1. Dependencies:

The following libraries are needed to be compiled and install to run TraffEdu System:

1. OpenSceneGraph 1.0
2. OpenDynamics Engine 0.5
3. openAL 1.1

TraffEdu system must be compiled using Microsoft Visual Studio 2003 platform.

2. Installation of Dependencies:

2.1 Open Dynamics Engine

1. Download ode-0.5.tgz from the site http://www.ode.org/download.html and extract.
2.Change the ode-0.5\config\user-settings file as follows:

```
/*************************************************************/

# ODE user settings: the following variables must be set by the user

# (1) the platform to use. this name should have a corresponding
#     makefile.PLATFORM file. currently supported platforms are:
#       msvc            microsoft visual C/C++
#       msvc-dll  microsoft visual C/C++, create a DLL
#       mingw           minimalist GNU for windows
#       cygwin          cygnus GNU for windows
#       unix-gcc  GNU gcc on unix
#       unix-generic    generic unix compiler. you may need to edit the CC
#                 variable in makefile.unix-generic
#     osx         Mac OS-X, with the gnu compiler.

PLATFORM=msvc

# (2) the floating point precision to use (either "SINGLE" or "DOUBLE")

#PRECISION=SINGLE
PRECISION=DOUBLE

# (3) the library type to build (either "debug" if you are doing
development,
#     or "release" for the optimized library)

BUILD=debug
#BUILD=release

# (4) if you are using an old version of MS-Windows that has command line
#     length limitations then you will need to set this to "1". otherwise,
#     leave it at "0".

WINDOWS16=0

# (5) If you want to use the TriList (triangle mesh) geometry class, you
must
#     have the OPCODE library installed somewhere. If this is the case then
#     uncomment the following variable and set it to point to the directory
```

```
#     where OPCODE is installed (note that you must have already compiled
#     OPCODE, ODE's build system will not do that for you).
#     See http://www.codercorner.com/Opcode.htm for more information about
#     OPCODE. A recent version of OPCODE is provided in the ODE
distribution
#     in the OPCODE subdirectory. This code was originally written for and
#     compiled on windows, but it has been ported so that it should compile
#     under unix/gcc too. Your mileage may vary.

OPCODE_DIRECTORY=OPCODE

/*************************************************************************/
```

3. Double click on the batch file ode-0.5\VC6\ configure-double-trimesh

4. Open the workspace \ode-0.5\OPCODE\opcode.vcproj with .NET. Then build the solution.

5. In this step, a setting must be set in .NET platform for allowing copilation of ODE. Add the complete paths of ode-0.5\include\ode and ode-0.5\OPCODE directories in to the Tools->Options->Projects->Include of .NET. Then add ode-0.5\lib Tools->Options->Projects->Library.

6. Then compile the workspace ode-0.5\VC6\ode.vcproj

7. Testing can be done by compiling ode-0.5\VC6\Samples\makealltest.vcproj in the same manner.

2.2 OpenSceneGraph

1. Download osg1.0_setup_2005-12-09.exe from http://www.openscenegraph.org/ and run the executable.
2. Add the complete paths of OpenSceneGraph\lib\ in to the Tools->Options->Projects->Executable of .NET.
3. Add OpenSceneGraph\include into Tools->Options->Projects->Include of .NET.
4. Add OpenSceneGraph\lib into the Tools->Options->Projects->Library of .NET.

2.3 OpenAL

1. Download OpenAL 1.1 SDK.
2. Add the complete paths of OpenAL 1.1 SDK\lib\ and OpenAL 1.1 SDK\dll in to the Tools->Options->Projects->Executable of .NET.
3. Add OpenAL 1.1 SDK\libs\Win32 and openal-20040816\openal-20040816\lib into the Tools->Options->Projects->Library of .NET.

3. Installing and Compiling TraffEdu System

After installation of dependencies, the source packet of the TraffEdu system is extracted. The workspace file may be found under directory TraffEdu. After opening the workspace file with .NET, the project is built by Build->Build Solution. The executable file under Release directory along with models, Data, Help and res directories can be moved to another preferred directory and runned.