

Description of Tel-U Palm-Print Data-set V1.0

1 Introduction

Palm print is one kind of biometrics feature or trait[1], which had been investigated and can provide the promising result[2][3]. Palm print has more advantages such as have stable structure features, low cost and high user acceptance[2][3]. Here, we release **Tel-U Palm-Print Data-set V1.0**, a palm print database which can be used widely for biometrics research. The images are captured by camera digital and tool/environment which has been designed for data acquisition.

2 Description of Database

Full version of Tel-U Palm-Print Data-set V1.0 contain 2,301 palm print images (right hand) which are captured from 154 different people. We design a tool or environment for data acquisition (see figure 1 and figure 2), where the all of parts inside of box is covered by black paper, the objective is to distinguish hand region and background, so, the hand segmentation process can be more easier. The lightening source is used from camera digital which we used itself. due to selection process for proper dataset, then the number of sample for each person are not same. People number 1 until 149 consist 15 images, number 150 - 153 consist 14 images, and lastly number 154 only consist 10 images.

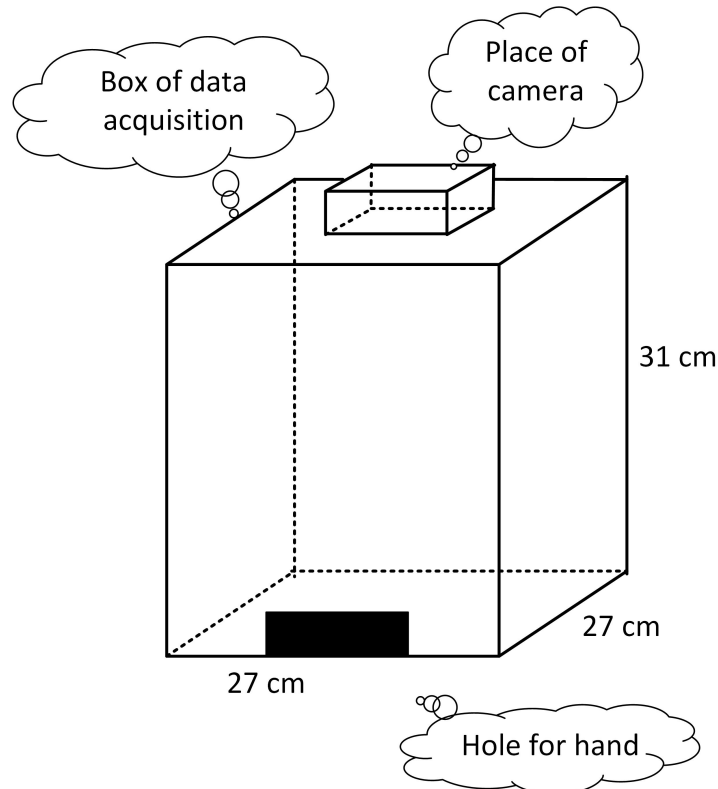


Figure 1: Design of acquisition box

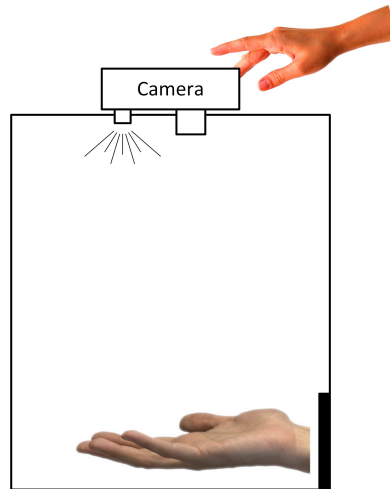


Figure 2: Illustration of palm print acquisition process

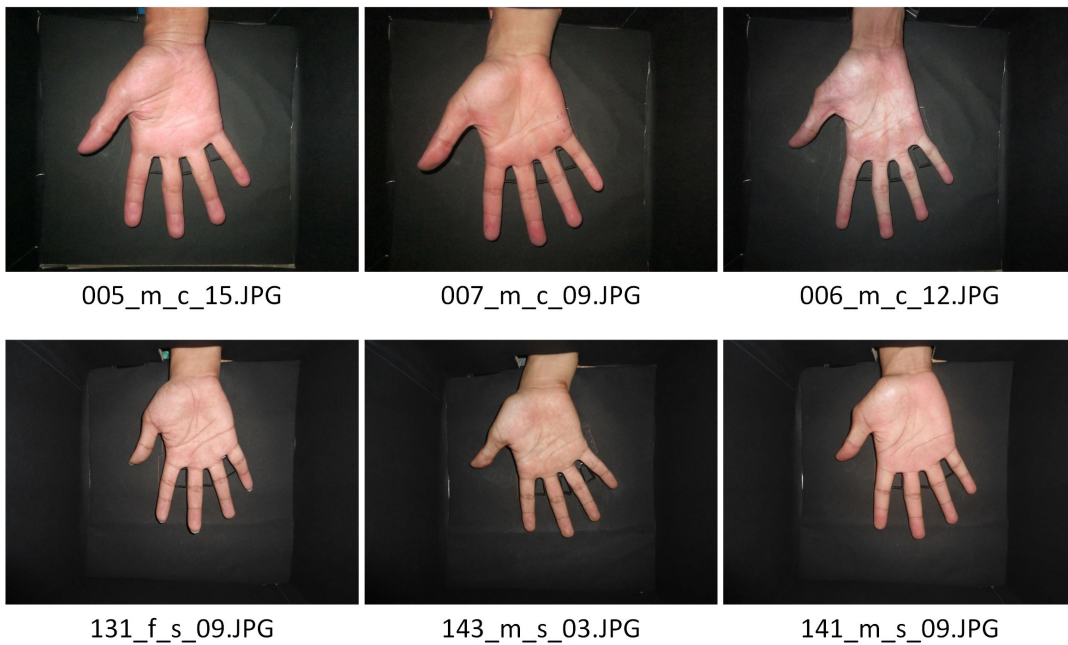


Figure 3: Example of palm print images from our database

Table 1: Specification of released version

Specification	Full Version	Share Version
Number of classes	154 people	100 people
Number of samples	15 images	6 images
Raw Images 4000x3000 pixels	Yes	No
Compressed Images 427x320 pixels	Yes	Yes
Region of interest (by using CHVD[4]) 128x128 pixels	Yes	Yes

3 Camera and Format Files

There are two kind of cameras which were used for data acquisition:

- a. Sony DSC-W510 12.1 Megapixel
(see <http://www.sony.co.uk/support/en/product/dsc-w510>)
- b. Canon Powershot A1200 12.1 Megapixel
(see http://www.canon-europe.com/for_home/product_finder/cameras/digital_camera/powershot/powershot_a1200/)

The images were stored into JPEG format, where file name is AAA_G.Y.XX.JPG

- AAA: the unique identifier of people
- G: gender (f is female and m is male)
- Y: type of camera (c is Canon and s is Sony)
- XX: index or number of samples for each individual
- JPG: JPG/JPEG is format of files.

4 Copyright Note and Contact

Tel-U Palm-Print Data-set V1.0 is part of research by by the School of Computing, Telkom University (url <http://telkomuniversity.ac.id/>) and published only for education and research purpose. We don't hold responsibility for any unintended consequences for using of the database. The shared version of this database can be downloaded here Shared_ROI_Palm, Full_ROI_Palm. It include 100 people with 6 palm image for each person.

Any person or organization are not permitted to distribute, publish, or copy this databases without our approval. All rights of Tel-U Palm-Print Data-set V1.0 is reserved. References to <http://cokagung.staff.telkomuniversity.ac.id/tel-u-palmprint-database-v1-0/> should be included for all reports and papers which uses this database, and it should be forwarded to

Tjokorda Agung Budi W., ST.,MT.

email: cokagung@telkomuniversity.ac.id

Biometrics Research Center Laboratory, School of Computing, Telkom University
Telekomunikasi No.1, Bandung, West Java, P.O.Box 40257, Indonesia

or send electronic copies to prastieko@students.telkomuniversity.ac.id or gp.pras@hotmail.com . Questions regarding Tel-U Palm-Print Data-Set V1.0 can be addressed to

Prasti Eko Yunanto ST.

email: prastieko@students.telkomuniversity.ac.id

Biometrics Research Center Laboratory, School of Computing, Telkom University
Telekomunikasi No.1, Bandung, West Java, P.O.Box 40257
Indonesia

Please contact us for full version of Tel-U Palm-Print Data-Set V1.0

References

- [1] A. K. Jain, P. Flynn, and A. A. Ross, *Handbook of Biometrics*. Secaucus, NJ, USA: Springer-Verlag New York, Inc., 2007.
- [2] A. Kong, D. Zhang, and M. Kamel, “A survey of palmprint recognition,” *Pattern Recogn.*, vol. 42, pp. 1408–1418, July 2009.
- [3] G. Lu, D. Zhang, and K. Wang, “Palmprint recognition using eigenpalms features,” *Pattern Recogn. Lett.*, vol. 24, pp. 1463–1467, June 2003.
- [4] G. K. Ong Michael, T. Connie, and A. B. Jin Teoh, “Review article: Touch-less palm print biometrics: Novel design and implementation,” *Image Vision Comput.*, vol. 26, pp. 1551–1560, Dec. 2008.