Features
CoDeSys V2.3

Last update: 05.08.02, V2.3.0

For modifications of the feature list due to Service Packs please see to the corresponding Release Information document, which will be provided on the Installation CD.

CONTENTS

1 ENI

The **'Engineering Interface'** can be optionally activated in CoDeSys. It is used to access an external database system via an independent **ENI Server**. The database accessed contains and manages CoDeSys objects and compilation files in different categories at a central location. This makes the following points possible:

- Multi-User-Operation of a CoDeSys project: a number of users can simultaneously work on the same project

- Central project data pool for CoDeSys and other applications, which are also clients of the ENI Server

- Source Code Management for CoDeSys Projects

The following database commands are made available in CoDeSys by the ENI: Get latest version, Check out, Check in, Undo Check out, Show differences, Show version history, Label version etc.

Drivers for the database systems 'Visual SourceSafe 5.0', 'Visual SourceSafe 6.0', 'MKS Source Intergrity' (licensing required) and for a local file system (licence free) are included in the standard package. For adaptations to other database systems the **ENI Driver Development Kit** can be used.

The **ENI Explorer** makes it possible to watch and operate the database independently of the CoDeSys programming system.

The ENI functions available in CoDesys can also be called by **batch commands**.

2 Intellisense

The Intellisense function can also be switched on optionally. It facilitates the entry of operands in all editors, in the Watch- und Receiptmanager, in the Visualization and in the Trace configuration.

If you enter a dot "." instead of an operand, a selection list containing all local and global variables is opened. If you enter a function block instance or a variable of type structure followed by a dot, then a selection list of all input/output variables of the function block resp. a list of the structure components will open.

3 Extensions in the Ladder Editor

Attention: this feature is already available in Service Pack 4 and higher of CoDeSys V2.2 !

Alternative Look & Feel ('Extras' 'Options'):

- Each contact can be furnished with a comment, the number of lines can be defined

- The variable names in a network can occupy several lines, the number of lines can be defined

- Networks can have linebreaks (can be switched on or off)

4 Macro Libraries

The macros generated in CoDeSys can be saved to external macro libraries. These can be included in other projects to make the macros available.

5   Key words for batch command parameters:

The following key words can be used in batch commands:

$PROJECT_NAME$: Name of the actual CoDeSys project

$PROJECT_PATH$: Path of the directory, which contains the actual CoDeSys project file

$PROJECT_DRIVE$: Name of the disk drive, where the actual CoDeSys project is located

$COMPILE_DIR$: Directory for compile files of the actual CoDeSys project

EXE_DIR: Directory which contains the codesys.exe file

6   Licensing

Each user or OEM can create his own libraries in the CoDeSys programming system and charge a license fee for these new libraries which will be protected by a software mechanism. The same protection will be applied to all buyable 3S software modules (ENI, CoDeSys HMI, CoDeSys SP RTE).

A license managing tool will provide an overview of and give information on all licensed 3S products, which are installed on the user's computer. It can also be used to request and register further licenses.

7   Extensions in the Task Configuration

- Additional standard properties for tasks (Check Time, Checking switchable on/off, Time resolution, optional linking to an interrupt)
- Manufacturer specific properties for tasks
- Online overview of the time behaviour of the tasks (minimal/maximal/average cycle time, jitter)
- Link table for (standard and manufacturer specific) events and POUs; examples of standard events: PLC-Start, PLC-Stop, last cycle before Online Change, PLC-BP....

8   MIPS Codegenerator

For MIPS processors CoDeSys additionally provides a MIPS code generator.

9   Extensions concerning Network Variables

Additional configuration options for network variables:
- Actions at bootup (e.g. at each bootup the node automatically gets an update of all variable values)
- Optional: confirmed network communication
- Optional: check sum in the telegrams

10 Extensions for the Object Dictionary

Dependent on Target (!), i.e. if it is defined in the target settings, the feature 'Object Dictionary' is available in the Resources tab in CoDeSys. This feature is responsible for the exchange of variables between two PLCs in the network. The Object Dictionary Editor now has the following new features:

- Additional standard attributes for object entries: minimum/maximum value, name, unit, POU which is called on each read/write access
- Manufacturer specific attributes for object entries

- Table editor for an easy assignment of index offsets to components of function block instances

11 CoDeSys Automation Interface

COM-Interface suitable for scripts for creating and editing projects

12 Target-Visualization

Dependent on Target (!), i.e. if it is defined in the target file, CoDeSys will create ST code (structured text) for marked visualizations of a project, which is loaded to the PLC with the other POUs. If the runtime system supports this functionality and if an appropriate monitor is available, the visualization can be started directly on the PLC. The programming system CoDeSys is not needed to run the visualization, which means a clearly lower use of memory.

13 Web-Visualization

Dependent on Target (!), i.e. if it is defined in the target file, CoDeSys will create an XML-version of all selected visualizations of a project. The XML data can then be downloaded to the PLC where a Web Server will then process the PLC data in XML format and provide a continuously updated visualization. This visualization can be called by a remote computer via the Internet and be monitored in a web browser independently of the target.

14 CoDeSys SoftMotion

Dependent on Target (!), i.e. if it is defined in the target file, the licensed software module 'SoftMotion' will be available in the tab Resources of the CoDeSys programming system in the form of a basic tool kit which is needed to integrate motion functionality in CoDeSys and CoDeSys SP. It can be used to program high-level motion tasks and provides grafic editors for the reference presets (NC editor (DIN66025), CAM editor), a number of function block libraries and a standardised (configurable) drive interface for common drive systems (CAN, SERCOS).

15 Tools

Dependent on Target (!), i.e. if it is defined in the target file, the function 'Tools' will be available in the tab Resources. It is needed to link external tools, which can then be started in the programming system (e.g. opening an external text editor, a pdf document, etc.).

The Tools selection can be predefined in the target file and if applicable be extended in the CoDeSys project.