Fast WSQ API Toolkit™

Mentalix's **Fast WSQ API Toolkit** addresses the FBI-certified fingerprint image compression and decompression needs of turnkey system providers. The Toolkit is for system integrators and programmers who offer electronic fingerprint identification systems to customers in the law enforcement industry. The Fast WSQ API Toolkit enables developers to quickly add compression and decompression capabilities to custom fingerprint solutions. And Mentalix is committed to continually fine-tuning the Toolkit to keep current with platform and operating system changes, as well as re-certifying the product as needed. In addition, Mentalix provides multiple products, already utilized by major systems integrators worldwide, for IAFIS-certified fingerprint scanning, fingerprint image utilities, and color image acquisition – all of which can be used in conjunction with the Fast WSQ API Toolkit to create a complete fingerprint solution for end users.

The Toolkit is sold on a per-developer-seat basis. Developers will need to determine which specific APIs are required for their end use, and in turn, will need to purchase from Mentalix the appropriate runtime licenses for each of their targeted end-user systems. A runtime license agreement will specify the particular APIs and royalty to be paid to Mentalix for each runtime license.

WSQ format advantages

The Wavelet Scalar Quantization (WSQ) Gray-scale Fingerprint Image Compression Algorithm is the standard mechanism selected by the FBI for exchanging fingerprint data. The WSQ format provides an efficient method for storing compressed fingerprint image data, achieving a significant compression ratio with minimal loss of quality. For example, a single fingerprint image from a 500 ppi FBI fingerprint card is typically 600KB. With typical 15-20X compression, the amount of data that needs to be stored and exchanged is approximately 30KB. Integrators can utilize the Fast WSQ API Toolkit to enable customers to easily convert raw grayscale image data to the much more compact WSQ format, or to convert any existing standard WSQ file back to raw grayscale image data.

Easy to integrate

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. The Toolkit offers a uniform interface across all supported platforms. For those who need additional capabilities, the Fast WSQ API Toolkit also works as an add-on to Mentalix's other fingerprint and scanning products.

Reduces development effort

With its 'C' API, the Fast WSQ module allows you to quickly add fingerprint image compression and decompression functionality to Windows, UNIX or Linux systems. The subroutines and sample 'C' program make it easy to include these features within larger systems.

Benefits

- FBI-certified WSQ compression and decompression support
- Meets WSQ Version 3.1 specifications that help to avoid data loss for images that are larger than two inches in height
- Compatibility with compliant products
- Industry-leading performance
- State-of-the-art implementation leverages latest hardware advances
- Accepted by major systems integrators
- Robust design does not impose arbitrary limits on print sizes

Features

- Easy-to-use API
- Visual Basic Support
- Sample C and Visual Basic programs with source code
- Included utility program supports conversion between WSQ and RAW, TIFF, BMP, TGA, PPM, Rasterfile, and XWD formats
- Consistent API across all supported platforms
- FBI-certified for Windows, AIX, Solaris, HP-UX, and Linux
- User-controlled compression ratio
- Complete error handling
- Multi-threading support
- Multi-ratio decompression support for fast, interactive, quality confirmation
- Supports all fingerprint, palm print and footprint image sizes

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