U.S. Army Biometrics Task Force

Fingerprint Image Quality Measurement Tool Set

Version 2.0.2 Release April, 2008

RELEASE NOTES

Overview:

The Fingerprint Image Quality Measurement (FIQM) toolset was designed by the U.S. Army Biometrics Task Force (BTF) to analyze the quality of fingerprint images, which is crucial to the performance of a biometric identification system. FIQM assigns an image (in either Bit-mapped (BMP) or Wavelet Scalar Quantization (WSQ) format) a single quality score using a human visual perception algorithm. Based on this score, an analyst or operator can determine the usefulness of the image in determining a person's identity. This is useful when examining an existing database of images and (since this analysis can be done in real time) also at enrollment, so an operator can determine if a finger needs to be rescanned while capturing someone's fingerprints.

New in this Release:

This release note provides information about the FIQM toolset Version 2.0.1. This release note is updated as needed to describe the changed information and documentation updates.

FIQMC202.DLL Updated in This Release

- The *_*ReadWSQFile* and *_*BMPtoRAW* functions are now able to read and process any number of image width.
- The new release is now able to detect and exclude black strips around the edges of images.

FIQMC202.LIB – A .LIB file is library file that needs to be included when building a "C" executable.

FIQMC.EXE – A "C" executable file that can be executed in Windows command line environment.

Release contents:

1. DLL file: “FIQMC202.dll”, Final release
2. LIB file: “FIQMC202.lib”, Final release
3. Batch processing executable: “qBatch.exe”, Final release
4. Examiner executable: “qExaminer.exe”, Final release
5. “C” executable: “fiqmc.exe”, Final release
6. User Guide for Fingerprint Image Quality Measurement Tool
7. Additional Documentation: “Fingerprint Image Quality Measurement Algorithm” article

System Requirements:

- A desktop or laptop PC with a minimum of 256 MB of RAM
- To execute qExaminer, a video mode 1024 x 768 (to allow displaying of a whole fingerprint image on the screen without scrolling up and down)

Acknowledgements:

The WSQ decompression function in the FIQMC202.dll is based on the NIST (National Institute of Standards and Technology) NFIS (NIST Fingerprint Image Software) “dwsq” WSQ image decompression function.