Politechnika Wrocławska

Wydział Informatyki i Zarządzania
kierunek studiów: Informatyka
specjalność: Inteligentne Systemy Informatyczne

Praca dyplomowa - magisterska

TITLE

TITLE EN

Adrian Bajdiuk

słowa kluczowe:
KEYWORDS

krótkie streszczenie:
SHORT ABSTRACT

Promotor:	dr Radosław Michalski	.....	.....
	imię i nazwisko	*ocena*	*podpis*

*Do celów archiwalnych pracę dyplomową zakwalifikowano do:**

a) kategorii A (akta wieczyste)

b) kategorii BE 50 (po 50 latach podlegające ekspertyzie)

** niepotrzebne skreślić*

pieczątka wydziałowa

Wrocław 2016

Niniejszy dokument został złożony w systemie LaTeX.

Contents

Abstract

ABSTRACT PL

Abstract

ABSTRACT EN

Chapter 1

Introduction

1.1. Background

The electric power grid is crucial part of economic and security systems. In fact nearly every branch of the daily life in modern societies operates using every sorts of energy with electric at the top. Every disruption to power transmission systems may cause tremendous economical and social losses for technologically advanced societies through strong dependencies on it of other critical infrastructures like telecommunications and transportation [6]. Power transmission systems key importance to modern societies encourages to further investigate electric power grids reliability and resiliency through development of new assessment methods and strategies to mitigate cascading blackouts.
From technological point of view, the electric power transmission grid involves many of present knowledge areas contributing to its design, operations and analysis. This involvement caused a tendency for more local analysis, focused only on elements important to interesting parties, losing the big picture of a problem [3],[5]. Thanks to advances in Complex Network Analysis and Graph Theory[4],[2] a step forward global approach was taken[7],[1].

1.2. Dissertation goal

following paper instead of focusing on finding elements with the greatest impact in case of failure , tries to find out subset of elements which improvement helps to mitigate cascade in case of described failure.

1.3. Outline

describe following chapters

Chapter 2

Failures cascade in power grid - model

2.1. Power grid preliminaries

2.2. Simple DC power flow model

2.3. Cascade propagation model

2.4. Complex Network preliminaries

Chapter 3

Experiment

3.1. Overview

3.2. Cascade trigger selection

3.3. Grid elements selection methods for improvement

Chapter 4

Results discussion

Chapter 5

Conclusion

Algorytm 1 Alghoritm 1

$T \leftarrow$ text under analysis
for each word $w \in T$ **do**
  $S_w \leftarrow FIND\_SENTIMENT(w)$
  if $S_w = POSITIVE$ **then**
    $Sentiment[POSITIVE]++$
  else if $S_w = NEGATIVE$ **then**
    $Sentiment[NEGATIVE]++$
  else
    $Sentiment[NEUTRAL]++$
  end if
end for
return $\arg\max_x Sentiment[x]$

Figure 5.1: Schema 1

¡GRAPHIC¿

5.1. Section 2

5.1.1. Subsection 1

Subsubsection 1
Definicja 1
Definicja - *pierwsza*

Appendix A

Appendix 1

Spis rysunków

Spis wzorów

Spis algorytmów

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