UTILISER POINT CLOUD LIBRARY
DANS VISUAL STUDIO 2015

par

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Prérequis

- **Visual Studio 2015** : https://www.visualstudio.com/fr-ca/downloads/download-visual-studio-vs.aspx
- **Point Cloud Library** : https://onedrive.live.com/?id=EC9EBB2646FF189A%2151249&cid=EC9EBB2646FF189A&group=0&parId=EC9EBB2646FF189A%2149089&authkey=%21ABJC39YpCnE4So8&action=locate

Versions utilisées (testées et fonctionnelles) :

- Visual Studio 2015 Community
- PCL 1.7.2

Étapes à suivre

1. Installer Visual Studio 2015 (avec outils de développement C++).

2. Installer PCL 1.7.2 (32 bits) pour VS2015 dans *C:\Program Files (x86)\Point Cloud Library*.

3. Installer PCL 1.7.2 (64 bits) pour VS2015 dans *C:\Program Files\Point Cloud Library*.

4. Créer les variables d'environnement suivantes :

Nom	**Valeur**
PCL_ROOT_32	*C:\Program Files (x86)\Point Cloud Library\PCL 1.7.2*
PCL_ROOT_64	*C:\Program Files\Point Cloud Library\PCL 1.7.2*
PCL_BIN_32 (facultatif)	*%PCL_ROOT_32%\bin*
FLANN_BIN_32 (facultatif)	*%PCL_ROOT_32%\3rdParty\FLANN\bin*
VTK_BIN_32 (facultatif)	*%PCL_ROOT_32%\3rdParty\VTK\bin*

5. Ajouter les variables au PATH :

    %PCL_ROOT_32%;
    %PCL_ROOT_64%;
    %PCL_BIN_32%; (facultatif)
    %FLANN_BIN_32%; (facultatif)
    %VTK_BIN_32%; (facultatif)

Note : les variables marquées comme étant facultatives permettent de donner le chemin aux DLL de PCL à Visual Studio de sorte à ce que le programme puisse s'exécuter peu importe son emplacement. Cependant, dans un contexte de release, il est préférable de copier les DLL requises manuellement dans le répertoire du programme.

6. Modifier les propriétés du projet C++ dans Visual Studio :

Répertoires Include
$(PCL_ROOT_32)\include\pcl-1.7
$(PCL_ROOT_32)\3rdParty\Boost\include\boost-1_57
$(PCL_ROOT_32)\3rdParty\Eigen\eigen3
$(PCL_ROOT_32)\3rdParty\FLANN\include
$(PCL_ROOT_32)\3rdParty\QHull\include
$(PCL_ROOT_32)\3rdParty\VTK\include\vtk-6.2

$(PCL_ROOT_32)\include\pcl-1.7;$(PCL_ROOT_32)\3rdParty\Boost\include\boost-1_57;$(PCL_ROOT_32)\3rdParty\Eigen\eigen3;$(PCL_ROOT_32)\3rdParty\FLANN\include;$(PCL_ROOT_32)\3rdParty\QHull\include;$(PCL_ROOT_32)\3rdParty\VTK\include\vtk-6.2;$(IncludePath)

Répertoires de bibliothèques
$(PCL_ROOT_32)\lib
$(PCL_ROOT_32)\3rdParty\Boost\lib
$(PCL_ROOT_32)\3rdParty\FLANN\lib
$(PCL_ROOT_32)\3rdParty\QHull\lib
$(PCL_ROOT_32)\3rdParty\VTK\lib

$(PCL_ROOT_32)\lib;$(PCL_ROOT_32)\3rdParty\Boost\lib;$(PCL_ROOT_32)\3rdParty\FLANN\lib;$(PCL_ROOT_32)\3rdParty\QHull\lib;$(PCL_ROOT_32)\3rdParty\VTK\lib;$(LibraryPath)

Dépendances supplémentaires	
Debug	**Release**
pcl_common_debug.lib	pcl_common_release.lib
pcl_features_debug.lib	pcl_features_release.lib
pcl_filters_debug.lib	pcl_filters_release.lib
pcl_io_debug.lib	pcl_io_ply_release.lib
pcl_io_ply_debug.lib	pcl_io_release.lib
pcl_kdtree_debug.lib	pcl_kdtree_release.lib
pcl_keypoints_debug.lib	pcl_keypoints_release.lib
pcl_octree_debug.lib	pcl_octree_release.lib
pcl_outofcore_debug.lib	pcl_outofcore_release.lib
pcl_people_debug.lib	pcl_people_release.lib
pcl_recognition_debug.lib	pcl_recognition_release.lib
pcl_registration_debug.lib	pcl_registration_release.lib
pcl_sample_consensus_debug.lib	pcl_sample_consensus_release.lib
pcl_search_debug.lib	pcl_search_release.lib
pcl_segmentation_debug.lib	pcl_segmentation_release.lib
pcl_surface_debug.lib	pcl_surface_release.lib
pcl_tracking_debug.lib	pcl_tracking_release.lib
pcl_visualization_debug.lib	pcl_visualization_release.lib
libboost_atomic-vc140-mt-gd-1_57.lib	libboost_atomic-vc140-mt-1_57.lib
libboost_chrono-vc140-mt-gd-1_57.lib	libboost_chrono-vc140-mt-1_57.lib
libboost_container-vc140-mt-gd-1_57.lib	libboost_container-vc140-mt-1_57.lib
libboost_context-vc140-mt-gd-1_57.lib	libboost_context-vc140-mt-1_57.lib
libboost_coroutine-vc140-mt-gd-1_57.lib	libboost_coroutine-vc140-mt-1_57.lib
libboost_date_time-vc140-mt-gd-1_57.lib	libboost_date_time-vc140-mt-1_57.lib
libboost_exception-vc140-mt-gd-1_57.lib	libboost_exception-vc140-mt-1_57.lib
libboost_filesystem-vc140-mt-gd-1_57.lib	libboost_filesystem-vc140-mt-1_57.lib
libboost_graph-vc140-mt-gd-1_57.lib	libboost_graph-vc140-mt-1_57.lib
libboost_iostreams-vc140-mt-gd-1_57.lib	libboost_iostreams-vc140-mt-1_57.lib
libboost_locale-vc140-mt-gd-1_57.lib	libboost_locale-vc140-mt-1_57.lib
libboost_log-vc140-mt-gd-1_57.lib	libboost_log-vc140-mt-1_57.lib
libboost_log_setup-vc140-mt-gd-1_57.lib	libboost_log_setup-vc140-mt-1_57.lib
libboost_math_c99-vc140-mt-gd-1_57.lib	libboost_math_c99-vc140-mt-1_57.lib
libboost_math_c99f-vc140-mt-gd-1_57.lib	libboost_math_c99f-vc140-mt-1_57.lib
libboost_math_c99l-vc140-mt-gd-1_57.lib	libboost_math_c99l-vc140-mt-1_57.lib
libboost_math_tr1-vc140-mt-gd-1_57.lib	libboost_math_tr1-vc140-mt-1_57.lib
libboost_math_tr1f-vc140-mt-gd-1_57.lib	libboost_math_tr1f-vc140-mt-1_57.lib
libboost_math_tr1l-vc140-mt-gd-1_57.lib	libboost_math_tr1l-vc140-mt-1_57.lib
libboost_mpi-vc140-mt-gd-1_57.lib	libboost_mpi-vc140-mt-1_57.lib

libboost_prg_exec_monitor-vc140-mt-gd-1_57.lib	libboost_prg_exec_monitor-vc140-mt-1_57.lib
libboost_program_options-vc140-mt-gd-1_57.lib	libboost_program_options-vc140-mt-1_57.lib
libboost_random-vc140-mt-gd-1_57.lib	libboost_random-vc140-mt-1_57.lib
libboost_regex-vc140-mt-gd-1_57.lib	libboost_regex-vc140-mt-1_57.lib
libboost_serialization-vc140-mt-gd-1_57.lib	libboost_serialization-vc140-mt-1_57.lib
libboost_signals-vc140-mt-gd-1_57.lib	libboost_signals-vc140-mt-1_57.lib
libboost_system-vc140-mt-gd-1_57.lib	libboost_system-vc140-mt-1_57.lib
libboost_test_exec_monitor-vc140-mt-gd-1_57.lib	libboost_test_exec_monitor-vc140-mt-1_57.lib
libboost_thread-vc140-mt-gd-1_57.lib	libboost_thread-vc140-mt-1_57.lib
libboost_timer-vc140-mt-gd-1_57.lib	libboost_timer-vc140-mt-1_57.lib
libboost_unit_test_framework-vc140-mt-gd-1_57.lib	libboost_unit_test_framework-vc140-mt-1_57.lib
libboost_wave-vc140-mt-gd-1_57.lib	libboost_wave-vc140-mt-1_57.lib
libboost_wserialization-vc140-mt-gd-1_57.lib	libboost_wserialization-vc140-mt-1_57.lib
flann_cpp_s-gd.lib	flann_cpp_s.lib
qhullstatic_d.lib	qhullstatic.lib
vtkalglib-6.2-gd.lib	vtkalglib-6.2.lib
vtkChartsCore-6.2-gd.lib	vtkChartsCore-6.2.lib
vtkCommonColor-6.2-gd.lib	vtkCommonColor-6.2.lib
vtkCommonComputationalGeometry-6.2-gd.lib	vtkCommonComputationalGeometry-6.2.lib
vtkCommonCore-6.2-gd.lib	vtkCommonCore-6.2.lib
vtkCommonDataModel-6.2-gd.lib	vtkCommonDataModel-6.2.lib
vtkCommonExecutionModel-6.2-gd.lib	vtkCommonExecutionModel-6.2.lib
vtkCommonMath-6.2-gd.lib	vtkCommonMath-6.2.lib
vtkCommonMisc-6.2-gd.lib	vtkCommonMisc-6.2.lib
vtkCommonSystem-6.2-gd.lib	vtkCommonSystem-6.2.lib
vtkCommonTransforms-6.2-gd.lib	vtkCommonTransforms-6.2.lib
vtkDICOMParser-6.2-gd.lib	vtkDICOMParser-6.2.lib
vtkDomainsChemistry-6.2-gd.lib	vtkDomainsChemistry-6.2.lib
vtkexoIIc-6.2-gd.lib	vtkexoIIc-6.2.lib
vtkexpat-6.2-gd.lib	vtkexpat-6.2.lib
vtkFiltersAMR-6.2-gd.lib	vtkFiltersAMR-6.2.lib
vtkFiltersCore-6.2-gd.lib	vtkFiltersCore-6.2.lib
vtkFiltersExtraction-6.2-gd.lib	vtkFiltersExtraction-6.2.lib
vtkFiltersFlowPaths-6.2-gd.lib	vtkFiltersFlowPaths-6.2.lib
vtkFiltersGeneral-6.2-gd.lib	vtkFiltersGeneral-6.2.lib
vtkFiltersGeneric-6.2-gd.lib	vtkFiltersGeneric-6.2.lib
vtkFiltersGeometry-6.2-gd.lib	vtkFiltersGeometry-6.2.lib
vtkFiltersHybrid-6.2-gd.lib	vtkFiltersHybrid-6.2.lib
	vtkFiltersHyperTree-6.2.lib

vtkFiltersHyperTree-6.2-gd.lib	vtkFiltersImaging-6.2.lib
vtkFiltersImaging-6.2-gd.lib	vtkFiltersModeling-6.2.lib
vtkFiltersModeling-6.2-gd.lib	vtkFiltersParallel-6.2.lib
vtkFiltersParallel-6.2-gd.lib	vtkFiltersParallelImaging-6.2.lib
vtkFiltersParallelImaging-6.2-gd.lib	vtkFiltersProgrammable-6.2.lib
vtkFiltersProgrammable-6.2-gd.lib	vtkFiltersSelection-6.2.lib
vtkFiltersSelection-6.2-gd.lib	vtkFiltersSMP-6.2.lib
vtkFiltersSMP-6.2-gd.lib	vtkFiltersSources-6.2.lib
vtkFiltersSources-6.2-gd.lib	vtkFiltersStatistics-6.2.lib
vtkFiltersStatistics-6.2-gd.lib	vtkFiltersTexture-6.2.lib
vtkFiltersTexture-6.2-gd.lib	vtkFiltersVerdict-6.2.lib
vtkFiltersVerdict-6.2-gd.lib	vtkfreetype-6.2.lib
vtkfreetype-6.2-gd.lib	vtkftgl-6.2.lib
vtkftgl-6.2-gd.lib	vtkGeovisCore-6.2.lib
vtkGeovisCore-6.2-gd.lib	vtkgl2ps-6.2.lib
vtkgl2ps-6.2-gd.lib	vtkhdf5-6.2.lib
vtkhdf5-6.2-gd.lib	vtkhdf5_hl-6.2.lib
vtkhdf5_hl-6.2-gd.lib	vtkImagingColor-6.2.lib
vtkImagingColor-6.2-gd.lib	vtkImagingCore-6.2.lib
vtkImagingCore-6.2-gd.lib	vtkImagingFourier-6.2.lib
vtkImagingFourier-6.2-gd.lib	vtkImagingGeneral-6.2.lib
vtkImagingGeneral-6.2-gd.lib	vtkImagingHybrid-6.2.lib
vtkImagingHybrid-6.2-gd.lib	vtkImagingMath-6.2.lib
vtkImagingMath-6.2-gd.lib	vtkImagingMorphological-6.2.lib
vtkImagingMorphological-6.2-gd.lib	vtkImagingSources-6.2.lib
vtkImagingSources-6.2-gd.lib	vtkImagingStatistics-6.2.lib
vtkImagingStatistics-6.2-gd.lib	vtkImagingStencil-6.2.lib
vtkImagingStencil-6.2-gd.lib	vtkInfovisCore-6.2.lib
vtkInfovisCore-6.2-gd.lib	vtkInfovisLayout-6.2.lib
vtkInfovisLayout-6.2-gd.lib	vtkInteractionImage-6.2.lib
vtkInteractionImage-6.2-gd.lib	vtkInteractionStyle-6.2.lib
vtkInteractionStyle-6.2-gd.lib	vtkInteractionWidgets-6.2.lib
vtkInteractionWidgets-6.2-gd.lib	vtkIOAMR-6.2.lib
vtkIOAMR-6.2-gd.lib	vtkIOCore-6.2.lib
vtkIOCore-6.2-gd.lib	vtkIOEnSight-6.2.lib
vtkIOEnSight-6.2-gd.lib	vtkIOExodus-6.2.lib
vtkIOExodus-6.2-gd.lib	vtkIOExport-6.2.lib
vtkIOExport-6.2-gd.lib	vtkIOGeometry-6.2.lib
vtkIOGeometry-6.2-gd.lib	vtkIOImage-6.2.lib
vtkIOImage-6.2-gd.lib	vtkIOImport-6.2.lib
vtkIOImport-6.2-gd.lib	vtkIOInfovis-6.2.lib
vtkIOInfovis-6.2-gd.lib	vtkIOLegacy-6.2.lib
vtkIOLegacy-6.2-gd.lib	vtkIOLSDyna-6.2.lib
vtkIOLSDyna-6.2-gd.lib	vtkIOMINC-6.2.lib
vtkIOMINC-6.2-gd.lib	vtkIOMovie-6.2.lib

vtkIOMovie-6.2-gd.lib	vtkIONetCDF-6.2.lib
vtkIONetCDF-6.2-gd.lib	vtkIOParallel-6.2.lib
vtkIOParallel-6.2-gd.lib	vtkIOParallelXML-6.2.lib
vtkIOParallelXML-6.2-gd.lib	vtkIOPLY-6.2.lib
vtkIOPLY-6.2-gd.lib	vtkIOSQL-6.2.lib
vtkIOSQL-6.2-gd.lib	vtkIOVideo-6.2.lib
vtkIOVideo-6.2-gd.lib	vtkIOXML-6.2.lib
vtkIOXML-6.2-gd.lib	vtkIOXMLParser-6.2.lib
vtkIOXMLParser-6.2-gd.lib	vtkjpeg-6.2.lib
vtkjpeg-6.2-gd.lib	vtkjsoncpp-6.2.lib
vtkjsoncpp-6.2-gd.lib	vtklibxml2-6.2.lib
vtklibxml2-6.2-gd.lib	vtkmetaio-6.2.lib
vtkmetaio-6.2-gd.lib	vtkNetCDF-6.2.lib
vtkNetCDF-6.2-gd.lib	vtkNetCDF_cxx-6.2.lib
vtkNetCDF_cxx-6.2-gd.lib	vtkoggtheora-6.2.lib
vtkoggtheora-6.2-gd.lib	vtkParallelCore-6.2.lib
vtkParallelCore-6.2-gd.lib	vtkpng-6.2.lib
vtkpng-6.2-gd.lib	vtkproj4-6.2.lib
vtkproj4-6.2-gd.lib	vtkRenderingAnnotation-6.2.lib
vtkRenderingAnnotation-6.2-gd.lib	vtkRenderingContext2D-6.2.lib
vtkRenderingContext2D-6.2-gd.lib	vtkRenderingContextOpenGL-6.2.lib
vtkRenderingContextOpenGL-6.2-gd.lib	vtkRenderingCore-6.2.lib
vtkRenderingCore-6.2-gd.lib	vtkRenderingFreeType-6.2.lib
vtkRenderingFreeType-6.2-gd.lib	vtkRenderingFreeTypeOpenGL-6.2.lib
vtkRenderingFreeTypeOpenGL-6.2-gd.lib	vtkRenderingGL2PS-6.2.lib
vtkRenderingGL2PS-6.2-gd.lib	vtkRenderingImage-6.2.lib
vtkRenderingImage-6.2-gd.lib	vtkRenderingLabel-6.2.lib
vtkRenderingLabel-6.2-gd.lib	vtkRenderingLIC-6.2.lib
vtkRenderingLIC-6.2-gd.lib	vtkRenderingLOD-6.2.lib
vtkRenderingLOD-6.2-gd.lib	vtkRenderingOpenGL-6.2.lib
vtkRenderingOpenGL-6.2-gd.lib	vtkRenderingVolume-6.2.lib
vtkRenderingVolume-6.2-gd.lib	vtkRenderingVolumeOpenGL-6.2.lib
vtkRenderingVolumeOpenGL-6.2-gd.lib	vtksqlite-6.2.lib
vtksqlite-6.2-gd.lib	vtksys-6.2.lib
vtksys-6.2-gd.lib	vtktiff-6.2.lib
vtktiff-6.2-gd.lib	vtkverdict-6.2.lib
vtkverdict-6.2-gd.lib	vtkViewsContext2D-6.2.lib
vtkViewsContext2D-6.2-gd.lib	vtkViewsCore-6.2.lib
vtkViewsCore-6.2-gd.lib	vtkViewsInfovis-6.2.lib
vtkViewsInfovis-6.2-gd.lib	vtkzlib-6.2.lib
vtkzlib-6.2-gd.lib	

7. Refaire l'étape 6 en changeant les variables d'environnement suffixées par 32 en 64. Dans le cas d'une release, changer les variable d'environnement par les chemins complets.

Références

http://unanancyowen.com/?p=1255