**Mini Tutorial for applying NNetwork DLL**

In the provided folder, there are three SRMs, which give CH4 production rate, CO2 injection rate and CO2 production rate.

In order to implement a NNetwork DLL in your code:

1. You need the file NNetApply.DLL and an IDEA project with NNet Model.
2. The DLL have one public function and one public subroutine.

**PrintTitlesName (**public subroutine**):** print Title of the variables that you need to use in your input array. These could be the variables that you trained your network and the variable that you used in cluster analysis (if you select one of the clustering parameter as neural network input). The order of the parameter is important.

**ApplyNNet (**public function**):** apply the input data and return the nnet results.

1. In the declaration section introduce the DLL modules:

**Private Declare Function** ApplyNNet **Lib** " location of the DLL file" (MyNNetType As String, MyAddress As String, MyInput() As Double) **As Variant**

**Private Declare Sub** PrintTitlesName **Lib** " location of the DLL file " (MyAddress As String)

MyNNetType: could be “Back Prop” or “GRNN”

MyAddress: The location of the IDEA project

MyInput(): it is two dimensional array, MyInput (nocase, nofeature) you can get information about the feature from the PrintTitlesName sub. It will print the title of the variable as a new file in the IDEA project with “.MyTitles” extension.

1. Set up result array:

Assume you find out that you have 7 inputs and one case to apply after applying PrintTitlesName.

ReDim MyResult(1, 1) As Variant

ReDim MyInputs(1, 7) As Double

Dim MyLocation as string

MyLocation = "C:\Users\Razi\Desktop\Test IDEA\Test IDEA"

MyInputs(1, 1) = 15369028 'Y

MyInputs(1, 2) = 0.4251 'Net\_PhiH\_TG

MyInputs(1, 3) = 14 'NUMBER OF PERFS MEDINA

MyInputs(1, 4) = 550 'SKS SAND MEDINA"

MyInputs(1, 5) = 282 'Gas\_Months\_Prod"

MyInputs(1, 6) = 0.69 'PERF DIAMETER"

MyInputs(1, 7) = 105 'MMCF N2 MEDINA

MyResult = ApplyNNet("GRNN", MyLocation, MyInputs())

Text1.Text = MyResult(1, 1) ‘final result