

## Note on Iris Ageing

The data suited for investigation of subject-ageing related effects for iris recognition applications was collected for 50 different subjects in April 2009 and April 2013, resulting in a time span of 4 years between the old and new images for the subjects. The images have furthermore been acquired with various sensors, where for some images the same sensors instances (Irisguard H100 and OKI Irispass-h) have been used to acquire the old and new images. The database is divided into the two time spans, 2009 and 2013, and each time span contains folders corresponding to the single subjects, which furthermore contain the iris-images for the specific subjects. The specific files have each a unique filename, which has been generated with the following file naming rules:

```
$root path$/YYYY/sensorName/IIII(-
G)/YYYY_S_IIIIE_XXXX_Z_F.bmp
  Y = Year: 2009 , 2013
  I = User ID
  (-G) = Images with glasses (only for 2013/Irisguard_H100 data
set)
  S = Sensor ID (sensorName): 0 (Irisguard_H100), 1
(Irisguard_AD100), 2 (OKI_Irispass-h)
  E = Eye L (left) or R (right)
  X = image index
  Z = session
  T = Sequence ID
```

The User ID is unique for each subjects and consistent over the time interval and different iris-sensors, hence images with the same User ID are from the same subject both in 2009 and 2013 and for all sensors.

Overview of the database:

2009:

- Irisguard\_H100: 48 subjects, 480 - 1920 images per subject, left and right eye for each subject
- OKI\_Irispass-h: 49 subjects, 42 - 2884 images per subject, left and right eye for each subject

2013:

- Irisguard\_AD100: 50 subjects, 16 images per subject, 8 for left eye, 8 for right eye
- Irisguard\_H100: 49 (22 additionally with glasses) subjects, 40 images per subject, 20 for left eye, 20 for right eye
- OKI\_Irispass-h: 49 subjects, 6 - 219 images per subject, left and right eye for each subject

#### Publications:

[1] Peter Wild, James Ferryman, Andreas Uhl, "Impact of (segmentation) quality on long vs. short-timespan assessments in iris recognition performance", IET Biometrics :, IET, 2015, E-first published, DOI: 10.1049/iet-bmt.2014.0073

[2] T. Bergmüller, L. Debiasi, Z. Sun, A. Uhl, "Impact of sensor ageing on iris recognition", In Proceedings of the IAPR/IEEE International Joint Conference on Biometrics (IJCB' 14), 2014