

What's New

SEE Electrical Expert V4R3 Service Pack 2

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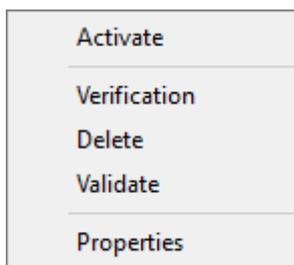
I. New Features

I.A. Creation and Validation of a Work Environment within the Environment Explorer

The new command: **Create a work environment**, added in the pop-up menu available on the active environment, enables you to create a temporary working environment from the active one.

The environment, created via this command, represents a copy of the active environment, and bears the same name with the suffix "_InWork" added.

The working is indicated by a specific icon in the **Environment Explorer**, and the following contextual menu is available on it:



- ✓ The **Activate** command makes the environment available to other users
- ✓ When the new command: **Validate** is executed, the corresponding "original" environment is automatically archived and the working environment becomes a new "index" of the archived one.

Only the environment creator or a user assigned with relevant rights is allowed to activate the working environment or to create new projects using templates from that environment.

I.B. Innovations in the Environment Manager

I.B.1. New Command to Compare the Active and Project Environments

The new command **Environment > Compare active and project environment**, protected by the Environment Manager module, allows you to create a new environment resulting from comparing the active environment with a temporary one that contains the elements used in the current project.

At the execution of the command, the following automatic processes are consecutively run:

- ✓ A temporary environment is created from the current project with the same name as the active environment, and stored in a temporary folder.
- ✓ Comparison is done between the two environments - the active one is treated as a reference (known as "source" so far) and the newly created temporary environment – as a local environment (known as "destination environment" so far).
- ✓ A new environment, containing the "differences" detected between the two compared environments is generated in the "SEE_Env" folder, and named: "*Env_{Project Name}*".

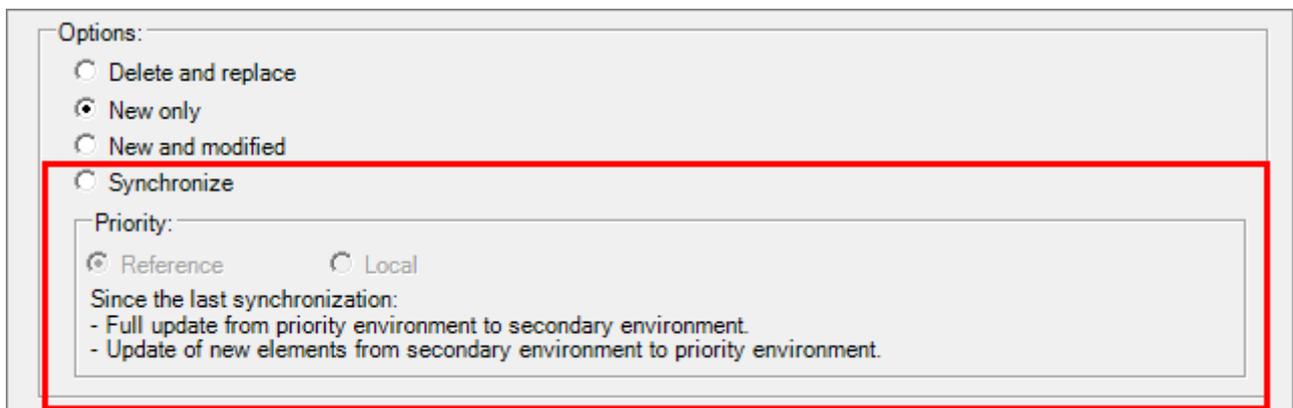
A relevant log file is displayed at the end of the entire process.

I.B.2.New Update Mode to Synchronize Two Environments

The new option: "**Synchronize**", available in the **Environment manager settings** dialogue, enables you to perform bidirectional update between your reference and local environments, as long as they are from a **V4R3** version of *SEE Electrical Expert*.

The synchronization process takes into account the relevant elements of the two environments that are treated: Symbols, Illustrations, Translation terms, Parameter Sheets, Sheet Generator, Blocks, Templates, Title Blocks and Equipment Catalogue of MDB format (SQL format to be managed in SEE Electrical Expert V5).

When the "**Synchronize**" option is activated, a "**Priority**" environment must be specified in order to set the start of the process - this can be either the "**Reference**" or the "**Local**" environment:



The "**Priority**" is to indicate that the synchronization is to start by adding the "new" elements existing in the specified "priority" environment to the secondary one and full update is to be done from the priority environment to the other environment. After that, relevant update is to be done from the secondary environment to the priority one.

- ✓ At the first synchronization treatment, launched on a given environment, the update is performed according the rules applied when the "**New and modified**" option is activated, by considering the specified priority. During the process, a relevant "*Synchronization.xml*" file is created in:
 "... \IGE+XAO\SEE Electrical Expert V4R3\4.8\SEE_Env*<ENVIRONMENT_NAME>*\Other".

- ✓ At the next synchronizations performed for that environment, the XML file is initialized with the date of the last executed synchronization.

For each next synchronization, the process compares the stored synchronization date with the last modification date of each element of the treated environment components.

The synchronization runs through the following consecutive stages:

- Comparing the dates of the last modification for the elements from the priority environment with the last synchronization date recorded in the "Synchronization.xml" file.
 - ✓ When the modification date of an element – e.g. symbol from the priority environment is later than the last synchronization date, this symbol replaces the corresponding one in the other environment.
In case a corresponding symbol does not exist, the symbol from the priority environment is automatically created in the other one.
 - ✓ When the date of a symbol modification in the priority environment precedes the synchronization date, no change is done on the corresponding symbol in the other environment.
When a corresponding symbol is missing in the other environment, it is considered deleted.
- Comparing the last modification dates of the elements in the other environment with the last synchronization date.
 - ✓ When the modification date of a symbol from the other environment is later than the last synchronization date, this symbol replaces the corresponding one in the priority environment.
In case a corresponding symbol does not exist, the symbol is kept in the other environment but is not created in the priority one.
 - ✓ When a symbol's modification date in the other environment is earlier than the synchronization date, no change is done.

When the entire synchronization process is over, a detailed log file is generated.

Important! The synchronized update can be launched only on environments with the same structure - therefore it is **only possible for two environments created for the V4R3** version of *SEE Electrical Expert*.

I.B.3.New Setting for Automatic Update

A new setting, available in the *Environment manager settings* dialogue, allows you to enable the automatic update of the local environment when the software is launched, in case its index is lower than the index of the specified reference environment.

- When soft is opening, update automatically local environment about reference environment if its index is lower

I.C. Possibility to Select Printing Languages

A new button: **Languages** was added in the *Print Manager* window (called via the **File > Print** command).

The button displays the **Select Languages Visibility** dialogue, which contains all languages defined in the current **Language** method and enables you to select those in which you want to print project data.

The option: "**Use language visibility settings defined in sheets editor**", available in this dialogue, allows you to directly select the languages specified for the multi-language texts visualization (via the command **View > Languages Visibility...**).

The **Languages** button is also available in the *Print Preview* window, where all currently selected printing languages are shown.

I.D. New Functions in the PLC I/O Configuration Manager

- ✓ A new command: **Configuration of the channel address calculation** in the **Options** menu allows you to define Channels default numbering format for all kinds of modules.
- ✓ An **Address** pop-up command is available on each existing Module, allowing you to separately define or change the particular Channels numbering format and apply it to the respective Module.
- ✓ It is now possible to import files of *AML* format from the Siemens' *TIA Portal V14*.

II. Enhancements in Existing Processes and Features

II.A. Automatic Project Reparation

A number of security improvements have been brought in the repairing processes, which are automatically run on corrupted projects at their opening or other particular conditions.

Process failure management was implemented in a way that in case even a single reparation process fails, the project opening is blocked and a relevant message is displayed, containing information about the possible reasons and suggesting solutions for fixing the respective issue(s).

II.B. Diagram Exportation

When, for the execution of the **File > Export > Diagram for SEE Publisher** command, all project sheets are set to be exported in a single JSON file, the generation process sorts the sheets in the file in the same order in which they are displayed in the **Sheet Explorer**.

II.C. Labels Exportation

II.C.1. Ameliorations in the Label Export Process

Sorting of the Exported Data

When the data to export is set to be sorted by **Location** or by **Sheet** (in the **Label export** window), the sorting of the exported labels is performed, by respecting the following rules:

- ✓ First, labels are sorted according to the specified data sorting criteria – "by **Location**" or "by **Sheet**".
- ✓ After that the labels from each particular Location or Sheet are sorted alphanumerically.

Equipment Extraction

The label exportation process was improved to take into account Equipment that is not inserted in the Schematic Sheets (as, for example, terminals created in the Terminal Strip Editor), so the respective labels are also extracted.

Partex plugin for label export

The fields: "Additive_Code1" to "Additive_Code9" were added to the neutral XML file that is generated at label export.

When the Partex plugin is used for data extraction, the value of the "Additive_Code1" (from the neutral XML) is filled in the "Product code" field of the generated TXT file.

II.C.2. Enhanced the Neutral XML Generation Process

Introduced possibility to indicate the location of the neutral XML

For this purpose, the process that is run following the execution of the **Process > Export SEE labelling Export File** now takes into account a setting already existing in the **Label export** window - used to set exportation of labels in particular manufacturer formats.

As a result, the neutral XML is by default generated in the location specified by the path entered in the **Files generated folder** field (of the **Label export** window).

When the field is empty (i.e. no label export performed yet), the neutral XML file is created in the folder that was used by the process as a default one until now:

"C:\Users\<UserName>\AppData\Roaming\IGE+XAO\ExportLabel\".

Generation of a log file

At the end of the neutral XML file generation a relevant report is displayed, containing details about the executed process.

II.D. Cabling Control

The "**Gauge of wires and connection points compatibility**" cabling control process (run via **Tools > Control...**) is now able to analyse and handle situations when more than one wires are connected to the same connection point

In the report that is generated at the end of the entire process, the results of this control are summarized in a relevant table

The screenshot shows a software interface with a list of checks on the left and a table for a specific check. The table is highlighted with a red border.

Cable	Wire	Wire Section	Equipment	Pin Section Min	Pin Section Max	Symbol Tag
W2	BN	2,5	2x2.5 ²	1	2	P1-3
W3	BN	2,5	2x2.5 ²	1	2	P2-4
W5	GY	10	1x10 ² Grey	0,5	2	KM1-A1
W1	WH	6	1x6 ² White	0,5	2	KM1-A1
W4	WH	6	1x6 ² White	1	3	H1-1
W6	<empty tag>	4		1	2	P2-3
W6	<empty tag>	4		0,5	2	H5-2

II.E. Electric Data Explorer

In the **Terminals / Pins** tab, the execution of [**Ctrl + Double click**] on a Terminal strip displays a dialogue listing the terminals that belong to the clicked Terminal strip. The list provides you with the possibility to navigate to the Schematic sheets in which the particular terminals are inserted.

*With regard to these improvements, the [**Ctrl + Double click**] keyboard shortcut can no more be used to run the **Open Connector / Open Terminal strip** functionalities, and was removed from the respective contextual menus on connectors, terminals and pins (within the tab).*

II.F. Equipment Catalogue

The "**Date of update**" field in the Equipment Catalogue is updated or filled in (in case of empty value) at the execution of relevant functionalities, available in *SEE Electrical Expert*, which allow or initiate creation, importation or modification of Equipment Codes.

However, there are particular cases in which the "**Date of update**" field is not updated. They are the following:

- ✓ Modification of Equipment Codes directly in the Access base.
- ✓ Download of Equipment Codes from CSV and XML files.
- ✓ Download of Equipment Codes having ASCII Formatted format, dBase format and Class format.
- ✓ Modification of a field value via the command **Edit > Change field value...**
- ✓ Modification of a field via the command **Tools > Add or Modify field into multiple classes.**

II.G. Environment Manager

II.G.1. Improved the Merge Environment Process

It is no more necessary to select a merging option before executing the merge process – the "*Options*" frame was removed from the **Merge environment** dialogue.

Whenever the process of merging the indicated reference environment into the local one is run, all elements that exist in the reference environment but are not present in the local environment are merged in it (as long as the respective elements were specified to be treated by the process). This is to say that only elements that are "new" for the local environment are imported inside it from the reference one.

II.G.2. Optimized the Catalogue Updating Process

When an update/synchronization is run, following the execution of the **Environment > Update environment** command, the process checks and compares only the respective "**Date of update**" fields in the Equipment Catalogues of the reference and local environments, instead of comparing all catalogue fields, as it was in the previous *SEE Electrical Expert* versions.

In case, for a piece of equipment, the field is empty in both environments, the old updating process is run.

II.H. SEE Electrical Expert Configuration

The plugins' names in the different languages were appropriately changed, and the available plugins are sorted alphanumerically in the list displayed within the **Plugins Manager** section of the **SEE Electrical Expert Configuration** window.

II.I. PLC I/O Configuration Manage

- ✓ The process run at the execution of the **Option > Sif Generation** command is now able to export interfaces in the generated PLC sheets, which is not possible though the Block generation process (run via the command **Option > Block Generation**).
- ✓ It is no longer possible to add Channels on a Module that has an Equipment Code assigned to it.

II.J. API

When a main and additive Equipment Codes are defined via the API, the additive Equipment Codes are now correctly linked with the respective main ones.