

## ***ABSTRACT***

*Communication is one of the way to interact betwene humans. But it's different for deaf people to interact and communicate with each of them or people in general using Indonesian Sign Language System (SIBI) or Bisindo which is mother language.*

*This Final Task has proposes a system to convert the speech signal to sign language motion video for deaf people which the first stage is begin from inputting the signal word then continued to preprocessing stage, and then feature extraction process using Mel-frequency Cepstral Coefficients method. The result of the feature extraction is classified using K-Nearest Neighbors method to looking for the closest similarities between the data with the database. If the result of the classification same as the database, then the output of the system will be a text. The text is become the input to summon the sign language motion video on the database.*

*The results of the Final Task system testing that using the best parameter with the number of MFCC coefficients as big as 40, 1 for K parameter and the uses of euclidean distance in K-NN classification is capable to convert the speech signal to sign language motion video for deaf people with the highest accuration as big as 95.417%.*

***Keywords :*** *Deaf, Mel-frequency Cepstral Coefficients, K-Nearest Neighbors.*