

Creating IVI Classes Using the VIVID Toolkit

REVISION HISTORY

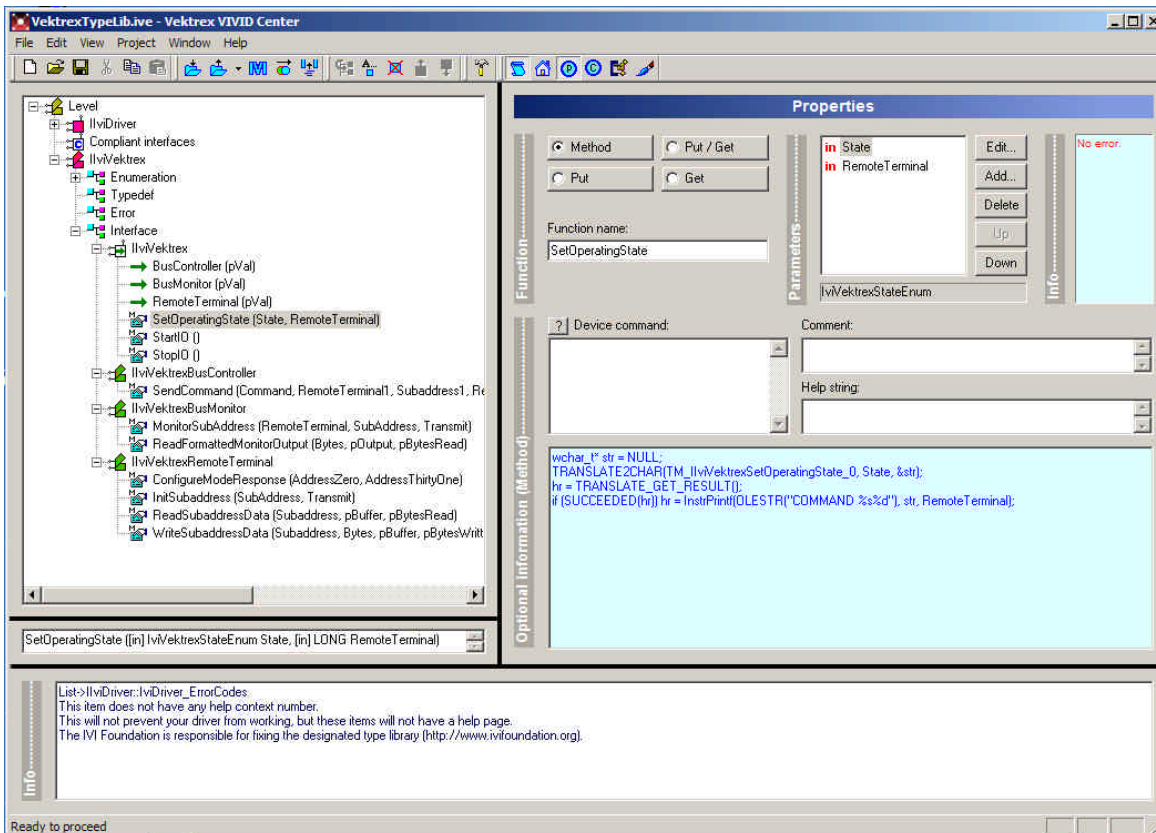
Date	Description	Revision Letter
10/07/02	Original Draft	A

Abstract

This application note describes the procedure for creating and using an IVI Class Type Library DLL using the VIVID Toolkit.

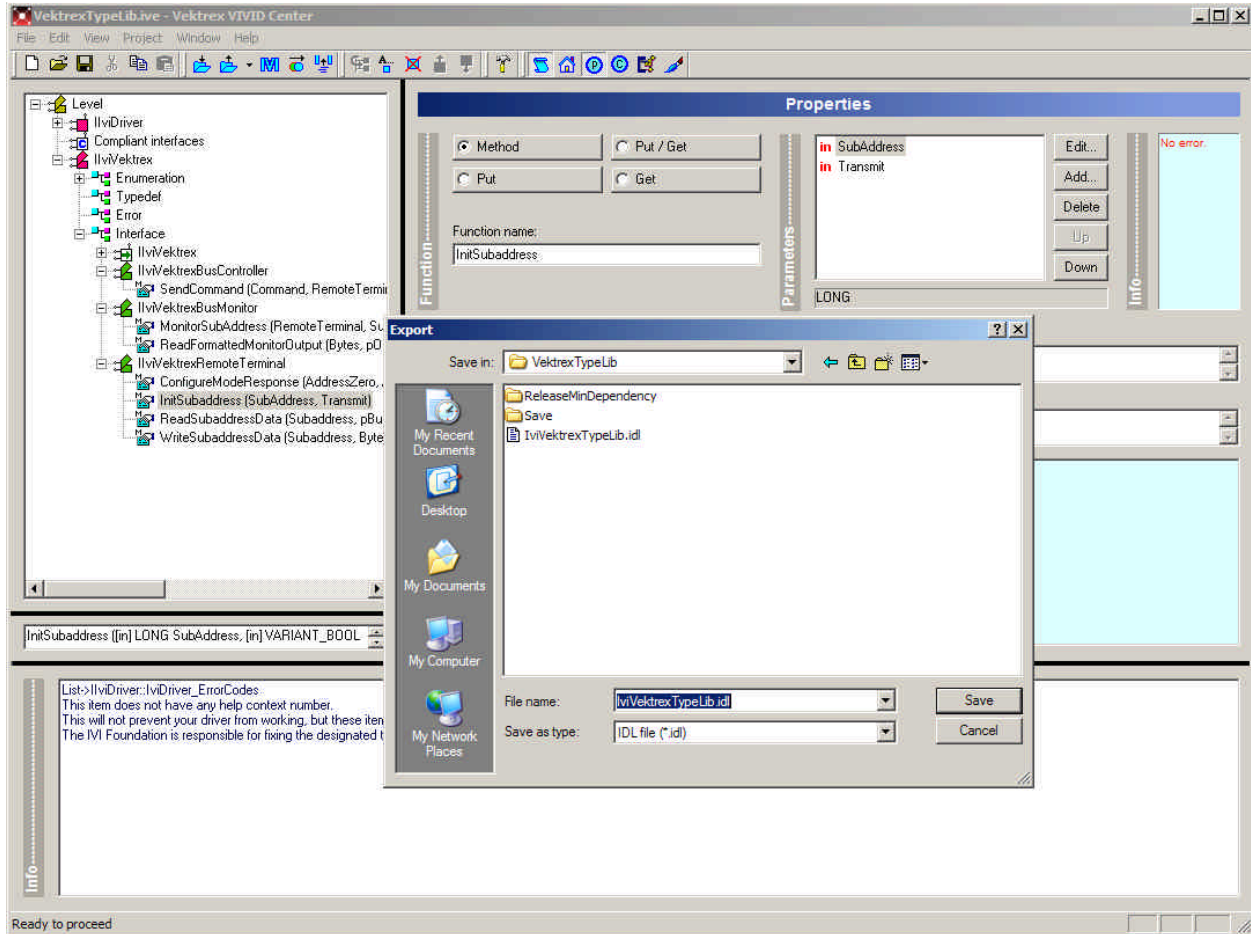
Step 1 – Design the class

Use VIVID Center and design the class type library by adding the necessary interfaces, methods, and properties in the specific interface portion of the driver tree view.



Step 2 – Generate the IDL file

Export to an IDL file. The name of the file should be Ivi<class>TypeLib.idl where <class> is the name of the new class being added.



Step 3 – Edit the IDL file

Edit the IDL file and make the following changes:

1. Make sure the help file name matches the header file that is generated

```
#include <winerror.h>
#include "IVektrexTypeLibHelp.h"
import "stdole32.tlb";
```

2. Comment out the line - `importlib("ItlTypeLib.dll")`

```
importlib("stdole32.tlb");
importlib("stdole2.tlb");
// importlib("ItlTypeLib.dll");      !!!! This line needs to be commented out !!!!
importlib("IviDriverTypeLib.dll");

interface IIVIvektrex;
interface IIVIvektrexBusController;
interface IIVIvektrexBusMonitor;
interface IIVIvektrexRemoteTerminal;
```

3. Comment out the lines at the end of the file that refer to the coclass

```
[in] LONG Bytes,
[in, out] LONG* pBuffer,
[out, retval] LONG* pBytesWritten);
};

/*
[
    uuid(d4baa5ec-db2d-433e-8346-530137daf239),
    helpstring("IviVektrexTypeLib Class"),
    helpcontext(HID_DRV_IIVIVEKTRTXDRIVER)
]
coclass IviVektrexTypeLib
{
    [default] interface IIVIvektrex;

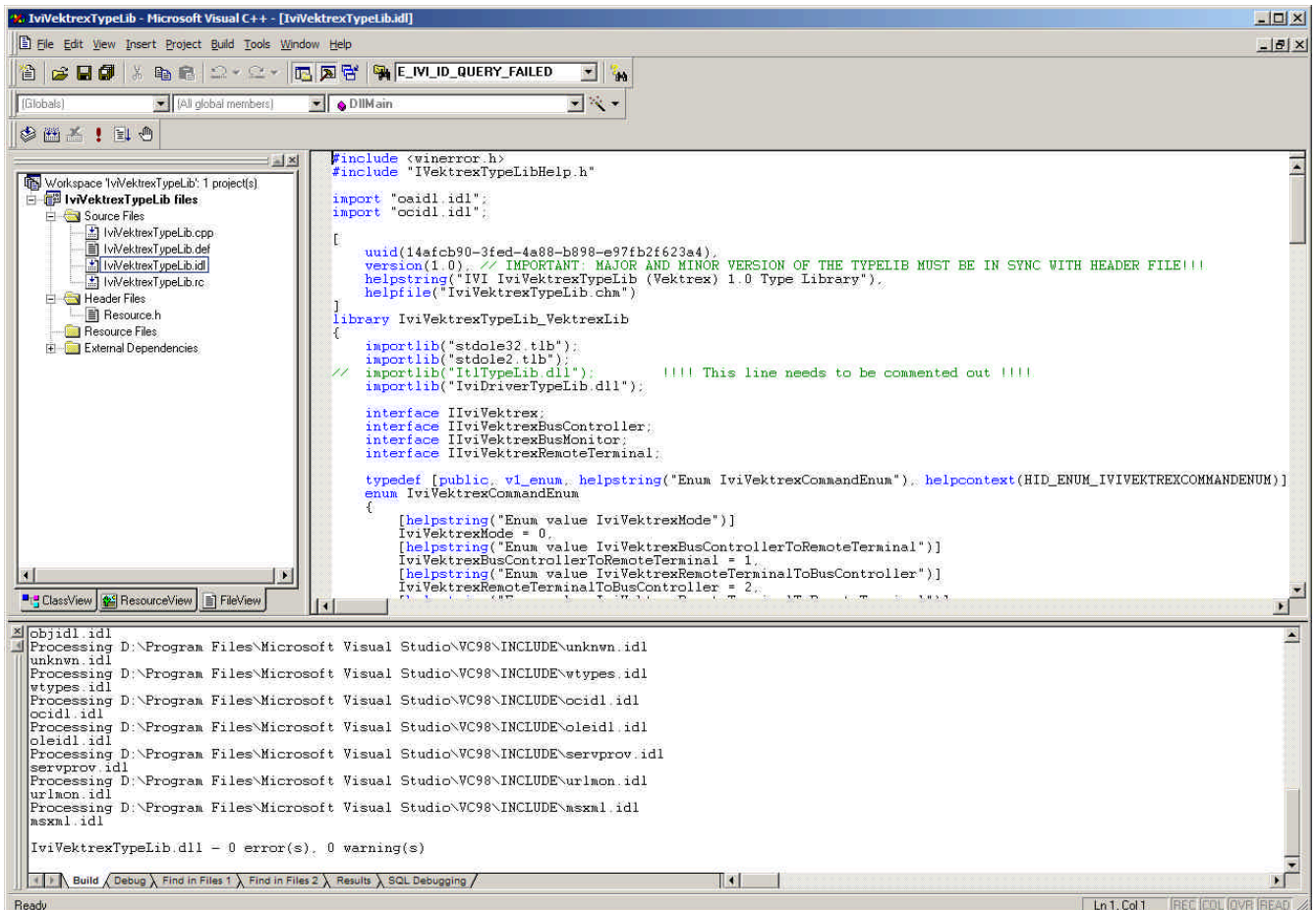
    interface IIVIClassWrapper;
    interface IIVIComponentIdentity;
    interface IIVIvektrex;
    interface IIVIvektrexBusController;
    interface IIVIvektrexBusMonitor;
    interface IIVIvektrexRemoteTerminal;

    interface IIVITrace;
    interface IIVIDirectIO;
};
*/
};
```

Step 4 – Create the Type Library DLL

Use the attached zip file (vektrextypelib.zip) as a model and create a Visual Studio project

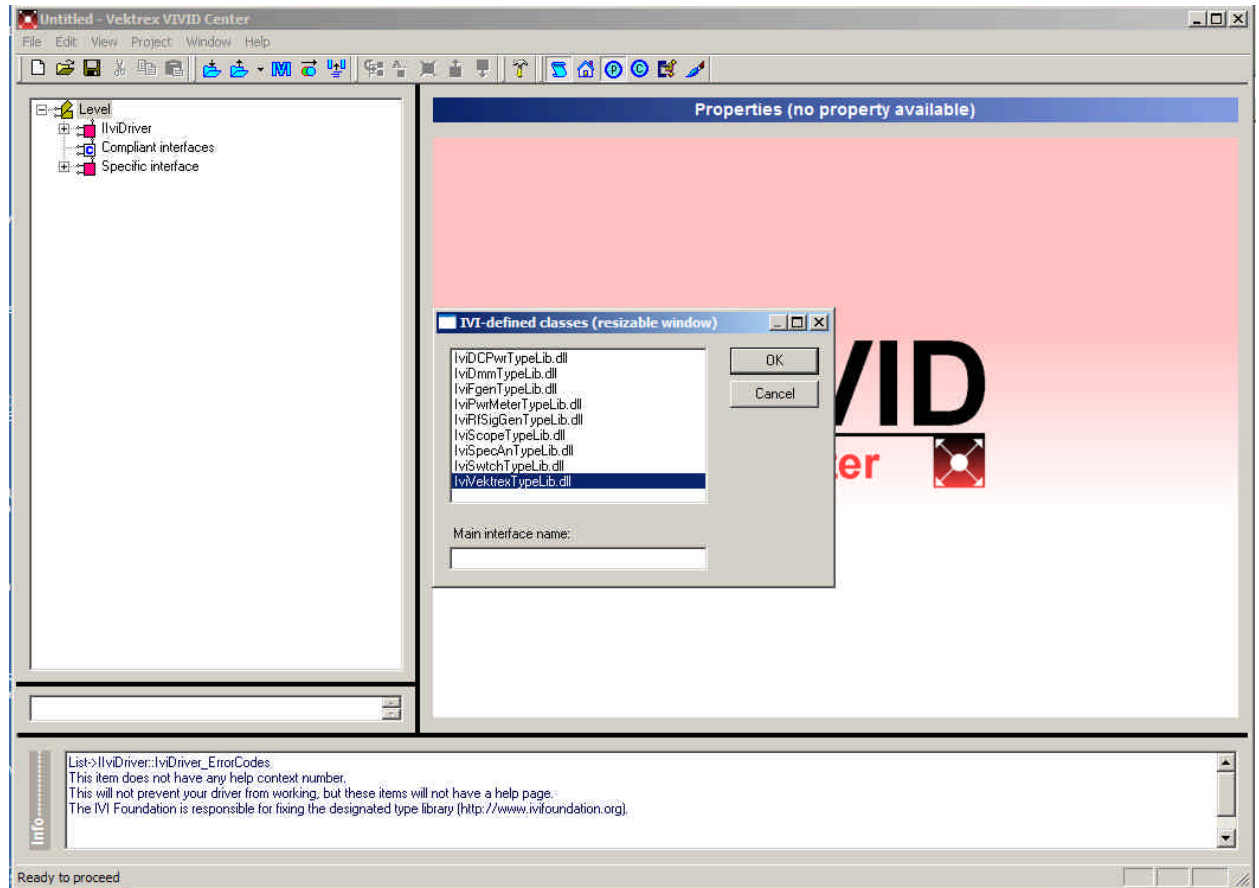
1. Extract the files to the desired project directory
2. Replace all references to *Vektrex* in all the files to the *Class* that is being developed
3. Add the generated IDL and help files to the project directory
4. Build the DLL
 - a. The type library dll has to be named Ivi<class>TypeLib.dll where <class> is the name of the new class being added.
5. Create the DLL ReleaseMinDependency



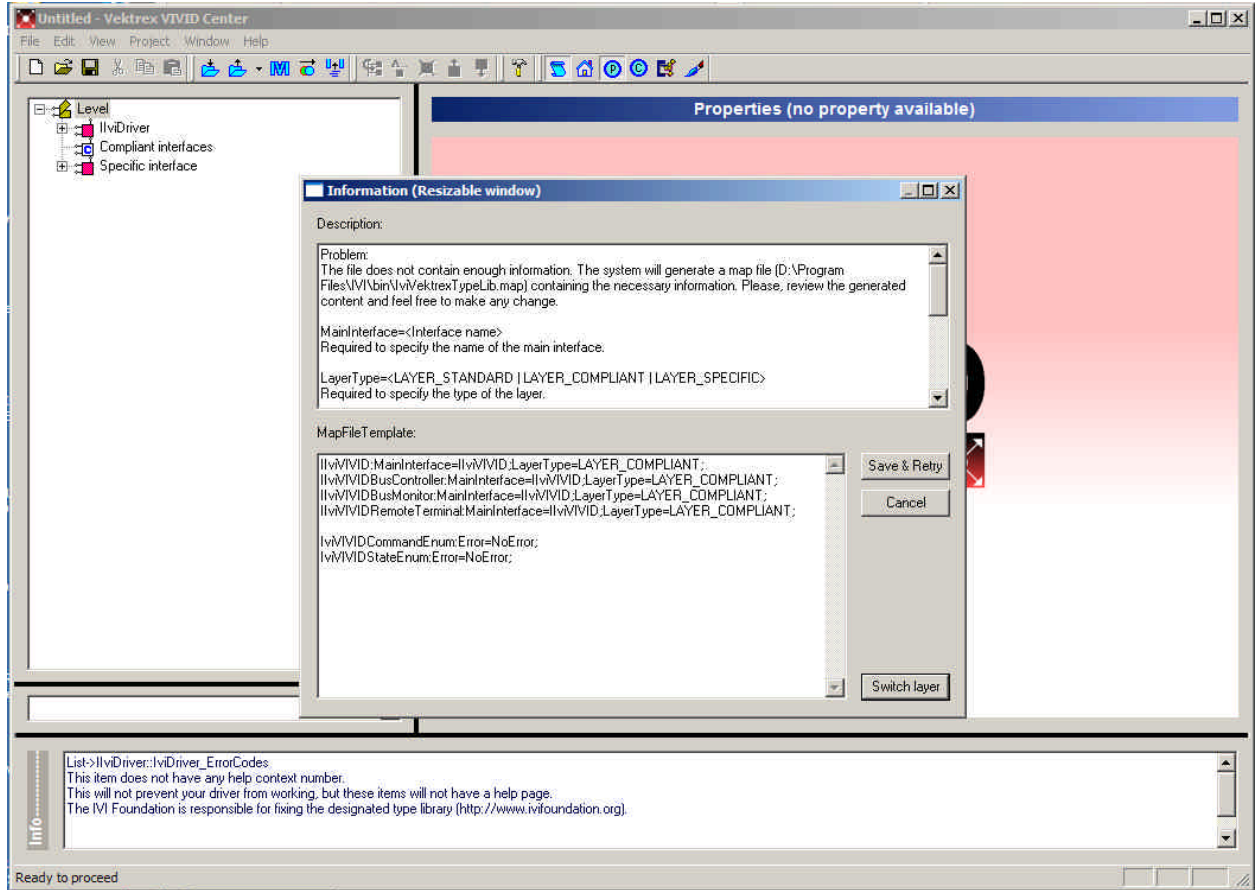
Step 5 – Use the Type Library DLL

The type library dll needs to be placed in the folder \program files\ivi\bin and registered using regsvr32.exe.

1. This will cause the type library to appear in the Import class-compliant type library list



2. The first time that the type library is included in a driver project another dialog will appear indicating that a map file is required to use the type library.



Normally, the Save & Retry button can be pressed. For more information on map files, please refer to the *Import Information Dialog* in the reference section of the VIVID Center help file.

3. At this point the Type Library is ready for use and can be used like any other IVI Type Library.