Final Paper First Proposal

Jones Sipho-J Matse

09 October 2014

Paper Outline

This project is aimed at exploring the developing improvements in iris recognition. One of the current improvements in the field of personal identification is the development of multi-biometrics. Multi-biometrics are used to enhance the accuracy of successful matches during the identification and verification process by allowing advantages of one biometric to compensate for the limitations of the other biometric. There are different levels of fusion derived from the use of multi-biometrics that can be accomplished at various levels of the biometric system.

While tackling the complexities of the multiple iris recognition multimodal systems, the objective is to determine the best suited system which can be distributed for public and private use. The research will compile the following topics

- The specific efficiencies multi-biometrics contributes to iris recognition.
- Which fusion level is the most ideal for iris recognition.
- Which biometric is best suited for iris recognition in a multimodal system. This will have to consider best matching accuracy versus the level of unintrusiveness.
- The ease of implementation vs. the accuracy improvement
- Which technologies and algorithms are in place or being developed which can help the development of multi-biometrics
- Future developments, can it be applied to personal devices
- Security, privacy and ethical issues concerning multimodal biometrics

Software

I am currently looking into simplified models of iris recognition software that can be implemented and determine it feasibility. The software I would produce would simulate a standard iris identification and verification process.