Date: 3/23/2010

To: Jamie Anderson

Cc: Prabhjot (Nicky) Sandhu, Tara Smith

From: Kevin Kao

Delta Modeling Section

Bay-Delta Office

Department of Water Resources

Subject : DSM2 version 8 compilation and packaging

This memo presents step-by-step instruction on compiling and packaging DSM2 version 8. Please note that DSM2 project may be reorganized and moved to an open-source server in the near future. Please consult with Nicky or Eli for more information.

**Required Software**

1. Visual Studio 2008 sp1
2. Intel Fortran Compiler 11.0
3. Subversion <http://subversion.apache.org/packages.html>
4. Tortoise SVN <http://tortoisesvn.net/downloads>
5. Flex and Bison packages in Cygwin <http://www.cygwin.com/setup.exe>
6. Inno Setup Compiler v5.2.3 <http://files.jrsoftware.org/is/5/isetup-5.2.3.exe>
7. Python <http://www.python.org/download/>
8. Java Development Kit <http://java.sun.com/javase/downloads/index.jsp>
9. Microsoft Office 2007

**Visual Studio Configurations**

1. Start Visual Studio 2008, go to “Tools → Options → VC++ Directories → Include Files” (See Figure 1)
2. Add paths to JDK include files (See Figure 2)



Figure



Figure

**Checkout DSM2 project**

1. Checkout the following folders hosted on DWR SVN server and put them in the same directory, e.g., D:\delta\models\

<http://dminfo:8686/svn/repository/models/branches/dsm2_v8_0>

<http://dminfo:8686/svn/repository/models/branches/input_storage_v1_0>

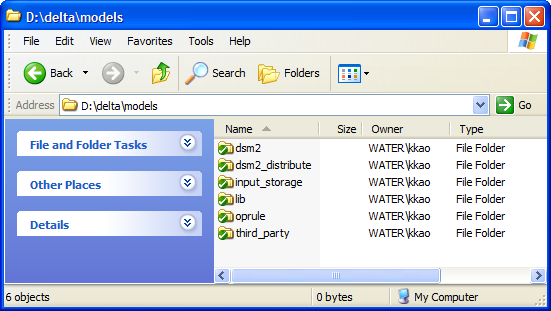
<http://dminfo:8686/svn/repository/models/branches/oprule_v1_0>

<http://dminfo:8686/svn/repository/models/branches/dsm2_distribute_v8_0>

<http://dminfo:8686/svn/repository/models/trunk/third_party>

<http://dminfo:8686/svn/repository/models/trunk/lib>

1. Rename the folder “dsm2\_v8\_0” to “dsm2”, “input\_storage\_v1\_0” to “input\_storage”, “oprule\_v1\_0” to “oprule”, “dsm2\_distribute\_v8\_0” to “dsm2\_distribute” (See Figure 3)



Figure

**Compiling DSM2\_v8**

1. Compile Input\_Storage library:

Use Visual Studio 2008 to open the following solution file and compile both Debug and Release versions. The compiled libraries will be automatically placed in the folder D:\delta\models\lib\

D:\delta\models\input\_storage\build\_vs2008\all\input\_storage\_all.sln

1. Compile Oprule library:

Use Visual Studio 2008 to open the following solution file and compile both Debug and Release versions. The compiled libraries will be automatically placed in the folder D:\delta\models\lib\

D:\delta\models\oprule\build\_vs2008\OpRuleAll.sln

1. HEC DSS library:

HEC DSS libraries are precompiled and placed the folder “lib”. See figure below.



1. Compile DSM2:

Run “generate.py” in the folder “D:\delta\models\dsm2\src\input\_storage”.

Open the following solution file with Visual Studio 2008 and compile.

D:\delta\models\dsm2\build\_vs2008sp1\_ivf110066\all

The release version of compiled binaries will be automatically placed in the folders:

D:\delta\models\dsm2\build\_vs2008sp1\_ivf110066\hydro\Release D:\delta\models\dsm2\build\_vs2008sp1\_ivf110066\qual\Release

D:\delta\models\dsm2\build\_vs2008sp1\_ivf110066\all\DLL\

**Packaging DSM2**

1. Generate tutorial PDF files:
2. Delete all PDF files in “D:\delta\models\dsm2\_distribute\dsm2\tutorials\pdf”
3. Run “doc2pdf.vbs” in “D:\delta\models\dsm2\_distribute\dsm2\install\” to generate PDFs from tutorial word documents.
4. Copy compiled binaries to distribution folder:
5. Check the specified DSM2 version and paths to the compiled binaries are correct in the batch file “copy\_hydro\_qual\_ptmDLL\_notepad\_style.bat” in the folder “D:\delta\models\dsm2\_distribute\dsm2\install\”
6. Run the batch file “copy\_hydro\_qual\_ptmDLL\_notepad\_style.bat”
7. Generate Inno Setup script:

Run the Python script “DSM2setup\_Script\_Generate.py ” in the folder “D:\delta\models\dsm2\_distribute\dsm2\install\” to generate setup script “DSM2setup\_v8.iss”.

1. Create DSM2 installation file:

Run “DSM2setup\_v8.iss” with Inno Setup Compiler v5.2.3

The installation file named “DSM2setup\_8.X.Xrelease.XXXX.exe” will be created in the same folder, i.e., “D:\delta\models\dsm2\_distribute\dsm2\install”