, 2011) The Earth, as a habitat for animal life, is in old age and has a fatal illness. Several, in fact. It would be happening whether humans had ever evolved or not. But our presence is like the effect of an old-age patient who smokes many packs of cigarettes per day — and we humans are the cigarettes.

1.4 Objectives

Imagine trying to live in a world dominated by dihydrogen oxide, a compound that has no taste or smell and is so viable in its properties that it is generally benign but at other times swiftly lethal. Depending on its state, it can scald you or freeze you. In the presence of certain organic molecules it can form carbonic acids so nasty that they can strip the leaves from trees and eat the faces off statuary. In bulk, when agitated, it can strike with a fury that no human edifice could withstand. Even for those who have learned to live with it, it is often murderous substance. We call it water.

1.5 Research Scope

This nation, turning 100 years old, had no *Odyssey*, no St. George slaying the dragon, no Prometheus. The emerging American genius for making a lot of money was a poor substitute for King Arthur and his knights (although the Horatio Alger myth of rags to riches was good for a lot of mileage). Without a mythology and set of ancient heroes to call its own, America had to manufacture its heroes. So the mythmaking machinery of nineteenth-century American media created a suitable heroic archetype in the cowboys of the Wild West. The image was of the undaunted cattle drivers living a life of reckless individualism, braving the elements, staving off brutal Indian attacks. Or of heroic lawmen dueling with six-guns in the streets at high noon. This artificial Wild West became America's Iliad.

1.6 Research Contribution

I used a similar illustration in one of my Royal Institution Christmas Lectures in 1991. I said I had reason to believe that among my audience was a psychic, clairvoyant individual, capable of influencing events purely by power of thought. I would try to flush this individual out. "Let's first establish," I said, "whether the psychic is in the left half or the right half of the lecture hall." I invited everybody to stand up while my assistant tossed a coin. Everybody on the left of the hall was asked to 'will' the coin to come down heads. Everybody on the right had to will it to be tails. Obviously one side had to lose, and they were asked to sit down. Then those that remained were divided into two, with half 'willing' heads and the other half tails. Again the losers sat down. And so on by successive halvings until, inevitably, after seven or eight tosses, one individual was left standing. "A big round of applause for our psychic." He must be psychic, mustn't he, because he successfully influenced the coin eight times in a row?

1.7 Report Organization

If [in 2600] you stacked all the new books being published next to each other, you would have to move at ninety miles an hour just to keep up with the end of the line.

Of course, by 2600 new artistic and scientific work will come in electronic forms, rather than as physical books and paper. Nevertheless, if the exponential growth continued, there would be ten papers a second in my kind of theoretical physics, and no time to read them.

CHAPTER 2

LITERATURE REVIEW

2.1 First section

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2.1.1 First subsection

We thrive in information—thick worlds because of our marvelous and everyday capacity to select, edit, single out, structure, highlight, group, pair, merge, harmonize, synthesize, focus, organize, condense, reduce, boil down, choose, categorize, catalog, classify, list, abstract, scan, look into, idealize, isolate, discriminate, distinguish, screen, pigeonhole, pick over, sort, integrate, blend, inspect, filter, lump, skip, smooth, chunk, average, approximate, cluster, aggregate, outline, summarize, itemize, review, dip into, flip through, browse, glance into, leaf through, skim, refine, enumerate, glean, synopsize, winnow the wheat from the chaff and separate the sheep from the goats.

2.1.1.1 First subsubsection

The Earth, as a habitat for animal life, is in old age and has a fatal illness. Several, in fact. It would be happening whether humans had ever evolved or not. But our presence is like the effect of an old-age patient who smokes many packs of cigarettes per day — and we humans are the cigarettes.

2.1.1.2 Second subsubsection

Imagine trying to live in a world dominated by dihydrogen oxide, a compound that has no taste or smell and is so viable in its properties that it is generally benign but at other times swiftly lethal. Depending on its state, it can scald you or freeze you. In the presence of certain organic molecules it can form carbonic acids so nasty that they can strip the leaves from trees and eat the faces off statuary. In bulk, when agitated, it can strike with a fury that no human edifice could withstand. Even for those who have learned to live with it, it is often murderous substance. We call it water.

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REFERENCES

- Chang, F., Dean, J., Ghemawat, S., Hsieh, W.C., Wallach, D.A., Burrows, M., ... Gruber, R.E. (2008). Bigtable: A distributed storage system for structured data. *ACM Transactions on Computer Systems (TOCS)*, 26(2), 4.
- Han, J., Haihong, E., Le, G., & Du, J. (2011). Survey on NoSQL database. In Pervasive computing and applications (ICPCA), 2011 6th international conference on. IEEE, Author.