

# **Developing Thai and English Braille Fonts by using Font Forge**

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## **Abstract**

The primary purpose of this research was to develop Thai and English Braille Fonts by using FontForge program. The Critical issues is the identity of Thai language. Because Thai characters consist of consonants, tones and vowels unlike native language of Braille. In addition, Thai language has added special characters, acronym include and reduce vowels. Including the use of tone marks to determine the high and low sound in each word. So the sound level is low or high in Thai makes the meaning change. Therefore, the project has been set up by development of script. The main function of Braille is to use, control and set the properties of the Braille's fonts to the correct principles written in Thai and Braille. After that we typed the developed and printed it with Braille visual equipment called Slate and Stylus. Then we took it to the expert to verify the accuracy and we found that it can be read 100% correctly in Braille fonts. Finally we implemented it in bold fonts. We wrote stories in both Thai and English to test with blind users in PATTAYA REDEMPTORIST SCHOOL FOR THE BLIND. 25 samples read it, we found the overall satisfaction were at the highest level by average of 4.50

**Keywords:** Braille, FontForge, Braille font.

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## **Biographies**

Punthat Siriwan is a student at Princess Chulabhorn Science High School Chonburi in Chonburi, Thailand. We are the winner award form Inventors' day 2018 by National Research Council of Thailand, Thailand. Winner the second runner-up award from the 1<sup>st</sup> KVIS International Science Fair 2018 by KVIS, Thailand. Winner award from the 17<sup>th</sup> Thailand IT Contest Festival: IT 2018, By NECTEC and NSTDA, Thailand. Winner award "Innovation for All" from 9<sup>th</sup> National disability conference, By Ministry of Social Development and Human Security and Mahidol University, Thailand. The winner Best Poster Presentation award in 2<sup>nd</sup> World Disability & Rehabilitation by WDRC at Colombo, Sri Lanka. And Winner award DOUBLE GOLD AWARD (Score over gold level) and. SPECIAL HONOUR OF INVENTION (from TISIAS, Canada) in The 8th International Engineering Invention & Innovation Exhibition 2018 (i-ENVEX 2018) at Perlis, Malaysia.

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