

# Two Fingerspelling Keyboard Layouts for Myanmar Sign Language with Myanmar SignWriting

Hlaing Myat Nwe † , Ye Kyaw Thu λγ , Hnin Wai Wai Hlaing † , Swe Zin Moe † ,

Ni Htwe Aung ‡ , Hnin Aye Thant † , Nandar Win Min †

†University of Technology (Yatanarpon Cyber City), Pyin Oo Lwin, Myanmar

λOkayama Prefectural University (OPU), Okayama Prefecture, Japan

γ

Language and Speech Science Research Lab., Waseda University, Japan

‡Yangon Technological University (YTU), Myanmar

{hlaingmyatnwe.nwe, hninwaiwaihlaing.ycc, swezinmoe.1011, nhadec, hninayethant,

nandarwinmin}@gmail.com,

wasedakuma@gmail.com

## Abstract

Sign language is the first language for the Deaf. The Deaf people could communicate with the hearing people by Sign language. The use of sign language technologies in the interface of computing systems to improve their accessibility for deaf signers. In this paper, we propose two fingerspelling keyboard layouts for typing Myanmar fingerspelling characters with SignWriting. Fingerspelling is used in sign language to spell out names of people and places for which there is not a sign. We discuss the usability of our approach based on the user study and the evaluation results. The evaluations were made in terms of typing speed CPM (Character per Minute) and Likert scale feedbacks from both hearing-impaired and hearing users. The outcome of the research will be useful in implementing Myanmar SignWriting text input interface for Myanmar sign language.