

## PORTABLE DVRK SIMULATOR: VISUAL STUDIO CONFIGURATION SETTINGS

To build the source code and run the DVRK simulator application, the distributed files need to be configured as a Visual Studio (VS) project. The following instructions and settings refer to the Configuration panel options that have to be set from the *Properties* page of the VS project.

The distributed simulator has been successfully built and executed under **Visual Studio 2015**, with **Platform Toolset v140**, along with all other required settings listed in the following. Any other combination of VS version / Platform toolset / settings is not granted to succeed and has not been tested. Please refer to the configuration described in the following.

### Required Dependencies

Chai3d-3.2.0

OpenHaptics 3.4.0

OpenCV 2.4

Boost 1.66.0

GLEW

SDL

OculusSDK

Eigen

#### 1. Add source files to the project

*(Right click on Project -> Add -> Existing Item)*

2. **Set Build configuration:** Release – x86
3. **From *Properties Pages*** *(Right click on Project -> Properties)*

##### a. General

**Target Platform Version:** 8.1

**Platform Toolset:** Visual Studio 2015 (v140)

**Configuration Type:** Application (.exe)

##### b. VC++ Directories

###### Include Directories

*Path-To-OpenHaptics\OpenHaptics\Developer\3.4.0\utilities\include*

*Path-To-OpenHaptics\OpenHaptics\Developer\3.4.0\include*

*Path-To-Opencv\opencv\build\include*

*Path-To-Boost\boost\boost\_1\_66\_0*

*Path-To-Glew\glew\include\GL*

*Path-To-SDL\sdl\include*

*Path-To-OculusSDK\OculusSDK\LibOVRKernel\Src*

*Path-To-OculusSDK\OculusSDK\LibOVR\Include*

*Path-To-V-REP\V-REP\_PRO\_EDU\programming\remoteApi*

*Path-To-V-REP\V-REP\_PRO\_EDU\programming\include*

#### **Library Directories**

*Path-To-Opencv\opencv\build\x86\vc14\lib*

*Path-To-Boost\boost\boost\_1\_66\_0\stage\lib*

*Path-To-Glew\glew\lib\Release\Win32*

*Path-To-SDL\sdl\lib\x86*

*Path-To-OculusSDK\OculusSDK\LibOVR\Lib\Windows\Win32\Release\VS2015*

#### **c. C/C++ - General**

##### **Additional Include Directories**

*Path-To-Chai3D\chai3d-3.2.0\extras\GLFW\include*

*Path-To-Chai3D\chai3d-3.2.0\external\glew\include*

*Path-To-Chai3D\chai3d-3.2.0\src*

*Path-To-Chai3D\chai3d-3.2.0\external\Eigen*

**SDL Checks:** Yes

#### **d. C/C++ - Preprocessor**

##### **Preprocessor Definitions**

NON\_MATLAB\_PARSING

MAX\_EXT\_API\_CONNECTIONS=255

\_CRT\_SECURE\_NO\_WARNINGS

#### **e. Linker – General**

##### **Additional Library Directories**

*Path-To-OpenHaptics\OpenHaptics\Developer\3.4.0\lib\Win32\Release*

*Path-To-OpenHaptics\OpenHaptics\Developer\3.4.0\utilities\lib\Win32\Release*

*Path-To-Chai3D\chai3d-3.2.0\extras\GLFW\lib\Release\Win32*

*Path-To-Chai3D\chai3d-3.2.0\lib\Release\Win32*

**f. Linker – Input**

**Additional Dependencies**

*opencv\_core2413.lib*

*opencv\_highgui2413.lib*

*opencv\_imgproc2413.lib*

*opencv\_video2413.lib*

*boost\_thread-vc140-mt-x32-1\_66.lib*

*glew32.lib*

*Opengl32.lib*

**4. Paste the following libraries in the Release folder (where the executable is generated)**

*boost\_chrono-vc140-mt-x32-1\_66.dll*

*boost\_system-vc140-mt-x32-1\_66.dll*

*boost\_thread-vc140-mt-x32-1\_66.dll*

*glew32.dll*

*hd.dll*

*hl.dll*

*hdPhantom32.dll*

*Leap.dll*

*opencv\_core2413.dll*

*opencv\_highgui2413.dll*

*opencv\_imgproc2413.dll*

*SDL2.dll*

*sixense.dll*

*tdLeap32.dll*

