

***GBMSDemo Application***  
***User Guide***  
***SDK Version 4.2***

March 2018



# Table of Contents

|          |  |          |
|----------|--|----------|
| <u>1</u> | <u>Introduction</u>                                  |          |
|          |  | <u>3</u> |
| 1.1      | Documentation conventions.....                       | 3        |
| 1.1.1    | General Conventions.....                             | 3        |
| 1.2      | Documentation revisions.....                         | 4        |
| <u>2</u> | <u>Interface Description</u>                         |          |
|          |  | <u>5</u> |
| 2.1      | Start Window description.....                        | 5        |
| 2.1.1    | Refresh Button.....                                  | 5        |
| 2.1.2    | Scanner List.....                                    | 5        |
| 2.1.3    | User control section.....                            | 6        |
| 2.2      | User information acquisition window description..... | 7        |
| 2.3      | Configuration window.....                            | 9        |
| 2.3.1    | “Options” tab.....                                   | 9        |
| 2.3.2    | “Image Size” tab.....                                | 11       |
| 2.3.3    | “Other settings” tab.....                            | 12       |
| 2.3.4    | “Advanced settings” tab.....                         | 13       |

# 1 Introduction

This document provides some information about the GBMS Demo application, example application of the MultiScan Full Enhanced SDK.

This example shows how the GBMSGUI component should correctly be used and how to use it in conjunction with the top level and the BASIC SDK components (see chapter "FULL ENHANCED SDK" in MULTISCAN Overview document) in order to perform a complete acquisition process.

Even if GBMS Demo can be used "as it is" in order to have a complete acquisition system, the GBMSGUI library and GBMS Demo itself with their complete source code are provided to allow integrators to customize their own applications.

## 1.1 Documentation conventions

### 1.1.1 General Conventions

Green Bit saves the right to make changes, integrations or enhancements to this manual without notice, and this cannot be a reason to consider this present publication inadequate.

In this manual the following acronyms are used:

- IAFIS                    Integrated Automated Fingerprint Identification System
- IQS                      Image Quality Specifications

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## 1.2 Documentation revisions

| SDK Version | Date           | Description           |
|-------------|----------------|-----------------------|
| V1.0        | September 2010 | Original              |
| V2.7        | November 2011  | See Modification List |
| V2.8        | August 2012    | See Modification List |
| V2.9        | September 2013 | See Modification List |
| V3.1        | May 2014       | See Modification List |
| V3.3        | March 2015     | See Modification List |
| V4.0        | December 2016  | See Modification List |
| V4.1        | June 2017      | See Modification List |
| V4.2        | March 2018     | See Modification List |

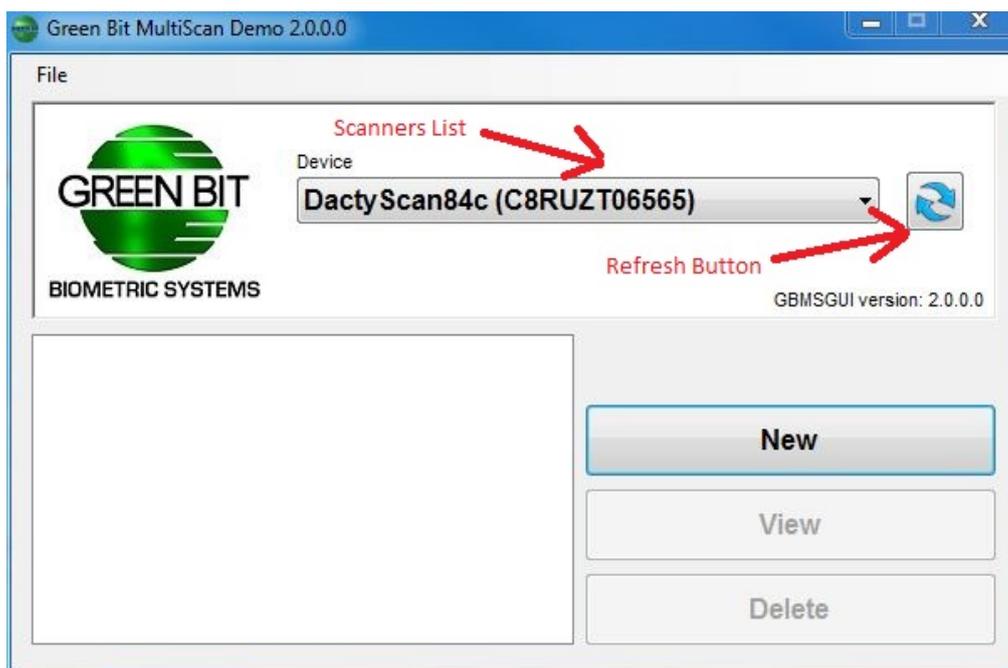
## 2 Interface Description

In this chapter a description of graphical user interface is given.

NOTE: when the demo is installed by means of the GBMSDemoSetup.exe installation program, the demo executable is placed in the "Programs" directory of the PC. Therefore sometimes it could happen that, for proper working, the demo requires to be run as administrator.

### 2.1 Start Window description

The start window is structured as follows:



#### 2.1.1 Refresh Button

This button allows to refresh the device list (for example it has to be used when a new scanner is plugged to the PC).

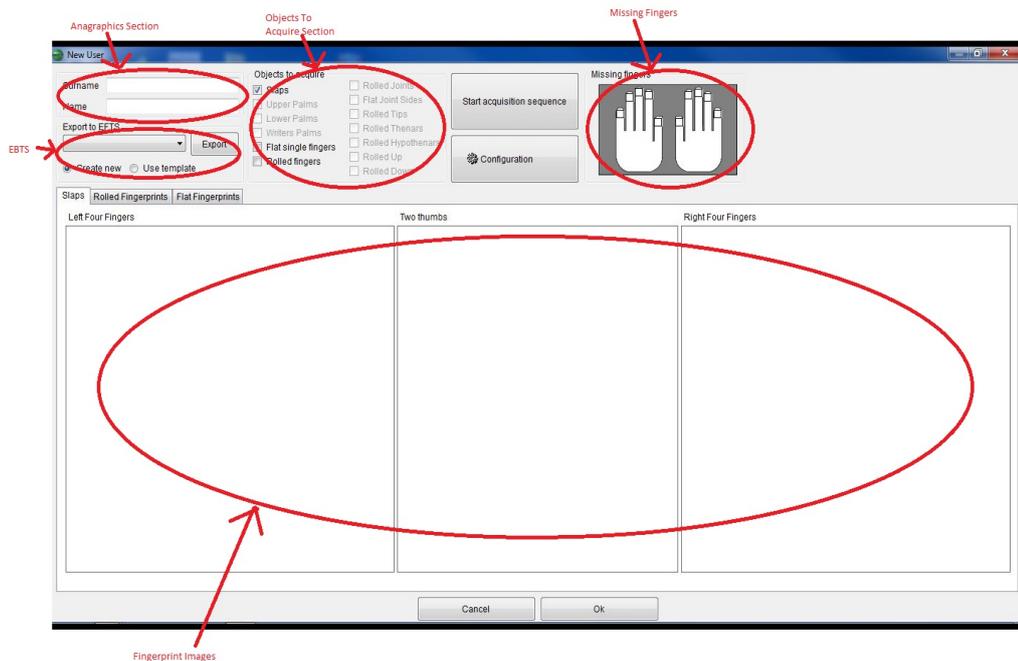
#### 2.1.2 Scanner List

In this combo the list of the scanners plugged to the PC is displayed. When an item of this list is selected, the corresponding scanner is set as the acquisition device.

### 2.1.3 User control section

In this section three buttons are displayed, that allow a complete user management. The "New" button allows the creation of a new user, and opens the "Main acquisition window" that will be described in a following chapter. The "View" button allows to show the information about the selected users in the "Users list", and the "Delete" button allows to delete the selected user from the list.

## 2.2 User information acquisition window description



In this chapter a description of the user information acquisition window will be given.

The "Anagraphics" section allows to edit anagraphic information about the user being created.

In the "Objects to acquire" section it's possible, by means of several check boxes (more than one at a time can be checked), the objects that have to be acquired.

The acquisition can be initiated by means of the "Start acquisition sequence" button pressure (in this case all of the objects specified in the "Objects to acquire" section will be acquired), or by means of the "Acquire" context item selection (in this case only an object will be acquired), that appears when right clicking with the mouse on the desired object in the "fingerprint images" section.

Acquired fingerprint images are shown in the "Fingerprint images section" (a tab for each object type).

Fingerprint images, together with some user information, can be stored into an ANSI/NIST ITL 1-2011 or ANSI/NIST ITL 1-2007 formatted file (see "EBTS" section), starting from an existing file (by checking the "use template" radio button) or creating a new one (by checking the "Create new" radio button).

Working option can be set by means of the "Configuration" button, that opens a window described in the following chapter.

In the "missing fingers" section missing fingers can be selected before starting sequence, and this datum will be kept in count during segmentation.

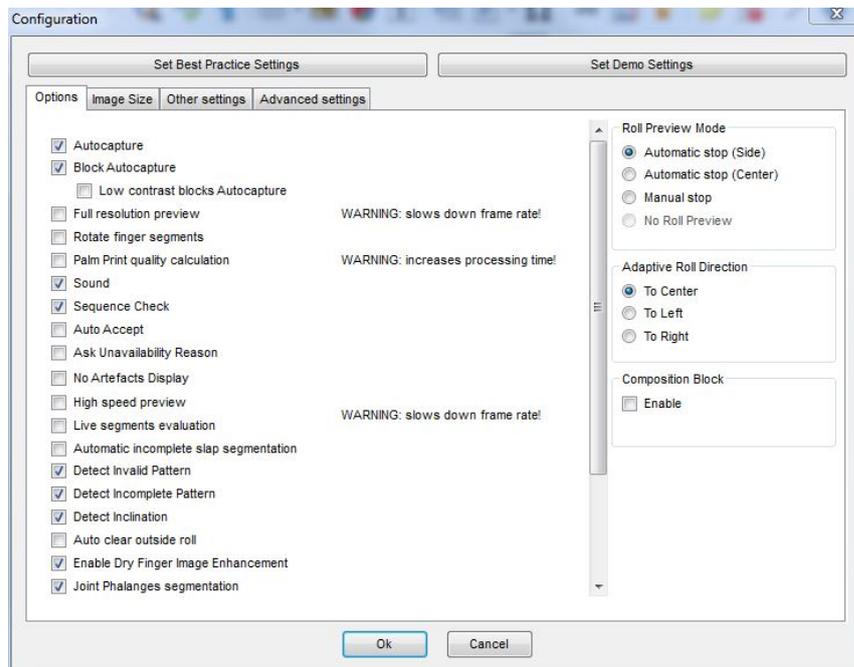
## 2.3 Configuration window

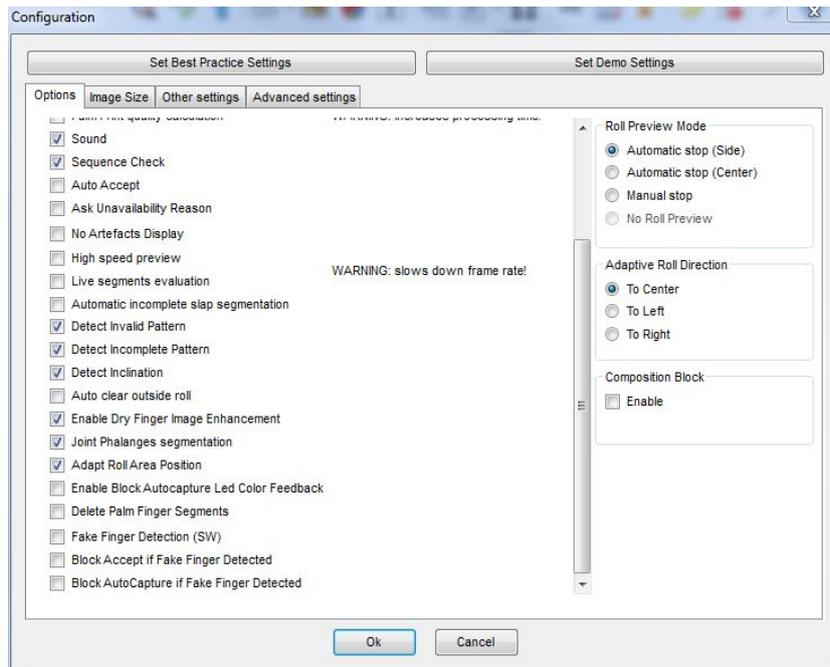
The configuration window is composed by several tabs, described in the next paragraphs.

Two buttons appear in the area above the Tab List:

- **“Set Best Practice Settings”**: this button sets a configuration that is optimized for an average integrator needs, as per Greenbit experience; Greenbit recommends to use these settings as a starting point for developing applications.
- **“Set Demo Settings”**: this button sets a configuration that can be used for demo purposes (for example, some diagnostics are not taken in count when acquiring or processing the image), in order to make the acquisition process faster and to take the customer’s attention on the main sdk features.

### 2.3.1 “Options” tab





A lot of general options can be set/unset in this tab. Some of them are brand new respect to the older versions, for example the "Block Autocapture if Fake Finger Detected". For more information about them, see GBMSGUI documentation.

## 2.3.2 “Image Size” tab

Configuration

Set Best Practice Settings      Set Demo Settings

Options   **Image Size**   Other settings   Advanced settings

Standard: ANSI/NIST-ITL 1-2007/2011

|                   | Width | Height | (Inches) |
|-------------------|-------|--------|----------|
| Upper Palm        | 5     | 5      |          |
| Lower Palm        | 5     | 5      |          |
| Writer's Palm     | 1.8   | 5      |          |
| Four Fingers      | 3.2   | 3      |          |
| Two Thumbs        | 3.2   | 3      |          |
| Flat Thumb        | 1     | 2      |          |
| Flat Finger       | 1     | 1      |          |
| Rolled Thumb      | 1.6   | 1.5    |          |
| Rolled Index      | 1.6   | 1.5    |          |
| Rolled Middle     | 1.6   | 1.5    |          |
| Rolled Ring       | 1.6   | 1.5    |          |
| Rolled Little     | 1.6   | 1.5    |          |
| Rolled Tip        | 1.6   | 1      |          |
| Rolled Joint      | 1.6   | 5      |          |
| Flat Joint        | 1.6   | 5      |          |
| Rolled Thenar     | 3     | 4.5    |          |
| Rolled Hypothenar | 3     | 4.5    |          |

Roll area size

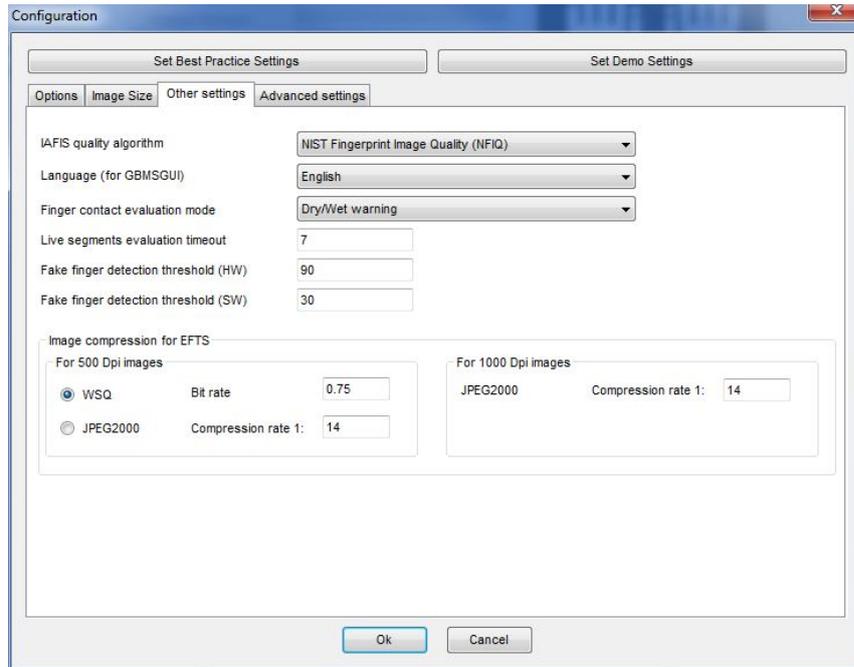
IQS

GA

Ok      Cancel

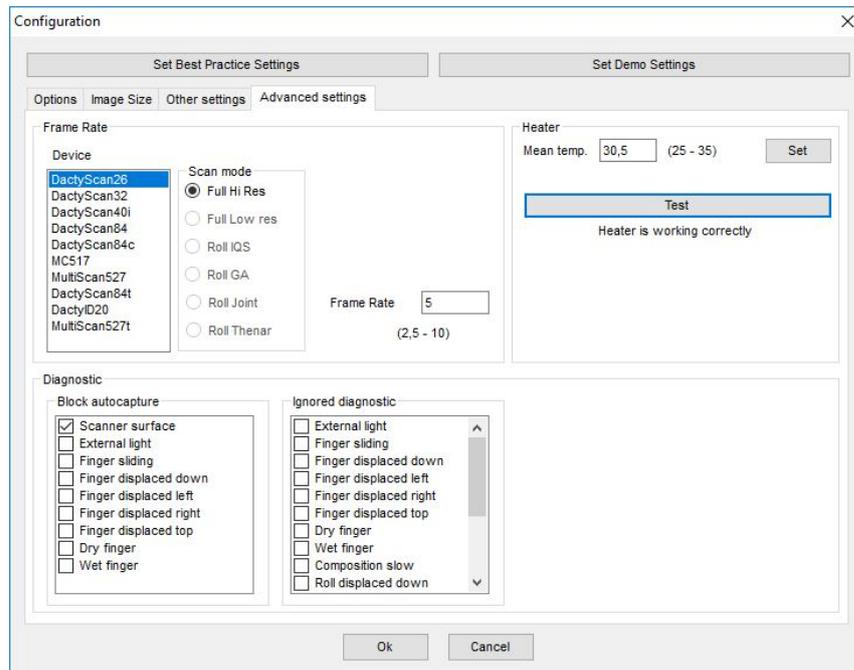
In this tab image size for each acquirable option can be set. Some pre-compiled settings are available (ANSI/NIST ITL 1-2007/2011, for example), and they can be chosen by selecting an item in the “Standard” combo box.

### 2.3.3 “Other settings” tab



In this tab the algorithm for quality calculation (between NFIQ and Green Bit proprietary), the GBMSGUI language, the finger contact evaluation method, the fake finger detection algorithms thresholds and the live segments evaluation timeout can be set.

## 2.3.4 “Advanced settings” tab



In this tab nominal frame rate can be set (for those scanners allowing it), the block auto-capture mask and the diagnostics to be ignored can be set with the desired options. Further, from this tab the platen heater (for devices supporting it) can be controlled: the mean temperature is read at the opening of the tab and can be set by writing it into the textbox (please fill with a value in range) and pressing the “Set” button; while the correct functioning of the heater can be tested by pressing the “Test” button.



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