

KBSW180120 Win32-CompositeMap

composite_map_demo, .stcmcomposite map

-
-
-
-
-

- - Visual Studio 2010 SP1
 - Slamware Windows SDK:[Slamware Windows SDK](#)
 - RoboStudio():[Robostudio installer](#)
 - Sample Code:



Visual Studio

Visual Studio 2010SP1.Net FrameworkSP1

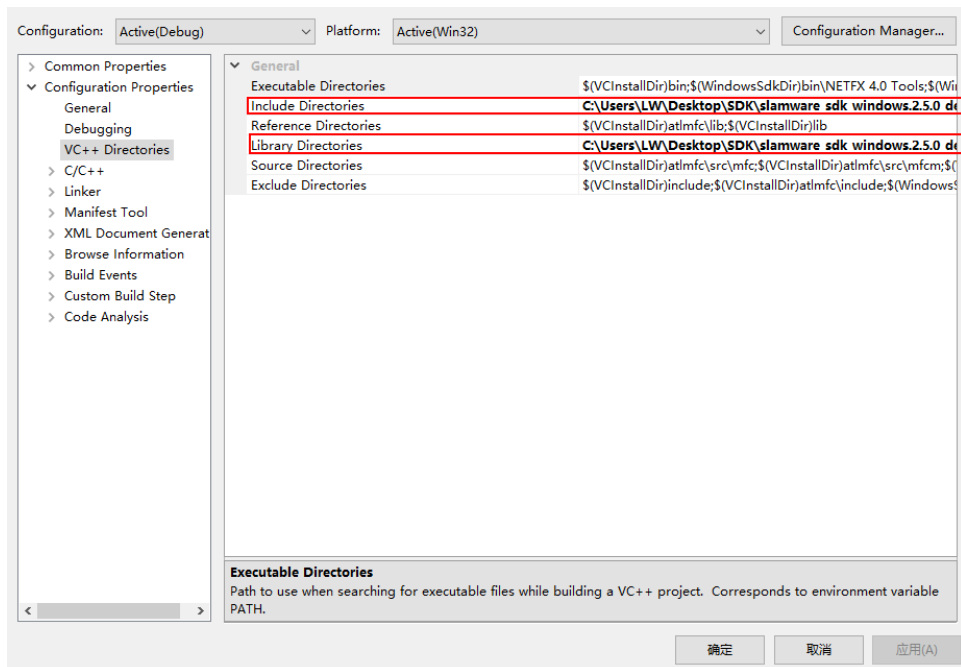
- - Slamware SDP mini
 - Slamware SDP
 - Slamware Slamware
 - Zeus/Apollo

[Win32-](#)

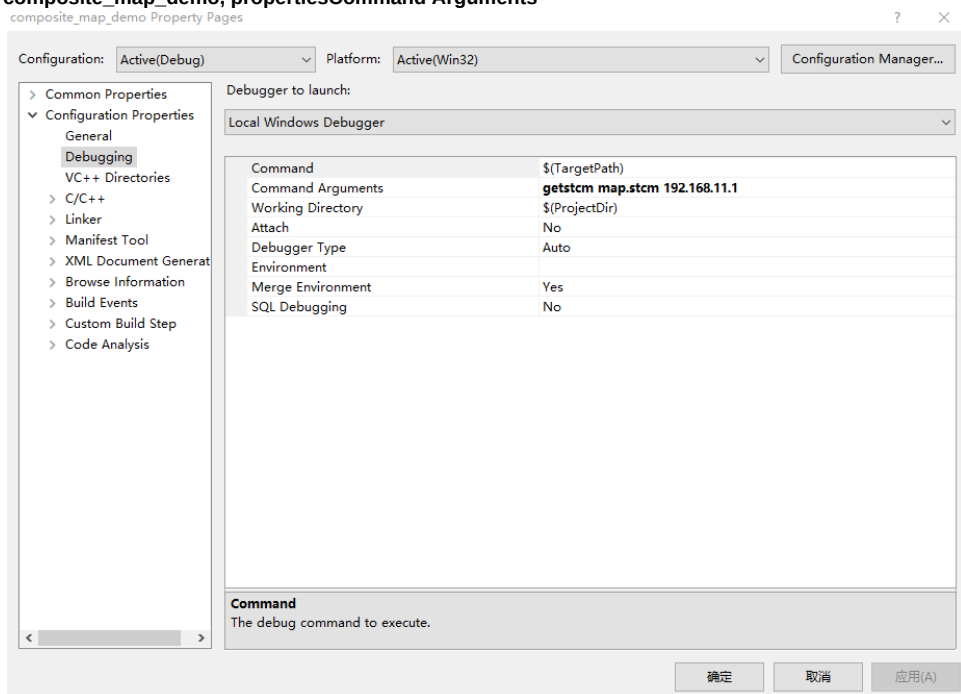
1. samplescomposite_map_demo, StartUp project

-
- Solution 'samples' (9 projects)
 - > artifacts_demo
 - > **composite_map_demo**
 - > configure_network_demo
 - > get_laser_scan
 - > get_power_status
 - > get_sensor_value
 - > go_home_to_charge
 - > move_to_spot
 - > rotation_action_demo

2. composite_map_demo, Slamware SDK includelib



3. composite_map_demo, propertiesCommand Arguments



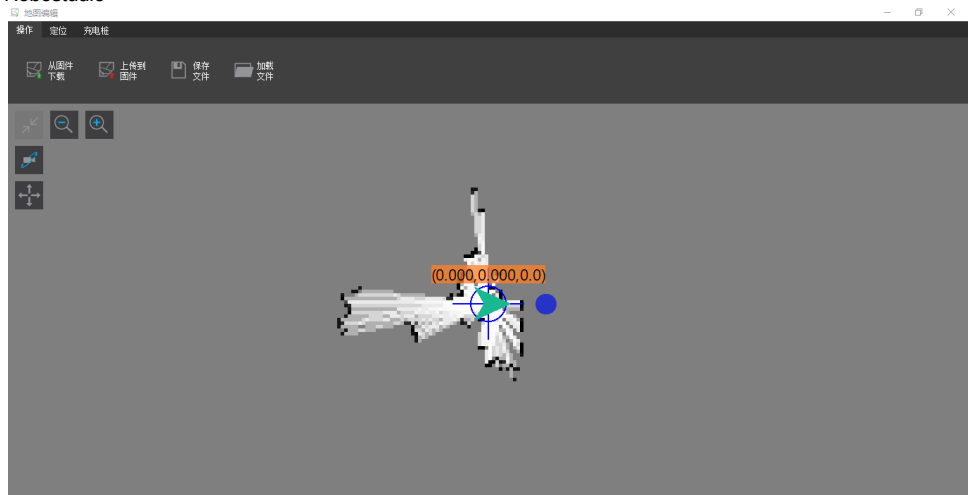
composite_map_demo [OPTS] [filename] <SDP IP Address>
 SDP IP Address The ip address string of the SLAMWARE SDP
 getstcm filename download compositeMap
 setstcm filename upload compositeMap
 -h Show this message

4. F5

- **composite_map_demo** getstcm map.stcm 192.168.11.1 (slamwarecomposite map, map.stcm)

[illegible]

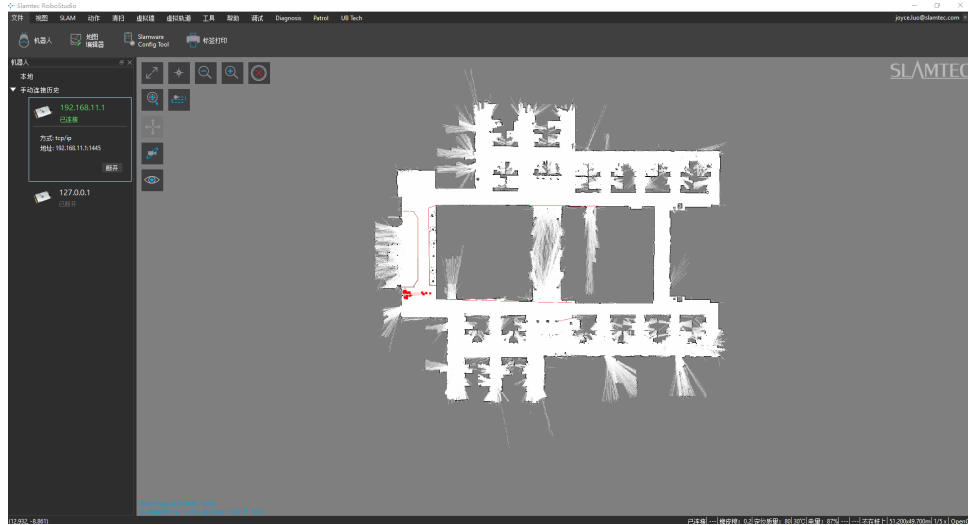
Robostudio



- **composite_map_demo setstcm map.stcm 192.168.11.1(map.stcmlslamware)**

[illegible]

Robostudio



- slamwarecomposite map

composite map

```
bool StcmMapWriter(const std::string file_name, SlamwareCorePlatform platform) {
    CompositeMap composite_map = platform.getCompositeMap();
    CompositeMapWriter composite_map_writer;
    std::string error_message;
    bool result = composite_map_writer.saveFile(error_message, file_name, composite_map);
    return result;
}
```

- composite mapslamware

composite map

```
bool StcmMapReader(const std::string file_path, rpos::core::Pose pose, SlamwareCorePlatform platform) {
    CompositeMapReader composite_map_reader;
    std::string error_message;
    boost::shared_ptr<CompositeMap> composite_map(composite_map_reader.loadFile(error_message, file_path));
    if (composite_map) {
        platform.setCompositeMap((*composite_map), pose);
        return true;
    }
    return false;
}
```

- composite map

map layer

```
CompositeMapReader composite_map_reader;
std::string error_message;
boost::shared_ptr<CompositeMap> composite_map(composite_map_reader.loadFile(error_message, file_path));
if (composite_map) {
    for (auto it = composite_map->maps().begin(); it != composite_map->maps().end(); ++it) {
        auto layer = *it;
        std::string usage = layer->getUsage();
        std::string type = layer->getType();
        std::cout << "Layer Usage : " << usage << std::endl;
        //get grid map layer
        if (type == GridMapLayer::Type) {
            auto grid_map = boost::dynamic_pointer_cast<GridMapLayer>(layer);
            std::cout << "Map Position : (" << grid_map->getOrigin().x() << " , " <<
                grid_map->getOrigin().y() << ")" <<std::endl;
            std::cout << "Map Resolution : (" << grid_map->getResolution().x() <<
                " , " << grid_map->getResolution().y() << ")" <<std::endl;
            std::cout << "Map Dimension: (" << grid_map->getDimension().x() <<
                " , " << grid_map->getDimension().y() << ")" <<std::endl;
            std::cout << "Map Data:" << std::endl;
            for (auto it = grid_map->mapData().begin(); it != grid_map->mapData().end();
++it) {
                std::cout << (int)*it << " " ;
            }
            std::cout << std::endl << std::endl;
        }
        //get line map layer
        else if (type == LineMapLayer::Type) {
            auto line_map = boost::dynamic_pointer_cast<LineMapLayer>(layer);
            for (auto it = line_map->lines().begin(); it != line_map->lines().end();
++it) {
                auto line = it->second;
                std::cout << "start: (" << line.start.x() << " , " << line.start.y()
<< ")" << std::endl;
                std::cout << "end: (" << line.end.x() << " , " << line.end.y() <<
                ")" << std::endl;
            }
        }
    }
}
```

```

        }
        std::cout << std::endl;
    }

    //get pose map layer
    else if (type == PoseMapLayer::Type) {
        auto pose_map = boost::dynamic_pointer_cast<PoseMapLayer>(layer);
        for (auto it = pose_map->poses().begin(); it != pose_map->poses().end();
++it) {
            auto pos = it->second;
            std::cout << "Position : (" << pos.pose.x() << " , " << pos.pose.y()
<< ")" << std::endl;
        }
        std::cout << std::endl;
    }
    else if (type == PointsMapLayer::Type) {
        //TODO: get Points map layer
        std::cout << std::endl;
    }
    else {
        //TODO: get unknown map layer
        std::cout << std::endl;
    }
}
}

```