Target frame Barcode TAG identification software

Windows Setup

Installation and Compilation

Author: Popescu Dragos Constantin

Contact: dragos.popescu@eli-np.ro

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Disclaimer !!!
The source code was compiled under **Windows 8.1 64bit** using:
- **Visual Studio Express 2012**
- **OpenCV 2.4.13**
- **Zbar 0.10**

but it should work using any other Windows setup.

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1. Visual Studio Setup

➢ Download and install the latest version of **Visual Studio Express** from:

https://www.visualstudio.com/vs/visual-studio-express/

2. OpenCV Setup

➢ Download **OpenCV 2.4.13** installer from:

https://sourceforge.net/projects/opencvlibrary/files/opencv-win/2.4.13/opencv-2.4.13.exe/download

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Warning !!!
- This archive contains only VC11 and VC12 libraries.
- For VC14 libraries you should download the following installer:

  https://sourceforge.net/projects/opencvlibrary/files/opencv-win/2.4.13/opencv-2.4.13.2-vc14.exe/download

- For any other distribution you have to build your own libraries from Source Files using the following instructions:

  http://docs.opencv.org/2.4/doc/tutorials/introduction/windows_install/windows_install.html

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> **Warning !!!**
> Because **Zbar** library is only **32bit** version you have to use only **x86 OpenCV** version.

- ➢ Extract **OpenCV** archive to any desired location.
- ➢ **Configure Environment Variables:**
  - Add to System Variables the path of the **vc11** folder from **x86** folder from **build** folder from **opencv** folder you have extracted.
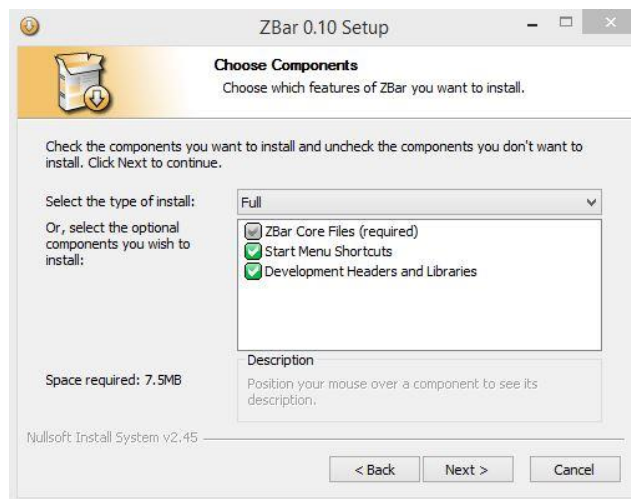
  ex: %OPENCV_DIR% - D:\opencv\build\x86\vc11

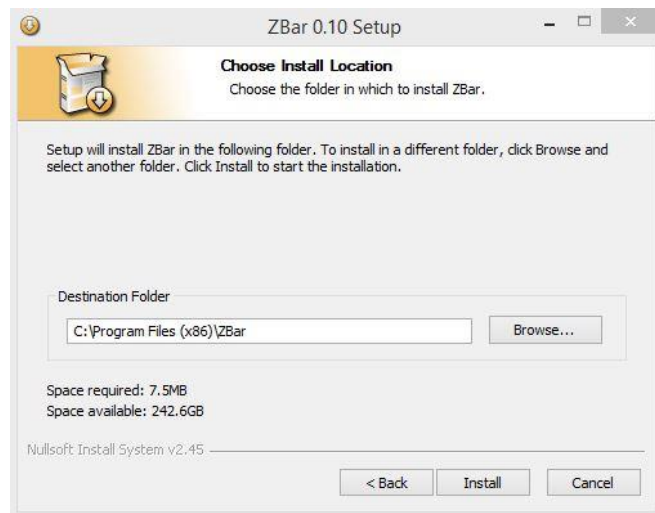 - Add to Path the location of the **bin** folder from **vc11** folder.

  ex: %OPENCV_DIR%\bin

3.Zbar Setup

- ➢ Download **Zbar** installer from:

  https://sourceforge.net/projects/zbar/files/zbar/0.10/zbar-0.10-setup.exe/download

- ➢ Run the installer.
- ➢ Make sure to install all the components:

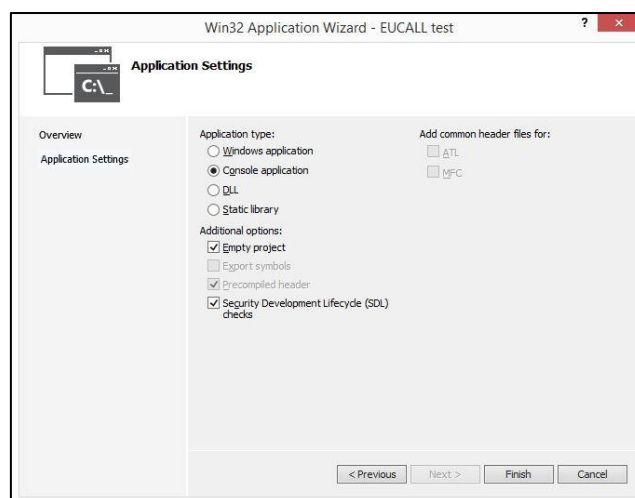- ➢ Install **Zbar** in the default directory:

➢ **Configure Environment Variables:**

  • Add to Path the location of the **bin** folder from **Zbar** installation folder:

ex: C:\Program Files (x86)\ZBar\bin
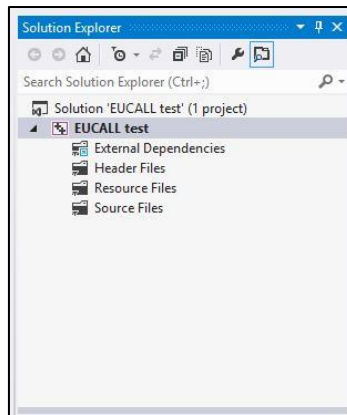
4. Visual Studio (VS) Project configuration

➢ In VS create a new *empty* **Win32 Console Application** project:

➢ Configure the project to **Release** from the upper side in VS:

➢ Right-click on the application name from the **Solution Explorer** (upper-right side in VS) and click **Properties**:

➢ Go to **Configuration Properties** >> **C/C++** >> **General** >> **Additional Include Directories** and add:

$(OPENCV_DIR)\..\..\include
C:\Program Files (x86)\ZBar\include

➢ Go to **Configuration Properties** >> **Linker** >> **General** >> **Additional Library Directories** and add:

$(OPENCV_DIR)\lib
C:\Program Files (x86)\ZBar\lib

➢ Go to **Configuration Properties** >> **Linker** >> **Input** >> **Additional Dependencies** and add:

libzbar-0.lib
opencv_calib3d2413.lib
opencv_contrib2413.lib
opencv_core2413.lib
opencv_features2d2413.lib
opencv_flann2413.lib
opencv_gpu2413.lib
opencv_highgui2413.lib
opencv_imgproc2413.lib
opencv_legacy2413.lib
opencv_ml2413.lib
opencv_nonfree2413.lib
opencv_objdetect2413.lib
opencv_ocl2413.lib
opencv_photo2413.lib
opencv_stitching2413.lib
opencv_superres2413.lib
opencv_ts2413.lib
opencv_video2413.lib
opencv_videostab2413.lib

Warning !!!
If using other **OpenCV** version you have to modify accordingly the name of the libraries

- Click **Apply** >> **Ok**.

- In **Solution Explorer** under the name of the application right-click on **Source Files** and click on **Add** >> **New Item** >> **C++ File (.cpp)** and name it **main.cpp**.

- In **main.cpp** copy the **Source Code** for **TAG identification software** and save it.

- In **Solution Explorer** right-click on the application name and click **Build**.

- The application should build without any errors.

4.Testing / using the application

- Open **Command Prompt** and navigate to **Release** folder from the folder where you have created the project.

- There should be a **.exe** application created by the compilation process.

- You need to have in the same folder an input image with a barcode.

- Run:

  APP_NAME.exe IMG_NAME.jpg 1

  if you want to display an image with the Barcode identified, otherwise run:

  APP_NAME.exe IMG_NAME.jpg

Warning !!!
The application can be moved to any other location and renamed

Warning !!!
If the name of the application or the input image contains spaces, you have to provide them inside commas: *"APP NAME.exe" "IMG NAME.jpg" 1*