KBSW191009 Win32 - Get the original data of laser scanning

This document introduces the demo project of "go_laser_scan", including how to get the original data of laser scanning.

Content

IDE Preperation

- ### Software
  - Visual Studio 2010 SP1
  - Slamware Windows SDK:Slamware Windows SDK
  - RoboStudio(for map display):Robostudio installer
  - Sample Code:

> Higher version of Visual Studio will cause errors. Sometime you will need to upgrade SP1 package to make your VS compatable with .Net Framework.

- ### Hardware

Either one of following

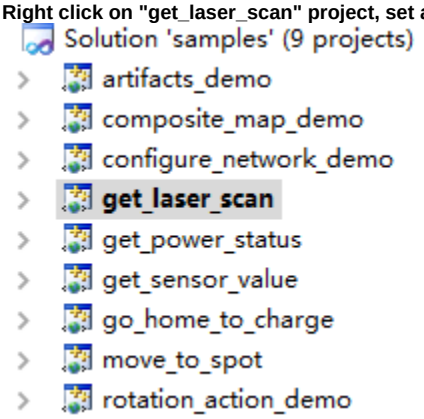
  - Slamware SDP mini
  - Slamware SDP
  - Slamware Kit
  - Zeus/Apollo robot base

Download

Win32-Demo

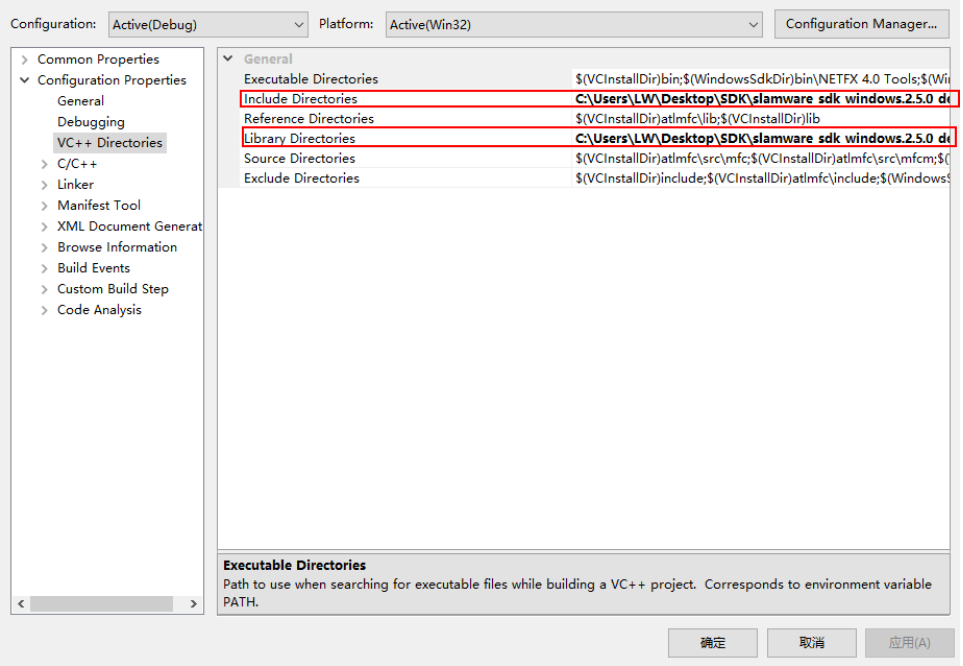
Compiling

1. **Right click on "get_laser_scan" project, set as StartUp project.**

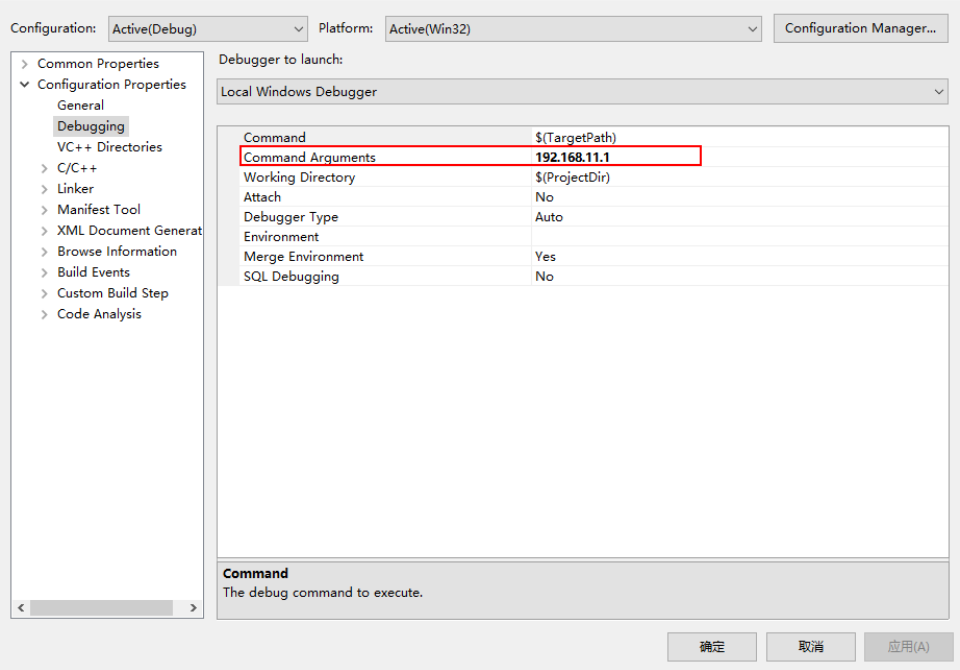


2. **Right click on " get_laser_scan ", then " Properties"configure "include" and "lib" directories to the corresponding folder path of Slamware SDK.**

> It's not necessary to copy files to the project directory, user will only need to configure the path of SDK.



3. **Right click on " get_laser_scan ", then "properties"set "Command Arguments" as follows: Syntax get_laser_scan <IP address>>**



4. **Click " F5" to execute.**

5. **The output from console will be as follows:**

```
PS C:\Users\LW\Desktop\SDK\samples\samples\Debug> .\get_laser_scan.exe 192.168.11.1
Connecting SDP @ 192.168.11.1...
SDK Version: 2.5.0_dev
SDP Version: 2.6.0_dev-sdp_vre-20171219
Angle: 1.92045; Distance: 0.319171; is Valid: 1
Angle: 1.91375; Distance: 0.321968; is Valid: 1
Angle: 1.90452; Distance: 0.325763; is Valid: 1
Angle: 1.89561; Distance: 0.329532; is Valid: 1
Angle: 1.88437; Distance: 0.333152; is Valid: 1
Angle: 1.87692; Distance: 0.340966; is Valid: 1
Angle: 1.87331; Distance: 0.335885; is Valid: 1
Angle: 1.86326; Distance: 0.345578; is Valid: 1
Angle: 1.85841; Distance: 0.349422; is Valid: 1
Angle: 1.84743; Distance: 0.353176; is Valid: 1
Angle: 1.83993; Distance: 0.358993; is Valid: 1
Angle: 1.83299; Distance: 0.363767; is Valid: 1
Angle: 1.78592; Distance: 0.396414; is Valid: 1
Angle: 1.75794; Distance: 0.414637; is Valid: 1
Angle: 1.7463; Distance: 0.421334; is Valid: 1
Angle: 1.74161; Distance: 0.426141; is Valid: 1
Angle: 1.73797; Distance: 0.362; is Valid: 0
Angle: 1.73271; Distance: 0.429854; is Valid: 1
Angle: 1.72808; Distance: 0.435798; is Valid: 1
Angle: 1.70663; Distance: 0.439087; is Valid: 1
Angle: 1.7017; Distance: 0.397; is Valid: 0
Angle: 1.69542; Distance: 0.404; is Valid: 0
Angle: 1.6687; Distance: 0.2; is Valid: 0
Angle: 1.66052; Distance: 0.199; is Valid: 0
Angle: 1.65206; Distance: 0.198; is Valid: 0
```

Code

- Get the original data of laser scanning

Get the original data of laser scanning

```
                SlamwareCorePlatform sdp = SlamwareCorePlatform::connect(argv[1], 1445);
        std::cout <<"SDK Version: " << sdp.getSDKVersion() << std::endl;
        std::cout <<"SDP Version: " << sdp.getSDPVersion() << std::endl;
                rpos::features::system_resource::LaserScan laser_scan = sdp.getLaserScan();
            std::vector<rpos::core::LaserPoint> laser_points =laser_scan.getLaserPoints();

                for (std::vector<rpos::core::LaserPoint>::iterator it = laser_points.begin(); it!=
laser_points.end(); ++it)
                        std::cout << "Angle: " << it->angle() << "; Distance: " <<
                        it->distance() << "; is Valid: " << it->valid() << std::endl;
```