**SYSTEM VISION DOCUMENT**

**TAGALOG SPEECH TO-BAYBAYIN TEXT**

**Problem Description**

Baybayin, as an ancient Philippine language script, holds an important place in Philippine history and culture. But at present, only a few Filipinos know how to read and write Baybayin. This is due to its limited teaching and use in modern times. Because of this, Baybayin is only maintained through publications and books. It is not widely used in everyday communication. As such, for most Filipinos today, Baybayin is not very familiar nor easy.

To revive Baybayin as part of our culture and Philippine language, it needs to be made easier and more accessible to the modern generation. One way to do this is through speech-to-text technology. If we have a system that can convert spoken Tagalog into correct Baybayin text, it would become easier for Filipinos to learn and use. It can become practical for use in text messages, social media, and other forms of modern communication.

But there are challenges in developing this kind of speech-to-text system for Filipino and Baybayin. Much research and development are still needed to create accurate algorithms and datasets. A good user interface is also needed for easy use by ordinary citizens.

So, building a Tagalog speech-to-Baybayin text system is a challenge but an important step towards maintaining and propagating Baybayin in modern times. It has great potential to revive Baybayin as part of our evolving culture and language.

**System Capabilities**

* Voice input module - Can accept and digitize the user's voice speaking Tagalog.
* Speech recognition - Uses advanced machine learning algorithms to recognize and transcribe spoken Tagalog.
* Text analysis - Analyzes the transcribed Tagalog text to identify correct morphemes and word boundaries.
* Baybayin transliteration - Automatically converts the Tagalog text to its proper representation in the Baybayin script.
* Text-to-speech - Can read back the generated Baybayin text in voice form.
* User dictionary - Allows users to add new words and names to the dictionary for correct recognition from speech input.
* Spell check - Can check the spelling of encoded Baybayin characters and correct errors.
* Interactive user interface - Intuitive and user-friendly interface for easy use of the system by ordinary users.
* Storage of Baybayin text - Can save and retrieve generated Baybayin text for future use.
* Integration with various applications - Capability can be integrated with different software applications like messaging apps, social media, productivity software.
* Continuous learning - Continuously accesses data and adapts to improve accuracy of speech recognition and transliteration.

**Business Benefits**

* Makes the use and study of Baybayin easier for Filipinos - Since it can now be used in everyday communication.
* Promotes the preservation and propagation of Baybayin as part of our culture and language.
* Creates a new revenue stream for developers of speech and language technology.
* Opens up a new market for applications and services that use Baybayin.
* Gives advantage to companies that adopt it early to gain customers and visibility.
* Enables new research collaborations between academe and industry in linguistics and language technology.
* Opportunity to gain global recognition for the Philippines' expertise in advanced language technology development.
* Supports educational and cultural mandates for teaching and using Baybayin.
* Expands access to linguistic and historical databases of books and documents written in Baybayin.
* Development of new interactive language learning applications and platforms.
* Support for innovations in user interface/experience for emerging scripts like Baybayin.