PSCAD

PSCAD and EMTDC Hot Fix (v4.5.3)

May 16, 2014
Rev. 4

Contents

1. Introduction

There are two hot fixes for PSCAD v4.5.3.

In the first hot fix (Section 2), we have generated a special release build of PSCAD 4.5.3 which will resolve specific PSCAD compile errors and issues.

Instead of relying on the Windows long path name to short (8.3) filename conversion, which for some unknown reason(s), does not appear to be working on all newer machines, and will result in an error similar to the following,

'C:\Program' is not a valid internal or external command

a new build of PSCAD 4.5.3 (April 4, 2014 release) will now always use double quotes (") around all file paths used to invoke the compilation and running of PSCAD cases. This is the ONLY operational difference between the official Nov 21, 2013 release of PSCAD 4.5.3 and the April 4, 2014 re-build of PSCAD.

In the second hot fix (Section 3), five Emtdc files will be fixed.

2.   PSCAD Hot Fix

Summary

A summary of this procedure is as follows:

- Ensure the PSCAD 4.5.3 official release (Nov 21, 2013) is installed on your machine.

- Install the PSCAD 4.5.3 hot fix (April 4, 2014).

Procedure

Proceed as follows:

a. Check whether the PSCAD 4.5.3 Official Release (Nov 21, 2013) is installed on your machine.

b. If the PSCAD 4.5.3 Official Release is not installed, we will supply a download link. Install the PSCAD 4.5.3 Official Release, selecting to also install GFortran. You should NOT need to install the License Manager if you were previously using PSCAD X4. Whatever License Manager you already have will work with PSCAD 4.5.3.

   - The official installation will patch (overwrite) any previous PSCAD 4.5 installations with PSCAD 4.5.3.

   - On a 32-bit machine, the installation should install PSCAD 4.5.3 (32-bit).

   - On a 64-bit machine, the installation should install both PSCAD 4.5.3 (32-bit) and PSCAD 4.5.3 (64-bit).

   - The installation should create PSCAD shortcuts which will point to PSCAD 4.5.3 (32-bit or 64-bit as required).

c. Download the PSCAD 4.5.3 Hot Fix (April 4, 2014) zipped file from the following link:

   http://updater.pscad.com/utilities/PSCAD_453_2014_04_04.zip

d. Extract the folders in the "PSCAD_453_2014_04_04.zip" zipped file to a temporary folder. The extracted folder structure should look like this:

e. Download the latest Fortran Medic utility from our site as shown below, and extract the "FortranMedic.exe" file from the downloaded zipped file:
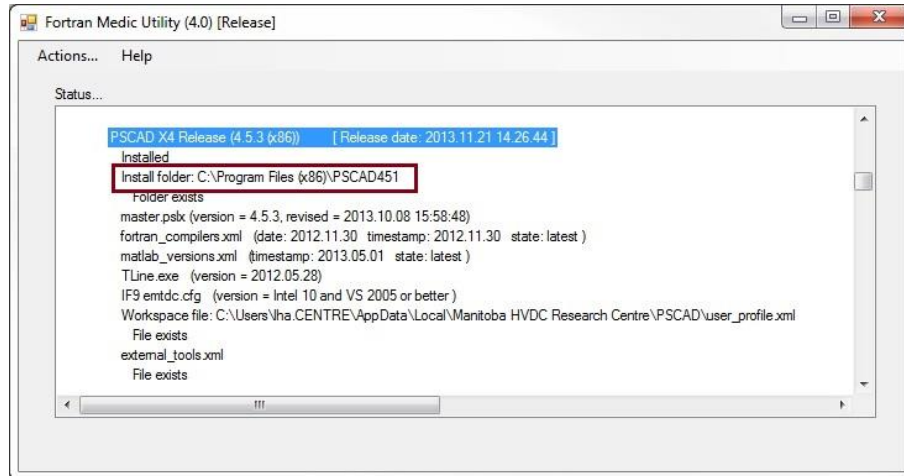
http://updater.pscad.com/utilities/FortranMedic.zip

> **Note**
> You must use the April 4, 2014 build or later build of Fortran Medic. The earlier builds do not contain the required data.

f. Launch the Fortran Medic utility from the "FortranMedic.exe" file, then start the utility by selecting Actions | Start. The utility will gather and display system information. Leave the utility open as it will be used in the following steps; do not exit it or close it.
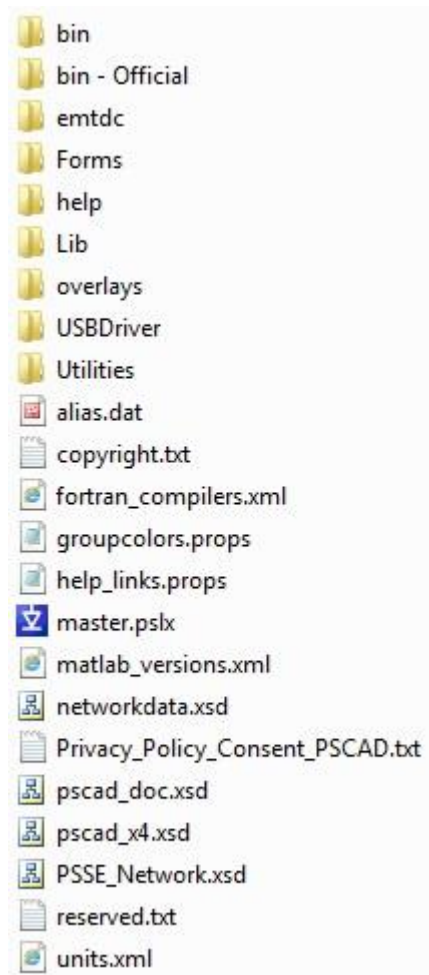
g. If PSCAD 4.5.3 (x86) is installed:

- Scroll down in the Fortran Medic utility to "PSCAD X4 Release (4.5.3 (x86))", and locate the "Install folder" (see image below). Take note of this path.
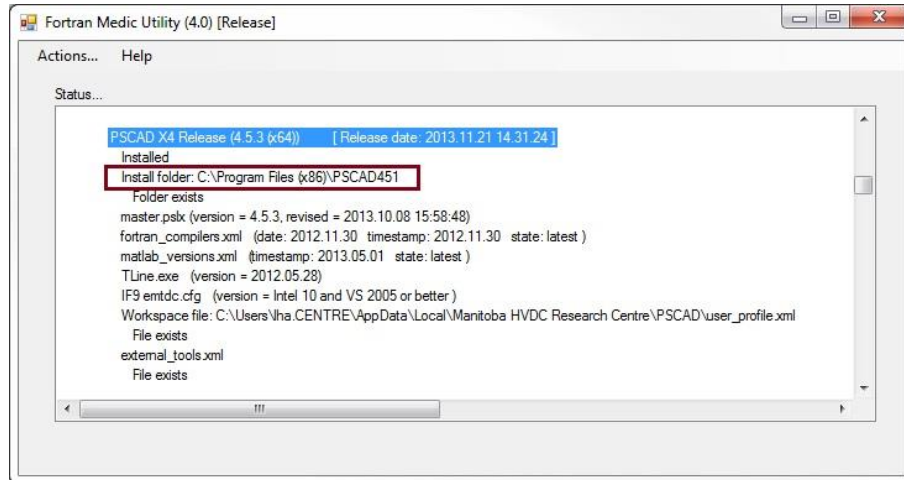

- Open a browser and browse to the install folder as identified in the previous step. In the install folder:

  ° Rename the existing **\bin** folder to: **\bin – Official**

  ° Open the folder containing the files that were extracted in Step (d), and copy the extracted **\bin** folder and its subfolders. Paste these folders into the install folder. Do not rename the new **\bin** folder.

◦   The PSCAD 4.5.3 (x86) install folder should now look like the image below, containing both a "***bin***" folder and a
"***bin − Official***" folder:

> 📁 bin
> 📁 bin - Official
> 📁 emtdc
> 📁 Forms
> 📁 help
> 📁 Lib
> 📁 overlays
> 📁 USBDriver
> 📁 Utilities
> 📄 alias.dat
> 📄 copyright.txt
> 📄 fortran_compilers.xml
> 📄 groupcolors.props
> 📄 help_links.props
> 📄 master.pslx
> 📄 matlab_versions.xml
> 📄 networkdata.xsd
> 📄 Privacy_Policy_Consent_PSCAD.txt
> 📄 pscad_doc.xsd
> 📄 pscad_x4.xsd
> 📄 PSSE_Network.xsd
> 📄 reserved.txt
> 📄 units.xml

h. If PSCAD 4.5.3 (x64) is installed:

- Scroll down in the Fortran Medic utility to "PSCAD X4 Release (4.5.3 (x64))", and locate the "Install folder" (see image below). Take note of this path.

- If the PSCAD 4.5.3 (x64) install folder is the same as the PSCAD 4.5.3 (x86) install folder, then go to Step (i).

- *If* the PSCAD 4.5.3 (x64) install folder is not the same as the PSCAD 4.5.3 (x86) install folder, then open a browser, and browse to the PSCAD 4.5.34(x64) install folder as noted above. In the install folder:

  ◦ Rename the existing **\bin** folder to: **\bin – Official**

  ◦ Open the folder containing the files that were extracted in Step (d), and copy the extracted **\bin** folder and its subfolders. Paste these folders into the install folder. Do not rename the new **\bin** folder.

  ◦ The PSCAD 4.5.3 (x64) install folder should now look like the second image in Step (g), containing both a "**bin**" folder and "**bin – Official**" folder.

i. In the Fortran Medic utility (ensure you are still using the April 4, 2014 or later version), select "Start" to rerun the utility, and check whether the utility recognizes the PSCAD 4.5.3 Hot Fix (x86 and x64). This is determined by viewing the "Release date", which should have changed from "2013.11.21" to 2014.04.09". See images below. If this change did not occur, please inform us at support@pscad.com.
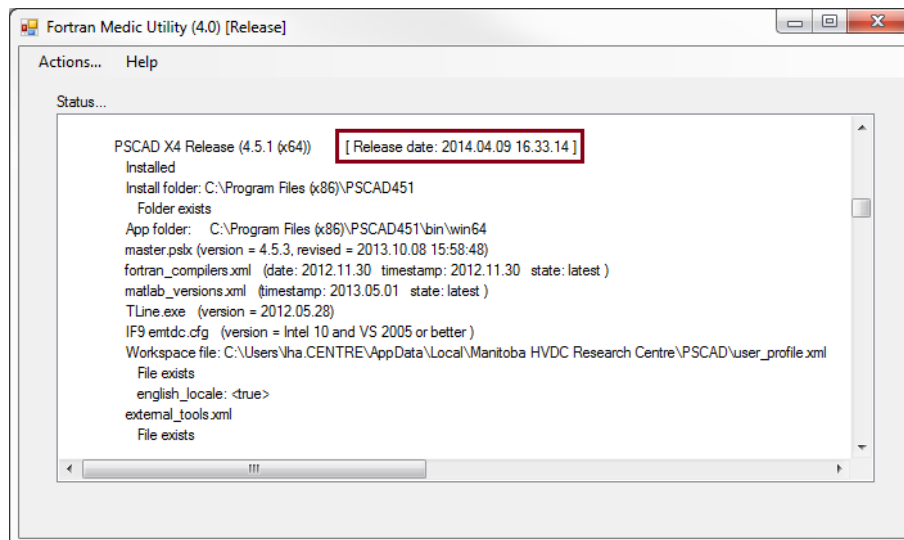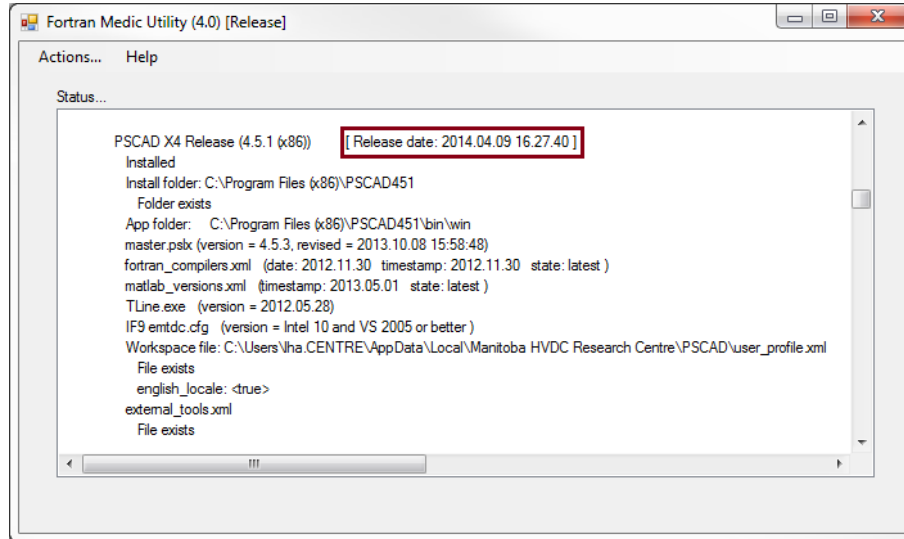
j. Launch PSCAD 4.5.3.

k. Select to use the GFortran compiler (see Appendix A for instructions if required).

l. Load the Examples\Tutorial\vdiv.pscx case into PSCAD (see Appendix B for instructions if required).

m. Run the example case.

n. If there are any errors, please send the following to us at
    support@pscad.com:

    - The Fortran Medic messages file (see Appendix C for instructions if required).

    - The PSCAD Build Messages (see Appendix D for instructions if required).

o. Select to use the Intel compiler (see Appendix A for instructions if required).

p. Run the vdiv.pscx case.

q. If there are any errors, please send in the information as listed in Step (n).

3. EMTDC Hot Fix

Summary

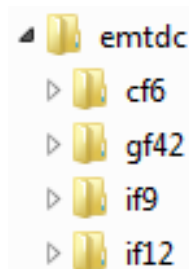The EMTDC HotFix will fix 5 Emtdc files:

- One file in the Emtdc\cf6 folder, used for compiling with Compac 6.6,

- Three files in the Emtdc\If9 folder, used for compiling with Intel 9.x, 10.x, and 11.x,

- One file in the Emtdc\If12 folder, used for compiling with Intel 12.x, 13.x, and 14.x.

For simplicity, we are providing a ZIP with the contents for <u>all</u> the Emtdc folders, gf42, cf6, if9, and if12.

Procedure

Proceed as follows:

a. Download the Emtdc 4.5.3 Hot Fix (April 16, 2014) zipped file from the following link:

   http://updater.pscad.com/utilities/emtdc_453_HotFix2.zip

b. Extract the folders in the "emtdc_453_HotFix2.zip" zipped file to a temporary folder. The extracted folder structure should look like this:
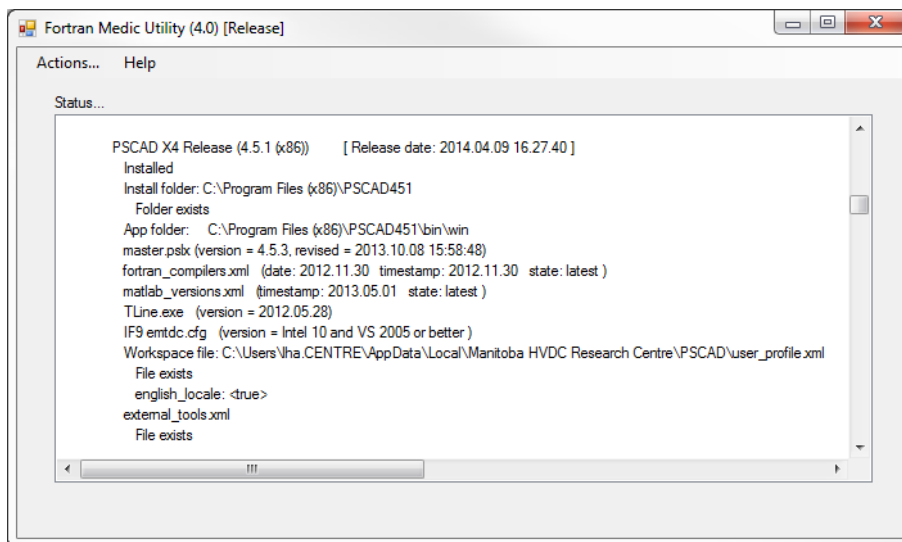
c. Download the latest Fortran Medic utility from our site as shown below, and extract the "FortranMedic.exe" file from the downloaded zipped file:

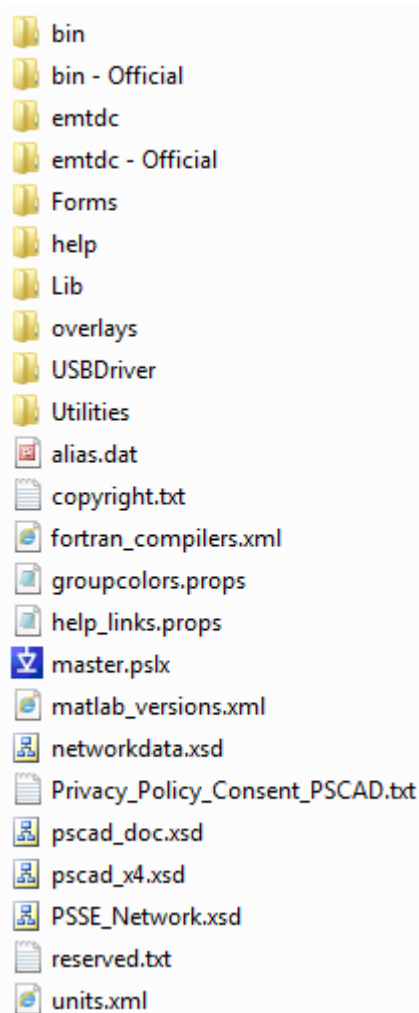   http://updater.pscad.com/utilities/FortranMedic.zip

   Note
   You must use the April 4, 2014 build or later build of Fortran Medic. The earlier builds do not contain the required data.

d. Launch the Fortran Medic utility from the "FortranMedic.exe" file, then start the utility by selecting Actions | Start. The utility will gather and display system information. Leave the utility open as it will be used in the following steps; do not exit it or close it.

e. If PSCAD 4.5.3 (x86) is installed:

   • Scroll down in the Fortran Medic utility to "PSCAD X4 Release (4.5.3 (x86))", and locate the "Install folder" (see image below). Take note of this path.
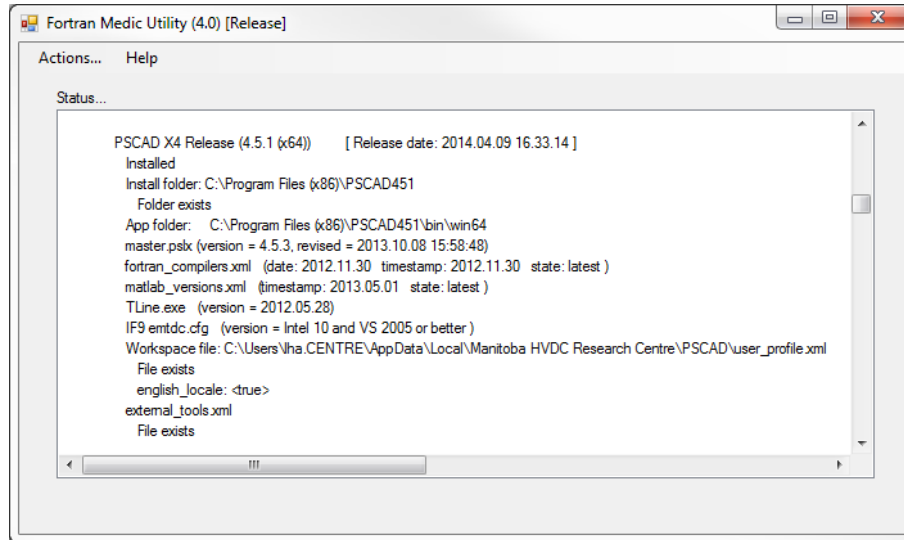

   • Open a browser, and browse to the install folder as identified in the previous step. In the install folder:

      ° Rename the existing **\emtdc** folder to: **\emtdc − Official**

      ° Open the folder containing the files that were extracted in Step (b), and copy the extracted **\emtdc** folder and its subfolders. Paste these folders into the install folder. Do not rename the new **\emtdc folder**.

- The PSCAD 4.5.3 (x86) install folder should now look like the image below, containing both a "*emtdc*" folder and a "*emtdc – Official*" folder:

bin
bin - Official
emtdc
emtdc - Official
Forms
help
Lib
overlays
USBDriver
Utilities
alias.dat
copyright.txt
fortran_compilers.xml
groupcolors.props
help_links.props
master.pslx
matlab_versions.xml
networkdata.xsd
Privacy_Policy_Consent_PSCAD.txt
pscad_doc.xsd
pscad_x4.xsd
PSSE_Network.xsd
reserved.txt
units.xml

f. If PSCAD 4.5.3 (x64) is installed:

- Scroll down in the Fortran Medic utility to "PSCAD X4 Release (4.5.3 (x64))", and locate the "Install folder" (see image below). Take note of this path.


- If the PSCAD 4.5.3 (x64) install folder <u>is the same as</u> the PSCAD 4.5.3 (x86) install folder, then go to Step (g).

- If the PSCAD 4.5.3 (x64) install folder <u>is not the same as</u> the PSCAD 4.5.3 (x86) install folder, then open a browser, and browse to the PSCAD 4.5.3 (x64) install folder as noted above. In the install folder:

  ○ Rename the existing **\emtdc** folder to: **\emtdc – Official**

  ○ Open the folder containing the files that were extracted in Step (b), and copy the **\emtdc** folder and its subfolders. Paste these folders into the install folder. Do not rename the new **\emtdc** folder.

  ○ The PSCAD 4.5.3 (x64) install folder should now look like the second image in Step (e), containing both a "**emtdc**" folder and a "**emtdc – Official**" folder.

g. Launch PSCAD 4.5.3.

h. Select to use the Intel compiler (see Appendix A for instructions if required).

i. Load the Examples\Tutorial\vdiv.pscx case into PSCAD (see Appendix B for instructions if required).

j. Run the example case.

k. If there are any errors, please send the following to us at support@pscad.com:

    -   The Fortran Medic messages file (see Appendix C for instructions if required).

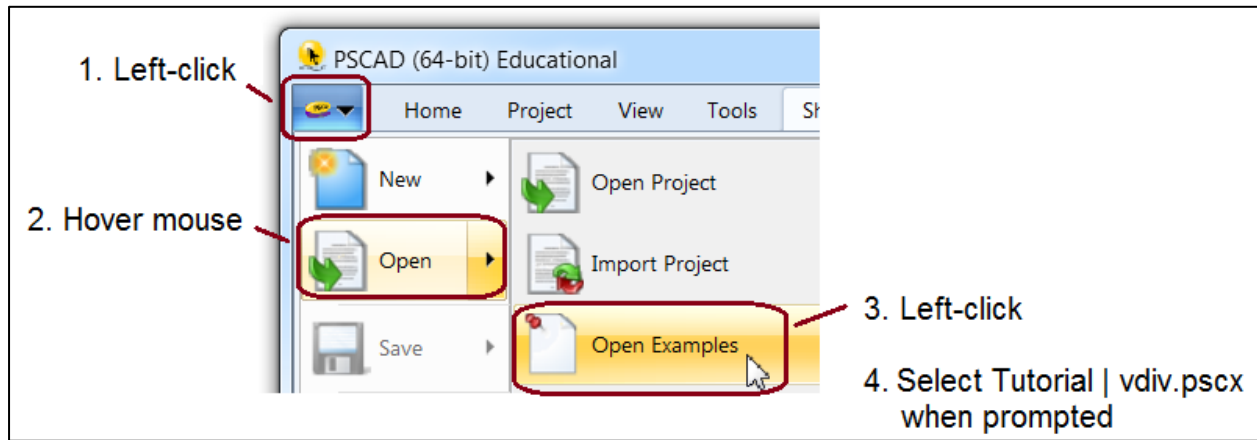   -   The PSCAD Build Messages (see Appendix D for instructions if required).

Appendix A – Selecting a Fortran Compiler

To select an installed Fortran compiler, proceed as shown:
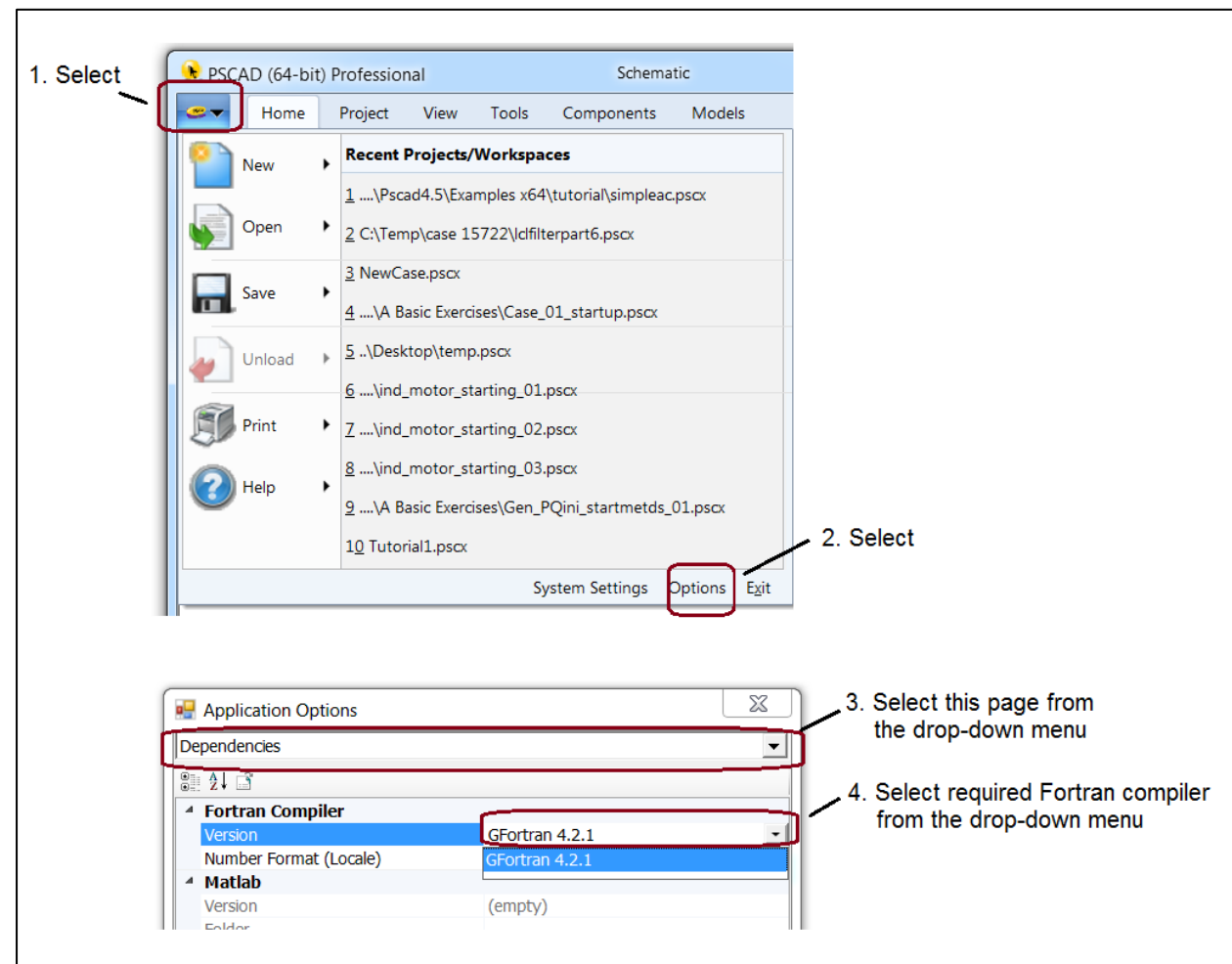
Appendix B – Loading an Example Case

Load the vdiv.pscx example case into PSCAD as follows:

# Appendix C – Generating the Fortran Medic Log File

Generate the Fortran Medic log file as follows:

a. Click on the "Actions" menu and select "Start".

b. After the utility is done retrieving information, click on the "Actions" menu and select "Save Messages".

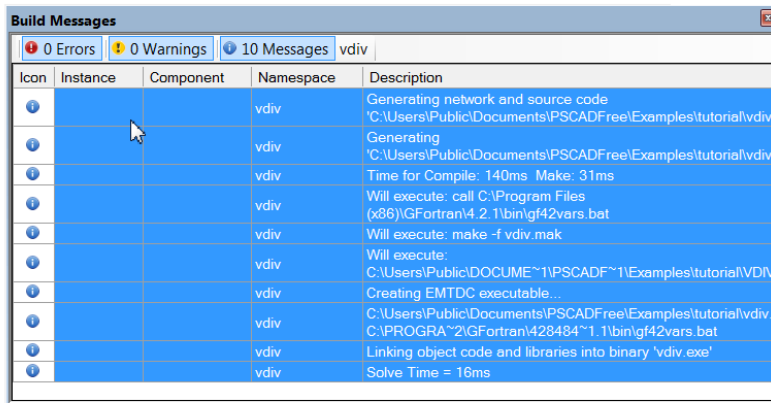c. The Fortran Medic message window will display the location of the saved log file.

Appendix D – Saving the Build Messages
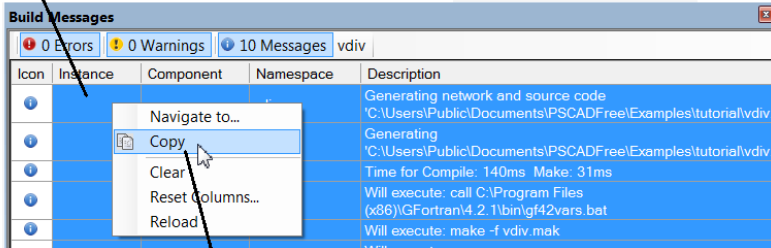
Save the PSCAD Build Messages to a file as shown:
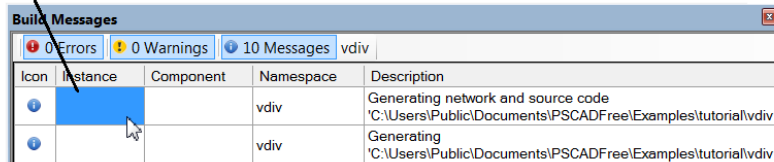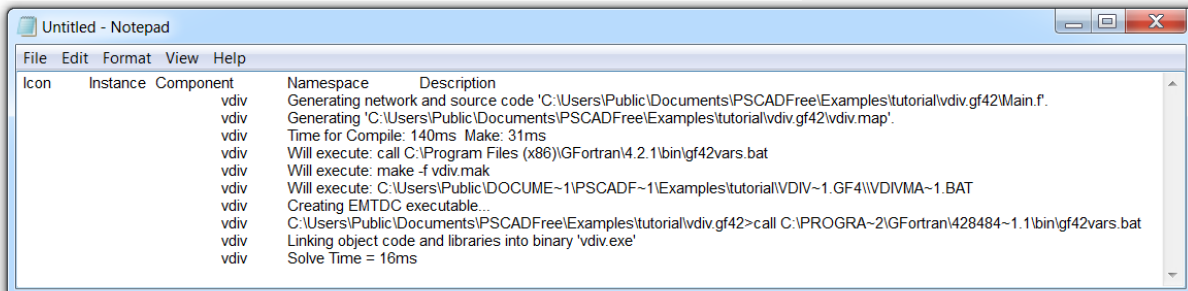
DOCUMENT TRACKING

Rev.	Description	Date
0	First Issue	09/Apr/2014
1	Modified title, improved Medic snapshots (x4)	15/Apr/2014
2	Modified title	28/Apr/2014
3	Added EMTDC hot fix and App A,B,C,D; modified title; minor corrections and improvements	29/Apr/2014
4	Minor corrections	16/May/2014

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