

**INTEGRATING FUNCTIONALITIES
TO A FILIPINO SPEECH SYNTHESIS SYSTEM**

A Mini-Thesis

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ABSTRACT

People have been trying to create talking machines, which led to extensive use of computers. These machines made to help those who are visually impaired for them to read books, for those who are vocally impaired or deaf people, which would serve as their voices, to help improve better aids for speech therapy and for better hearing aids. Programmers were improving many speech synthesis systems in different languages integrating them with more features and functionalities. This study explains how intonation is integrated in a Filipino speech synthesis system.

Keywords:

Speech synthesis system, Prosody, Intonation

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

The use of computers these days are very rampant especially in the field of computing. As technology continually develops, enhancements in different aspects of machinery were developed and some of these newly developed technologies are automation of vehicle driving, simulation of human voice, etc.

Problems arouse from these newly developed technologies, primarily in human voice simulation typically called speech synthesizer. There were comments addressed by some users about the technology, one of the comments was that the simulation is not yet perfect. The usual problem of the technology is the way it generates its output voice, which is a robotic tone and wrong pronunciations are frequently observed. Many studies were then conducted to overcome these problems.

Unfortunately, there have been only few applications available for a Filipino language. Most of these applications lack some functionality, which closely achieves the goal of a speech synthesis like intonation. As a result, the group aims to improve a Filipino speech synthesis system by integrating it with intonation functionality.

1.2 Statement of the Problem

The present study seeks to answer the following general problem: How to integrate intonation functionality to a Filipino Speech Synthesis?

Specifically, it seeks to answer the following questions:

- What is a speech synthesis system?
- What are the basics of Prosody models?
- What are the limitations of speech synthesis system with intonation?
- What are the efficient methods to be used in integrating Filipino speech synthesis system with intonation?
- How will the efficiency of the application be evaluated?

1.3 Objective of the Study

The general objective of this research is to integrate intonation functionality to a Filipino speech synthesis.

The specific objectives are:

- To define speech synthesis system
- To review on the basics of Prosody models
- To enumerate the limitations of speech synthesis system with intonation
- To distinguish the efficient methods to be used in integrating Filipino speech synthesis system with intonation
- And, to evaluate the efficiency of the application with its functionality

1.4 Scope and Limitation of the Study

The study will generally focus on integrating the intonation functionality using the existing Filipino speech synthesis for multisyllable words.

The Study will limit itself with Tagalog intonation.

1.5 Significance of the Study

This study is significant to all Filipino users particularly to the following groups of people:

- **Blind or visually impaired people to hear what they type and hear what is displayed on the screen allowing them to fully use their personal computers to its extent.**
- **People with a Filipino speech difficulty to have the system speak the text that they entered and act as their voice.**
- **People who have trouble learning to read and write by displaying the text with its equivalent speech output to assist them in their learning process.**
- **and Those who are attempting to learn the Filipino language**

Such new synthesis technology that uses Filipino language will be a great worth for the purpose of automatic assistance such as telephone operators, etc.