ABSTRACT

Physical measurement or anthropometry known as simple indicators to measure nutritional status of individuals or society. To determine the child's nutritional status, anthropometry is presented in the form of indexes which assosiated with another variable. The index used are weight index and height index according to the age and sex of the child. In Indonesia, the growth charts used are based on The National Centre for Health Statistics (NCHS) from United States of America. This graph is used in Kartu Menuju Sehat *(KMS), or child health record books given to the parents. The graph consists of a growth chart of the indexes measured by anthropometry.*

This final project designs an Android app that can-do anthropometry with the input of digital image using matched filter and morphology operation method. Both methods are used as tools for performing image component extraction in the form of representation and description of an area in image. Objects that have been segmented will be processed further into the calculation of Body Surface Area (BSA) Mosteller which produces information of weight in kilograms (kg) and height in centimeters (cm).

From the results of testing the application system, the output of anthropometry value has an accuracy of 82.19% *for boys and* 82.45% *for girls*.

Keywords: anthropometry, child, image detection, matched filter, morphology operation, Body Surface Area Mosteller.