The Visual Processing library contains source and windows binaries of the following application:

- [Curvace Simulator](#)
- [Curvace Viewer](#)
- [CDS-Viewer](#)
- [CDS-Filter](#)

The core application within this package is the Curvace Simulator which allows to simulate the output of sensors within a virtual environment. The Simulator can be extended with plugins to support additional sensor shapes or other functionality.

The Curvace Viewer can be used to read data from a cylindrical Curvace sensor in conjunction with an intermediate microcontroller board.

Curvace Viewer and Simulator can both store their image sequences in a common data format. The CDS-Viewer can be used to view and analyze these stored sequences.

Finally CDS-Filter incorporates several visual filter algorithms as well as other utility functions that are performed on CDS files. The flow option for example allows to load a CDS file, compute optic flow from the data and store the data together with the optic flow in a new CDS file which can then be analyzed with the CDS-Viewer.

Installation

The [Visual Processing Library Package](#) includes the windows binaries of all applications. These are located in the /bin subdirectory of the archive. No installation is required, simply extract the binary directory to your preferred location. Alternatively you can download the binary only package:

download PC Application binaries for windows (.zip)

download Application and algorithm source (.zip)

Compiling

The project uses CMake as cross-platform make tool which has been tested with Microsoft Visual Studio 2008 and with GCC under linux. The following dependencies are required to compile the applications:

- CMAKE
- QT4
- OpenSceneGraph (for Curvace Simulator)
- Boost (for Curvace Viewer)

 If you encounter problems with the dependencies you should refer to Help on Installing Dependencies   .

Using Visual Studio

   - Run the CMake GUI
   - Set 'Where is the source code' to the /src directory of the Visual Processing Library Package
   - Set 'Where to build the binaries' to a new build directory (e.g. /build) - do not put the build within the /src directory
   - Press Configure and select your Compiler (Visual Studio ...)
   - You can change the CMAKE_INSTALL_PREFIX to your preferred install location. All other options can be left unchanged.
   - Press Generate (you can close CMake when finished)
   - Open the generated solution CurvaceVisualProcessing.sln within the /build directory
   - Select 'Release' build.
   - Build BUILD_ALL
   - Build Install

If everything worked fine you now have a working set of applications in the selected install

directory /bin

Using g++ and make under linux

- create a /build directory and change to this directory (mkdir build; cd build)
- run 'ccmake src' where src is the source directory of the VPL package
- press 'c' to configure, then 'g' to generate the makefile
- quit cmake and run 'make'
- You can install the applications by running 'make install'