

SIMCC Simulation Control Center

SIMCC is a simulation software tool to simulate plant behaviour in a desktop PC. By using integrated development environment, you can design your plant easily and run it in your office.

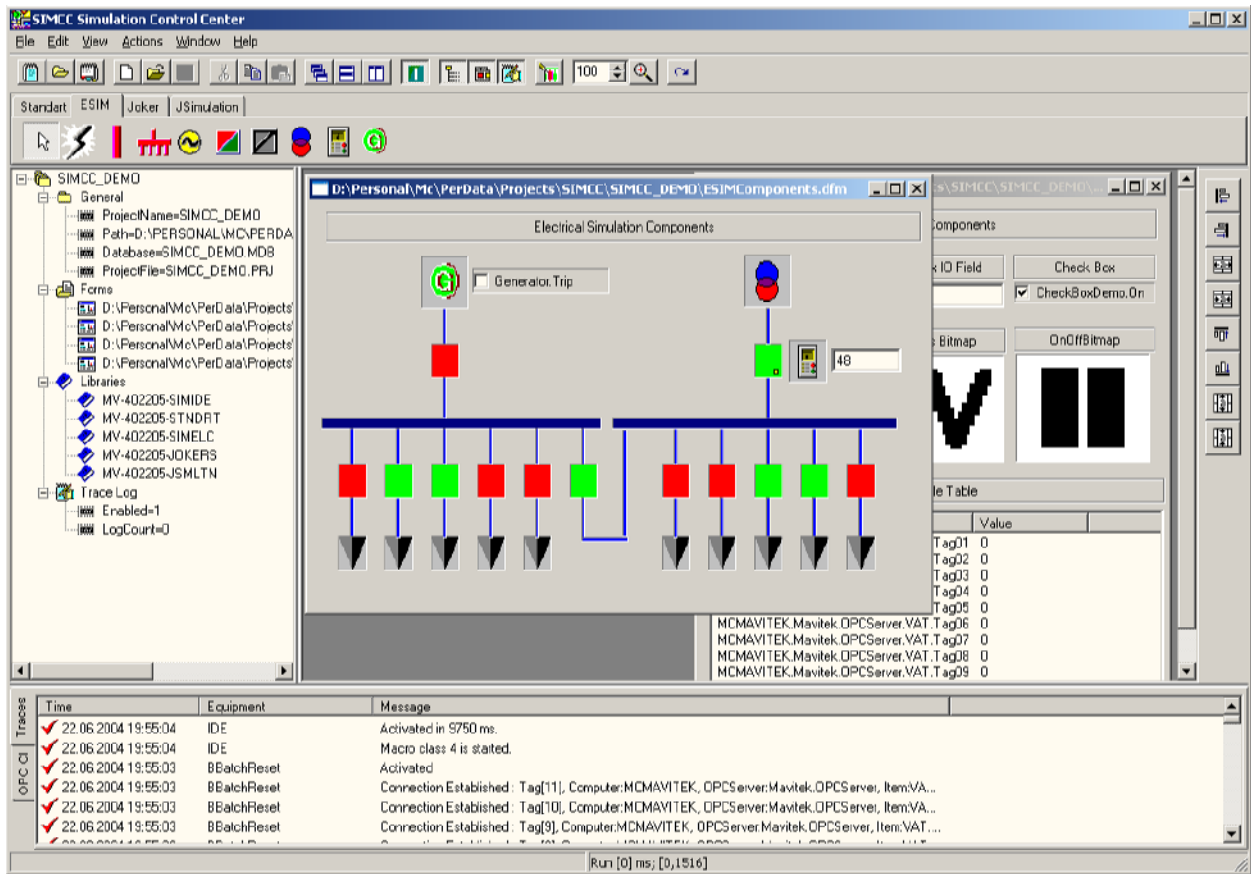
Overview of SIMCC SW

❖ What is simulation ?

SIMCC is a powerful tool to simulate plant behaviour with a direct connection to the controller PLC and internal OPC Server.

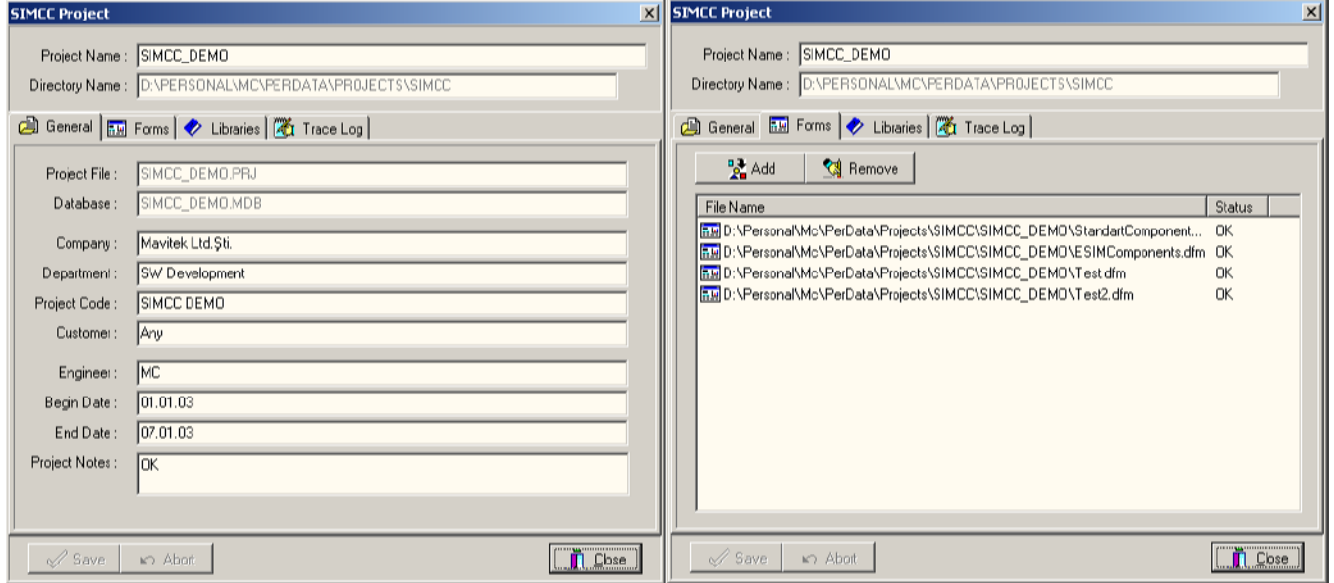
SIMCC supplies Forms as component containers and components substitutes equipments in plants. With tags defined in the components, it is possible to connect component's data to the PLC and run predefined code in the component without extended scripts...

It is also possible to define macros within components and run it in the form.





Managing Projects And Forms



❖ Project Based Approach On Simulation

SIMCC software organizes your simulation project in a project based approach. The project data is stored in a directory that is defined at the creation phase.

In every project, there is such a file organization :

- PRJ file containing project properties.
- DFM files as Forms of your project.
- MDB file containing properties of components which are used in forms.

❖ PRJ File and Project Properties

PRJ File is used to save and retrieve project data.

You can Create, Edit, Open and Save the project files.

The following project specific properties are stored in this file :

- Project properties,
- Forms of your project,
- Registered libraries,
- Trace Log configuration entries.

❖ Forms, As Component Containers

A SIMCC project contains Forms as component containers.

You can create your custom drawing in Forms by using components shown in Component Toolbar.

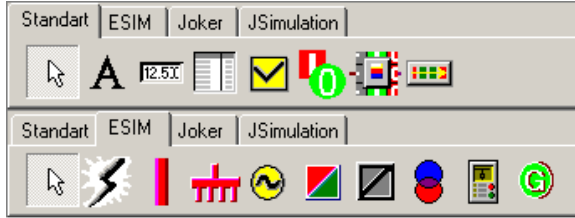
You can add unlimited forms to your project and unlimited components in forms.

❖ MDB File and Component Properties

Every Component in the form has properties and tag connections. These connections are stored in this MDB file.

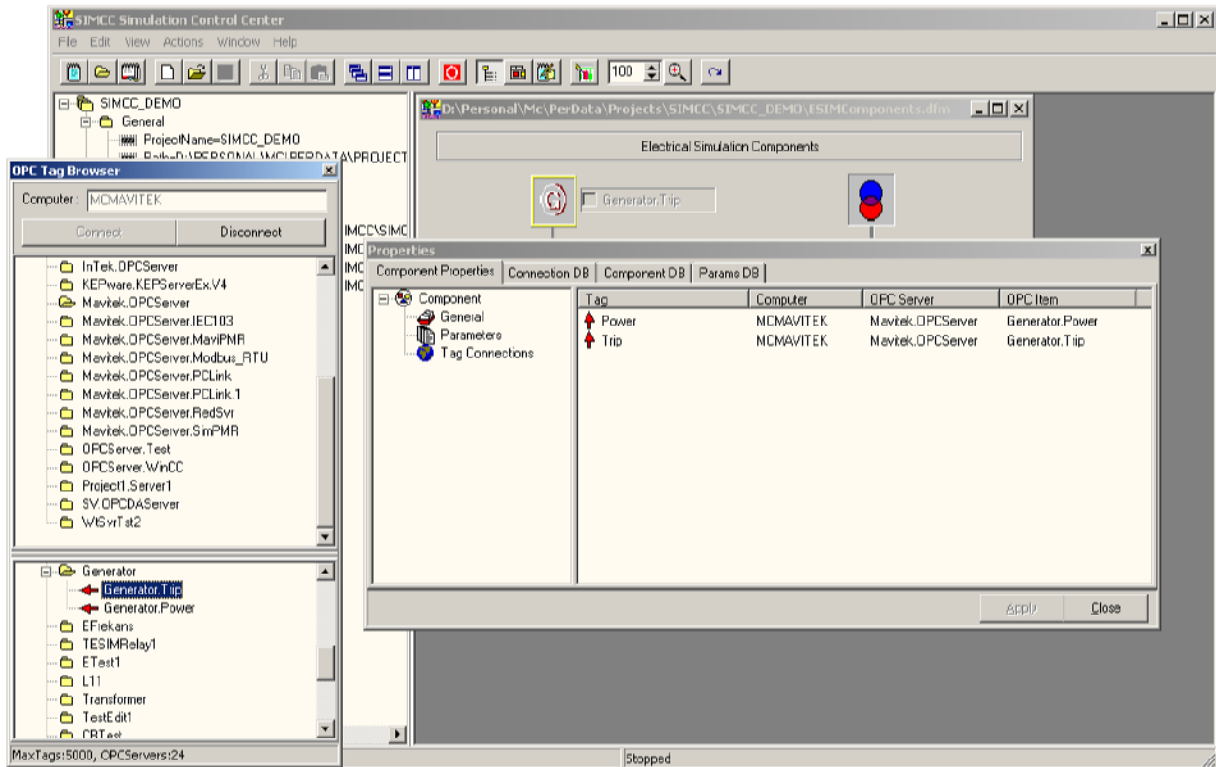


SIMCC Components Principles



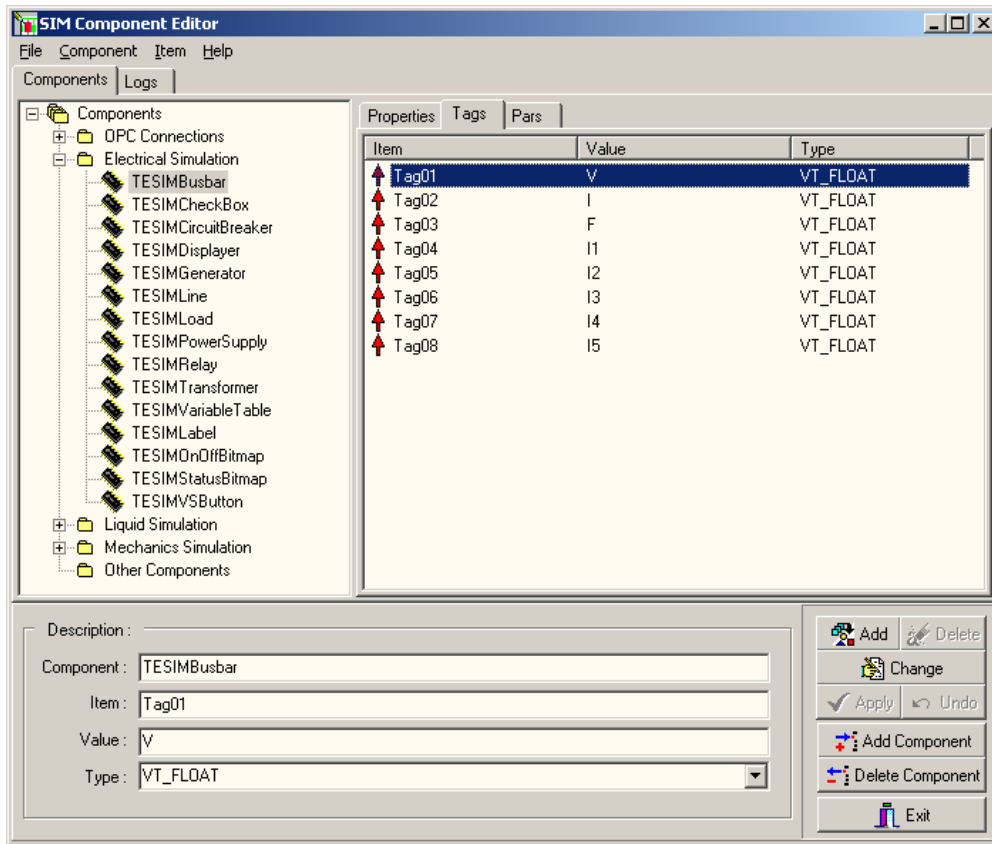
Component overview

- ❖ **Components, Substitutes Equipments In The Plant**
 - SIMCC provides components which substitutes equipments in the plants. Every equipment at the plant is represented as a component in the simulation project.
- ❖ **Component list of SIMCC**
 - You can see component list and detailed definitions of SIMCC components in Component Toolbar section.
- ❖ **Every component type has its own code in it :**
 - Custom code for different component types
- ❖ **Every single components has custom data in it :**
 - Custom parameters
 - Custom tag connections for data exchange
- ❖ **Component Data**
 - Every component has its parameter set defined via SIMCE Component Editor
 - It is possible to set parameter values of component
- ❖ **Tag Connections**
 - Every component has its parameter set defined via SIMCE Component Editor
- ❖ **Data Exchange in SIMCC**
 - Components, via these parameter set and I/O definitions, run process codes in it.
 - Every component gets input values from input tags and sets output values to output tags.
 - SIMCC's tags are OPC tags and any OPC client may get access to SIMCC's variables via OPC connection.
 - SIMCC may use any OPC server's tag as component's tag connection.





Editing components



Component Editor Window can be made visible by right clicking on a component on the Form, and clicking Edit menu option on the popup menu.

❖ General

On this tab there are general read only properties of the component as Type, Name, Left, Top, Width, Height.

❖ Parameters

· On this tab there are parameters of the component. These parameters can be defined in SIMCE Component Editor

· New parameter value can be set by clicking on the parameter cell and typing new value.

❖ Tag Connection

On this tab there are Tag connections of the component. These parameters can be defined in SIMCE Component editor

· May set up an OPC connection by double clicking on the tag or pressing F3 on the tag or right clicking and selecting from popup menu

· May set up an internal OPC connection by pressing F4 on the tag or right clicking and selecting from popup menu

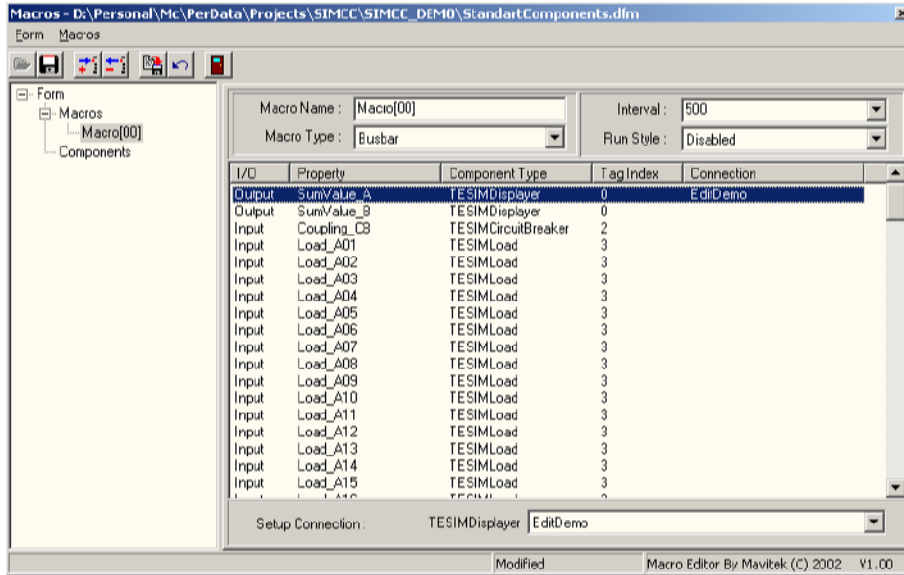
· May create an internal OPC tag defined as "ComponentName.TagName" format and connect to it by pressing F5 on the tag or right clicking and selecting from popup menu

· May delete connection by right clicking and selecting from popup menu



SIMCC Macros

SIMCC provides Macros to define functions between components without using OPC connection. Macros are relatively quick and do not load the CPU as much as OPC connections in a case of quick data processing in a huge data pool is required.



Macro editor may be seen by clicking Macros from MainMenu->Actions->Macros or by pressing F6 key. Current version contains following Macros

- PSFail
- Busbar
- Sum
- S=A-B

Macro editor has following functions

- Adding and defining a Macro
- Save Macro
- Load Macro
- Delete Macro



System requirements :

❖ **SIMCC requires following computer configuration :**

- Operating System as Windows NT4.0 /2000 /XP
- RAM min. 128 MB
- HDD Storage appr. 5MB

❖ **Licences :**

To run the SIMCC software you need following licences :

- SIMIDE to run the SIMCC software

To use simulation components you need following licences:

- STNDRT to use Standart Components
- SIMELC to use Electrical Components
- JOKERS to use Joker Components
- JSMLTN to use JSimulation Components

