Write a Vaa3D Plugin

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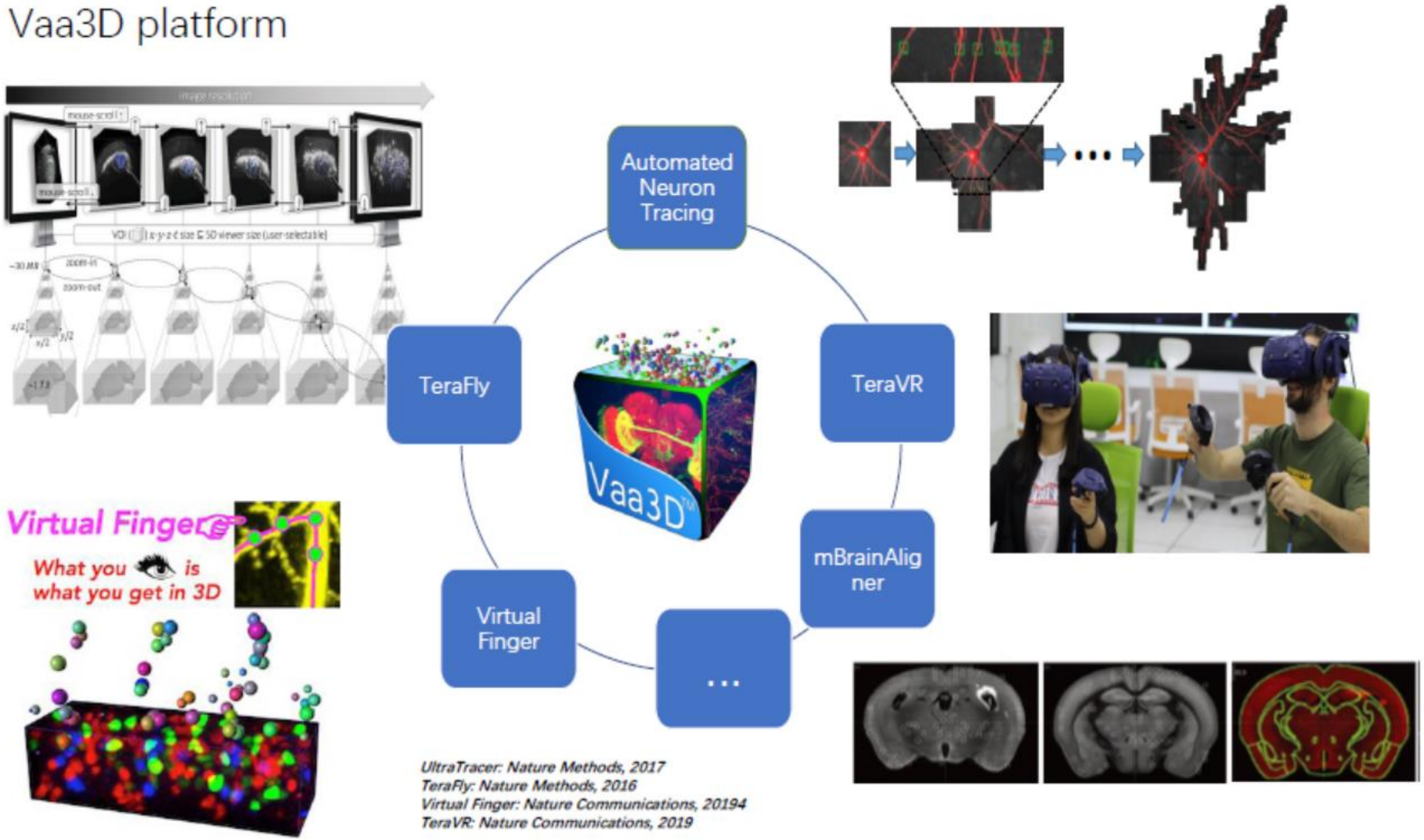
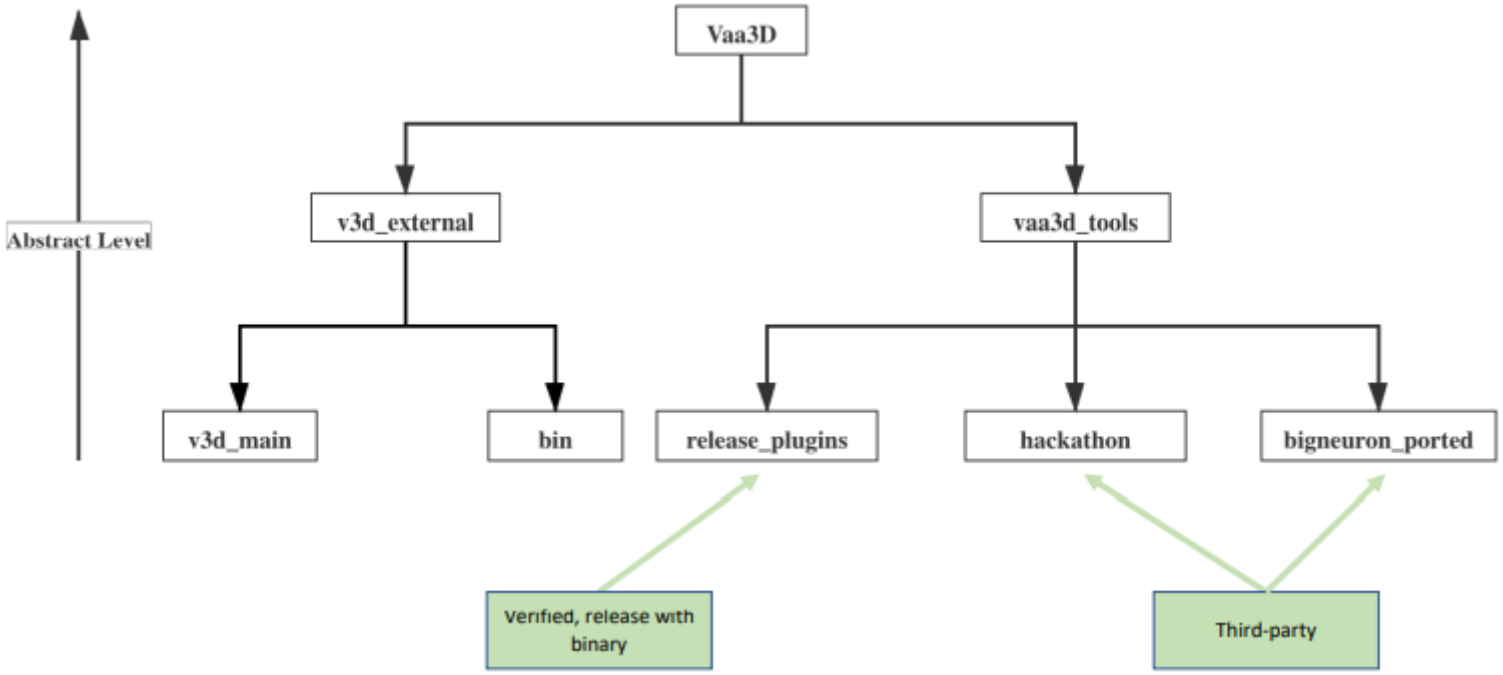
Overview



http://vaa3d.org

Extensibility: Plugins



- Available plugins
- Plugin implementation required only minimal effort
- Interact at dynamic library level (*.dll)

Different version: for developer and for user

Referenced to Dr. Liu

Comparison of develop version and user version

- The user version https://github.com/Vaa3D/release/releases/

folder_name\v3d_external\bin\

- The develop version http://vaa3d.org

Compile with VS and Qt tools

folder_name\v3d_external\bin\plugins\plugin_name\x.dll

https://github.com/Vaa3D/Vaa3D_Wiki/wiki/Build-Vaa3D-on-Windows-with-qmake-using-VS2013-and-Qt4.8.6

https://github.com/Vaa3D/Vaa3D_Wiki/wiki/Build-Vaa3D-on-Linux

Write our own plugin

Tools Preparation:

- Install the proper QT version http://qt.nokia.com/products/
- Download Vaa3D source code from http://vaa3d.org
- A C++ compiler

Detailed Information:

- See at: http://github.com/Vaa3D/Vaa3D_Wiki/wiki/

Write our own plugin

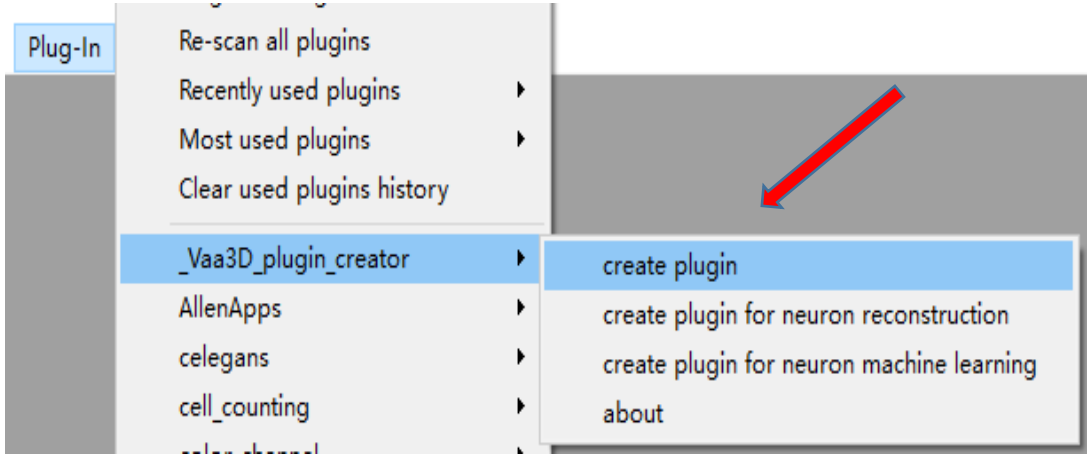
Structure of plugin: at least 3 files

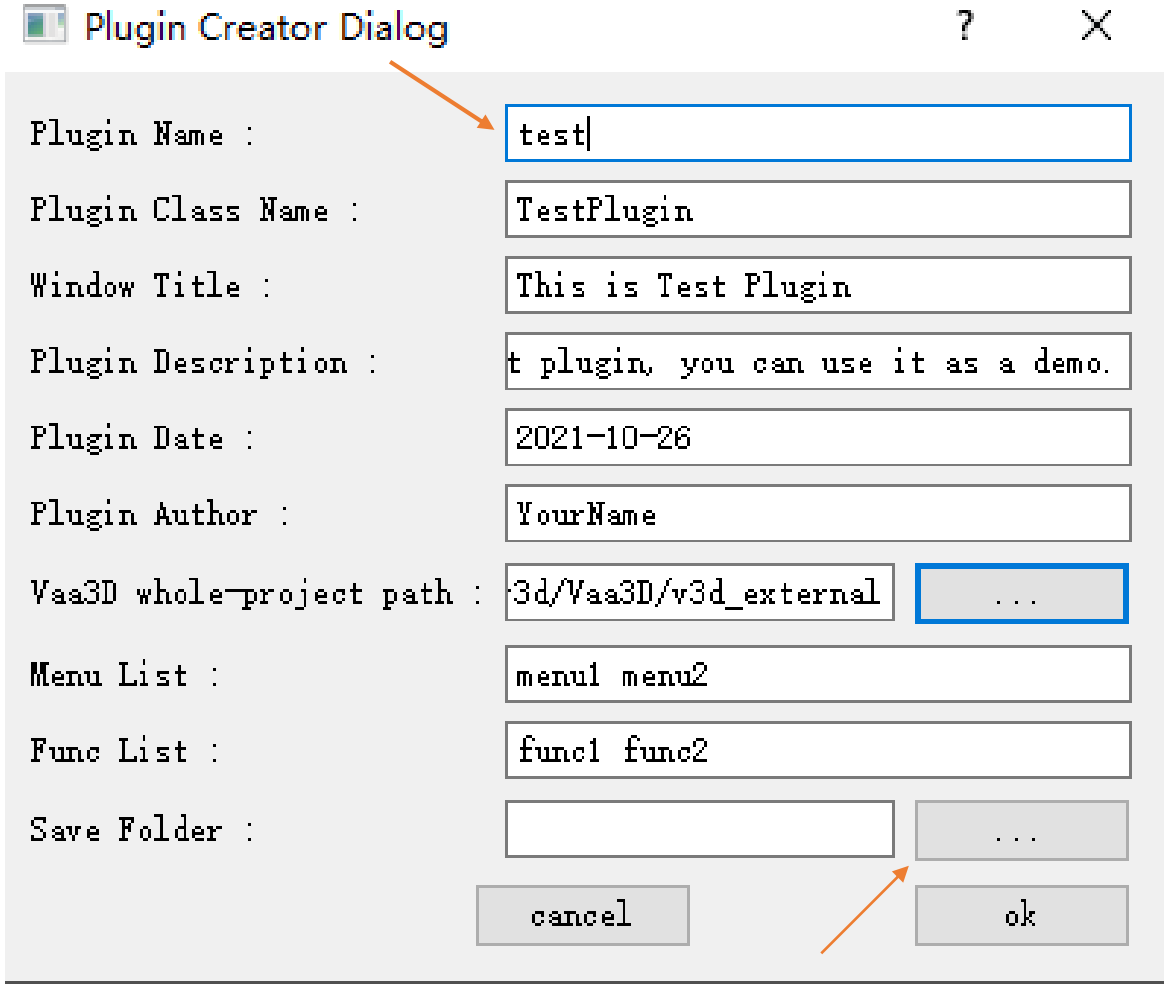
- plugin_name.h
- plugin_name.cpp
- plugin_name.pro: tells Qt how to compile the plugin

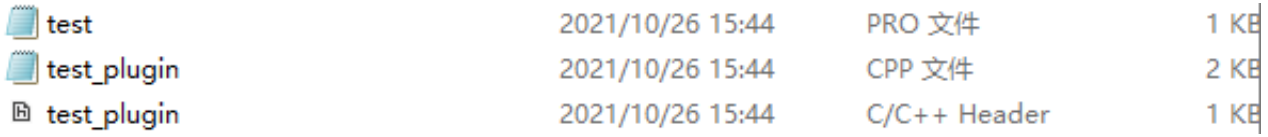
Plugin creator help:

- ‘_Vaa3D_plugin_creator’ : a useful plugin for beginners

Write our own plugin







V3D/vaa3d_tools/hackathon\name\project_name

Write our own plugin

plugin.pro file: to build the project – Project configuration

```
TEMPLATE        = lib
CONFIG   += qt plugin warn_off
#CONFIG += x86_64
VAA3DPATH = G:/v3d/Vaa3D/v3d_external
INCLUDEPATH     += $$VAA3DPATH/v3d_main/basic_c_fun

HEADERS         += test_plugin.h
SOURCES         += test_plugin.cpp
SOURCES         += $$VAA3DPATH/v3d_main/basic_c_fun/v3d_message.cpp

TARGET  = $$qtLibraryTarget(test)
DESTDIR = $$VAA3DPATH/bin/plugins/test/
```

Write our own plugin

plugin.h & plugin.cpp file: to construct a list of menu and func items

```
#ifndef __TEST_PLUGIN_H__
#define __TEST_PLUGIN_H__

#include <QtGui>
#include <v3d_interface.h>

class TestPlugin : public QObject, public
{
        Q_OBJECT
        Q_INTERFACES(V3DPluginInte

public:
        float getPluginVersion() const {r

        QStringList menulist() const;
        void domenu(const QString &m

        QStringList funclist() const ;
        bool dofunc(const QString &fun
};
```

part of plugin.h

```
#include "v3d_message.h"
#include <vector>
#include "test_plugin.h"
using namespace std;
// 1- Export the plugin class to a target, the first
Q_EXPORT_PLUGIN2(test, TestPlugin);

// 2- Set up the items in plugin domenu
QStringList TestPlugin::menulist() const
{
        return QStringList()
                <<tr("menu1")
                <<tr("menu2")
                <<tr("about");
}

//3- Set up the function list in plugin dofunc
QStringList TestPlugin::funclist() const
{
        return QStringList()
                <<tr("func1")
                <<tr("func2")
                <<tr("help");
}

//4- Call the functions corresponding to the domer
void TestPlugin::domenu(const QString &menu_nau
{
        if (menu_name == tr("menu1"))
        {
                v3d_msg("To be implemented.")
        }
        else if (menu_name == tr("menu2"))
        {
                v3d_msg("To be implemented.")
        }
        else
        {
                v3d_msg(tr("This is a test plugi
                        "Developed by YourN
        }
}

// 5- Call the functions corresponding to dofunc
bool TestPlugin::dofunc(const QString & func_name
{
```

part of plugin.cpp

CompilePlugins.wiki · Vaa3D/Vaa3D_Wiki Wiki (github.com)

Write our own plugin

- plugin.pro
- plugin.h
- plugin.cpp

- plugin.pro
- plugin.h
- plugin.cpp
- func.h
- func.cpp

to better arrange our project structure

Write our own plugin

This Plugin needs to be compiled with C++ compiler

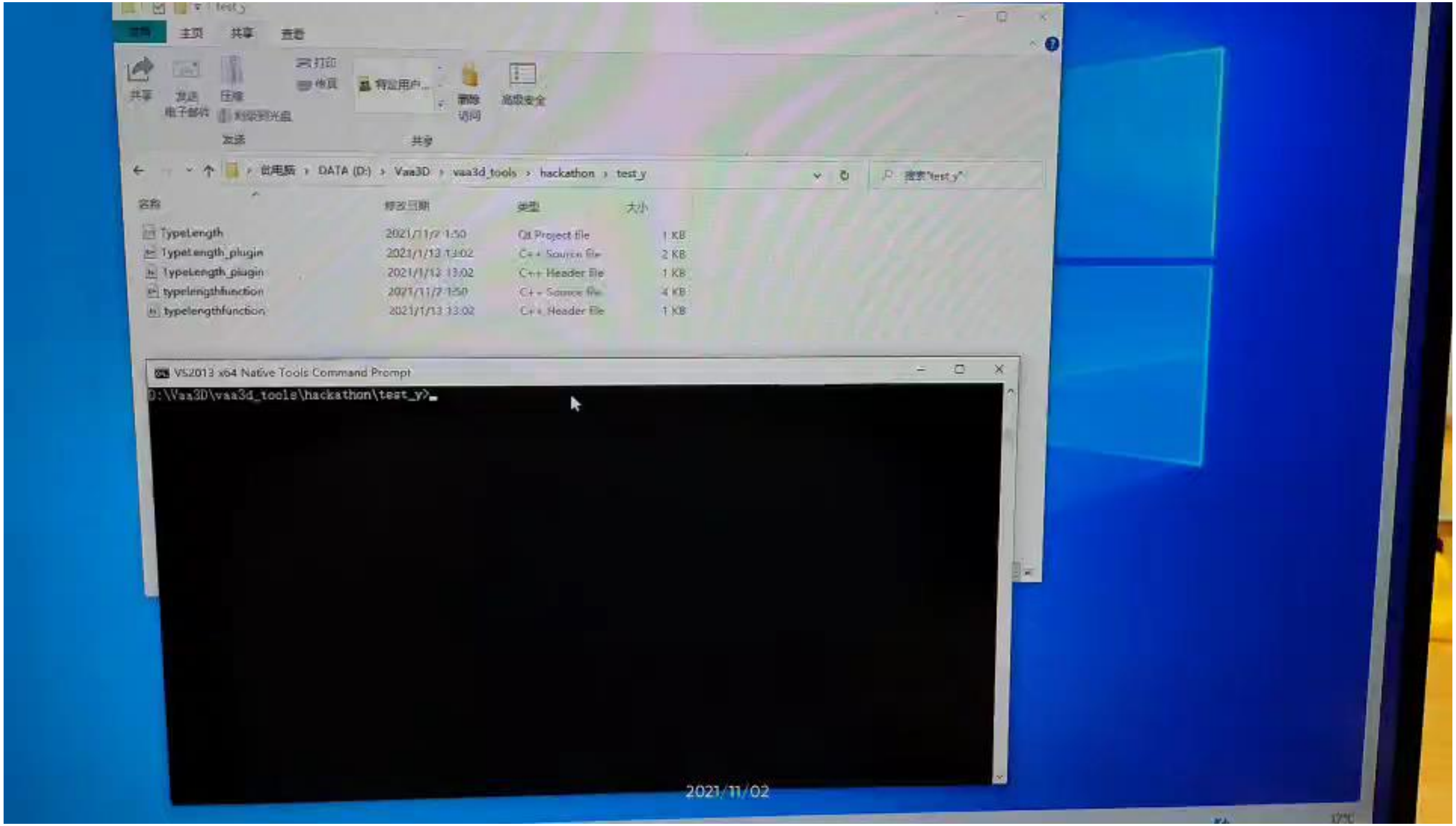
```
qmake abc.pro # assuming abc.pro is the Qt project name for your plugin.
nmake -f Makefile.Release  # This should compile the plugin.
```

VS2013 x64 Native Tools Command Prompt

enter the folder with the .pro file

qmake & nmake -f Makefile.Release clean & nmake -f Makefile.Release

https://github.com/Vaa3D/Vaa3D_Wiki/wiki/CompilePlugins.wiki/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