



Developer Roadmap

SigIDp

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Overview

This document is a guide to provide developers with a basic understanding of the available functions and commands for successful use and integration of the SigIDp software tool. SigIDp is an ActiveX control that allows the developer to capture fingerprint images (bmp, tif and jpg) at high-resolution for crisp fingerprint imaging. It also provides computer-scored fingerprint verification.

How Do SigIDp Databases and Data Retrieval Work?

You can save the data from the fingerprint scanner in two ways: as an image file (tif, jpeg, or bmp) or biometrically. However, if you save the fingerprint as an image, your later-use of the data is limited. With images, you cannot do later-searches or computer-based verifications. That is why Topaz recommends you save the data biometrically if you intend to use SigIDp for searches or accurate computer based biometric verifications.

There are two different ways to store the data biometrically. The first we call "Portable". This method of biometric data storage extracts the data to file or an ASCII hex string and stores the data in your own file system or database. Keep in mind that one-to-many searches cannot be performed using this method. Extracted fingerprint files and fingerprint strings can only be used to compare on a one-to-one basis. That is to say, you can input a fingerprint and compare it against an individual in the database and see if they match, but you cannot input a fingerprint and compare it against the entire database at once.

The other way to save biometric fingerprint data is to do so within a proprietary, built-in database. Because the data is stored all in one place, it is possible to implement one-to-many searches. One-to-many searches compare a fingerprint against the entire database, and if that person is in the database, the fingerprint will be matched and the user verified. These searches can only be performed using the built-in database system. The downside to using this system is that the data cannot be added to a custom database, but it can only be used within the built-in database.

How to Store the Fingerprint Data as an Image

It is possible to create standard image format fingerprint files, such as BMP, JPEG, and TIF. There is no biometric verification available through SigIDp when creating an image.

To Create a Bitmap, use the function call ".CreateBmp(String filepath)"

To Create a Jpeg, use the function call ".CreateJpg(String filepath)"

To Create a Tif, use the function call ".CreateTif(String filepath)"

Fingerprints stored as images are created at a resolution of 500 x 500 pixels.

How to Store the Fingerprint Data as an Extracted File (Portable)

One of the options for creating biometric fingerprint templates for verification would be to create fingerprint templates that are stored separately from one another. For example, you might create a folder on your computer and store all the templates there.

To enroll a new user, use the function call “.GetFingerprintFile(String strFile)”

To do a one-to-one search, use the function call “.ValidateFingerprintFile(String strFile)”

How to Store the Fingerprint Data as an ASCII HEX String (Portable)

Another option for creating biometric fingerprint templates for verification would be to create a fingerprint string composed of alphanumeric characters. The major use of such a system would be for customized database storage. For instance, if you already have a database system in place and simply want to add biometric fingerprint verification, you might consider this option.

To enroll a new user, use the function call “.GetFingerprintString(”

To do a one-to-one search, use the function call “.ValidateFingerprintString(String strFile)”

How to Store the Data in a Built-In Database (One-to-Many Searches)

The major benefit that the built-in database offers is the ability of one-to-many searches, which is not possible using the two portable methods above. One-to-many searches compare a fingerprint against the entire database, and if that person is in the database, the fingerprint will be matched and the user verified. In order to use the built-in-database, you must first initialize the fingerprint device. To do so, use the function call “.InitDeviceDb(String name, String path)”. Now, you can begin to enroll users with the function call “.EnrollUser(String name)”.

You pass in the name of the user and can use any name you wish. You can also delete users with the function call “.DeleteUser(String name)”. Please note that you should match the name used originally to enroll the user. Once you have a few users, you can calculate the number of users there are with the “.GetNumberOfUsers(” function call, or view all the users at once with “.ListAllUsers(”.

Once you have enrolled users, you can use some of our biometric verification tools. If you want to do a one-to-one search, use the function call “.ValidateID(String name)”, or “.Identify() As String” to do a one-to-many search.