

TRNSYS 18 Type Studio

Integrated TRNSYS-Dedicated Fortran Type Compiler

The TypeStudio is a graphical interface and a Fortran compiler that have been set up to facilitate creating new components (so-called Types) for use with TRNSYS. The TypeStudio creates and manages workspaces that can contain one or more TRNSYS Types. It allows the user to compile the Type(s) into a dynamic link library (dll) that will be placed in the proper location for the TRNSYS engine to load them during a simulation.

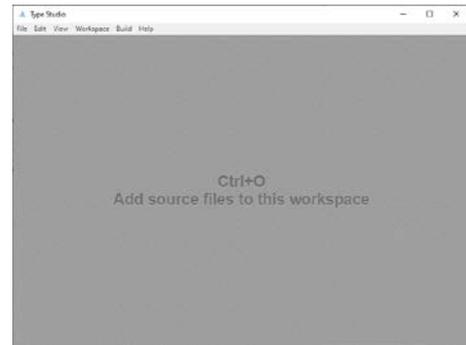


Compiling an Existing Type

If a user has existing components already written and wishes to recompile and link them into a DLL using the TypeStudio then they need to create a TypeStudio workspace.

When TypeStudio launches it opens a blank workspace. Choose “Add Source Files” to add one or more Types to the workspace. Having added Types to the workspace, the user should next save the workspace by selecting “Save Workspace” from the “File” menu.

Once Types are added and the workspace is created, it suffices to select “Compile Type” from the “Build” menu. The TypeStudio writes a message to the screen saying that it generated a DLL. In fact it generated two, one in release mode and one in debug mode.



Writing a New Type in TypeStudio

It is recommended that users new to writing Types start by generating a proforma in the Trnsys Simulation Studio. Once the proforma is created it can be exported as FORTRAN using commands within the Simulation Studio.

The exported FORTRAN is a skeleton of the Type being written. It contains much of the input/output and structure required of all Types. The user then edits the skeleton in the TypeStudio environment, adding FORTRAN code to compute the values of outputs from the values of inputs and parameters.

Once the Type is added to the workspace and appropriate equations have been added to compute the values of the outputs, it suffices to select “Compile Type” from the “Build” menu. The TypeStudio writes a message to the screen saying that it generated a DLL. In fact it generated two, one in release mode and one in debug mode.

