Fingerprint Utility API Toolkit™

Mentalix's **Fingerprint Utility API Toolkit** offers extensive functionality for processing and manipulating scanned fingerprint cards and latent print images. The Utility Toolkit may be used stand-alone or in conjunction with Mentalix's other fingerprint API products, such as the Fingerprint Scan API Toolkit™ which enables FBI-certified scanning of fingerprints. These toolkits are for system integrators and programmers who provide electronic fingerprint identification systems to customers in the law enforcement industry. Additionally, they address the image acquisition needs of civilian, security and social service applications that require scanning solutions. The Utility Toolkit allows systems integrators and turnkey solution providers to jumpstart the creation of comprehensive fingerprint solutions.

Easy to integrate

The Fingerprint Utility API Toolkit simplifies the integration process, making it easy to add fingerprint image processing functions to your interface. Comprised of a single, platform-specific runtime library module, the product is available in a DLL for Windows® platforms and a shared library for UNIX® systems. On Windows platforms, the DLL is easily usable in C, Visual Basic and .NET development environments.

Reduces development effort

With its 'C' API, the Utility library module allows you to quickly add rich fingerprint image processing functionality to Windows or UNIX systems. The included subroutines provide significant core capabilities that minimize your overall efforts in providing end-user-ready systems.

Advanced fingerprint image processing

The Fingerprint Utility API Toolkit features advanced cropping, validation and quality assurance routines. Available functionality includes template creation and management, card scan integration, card image load/save, fingerprint cropping and validation, scan quality analysis and print display optimization. The Utility Toolkit also reads and writes NIST files and enables asynchronous scanning which works in the background, freeing up your computer for other tasks. With these added capabilities, your fingerprint-scanning interface will provide a complete set of processing tools.

Comprehensive fingerprint solution

All of our Toolkits work stand-alone or in conjunction with each other. The Fingerprint Utility API Toolkit integrates smoothly with these products and is included in our Windows-only Fingerprint API Bundle™. Our Toolkits can also be combined and used together as a comprehensive 'C' API for fingerprint and non-fingerprint scanning applications. From fingerprint acquisition to image processing, Mentalix's API Toolkits enable smooth integration of a customized, complete fingerprint solution within your turnkey system.

Features

- **Custom Card Template Creation:** The Toolkit provides routines that allow you to easily create fingerprint card templates to handle your international and custom fingerprint cards.

- **Cropping Functions:** Cropping functions can be selected by the user prior to scanning the card. Depending on the method chosen, the program can locate the actual card borders and fingerprint areas of the scanned image, or it can crop the images based on user-defined measurements.

- **Card Validation:** The program assesses the scanned image and produces a quality rating, based on factors such as skew, offset and card size consistency with template. The user can set the criteria that are utilized to determine the ratings.

- **Overscan Image Analysis Routines:** The image analysis routines, based on a card offset detection algorithm, fully automate the overscan function (in Fingerprint Scan API Toolkit) for you. The routines allow you to create an interface that capitalizes on the overscan function without requiring your application to perform additional processing. The overscan image analysis routines accommodate and adjust for minor physical error in the placement of fingerprint cards on the scan bed without requiring intervention by the user, resulting in higher-quality images and reducing re-scans.

- **Dynamic Loading of Fingerprint Libraries:** Saves time for systems integrators when making changes. For example: Dynamic library loading allows you to switch libraries and use a different scanner model without recompiling the program.

- **Scanner Quality Assurance Testing:** Mentalix views quality assurance as a high priority for all of our products. In keeping with FBI recommendations, we provide test routines within the Utility Toolkit that permit you to scan a test card and check your scanner's signal-to-noise ratio, geometric image accuracy, linearity, and Modulation Transfer Function (MTF). Run the test immediately upon receipt of your scanner, and then periodically (on a regular basis, depending on usage) to compare results over time and ensure that your equipment is functioning at or near its highest potential.

- **NIST File Creation:** Easy-to-use routines support the creation of ANSI/NIST files, which are compatible with specialized NIST formats such as the FBI's EFTS standard. The NIST file format can be used for storing biographical data and images with fingerprint data. Mentalix's comprehensive data export routines include single-step image writing with WSQ (requires the Fast WSQ API Toolkit™), JPEG and CCITT group compression.