How to use the "POG Modeler"

- The POG_Modeler can be downloaded from the following website:

  http://www.dii.unimo.it/~zanasi/didattica/Modellistica_e_Controllo/POG_Modeler.zip

  The POG_Modeler.zip file contains the directory "POG_Modeler" containing the following files:

  POG_Modeler_23a.p: the POG_Modeler program. It is a Matlab coded file. The suffix "_23a" of the program name indicates the first Matlab version which can run the program.

  How_to_Use_POG_Modeler: this file describes the basic rules for using the POG_Modeler program.

  POG_Modeler_Manual.pdf: file containing a basic version of the POG_Modeler Manual.

  Help_POG.m: this file ascii low-level commands of the POG_Modeler program.

  SIMSCAPE_Basic_Blocks.slx: a Simulink file containing the Simscape blocks that can be used for defining the structure of the physical systems to be converted in the POG environment.

  POG_Congruent_Transformation.m: Matlab function performing a state space congruent transformation.

  POG_Input_Output_Inversion.m: Matlab function performing a state space input-output inversion.

  SI_Units: file containing the System International Units.

  and the following directories:

  POG_Examples. This directory contains some examples of physical systems. Each example is a "txt" file containing the POG structure of a physical system.

  SIMSCAPE_Examples. A few Simscape examples of physical systems. Each example is a "slx" file containing the Simscape structure of a physical system.

- In Matlab, the POG_Modeler can be run from any directory only if you type in the Matlab Command Window the following commands:

  ```
  path(path,'Directory_Name')
  savepath
  ```

  where `Directory_Name` is the name of the Directory containing the POG_Modeler Program. The original value of the variable "path" can be restored using the Matlab command `restoredefaultpath`

- The "POG_Modeler_23a" is a Matlab function which can be run in the Command Window using the following command:

  ```
  POG_Modeler_23a('File_name.ext')
  ```

  where `'File_name.ext'` is the name of the input file. Two types of input files can be used:

  `'File_name.txt'`: an ascii file with extension "txt" describing the structure of a physical system using the basic POG_Modeler commands described in the "POG_Modeler_Manual".

  `'File_name.slx'`: a Simscape file with extension "slx" describing the strucure of a physical system using the Simscape blocks contained in the "SIMSCAPE_Basic_Blocks.slx" file.

  Typing "`POG_Modeler_23a('Help')`" the program generates the "Help_POG.m" containing ascii low-level commands of the POG_Modeler program.