SIEMENS AG

Welcome to the CEMAT Libraries for SIMATIC PCS 7 V7.0 SP2
MODULE CEMAT Version V7 SP1

This readme file contains important information for the installation and use of the CEMAT libraries.
Please read this information carefully before installation and use of the software.

Contents of the Readme file

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1. Installation

1.1 Scope of supply

With this delivery you received the following product:

CEMAT V7.0

This package consists of 1 CD

1.2 Hardware and Software Requirements

- HW PCS 7 CPU S7-416 or bigger, PCS7 OS Hardware according to actual PCS7 specifications
- SW **PCS 7 V7.0 SP1**

1.3 Tips for Installation

If you already have an installed CEMAT version please remove this version first (Settings, control panel, Add/Remove Programs).

As the CEMAT installation directory has been changed it is recommended to set up based on a new installed System Image. If this is not possible, the registry must be "cleaned" (CEM_V6 must be replaced to CEMAT_CS).

Before you start the setup close all applications and reboot the computer.

Open the folder "Installation CEMAT Software" in the main directory with the Explorer and start the application "Setup.exe". This command installs CEMAT V7.0, including all entries in Microsoft Windows files. Important operating instructions will be given to you during setup.

Select the correct project key for your project:

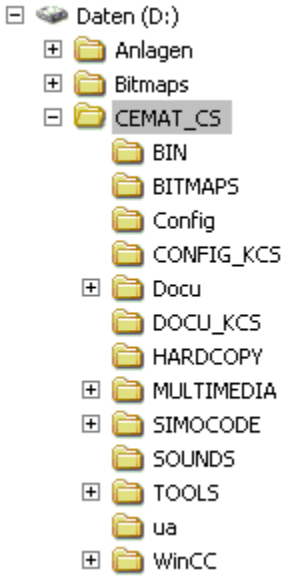
000 = CEMAT
004 = Holcim
006 = Dyckerhoff
007 = Heidelberger Zement
023 = Vigier
024 = Bushehr
025 = Caima
026 = Alsen
028 = Rossi

The Installation is always carried out on D:\CEMAT_CS. (The Selection of another destination is no longer possible)!)

As a standard, the following installation steps are carried out.

- the S7 library **ILS_CEM** is copied into the directory **C:\...\Siemens\Step7\s7libs**
- in case of a project version (Project-ID > 000) additionally the S7 library **PRO_CEM** is copied into directory C:\...\Siemens\Step7\s7libs.

  Attention NEW: FAMILY = CEMAT and AUTOR = CEMAT
- On drive D:\ the following structure is created:



- Active-X Components for Faceplates are copied into directory **D:\CEMAT_CS\BIN** and registered.
- the project scripts are copied into directories **D:\CEMAT_CS\WinCC\library** and **D:\CEMAT_CS\WinCC\pas**. (Copy later to project directory)
- system scripts are copied into **D:\CEMAT_CS\WinCC\Siemens**
- Standard pictures are copied into directory **D:\CEMAT_CS\WinCC\GraCS** (Copy later to project directory).
- Bitmap's for background pictures are copied into directory **D:\CEMAT_CS\bitmaps**. Default Bitmaps are stored in zip file.
- Module-, System documentation and Engineering manuals are copied into directory **D:\CEMAT_CS\Docu**.
- Online Help function will be installed in directory **C:\...\Siemens\Step7\s7libs\ILS_CEM**

For additional information regarding installation and parameterization refer to the Engineering Manual (chapter 3). If you want to upgrade you system, please also refer to the Upgrade description (chapter 15).

2 Information about the Product

2.1 What is new compared to the previous version

CEMAT V6.0

- Module parameter expanded with attributes for Process object view
- C_Server, Infodialog and Alarm line adapted to PCS7 V6
- Faceplate call up from CEMAT PCS7 V6 Symbols
- CEMAT-Symbols for automatic generation of block icons (Attention: don't use Symbols from CEMAT V5.03 or lower; from CEMAT V5.03 new Symbols are used)
- KCS AS Modules and Faceplates included

CEMAT V6.0 SP1

- Show plant selection messages and also the system messages in the Alarm line
- CEMAT in French.
- Script modification for the add-on Migration_S5_V3
- GRUZU modification for the add-on Migration_S5_V3
- help in the controller faceplate
- demo mode possible
- MAX_PLC increased to 50
- User rights for the Faceplate buttons can be defined per Instance.
- Additional symbols for C_GROUP, C_ROUTE and C_SELECT.
- Comment length changed to 24 signs per line.
- Project standard 007 (HZ), 024 (Busher) and 025 (Caima) integrated.

CEMAT V6.0 SP2

- Project Standard 006 (Dyckerhoff), 026 (Alsen), 027 (Lafarge) and 028 (Rossi) now available. The project standards will be installed automatically, using the right project key.
- Cemat V6 SP2 uses the controller blocks CTRL_PID and CTRL_S from the PCS7 library V60. Please consider the following:
  - Messages:
    The message text for Event includes the block comment and the fault type because the message format is different from the message format for CEMAT blocks (no additional texts possible).
    The fault type has been copied to the left side, do enable the display in the alarm line.
  - GraCS Directory:
    The Objects @C_Template01.pdl, ReglerSymbol1.pdl, RegerlSymbol2.pdl and @PG_C_Pid.pdl have been removed from the GraCS Directory, because the OCX technique is no longer used.
  - OCX Controller:
    The files C_IX_PID.ocx and C_PID_DLG.ocx are not delivered any more. The batches for (un)register RegCtrls.bat and UnRegCtrls.bat have been adapted accordingly.

  - Documentation:
    Overview and C_PID_e.pdf is new.

- Modifications under WinCC\Library
  - Faceplate Positioning and Button texts:
    With the new Script PCS7_OpenGroupDisplay_V6_CEMAT.fct the button texts can be transmitted from the Symbol property to the Faceplate property.
    There the possibility to display the faceplates at a pre-defined position, entering the X- /Y-coordinates.
  - If the standard facplate (..._Standard.pdl) is extended through additional functions (e. g. Info Button) the faceplate is positioned in that way that it fits into the working area. New script C_SetFaceplate.fct.
  - No application error will be generated on ENG or Single Station while reading variable @RM_SERVER_NAME.
    Modification for scipt C_ReadServerName.fct.
- Group instance list: The objects which are switched "Simulation" mode can be identified in the Group instance list through a different color.
- CEMAT message system (C_AlarmList.pdl), Online display/ Status field
  - Status field in the WinCC Dialog is now visible.
  - The display of the messages is actualized online.
  - Message display for actual messages shows incoming and Acknowledged.
  - Sporadical fault for refresh button now solved (sometimes the first line was selected instead of the last line). The display is being updated immediately with the change of archive - refresh is not required.
- The symbols for the project versions (except Lafarge) are not integrated in the template pictures @C_PCS7Typicals.pdl and @C_Template.pdl.
  - In all symbols the script PCS7_OpenGroupDisplay_V6_CEMAT.fct is used for opening the facaplate.
  - Controller symbols for the PCS7 Controllers and example symbols for button text (Index 300) have been added.
- Positioning function for C_DAMPER
  When entering the setpoint for damper position, the bar has been active immediatly (without any confirmation). The bar has been deleted. Instead of this an additional box opens with an input bar and limits.
- Correction of a fault for the actualization of the measure bar of C_MEASUR.
  In the Alarm-Faceplate the bar didn't change colors. It remained red. Actualization changed and new bar object.
- Modification of diagnostic pictures for C_DRV_1D, C_DRV_2D, C_DAMPER, C_VALVE, C_VAL_2D, C_ANNUNC, C_ANNUN8, C_MEASUR, C_GROUP and C_SILOP:
  - Adaptation of ranges for process values according to documentation.
  - Adaptation of the ToolTips in German, English and French
  - Adaptation of the units for the process values in all three languages.
    The modification has been carried out in the normal standard, and in the project versions for Alsen, Bushehr, Caima, Dyckerhoff and HZ.
- Modification of the description texts for the following interfaces of the route module in order to avoid misunderstanding: WVWT, WVWE, WVWA, WVWL and WUUS. The modification implies Documentation, diagnostic pictures and blocks.

- Template pictures for system information available.
  The PDLs C_System_Overview.pdl and C_System_DIAG_xxx.pdl can be used as templates for system information in combination with the system diagnostic tools from I&S ITPS.

CEMAT V6.0 SP3

- Diagnose pdl for C_DRV_2D EVSP
- Date fields in CEMAT Message system
- Lizenzcheck Lafarge
- Faceplate position top/left
- New curve template
- UserText for group-, route-, select- and damper symbol
- Analog value M2B (Lafarge)
- Modify @C_LF_PCS7Typicals.pdl und @C_LF_Tewmplate.pdl (Lafarge).
- C_DIB - bit DV connected (Lafarge)
- Standard-GRINZ (Obj) and -GRUZU (State) with Lafarge function.
- Button CSIGQuit.pdl with CEMAT function.

CEMAT V6.1

AS:

- **C_DRV_1D, C_DRV_2D**
  - Speed monitor must now directly connected to parameter "SW_SPEED".
  - Display motor current with connection of the point "C_MEAS ". In addition a new parameter "REL_MVC" must be released with 1-signal.
- **C_DRV_1D , C_DRV_2D, C_DAMPER, C_VALVE**
  - Connection SIMOCODE with module C_SIMO_A
- **C_ANNUN8**
  - Has now only 7 alarms. The 8th Alarm is used for the alarm repetition.
    The demeanors of INH and the corresponding delay time is total new (see Docu).
- **C_ANNUNC**
  - New Interface OKS (Signal level for OK). Therewith now also positively logic can be used. Presetting is still "LOG0". With an update is then no program change necessary
- **C_MEASURE**
  - There is the bypass function now in 2 characteristics.
    Measured value is frozen, state of the output signals is taken over.
    Measured value is further read, output signals are bridged
  - The release for square, root extraction etc. can be only modified in the CFC
    This is necessary, because it is not possible to write back the initial parameters of multiinstances from inside.
- **Message acknowledgement AS**
  - Now the Message acknowledgement from the OS is directly sent by the message line to the announcing module. Then an "AS-wide" acknowledge is initiated by this module.
  - By parameter setting in the AS system module can be toggled from "AS wide“ to "group" acknowledgement. Then the acknowledgement can be only given by the Group faceplate. (With the "group acknowledgement", all blocks belonging to the group has to be connected with the group acknowledgement signal).
- **All modules**
  - The comments of the module connections are meaningfully abbreviated with thus they German connection abbreviations in the representation "comment" also in English are useful.
  - The events of the modules are changed to long texts same as in "config files". The re-arrangement is necessary to have an identically text in "group status call" and message system.
- **System**
  - The minimum cycle time is to be set on 100ms into the Hardware config, because, otherwise, the software speed monitor does not work.

OS:

- new Faceplates with the following additional functions:
  - The web ability of the standard dialogs, diagnosis dialogs, info dialogs and alarm dialogs.
  - Area-dependent user administration in all input fields
  - instancespecific operating releases for "START", "STOP" pushbutton in the Operating Faceplates of all properties about the styling property "Processcontrolling_backup".
  - instancespecific operating releases for "switch limits" and "warning limits" of the analogous values with properties "Processcontrolling_backup" and "HigherProcesscontrolling_backup"
- Faceplates "can be fixed" on the picture
- The Faceplate of announcing modules can be called with "Info pushbutton" from the Alarm line.
- Message area selections can be carried out **no more** with the CEMAT specific choice dialog, but are dependent from the user's right "release for area" and "process operations".
- The user authorizations must be released in future specific for area.
- The sound expenditure must be used in future by PCS7. Now Sounds are determinable for different message classes and layout areas.
- There is a new overview dialog to show the rights and released areas of the current user as well as a list of available users.
- **Attention!** Right allocation in the diagnosis dialogs was changed. Please read up in the documentation (project planning).
- new template picture @C_PCS7Typicals_V61
  - all icons have additional " Faceplate-positionier-properties " topPos, leftPos, defaultPos
  - the active object can be highlighted by colored border
  - additional icons
  - the state display of the damper was changed, no blink and new icon for single and locally mode of operation.
- The new properties and the tool tip text will no more overwritten with a delta generate of the picture. A configuration file @PCS7Typicals.cfg is available in the directory "WScripts".
- Message masks CEMAT are decorated completely anew.
  - new functions and operation see system description
- Config reworks files for the properties

WEB:

- The CEMAT Faceplates as well as diagnosis dialogs, info dialogs and alarm dialogs and functions are published. A list of the CEMAT PDLs and functions witch are not able to be published is deposited on the CD under CEMAT_V6_WEB in file “read.me”
- On the CD CEMAŢ under CEMAT_V6_WEB\CEM_V6\BIŅthe OCXèn for WEB clients stored.
- On a CEMAT WEB client the functions for help, group state call and property list are not available.

Projectstandards:

- **PS 006 Dyckerhoff**
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT
- **PS 007 HZ**
  - **C_MEASURE**
    There is the bypass function now in 2 Characteristics. With HZ the parameter BYPB_ACT must be put on signal 1.
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT.
- **PS 024 Bushehr**
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT.
- **PS 025 Caima**
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT.
- **PS 026 Alsen**
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT
- **PS 027 Lafarge**
  - Extensions and Hotfixes with the single modules see documentation.
- **PS 028 Rossi**
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT.

CD

- Additionaldirectory "Additional_Information" with the following subdirectories:
  - CEM_Drafts (Project return flows consisting of bitmaps, Pdl`s, photos)
  - Clear_WinCC (quits the WinCC application)
  - Modificationlist (Changes of the AS modules)
  - Language (Dictionary CEMAT German, English, French, Spanish....)
  - User's archive (Import tool around the CEMAT INFO user's archive to supply data from “Hardware config” and “process object list” to user archive "info".

CEMAT V6.1 Sp1

AS:

- **C_VALVE**

  New functionality for 000 key only

  - The direction 2 normal is active. When setting the parameter DI1A=1 the direction 1 is active.
  - Valves without limit switches can be operated with separate monitoring for the limit switches and move time.
  - Changes of interface requires a PLC Stop

- **C_DRV_1D , C_DRV_2D, C_DAMPER, C_VALVE**
  - VISO_OS Byte erased from Status word (internal modification for group status call and group instance list)

- **C_ANNUNC**
  - Status call can now also show Individual fault texts for C_ANNUNC (max. 16 characters). Text must be entered under property "Shortcut" of parameter IN_DEL. (You have to take care that this text matches with the text for the alarms in the used block in CFC.)
  - In the config file C_ANUNNC_009.cfg under [Fault] the Comment must be set to "?".
  - Must not be modified for already existing plants (in this case change "?" to "Fault".)

- **C_SILOP**
  - new VSTATUS for a new Style.

OS:

- Revision of license code
  ENG License works also with multi user project, Client works with ENG license on Engineering Station.
- OCX for group status call and group instance list is extended
- Hardcopy Function is useable in all Faceplates (R- Mouse on TAG field -> OK).
- C_MEASURE, new Trigger for bar graph, Unit will be shown in Alarm line
- C_CTRL_PID, new call for user rights.
- New curve templates @TRG_Default_C8.Pdl and @TRG_Default_C12.Pdl with additional Grid function.
- Modification and enhancements in @C_PCS7Typicals.pdl and @PCS7Typicals.cfg.
- Config files for objects restyled

Project Standards:

- **PS 004 HOLCIM**
  - Complete new Holcim Project standard (Description see Documentation).
- **PS 027 Lafarge**
  - revision of user rights

General

Revision of Documentation

New Example Project

CEMAT V6.1 Sp2

AS:

- **C_PUSHB**
  - The module didn't match to the other compiled modules -> updating at CFC
- **C_DAMPER**
  - New function "inching in positioning mode". see Documentation
  - if the damper was in positioning mode KPOS =1 and simultaneous KEB1/KEB2 was "1" (Pulse already sufficed) it could be that the damper blocked.
- **C_SIMO_A**
  - Double information's, if e.g. the SIMOCODE switched off the drive with Overload, the drives Stills generated Faulty
- **C_PID3**
  - New object FB1008 + Subroutine FC1008 controller with 3 parameter set's for GAIN, TN, TV (see documentation)

OS:

- **License**
  - Revision of the CEMAT license query. There was not always the right amount of AS connections if OPC was in use.
  - A 14 day license was reported if the TH-PO license was removed on ENG stations. This report is suppressed now.
- **C_GROUP**
  - OCX for group status and group instance list was enlarged. If an object is switched to simulation (Bypass), the display changes to white on red. At Holcim it is black on orange (color selection about C_GROUP_xxx.cfg)
- **C_ROUTE**
  - State text changed by replace "deselected" with "not selected"
- **C_DRV_1D, C_DRV_2D**
  - to use the unit individual for each instance the variable CURR_OS has now the Attribute "shortcut". Presetting is **I =**
  - In the Faceplate the symbol was connected to .STATUS, it changed to VISU_OS
  - Display „fault Subcontrol" in diagnosis dialog
  - new "Subcontrol button" in the Drive Faceplate to call up an existing Subcontrol Faceplate
- **C_DAMPER**
  - - the Input for Set point was not usable in mode Ext. Setpoint+ tracking

- **C_SIMO_A**
  - **In** and **I** changed from % in A. In addition, the fields enlarged to 9999.9.
- **C_PID3**
  - Controller with 3 Parameter sets for GAIN, TN,TV with additional Symbol in @C_PCS7Typical.pdl
- There was no cascading interlock dialog call on Clients possible, because the server prefix was missing.
- Customizations and expansions in @C_PCS7Typicals.pdl and @PCS7Typicals.cfg
- The LoopInAlarm.fct was extended by the standard function:
  if no picture entry exists (or only ".") in the user archives the function change over to the PCS7 standard function.
- There are used different names in property “StyleTag“ from group, route, selection. Therefore Wscript-File could not safe the settings of Style in the pictures.
- Fault at the area selection, if client is connected to several servers.
- The CEMAT Alarm system was enlarged as follows:
  - 32 Selection button for Sections (before 16)
  - Event filter
  - User files with a 80 signs long comment field.
- To be able to recognize server failures in the system, CEMAT has an additional package of Lifebeat monitoring. See instructions in Additional_Information

WEB:

- Faceplates, pictures and template pictures were revised to make the web clients faster. This happens mainly by leaving project functions out at the publishing. The following functions are still necessary :

  C_ChangeView_Bt.fct

  C_OpenInterlok.fct

  C_SetCommandBtn.fct

  C_ShowPictureInPictureWindow.fct

  CematDateTime\ShowDateFormat.fct

  CematDateTime\Time_MakeLong.fct

  CematUA*.fct

  FD_CEM\C_SetDiagDlg.fct

  FD_CEM\PCS7_OpenGroupDisplay_V6_CEMAT.fct

  FD_CEM\PCS7_UpdateGroupTagName_V6_CEM.fct

Project standards:

- **PS 004 HOLCIM**
  supplementary functions according on request of Holcim project standard (see documentation and CD description CD:\ Additional_Information/ModificationList)

  AS

  - **C_GROUP**
    STANDBY as new Parameter. With “1” signal at this Parameter it is possible to preset the group to “stand-by” mode
  - **C_ANNUNC**
    The annunciation module generates now → ‘warning’ and then after a time ‘alarm’ + switch off.

  OS

  - **C_SELECT**
    Event – Object event – Group Display. Object modification, Function deleted.
  - **C_MEASUR**
    Color "orange" for "Override" wasn't correct.
  - **@C_HOLCIM_Symbole.pdl**
    The symbols are connected now again to the extended state display. With STATUS2, the direct Inputs for run or stop position are visualized.

- **PS 027 Lafarge**
  supplementary functions according on request of Lafarge project standard see documentation and CD description. (CD: \ Additional_Information/ModificationList)

  AS

  - All blocks have been included in SP2.

  OS

  - **C_DIB**
    - In the standard dialog the status texts were wrong (in case of "frozen" black/black.
    - In the diagnostic picture Interface DV was wrongly connected and FRV was not green.
  - **C_AIB**
    The button Graph could not be operated.
  - **Lizenzen**
    In the context of the V6.2 SP2 license strategy it became necessary to create the demo mode also for 027 Lafarge.

- **PS 025 CAIMA**

  AS

  - Local stop was shown in Local mode as fault.

  OS

  - LST as fault was not visible

- **PS 006 Dyckerhoff**

  AS

  - **C_ROUTE**
    At WBVG = 0 there was no interlock shown. The state ‚interlock' was only shown in STATUS word with 'start up interlock and not with 'operation interlock'

  OS

  - **C_DRV_1D + C_DRV_2D**
    - Diagnosis. KAB2 was wrong connected
    - Standard.pdl: Symbol was wrong connected.

- **PS 007 HZ**

  OS

  - The operation release for set point up, down with function PCS7_CheckPermission(tagname,…) is released.
    Tagname is the TAG with Server Prefix. Only TAG was used before (without Server Prefix)
    Therefore the entry on MC did not work.

General

- Documentation customized
- New example project
  The Example for Lafarge was of updated with the functions and pictures CEMAT V6.1 SP2.
- The interlock modules in the charts are wrong named M01_ESVG instead of M01_ESVG1

CEMAT V6.1 Sp3

AS:

- **C_DAMPER**
  - - There was only two times mechanic direction 1 and no direction 2 in English language.
  - - There was only two times torque direction 2 and no direction 1 in French language.
- **C_DRV1D**
  - The additional text $$AKZ$$ Comment to TAG was missing. Message identifier SIG7 was missing.
  - ESVA (protection interlock only in automatic mode) seems no more in local mode.
  - The function “sporadic running” works only in automatic mode.
  - If a subcontrol has a fault and stops the drive, only the subcontrol should create an alarm. In this case the acknowledgement was not working, because the common signal QTST was not created. Now a new alarm from C_DRV_1D will be created "Subc. General fault".
- **C_DRV2D**
  - The function “sporadic running” works only in automatic mode.
- **C_Measure**
  - Message Configuration: The column “Acknowledgment group” must be set to “1” (as for all the other blocks). In this case all alarms are acknowledged if one alarm of the block will be acknowledged.
- **C_Valve**
  - The function “sporadic running” works only in automatic mode.
  - Message identifier SIG5 was incomplete.
  - Limit Position Error if VE1 and VE2 are active.
- **C_SIMO_A**
  - Function extension: display of power
  - Thermistor value will not be displayed anymore, because SIMOCODE_Pro doesn't provide it.

OS:

- **C_TREE.OCX**
  - The status display "run" in the object list for damper and valve has been adapted.
    The status bits for Holcim are arranged different to the other project standards.
    The OCX now differs by means of the entry “type=” in Config files, if Holcim is installed or not and according to this, the OCX analyses the bits.
- **C_DRV1D**
  - The fault display local stop LST was missing.

- **C_MEASURE**
  - If the measured value faceplate is not called from the process symbol, the value is displayed with one position after decimal point (Example: Call up from motor faceplate or from group object list).
  - LimitMin from “lower limit 2” was not connected right to ".VAL_.SCB". It’s now connected to “SCB”.
  - The default setting for the user rights are: “18 Modify Warning Limits“ and “20 Modify switching limits “. This are also the default settings for the faceplate call from the process symbol.
    Background information:
    If the faceplate is called from the object list of the group, the user rights can not be taken over from the process symbol.
- **C_GROUP**
  - In some project standards in the group face plates the group acknowledge button was missing. This button works just like the AS acknowledge button, only the labeling is different. If only one group or the whole AS is being acknowledged is decided by the group module in the AS.
- **FD_CEM / C_ExitView1.fct**
  - If the diagnose faceplate was closed with the close button and the info dialog was opened directly after that, it came to many fault entries.
- **FD_CEM / PCS7_OpenGroupDisplay_V6_CEMAT.fct**
  - The button text for sub controls was changing to 20 characters.
- **@C_PCS7Typicals_V61.pdl**
  - The hot spot of the symbols is modified. Now the click event works only directly on the symbol.
- **Online Kurven template: @TRG_Default_C8_FS.pdl, @TRG_Default_CEMAT.pdl, CematDateTime / ConvertDateTimeString.fct**
  - Trend controls “one click“ handling:

Weekday button:	Switch to the weekday (offline)
Time range button:	Switch to the time range (offline)
Online button:	Change to online mode.
Full screen button:	Change the display between full screen and normal size. (@TRG_Default_C8_FS.pdl only)
- **@TopAlarmNew.pdl**
  - The extended alarm line (is being opened with the alarm-button in @AlarmOneLine) has been adapted to the CEMAT-set points for alarm lines.

    After the OS project editor has been executed, the file has to be copied into the project directory/GraCS once again, because the OS project editor overwrites them.

Project standards:

- **PS 004 HOLCIM**
  - Supplementary functions according to the request of HOLCIM project standard (see description in the documentation and CD:\ Additional_Information/ModificationList).

- **PS 027 Lafarge**

  Supplementary functions according on request of LAFARGE project standard see documentation and CD description (CD: \ Additional_Information/ModificationList).

  OS:

  - **CONFIG FILES**
    Adapted to CEMAT V6.1.

- **PS 006 DYCKERHOFF**

  OS

  - **C_GROUP**
    In the group faceplate the acknowledge button group was missing. (This button works similar to the AS Acknowledge button, only the label is different. In the AS it is decided what is acknowledged, group or AS.)

- **PS 007 HZ**

  AS:

  - **C_DRV_1D**
    - The parameter EEE (Single mode unlocked) was not updated.
  - **C_DRV_2D**
    - ENOT (emergency mode) was not set to bit13 of INTFC_OS (os_if_35)
    - EVSZ=0 switches EVS1/EVS2 (Motor running) to 0 (Single Mode unlocked).
    ..EVSZ=1 switches to 1.
  - **C_VALVE**
    - VNOT (emergency mode) was not set to bit7 of INTFC_OS (os_if_47).

- **PS 026 Alsen**

  AS:

  - **C_DAMPER**
    The parameter KBV (Local Mode) was not updated.

General

- Documentation customized
- Interlock/Interlock5 description completed. At one interface only one type of interlock possible.

CEMAT V7.0

General extensions:

- New Auto Setup, modified license query
- Additional License for Single Station with 6 AS
- Bundle PCS7 BOXPC with CEMAT Single Station AS3
- Italian and Spanish language extension of the CEMAT OS dialogs
- **O**bject **D**ata **A**cquisition module
- Statistic & Maintenance information for all drive functions
- KCS OS modules as open version with Faceplate Designer
- Additional I/O information in the Info dialog
- Supporting of the 1600x1200 screen resolution (pdl and symbols)
- Extended route control with new AS and OS blocks prepared for project standard 000 and 006 (Function will be released with SP1).
- CEMAT simulation types for SIMBA/SIMIT
- Drive functions can show the associated groups/routes

AS:

- **C_DRV_1D, C_DRV_2D, C_DAMPER, C_VALVE**
  - In these AS blocks the maintenance functionality has been implemented.
  - New interface for the route administration (see block description) (only for Project versions 000 and 006)
- **C_DRV_1D**
  - Setpoint input OS or External for the transmission to VSD blocks.
  - New output DLY_CNT to display of the remaining on/off delay time.
- **C_DRV_2D**
  - New output DLY_CNT to display of the remaining on/off delay time.
- **C_DAMPER**
  - If RTMONTIM (Runtime Supervision in sec) connected with 0, the supervision is switched off.

- **C_VALVE**
  - New output DLY_CNT to display of the remaining on/off delay time.
  - The limit switch monitoring via LSMONTIM now operates also onto VVSx and not only onto the alarms.
- **C_SIMOS**
  - New block for the SIMOCODE link with current and power output (this block replaces the C_SIMO_A) (see block description).
    Both blocks cannot be used at the same time. If you want to use the C_SIMO_A further on you have to change the request in @PG_C_xxxxx.STANDARD.PDL.
    (refer to Upgrade description in the Engineering Manaul, chapter 16)
- **C_INTERL, C_INTER5**
  - Loss of the RLO through Download for changes. This is a system property of PCS7.
    Warning added in Object description.

OS:

- **Faceplates in general:**
  - @PG_C_xyz_STANDARD.pdl, @PG_C_xyz_VIEWLIST.pdl
    The ComboControl (display of which faceplate is open - diagnose, help, etc.) now gets the text from ToolTipText of buttons (_STANDARD) or from the static text (_VIEWLIST).
  - With left click on the TAG in the STANDARD-Faceplate the window @C_Grouplist.pdl will be opened, which shows the dedicated groups and routes for the TAG
    (As a precondition that the object list for groups and routes must be saved in the user archive C_DriveList).
  - If the block is part of an active route control, "material name“, "Jobname“, "route name“ will be shown (for future Route Selection function), the material name can be removed.
  - @PG_C_X.DIAG.pdl, DLY_CNT display
    In the diagnosis faceplate the current counter for remaining on/off delay time will now be shown.
  - @PG_C_MAINT.pdl, @C_MAINT_OV.pdl, @C_MAINT.pdl, @CEMAT_MSOperartion.pdl, @CEMAT_MSSelectInterval.pdl
    Overviews in the maintenance area (see system description).
- **C_DRV1D**
  - @PG_C_DRV_1D_STANDARD.pdl
    Dislplay of the setpoint and the actual value of subordinate blocks.

- **C_MEASURE**
  - @PG_C_MEASURE_DIAG.pdl
    In the diagnosis faceplate the input for the Property Assignments was missing.
    Type 0, parameter fault
    Type 10, physical value as REAL
    Type 77, all S7 periphery modules.
- **C_ANNUNC, C_ANNU8**
  - @PG_C_ANNUNC_DIAG.pdl,@PG_C_ANNUN8_DIAG.pdl
    The operating message for Simulation On/Off had been exchanged and masked falsely.
- **C_GROUP, C_ROUTE**
  - C_GROUP_STATE.ocx
    The state request is logged in the file D:\CEMAT_CS\bin\C_GroupState.ini.
  - C_TREE.OCX
    In the object list a button was added in order to stop the display/initialization.
- **C_CTRL_PID**
  - @PG_C_CTRL_PID_OVERVIEW.pdl, @PG_C_PID3_OVERVIEW.pdl
    Locked messages are used in CEMAT. The button MSG_Lock in the overview faceplate has been removed.
- **FCT revision**
  - CematMessages\C_OpenMsgSystem.fct, cmsg_GetPlantZoneFilter.fct
    If in the OS-Project Editor under "Areas in the Overview" empty buttons are inserted, the CEMAT Message system showed wrong button descriptions (duplications).
    The order of the area buttons in the message system now complies with the order in the Overview Area.
  - PCS7_OpenGroup-Display_V6_CEMAT.fct
    Additional license query V3/V4 on C_614_GROUP and C_631_GROUP (migration)
  - C_GetPermissionOnArea.fct
    In the script the limit was set on 32 instead on 16 areas.
  - C_ChangeView_Bt.fct
    Sporadically appearing memory leak is eliminated.
  - WScripts\@PCS7Typicals.cfg, WScripts\TemplateControl.cfg
    With Create/Update Block Icons the Property UserText\Visible1 (display of User text in the symbols G, R, AW) will not be overwritten with "no" anymore.
  - C:\…\loopinal.fct
    It came to a General Protection Fault with the variable type LPCMN_ERROR (long Pointer on Errorhandler) on the output of the Errortext.
  - WEB-ability expanded
  - Migration V3/V4-V6, "Info-Button" in alarm line activated.
  - HighlightBlockIcon will now be proved before the composition, if the Property generally exists.
  - C_GetDebugMode.fct
    In the C_Config.cfg a new section exists which switches on/off Debug-Prints in the APDiag-OutputWindow.

- **@Overview1.pdl**
  - In the upper right corner for the MultiClients the Server name is displayed, from the Server which is currently connected (the MC gets the data from this Server). For the other station types (ES or Server the own station name is displayed.
- **Meldesystem**
  - @C_AlarmFilter.pdl, C_SetMsgFilter.fct, cmsg_SetMsgList.fct
    By now it is also possible to filter for system messages.
- **C_@PCS7Typicals_CemV7.pdl (new)**
  - Motor symbol 33. Property Index was missing for connection to VISU_OS.
  - new symbols for the Route Control function (future)
  - new symbol for the system supervision (C_ANNUNC)
  - If the symbol has the functionality "Highlight Bloc Icon“ it will be “highlighted” at opening the faceplate, at closing it will be "normal" again
- **Online Kurven template:**
  - @TRG_Default_C8_FS.pdl, @TRG_Default_C8.pdl, @TRG_Default_C12.pdl
    From curve 7 the current value of the curve 6 was always displayed in the value display.
- **@TopAlarmNew.pdl**
  - The advanced message line (will be opened with the alarm button in @AlarmOneLine) has been adapted to the CEMAT parameters for message lines.
    After operating of the OS Project Editor you must copy this file into the project directory/GraCS once more because the OS Project Editor overwrites it.
- **@Buttons11.pdl**
  - The display of analog and digital TAGs in the flow chart can now be switched on/off through 2 additional buttons in the footer (button11.pdl). With that you save the additional buttons in the flow charts.
  - The footer has been expanded by the languages Spanish and Italian.
- **@Buttons12.pdl**
  - Locked messages are not designed for CEMAT. The buttons CSIG_Lock and CSIG_Unlock have been switched "invisible" therefore.
- **@PG_C_INFO.pdl**
  - The data preparation for the user archive has been optimized.
  - In the multimedia directory the new directory "periphery" exists. There you can deposit text files TAG.txt (Chart_Block.txt - "/" is replace by "_") with additional I/O information (e.g. absolute addresses of all I/O, belonging to an object). The (unmodified) text file can be opened from the info dialog.
- **C_UserInfo.pdl, C_GetPermissionOnArea.fct**
  - For the maintenance functions the new authorization 29 has been introduced. In order to display this chart and C-functions have been modified.
  - Authorization 8 is not used any more in the message window.
- **@CSIGQuit.pdl**
  - Message Acknowledgement with F9.
- **@HornQuit.pdl**
  - Horn Acknowledgement with F8.

- **4 Monitors**
  - Cemat administrates 4 monitors with this version.

Project standards:

- **PS 004 HOLCIM**

  (description see documentation and CD:\Additional_Information\ ModificationList)

  AS:

  - **C_VALVE**
    Bug at reset of the operating time removed

  OS:

  - **@PG_C_HELP**
    The help for the type C_PROFB has been added.
  - **@PG_C_***_DIAG.pdl, pcs7_openinputboxanalog_v6_CEMAT.fct**
    Operator message in Italian and Spanish
  - **C_@PCS7Typicals_CemV7_Holcim.PDL (new)**
    The new template picture replaces the @C_Holcim_PCS7Typicals.PDL. The block icons are identical with the block icons in @C_Holcim_PCS7Typicals.PDL

- **PS 027 Lafarge**

  AS:

  - **C_AIB**
    Smoothing, gradient supervision and the overshoot outputs LG_P and LG_N have only been actualized in the sleeping mode.
    A modification in the "awake" mode has not been displayed because this instruction block was missing in this mode.

  OS:

  - **C_@PCS7Typicals_CemV7_LF.PDL (new)**
    The new template picture replaces the @C_LF_PCS7Typicals.PDL. The block icons are identical with the block icons in @C_LF_PCS7Typicals.PDL
    The three first block icons of @C_M2B had the false object type.
  - **@AlarmOneLine**
    Display of date, time, TAG, event, TAG comment, FCL, area
  - Spare displays removed.

- **PS 007 HZ**

  AS:

  - **C_DRV_1D**
    ESPO (sporadical ON/OFF) only acts in the automatic modus. If ESPO=0 and transfer is Auto <---> Single the command storage EKS will be cleaned up and therefore unintended start-up warning will be prevented.
  - **C_DRV_1D, C_DRV_2D, C_DAMPER, C_VALVE**
    The Alarm priority has been changed from ESB-EVO-EBM to ESB-EBM-EVO. Furthermore the prioritization of the fault display has been abolished in the diagnosis faceplate for this version. If now ESB-EBM and EVO fail at the same time, all 3 failure bits are displayed in the diagnosis

  OS:

  - **C_DRV_2D**
    The Simocode button had been positioned false.
  - **C_VALVE**
    @PC_C_VALVE_DIAG.pdl the display VEE (Un-interlocked single-start mode) was missing.

General

- Modifications in the documentation
  - The documentation directory was restructured.
  - The directories German and English have been removed. (All languages are now located in the same directory)
  - The filenames consist of the CEMAT Object Type and the Language ID, e. g. C_VALVE_009.pdf (similar to the config files).
- From CEMAT V7.0 the functions and pictures fort he V60_MessageSelection and for the Migration are no longer installed.
  On the CEMAT CD you find a directory Alarmline_MessageSelection_V60 with Pictures and Functions.

CEMAT V7.0_SP1

General modifications:

- Russian and Chinese language expansion of the CEMAT OS dialogs and partial documentation are available on request

- Subcontrol Templates (AS und OS) for
  - Masterdrive CBP2
  - Micromaster 4xxSeries
  - Robicon PH

  available on request for project standard „000“.

- Monitor resolution 1600
  C_@PCS7Typicals_CemV7_1600.PDL and greater bitmaps under
  CD:\Cemat_AddOn\CEMAT_1600

- As an example only the „000“ project is on the CD.
  Lafarge or HOLCIM projects are available on request.

- The CEMAT HDRS engineering tool was improved fundamentally

- A new CEMAT engineering tool is available, build similar than the HDRS tool, with example projects for all project standards.
  The tool is free of cost available. One day training is obligatory.

AS:

- **C_DRV_1D, C_DRV_2D, C_DAMPER, C_VALVE**
  - In the „Sequence Mode“ the runtime counter was always running
  - DSIG_SIM is showing the status „Simulation“ of the channel driver
- **C_DRV_1D**
  - Display of the dimension for „Set point „ was changed to #unit
- **C_MEASURE**
  - MV-I output for the present analogue value (not for simulation- or bypass mode)
  - Bad Quality annunciation also from C_MEASURE
  - MV_PERC was frozen in „Service Mode“
  - RA_OI interface for release of fault limiting bits
  - With message release „0“ at the following interfaces (RA_HH, RA_H, RA_L, RA_LL) the collective fault annunciation is inhibited.
- **C_PID3, CTRL_PID**
  - LMN_HLM, LMN_LLM are displayed
- **C_COUNT**
  - for counter input of REAL value is also possible.
    (ATTENTION the counting rang is limited and for large numbers inaccurate)
  - The new “reset output” is active for one cycle
- **C_ANNUN8**
  - DSIG_SIM is displaying the status „Simulation“ of the cannel driver

- **C_RUNNT**
  - RT_OS_H (display of hours) and RT_OS_M (display of minutes)
- **C_SELECT**
  - NON_INTL high if no interlock is active
- **C_SIM_AD**
  - o A new function block for SIMOCODE with current and power measuring function (replacement for function block C_SIMO_A) (please refer function block description). It is in general not possible to us the two function blocks at the same time. If the C_SIMO_A is still used, the call must be changed in @PG_C_xxxxx.STANDARD.PDL. The function block is available in „Cemat_Addon".

OS:

- **Faceplates general:**
  - o **INFO Dialog** display of documents wit the following formats:
    - .DOC, XLS, DWG, in addition the following buttons are available:
      - LOOP DIAGRAM BUTTON,
      - EL DRAWING BUTTON,
      - MCC BUTTON

    Program name and class name were read from the config. file and with that the corresponding file from the service hanger becomes opened (please refer to the OS_Engineering.pdf)
  - o **TRG_defaultxxxxxx.PDL's** Correction of defect: Time range, curves (please all curve compositions made till now delete and newly arrange).
  - o **Message selection**
    - Channel driver messages was not shown,
    - Auto scrolling and sorting by column heading were activated
    - An operation was not possible in the report window at open Faceplate
  - o **New curve picture presentations C_Curve01.pdl**
  - o **Internal CEMAT variables are created automatically**
    C_Servername, C_Empty, C_View_Tag_A, C_View_Tag_D
- **C_DRV_1D, C_DRV_2D, C_DAMPER,C_VALVE, C_ANNU8**
  - o Faceplate shows „Cannel driver in simulation mode"
- **C_MEASUR**
  - o Additional indication of the input value at simulation or by-pass mode
  - o Annunciation interface in diagnosis dialog
  - o Indication of the Quality code in the diagnosis dialog
  - o
- **C_SELECT**
  - o .new Styles @C_SELECT/5 und @C_SELECT/6
- **CTRL_PID, C_PID3**
  - o .Display of the output limits

- **C_@PCS7Typicals_CemV7.pdl**
  - o New sorting of the styles

- **C_SIM_AD**

  A new function block for SIMOCODE with current and power measuring function as well acyclic additional data (this function block can be used instead of C_SIMOS, please refer also the function block description).

Projectstandards:

- **PS 004 HOLCIM**

  (For the description please refer documentation and CD:\Additional_Information\ ModificationList)

  For the new HMI representation guidelines of HOLIM an example project exists, you can this request with us.

  AS:

  - **C_DRV_1D,C_DRV_2D,C_DAMPER,C_VALVE**
    REL_SC , The SIMOCODE adapter name can be typed in freely now, different types can be used
  - **C_GROUP**
    - Double assignments in the command word cleared
    - French station codes were mixed up
  - **C_VALVE**
    - Message „U Local isolated**“**

  OS:

  - **New presentation pictures in accordance with HOLCIM HMI definition**.
    - @C_Alarmlisting
    - @Button11
    - @Screen_CEM_1600
    - C_Curve_Groups.pdl
    - for process pictures refer xls under 004 Docu
    - C_@PCS7Typicals_CemV7_Holcim.PDL
  -
  - **C_GROUP**

    - Start/Stop button can be switched invisibly with IStyle=1

- **PS 027 Lafarge**

  AS:

  - **C_M2B**
    - REL_MVC switched visible

  OS:

  - **@PG_C_M2B.STANDARD.pdl**
    -Release analogue button changed.
    @PG_C_AIB_DIAG.pdl
    -Display LG_P and LG_N only if EN_GRAD is high “1”.

  - **@AlarmOneLine, @Overview1**
    High monitor resolution 1600x1200

- **PS 007 HZ**

  AS:

  - **C_DRV_1D, C_DRV_2D, C_DAMPER,C_VALVE,**
    - driver in simulation mode is shown
  - **C_DAMPER**
    - It was not possible to remove KDR1/KDR2 with KVT2/KVT1
  - .

  OS:

  - **C_DRV_1D, C_DRV_2D, C_DAMPER,C_VALVE,**
    - Driver in simulation mode is displayed

- **PS 026 ALSEN**

  AS:

  - **C_DRV_1D, C_DRV_2D, C_DAMPER,C_VALVE, C_VALVE_2D**
    - Driver in simulation mode is displayed t
    - Alarm priority was changed to ESB-EBM-EVO
    - Feedback signal ERM, KWE2/1,VE1/2 are executed as an OS variable and therefore can be archived
    - EIZ is executed as an output signal
    - ESD is executed as an output signal
  - **C_DAMPER**
    - It was not possible to remove KDR1/KDR2 with KVT2/KVT1
  - .

  OS:

  - **C_DRV_1D, C_DRV_2D, C_DAMPER,C_VALVE,**
    - „Driver in simulation mode“ is displayed
    - The buttons can be removed completely about additional styles

General

- Documentation customizations
  - New structure in the multimedia list. (refer OS_Engineering.pdf)

2.2 Migration

Upgrade instructions from CEMAT V5.02 / V5.03 to CEMAT V7.0 on enquiry.

2.3 Further Information

Detailed installation instructions you will find in the Engineering manual (path D:\CEMAT_CS\docu or on the CD).

You can find detailed change information for the AS modules on the CD in the directory “Additional_Information/Modificationlist”

In Directory **cd:\example** you can find an example project. The Project contains 3 AS where the PLC-PLC-Communication is already prepared. PLC1 contains furthermore a small engineering example with CEMAT Objects, CFCs and a process picture. (Two transport groups, one example for an uninterrupted route change-over and an example for a PID controller).

- CEM_mp.zip contains a PCS7-Project with 3 AS, one engineering station, one server, one standby- server and two multiclients.

Multimediaserver:

The multimedia files can be kept in the project network now on any PC. Fill in C_Config.cfg the name under [multimedia server].

There are the following options:

- empty - -> Reading files locally (how till now - downward compatible)
- Servername e.g. CLIENT62 -> The files are read from the CLIENT62
- @RM_SERVER_NAME -> Files are read from the current server

Projekt Update:

A new application "CematProjectUpdate.exe" is available to carry out an update on existing OS-projects.
You can find these in the directory CEMAT_CS.
A description is available under "CEMAT_CS/DOCU/update".

In the directory cd:\Hotfixe_Tools\Clear_WinCC you can find a tool to terminate the WinCC application.