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CGS SW Release Notes

Kurzbeschreibung:
Abstract:

This document issue provides the description of the CGS SW release 6.2.4 (engineering release for qualification purpose) based on CGS 6.2.3 release.

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2/-	30.04.2004	All	Initial release (6.2.0)
2/A	13.05.2004	All	Bug Fixes (6.2.0.1)
2/B	07.07.2004	All	Extended Functionality for Aeolus (6.2.1)
2/C	27.08.2004	All	Extended UCL Debugger Functionality (6.2.2)
2/D	10.09.2004	All	Bug Fixing for 6.2.2
2/E	22.09.2004	All	Bug Fixing for 6.2.2
2/F	15.10.2004	All	Bug Fixing for 6.2.2
2/G	22.10.2004	All	Final version for 6.2.2 (B14)
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3/-	11.02.2005	All	version for 6.2.3 (B20)
4/-	18.02.2005	All	Final version for 6.2.3
5/-	11.02.2005	All	version for 6.2.4 (B21)
6/-	22.04.2005	All	Final version for 6.2.4

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1 Introduction

1.1 Identification and Scope

This document is the CGS_6.2.4 SW Release Notes. The release is identified by document CGS SRO [AD 2.1.1].

CI Name : CGS SW

CI Number : 1130992

CI Variant : 6.2.4

1.2 Purpose

The purpose of this software release is a delivery to CGS AIV to qualify it.

1.3 Document Layout

This document has the following layout:

Chapter 1 provides the document identification and identifies under which CI this document is prepared. It also identifies the next higher level component CI. Chapter 1 also provides an overview of the purpose of the document and the overall document structure.

Chapter 2 provides the list of documents which are applicable or are referenced.

Chapter 3 provides an overall description of the release. Thus in this chapter all SW products being integrated are listed including the temporary fixes necessary to run the SW. This chapter also provides the identification of CCU versions being used for the SW product integration (if any).

Chapter 4 provides an overview of the release status. This includes a statement on the current test status and the identification of SPRs being fixed with this release.

Chapter 5 provides the installation instruction for the CGS SW.

Appendix A provides a list of abbreviations being used

Appendix B provides a list of terms being used in a certain sense.

Appendix C provides the file listing of the delivery.

2 Applicable and Reference Documents

2.1 Installation Manuals

CGS-RIBRE-SUM-0002: CGS Installation Manual, Issue 2/-, 12.09.2003

2.1.1 Software Release Order

CGS-RIBRE-SRO-0006: CGS Software Release Order, Issue 6/- 22.04.2005

2.2 User Manuals

CGS-RIBRE-SUM-0001:	CGS User Manual, Issue 3/1, 15.10.2004
COL-RIBRE-MA-0030-00	MDA Introduction Manual, Issue 3/B 4.4.1997
CGS-RIBRE-SUM-0003	MDA Reference Manual, Issue 01/B 23.09.2004
COL-RIBRE-MA-0018-00	MDA Administration Manual, Issue 4/B 31.03.2000
COL-RIBRE-MA-0037-00	DADIMA Introduction Manual, Issue 3/- 4.4.1997
CGS-RIBRE-SUM-0005	DADIMA Reference Manual, Issue 01/- 09.11.2001
CGS-RIBRE-SUM-0006	DADIMA Administration Manual, Issue 01/- 09.11.2001
COL-RIBRE-MA-0046	SID Range Tool Users and Operations Manual, Issue 1/- 15.09.1997
UM-114-001-ROV	GWDU User's Manual and Operations Manual, Issue 1.4, 1999

2.3 Reference Manuals

CGS-RIBRE-STD-0001	User Control Language (UCL) Reference Manual, Issue 2/C, 20.02.2005
CGS-RIBRE-STD-0002	High Level Command Language (HLCL) Reference Manual, Issue 2/ C, 20.02.2005
CGS-RIBRE-STD-0003	Virtual Stack Machine and I-Code Reference Manual, Issue 2/A, 01.09.2004
COL-RIBRE-STD-0008	Reference Manual for Crew Procedure Language and Software, Commanding, Issue 1/F, 31.10.2001

2.4 Requirements Specifications

CGS-RIBRE-SPE-0001	Columbus Ground System (CGS) Requirement Specification, Issue 2/D, 23.03.2004

2.5 Design Documentation

COL-RIBRE-ADD-0006	Columbus Ground System (CGS) Software Architectural Design Document, Issue 4/B, 30.10.1998

2.6 Interface Definitions

CGS-RIBRE-ICD-0001 System to CGS ICD, Issue 1/-, 31.01.2002

3 Release Overview

3.1 CCU Version Identification

This CGS SW Release provides no mission database content.

3.2 Integrated Products

In following table all SW components are identified necessary to build this release of the CGS SW.

- CGSI
- CLS
- DBS / Command History
- GWDU
- HCI
- MDA / CGS_MBD_V6_2_0
- TES
- TEV
- TSCV
- TSS
- CGS_API

3.3 Release Media & their Contents

The VTC SW System is delivered on a as being identified in Table 1.

Data Carrier ID	*Title / Contents*	*Receiver*
CGS-RIBRE-DC-0114	*CGS_6.2.4 (Master)*	*Dcc*
CGS-RIBRE-DC-0115	*CGS_6.2.4 (Backup)*	*CGS CM*
CGS-RIBRE-DC-0116	*CGS_6.2.4 optional (Master)*	*Dcc*
CGS-RIBRE-DC-0117	*CGS_6.2.4 optional (Backup)*	*CGS CM*
CGS-RIBRE-DC-0118	*CGS_6.2.4 Test SW (Master)*	*Dcc*
CGS-RIBRE-DC-0119	*CGS_6.2.4 Test SW (Backup)*	*CGS CM*

Table 1 : Identification of Data Carriers

This delivery contains online documentation only.

3.4 Identification of the Generation and Test Environment

The CGS SW Generation environment is described in chapter 5 of the release notes of ref. [AD 2.1].

This version is internal identified by PDB checkpoint CGS_6.2_B23**.**

4 SW Release Status

4.1 Release Status

The release status as defined by the SRO [AD 2.1.1.] is:

ENGINEERING RELEASE

4.2 Commercial Baseline

- ✓ Suse Linux Enterprise Server 8 / ServicePack3
- ✓ Oracle 9.2.0.5
- ✓ Gipsy 4.2.2 based on glibc 2.2 (with patch for call pr-3437)
- ✓ Dataviews 9.9
- ✓ CGS API with gnat 5.0.2a
- ✓ CIS CORBA Server with OrbRiver for Ada (CORBA 2.5, GIOP 1.2)

This CGS SW release shall be executed on Intel PC with SUSE Linux Enterprise Server 8 (SLES8) based environments.

4.3 Compatibility Statement

The software is based on CGS 6.2.3.

Due to the new privileges concept in CGS, some of the system library procedures are guarded. For compatibility reasons to earlier versions like CGS 5.1.1 (usage of generated UCL user library sources, …) the user is able to removes all key words '*guarded*' in the delivered CGS UCL system library sources without lost of functionality (except the checking of privileges).

4.4 New or Updated Components

All software components are updated.

4.5 New features in CGS_6.2.4

What's new in CGS_6.2.4 (in different to CGS 6.2.3)?

1. CGS BASELINE

- CGS is use now Gipsy 4.2.2 based on glibc 2.2

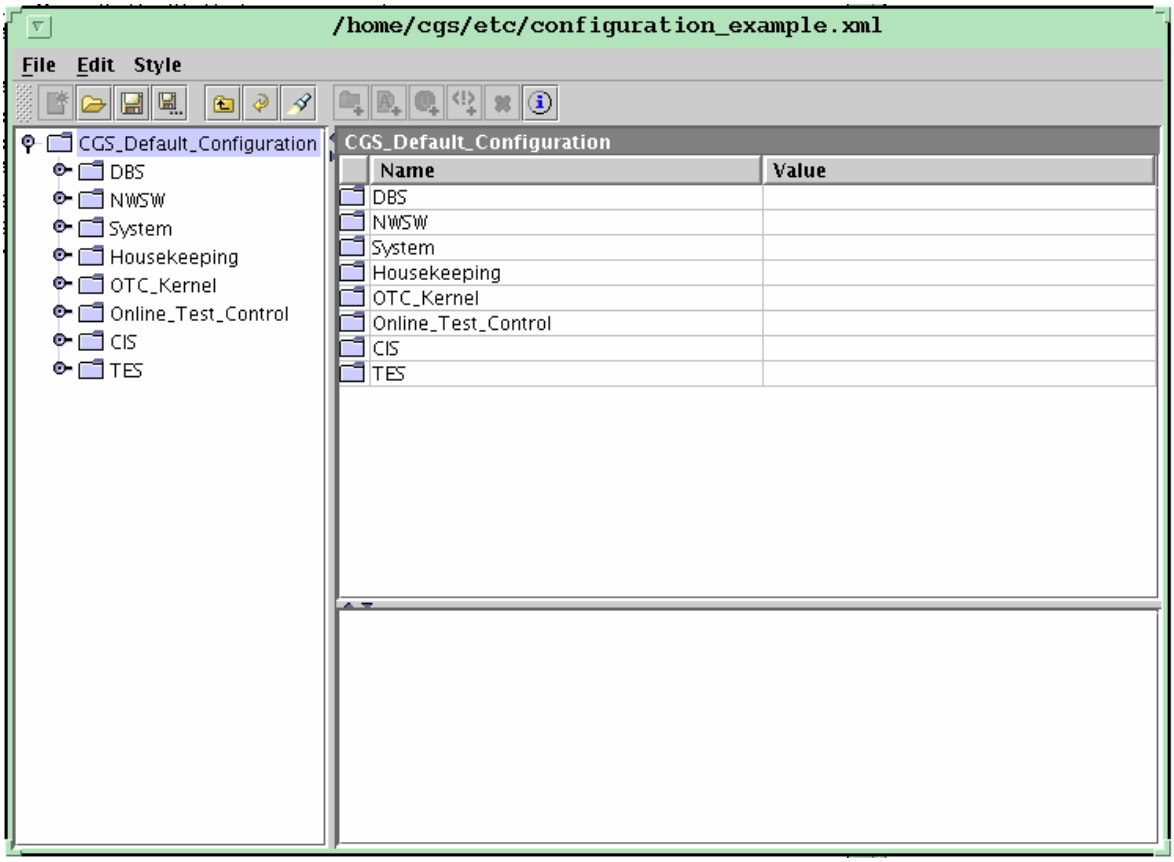
2. CGS CONFIGURATION

- The configuration for the products HCI, CIS and TES has been changed. They are using now a common configuration file, which can be changed by graphical means.

  ✓ $CGS_HOME/gsaf/config/bin/configuration_editor [-admin] <File>

  example: $CGS_HOME/gsaf/config/bin/configuration_editor $CGS_HOME/etc/configuration_example.xml.

  This file contains the CGS default configuration for documentation purposes.



Remark: The entries and changes in the configuration_editor must be confirmed with <Enter>

- CGS provide a converter to convert the old configuration files into the new one. The current actual settings in $CGS_HOME/etc, $CGS_HOME/local/config and

$HOME/.cgs/config for configuration files cis-properties.xml, otc-properties.xml and TES_CONFIG_FILE will be converted during installation of CGS.

- CGS provide a general script to convert different product configuration files into one or special executables for the different products.

  ✓ $CGS_HOME/gsaf/cgsi/bin/util/common/convert_config_files.sh

  ```
  Usage: convert_config_files.sh  -cis <cis_config_file_name> | -hci
  <hci_config_file_name> | -tes <tes_config_file_name> <config_file_name>
  ```

  ✓ $CGS_HOME/gsaf/cgsi/bin/linuxi/tes-convert_tes_props_to_cgs

  ```
  Usage: convert_tes_props_to_cgs <file_to_convert>
  <new_configuration_file> | -help | -list
         file_to_convert        - the file you want to convert
         new_configuration_file - the file you want to merge to, or a new
                                  file
         -help                  - print help text
         -list                  - list the old and new config parameter
                                  names
  ```

  ✓ $CGS_HOME/gsaf/cgsi/bin/linuxi/otc-convert_otc_props_to_cgs

  ```
  Usage: otc-convert_otc_props_to_cgs <otc-properties.xml>
  <configuration.xml> [cis|otc]
  ```

- Due to using of delivered style sheet $CGS_HOME/etc/configuration.xsl the configuration can be visualized in a browser.

3. UCL NICKNAME STRING CONVERSIONS

- Now it is possible to print out the nickname (alias name) of a pathname variable in UCL/HLCL (see section 4.9.4.3 of UCL RM 2/C)

  ✓ pathname string (Path_Variable) -> \some\path\name
  ✓ alias string (Path_Variable)   -> xyz (if xyz is the database alias of \some\path\name)

4. SYSTEM LIBRARY PROCEDURE LOAD_UCL IS OBSOLETE

- The ground_library system library routine load_ucl is obsolete. A TES error message like

  ✓
  ```
  UCL_Load not implemented
  UCL system library routine UCL_Load not implemented, use UCL Browser in
  Online Test Control instead!
  ```

will appear during usage. In HLCL the UCL_RETURN status 103 will appear:

✓
```
HLCL: LOAD_UCL \ABC\XYZ
STATUS = 103
HLCL: put status_string(103)
NOT_IMPLEMENTED: Addressed procedure/function is not yet implemented in
the executing software.
```

5. IMPROVEMENT FOR PROCESS CONTROL IN TSCV

- The status information for TES, HCI and CIS in the TSCV main window has been improved. A process to process communication was established, so the displayed status information are up to date and correct now. The update interval is configurable in $CGS_HOME/etc/tscv_configuration_file.dat with parameter NODE_STATUS_UPDATE_INTERVAL. The recommended value is each 5 seconds.

6. CIS USE HOSTNAME INSTEAD OF IP ADDRESS IN GENERATION OF IOR

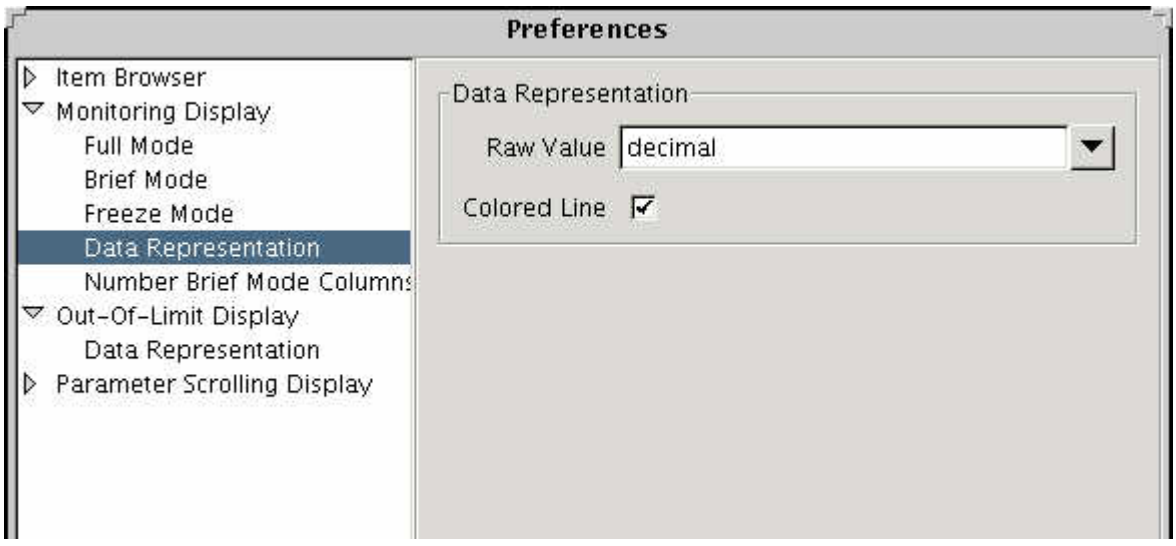
- The CGS interface server (CIS) is using for the IOR generation the hostname per default instead of the IP address. This configuration can be changed by CGS configuration parameter CIS.CorbaInterface.IIopUseHostnames (see point 2 of this section).

  ✓ CIS.CorbaInterface.IIopUseHostnames = TRUE => use hostname = Default
  ✓ CIS.CorbaInterface.IIopUseHostnames = FALSE => use IP

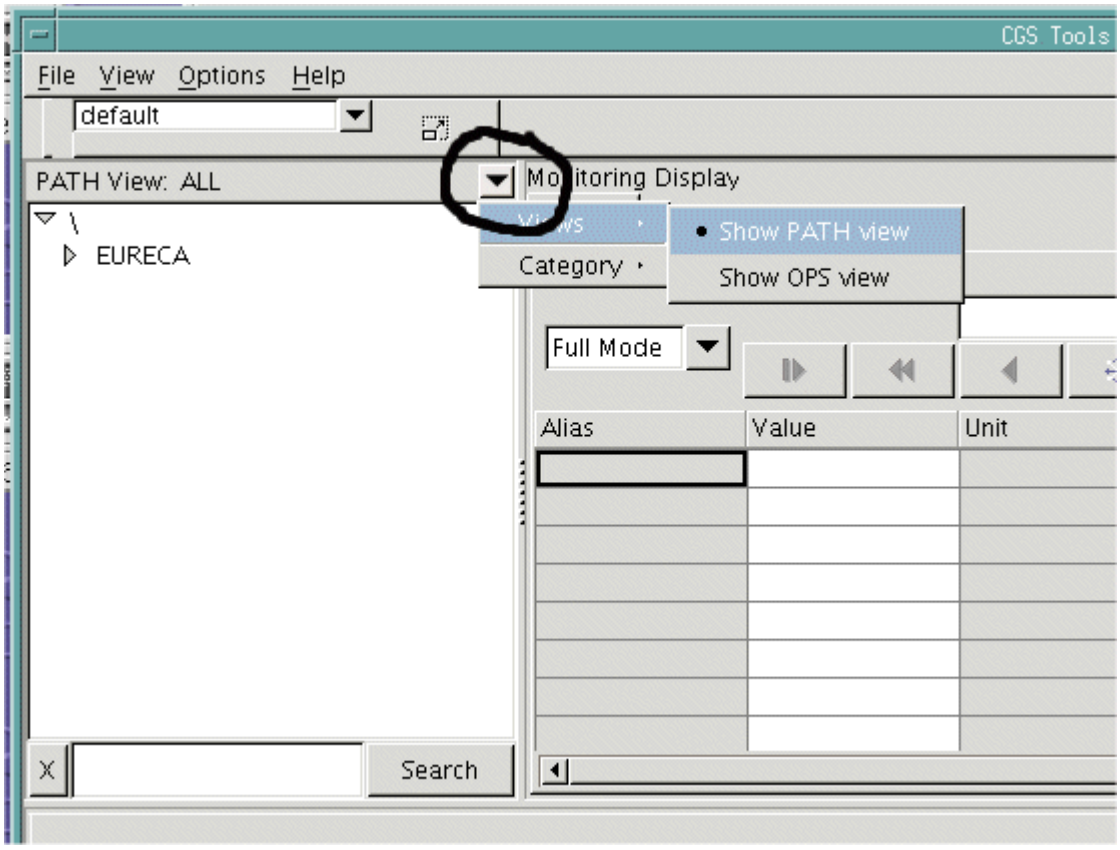
7. IMPROVED CONFIGURATION OPTIONS FOR CGS TOOLS

- It is possible to reconfigure the CGS Tools Monitoring Window and / or Out of Limit Display, that only the value field is coloured in case of monitoring limit violations (part 1 of SPR 16593).

  ✓ To select coloring of the engineering value only, select Options/Preferences... on CGS Tools. On the Preferences dialog, select Monitoring Display/Data Representation and uncheck the Colored Line box. Same applies for Out-Of-Limit Display.



  ✓ The preferences for Keymap and View Options are now directly below "Item Browser" instead of having their own items (see marked selection button).



8. IMPROVED COMMAND HISTORY OUTPUT

- It is possible to control the command history remotely to have more debug output or statistics information. For this, it is necessary to install dbs from the optional CD before (see installation steps 5.2.2). The remote control script is named command_cmd_history.csh in the directory $CGS_HOME/gsaf/dbs/util/common/command_history after installation. A description of available commands is in the README file in same directory.

4.6 SW Problem Status

4.6.1 SPR Status and Impact Analysis

For this release 53 SPR's are solved.

ID	TITLE
SPR-12308	Missleading parameter name in TES configuration file
SPR-14330	TEV: Exception X_PARMS_DO_NOT_FIT_IN_LANDSCAPE_WIDTH
SPR-14472	Synoptic display not sized to frame in HCI (rarely)
SPR-15618	Memory Leakage for CGS Processes
SPR-15688	HCI and TSCV: One process remains
SPR-16242	Digits graph incorrect after Edit->Value
SPR-16469	UCL Compiler: FATAL_ERROR when using Min function
SPR-16533	Error during parallel HLCL sequence execution
SPR-16573	Performance problem when displaying synoptic
SPR-16577	AP start from HLCL too slow
SPR-16593	JOTC Monitoring Window: Improvements
SPR-16603	Warm start failed with 'corrupted item' message
SPR-16717	Cannot quit TSCV after CGS shutdown
SPR-16756	Consistency check for uniqueness of Activity ID within an activity block not working
SPR-16794	TEV: Constraint_Error from 'Listing in one shot'
SPR-16797	'TSS Error' at begin of replay session
SPR-16843	TEV: 'Too long filename' message for empty list of files
SPR-16904	Misleading cursor shape
SPR-16929	PCS_COMM error: UNABLE_TO_RESOLVE_ENVIRONMENT_VARIABLE
SPR-100005	HCI display stacking order not correct in synoptics.
SPR-100026	Command history retrieval performance
SPR-100027	Command history retrieval performance
SPR-100032	Incorrect CSV Files
SPR-100036	CMd History access failed after Client Reboot
SPR-100042	Synoptic Display: Initial Refresh Problem
SPR-100050	install_user script for CGS V6 limitation
SPR-100058	Wrong C format string for text dynamic.
SPR-100059	AP scope info not updated during reload
SPR-100075	Monitoring window shows incorrect limit sets
SPR-100082	LAYOUT_ERROR raised during CIS shutdown
SPR-100104	Manual Stack (MCS Tools) cannot connect to Command History
SPR-100110	CIS not terminated when switching user (Holzmichl strikes again)
SPR-100111	CIS logfile not accessible as fct user - startup failed
SPR-100115	mcs-dbs error and warning messages, commanding after CS failover.
SPR-100116	I_MDB import fails in case of different MDB versions

SPR-100121 Entries in CMD History Report not ordered correctly
SPR-100126 The upgrade from CGS 4.5 to CGS 6.2 fails for SWEUs
SPR-100128 Out-of-date items after CLS batch compile
SPR-100142 Session.UnregisterService not working
SPR-100144 MTL node filter not handled correctly
SPR-100154 NWSW doesen't reuse file-descriptors in case of connection problems
SPR-100160 vicos_cis crashed/terminated on the mcs-ctm - new problem with same behaviour
SPR-100161 CIS: new Corba & TGX error ... CIS terminated on client
SPR-100163 CIS to use hostname instead of ip address in generation of IOR
SPR-100164 TEV does not delete temporary Files
SPR-100176 Replace CGS Tools logo by new CGS logo
SPR-100177 Status Flags are overwritten by value in synoptic displays
SPR-100182 CIS constraint error when requesting more than 900 items
SPR-100185 CIS crash during TP60
SPR-100186 ORACLE error during INIT_EXECUTION_SESSION
SPR-100208 CommandHistory does not set LAST_FILE flag
SPR-100214 CGS Tools monitoring window does not refresh all occurances of end-items in display
SPR-100245 CGS Tools doesn't start

4.6.2 Temporary fixed Problems

- SPR-16944

  Problem:

  The UCL system libraries BINARY_FILE_IO and TEXT_FILE_IO provide direct file i/o to the CGS users. A file (opened via CGS/TES) keeps open even if the AP (which has opened the file) terminates and the file was not closed properly, e.g., by aborting a running AP. The users cannot re-open or accessing an already opened file. The only way to close files which were not closed properly is to terminate the CGS/TES unix process.

  Workaround:

  Insert in specification of BINARY_FILE_IO and TEXT_FILE_IO following lines:

```
------------------------------------------------------------------------
-- CONSTANTS
------------------------------------------------------------------------

constant HANDLE_IN_USE : UCL_RETURN := 200;

-- temporary solution for SPR-016944
-- This return values is given for procedure open, create or append,
-- if this file was already opened and the handle may be in use.
```

  After the changes recompile all depend sources. The procedures open, create or append return status 200 (HANDLE_IN_USE), if the named file was already opened and the returned handle may be in use. This is a temporary fix only to overcome the lost handles during UCL-AP crashes.

  Remark: It is not guaranteed, that this constant will be useable in future versions.

4.6.3 Further Open Problems

- performance of executing HLCL sequences or starting of UCL automated procedures
  If the performance of executing HLCL sequences in HLCL command windows or synoptic displays or starting of UCL automated procedures slower than you are expected try to change a configuration parameter.

  insert in $CGS_HOME/etc/login.sh:
  export CLS_DH_NO_TREE
  CLS_DH_NO_TREE="TRUE"

  insert in $CGS_HOME/etc/login.csh:
  setenv CLS_DH_NO_TREE TRUE

  This configuration settings are temporary for this CGS version.

4.6.4 Known Restrictions

- It is not possible to prepare a telecommand (SWOP, FLAP, PUS_TC, and TC) via CIS, if this telecommand is defined with garded parameters in the parameter lists.

4.7 Test Status

This CGS SW release shall be executed on Intel PC with SUSE Linux Enterprise Server 8 (SLES8) based environments. The test status is CGS - AIV tested.

5 Installation Procedures

This software shall be used on Intel PC with SUSE Linux Enterpriser Server 8 (SLES8).

5.1 Complete Installation

For a complete installation follow the instructions of CGS installation manual ref. [AD 2.1].

Remark: The actual CGS installation manual is on CD below /<mountpoint>/doc/manual.

5.2 Patch Installation (based on CGS 6.2.3)

For a patch installation follow the next instructions:

5.2.1 Needed passwords

- <cgsadmin> (UNIX user)
- <MDB_ADM> (oracle user)

5.2.2 Installation steps

```
1. login as <cgsadmin> on DB server host

2. cgs shutdown via task_selector

3. quit task_selector

4. terminate the cgs_daemon
   in shell: killall -9 cgs_daemon

5. stop command history (on command history server)
   in shell: $CGS_HOME/gsaf/dbs/bin/common/stop_cmd_history
   in shell: $CGS_HOME/gsaf/dbs/bin/common/stop_central_distributor

6. Remove obsolete jar files
   in shell: rm -f $CGS_HOME/gsaf/cgsi/lib/common/*

7. install GIPSY 4.2.2

8. insert CGS basic CD CGS_6.2.4

9. mount CD

10.  install all products from CD
     in shell: /<mountpoint>/installer.sh

     Select Continue, Continue, Install,          -- for CGS
            Previous, TOOLS,   Continue, Install  -- for TOOLS
            Exit

11.  unmount CD

12.  register version
```

in shell: vit_manager -upd_item cgs VERSION 6.2.4

13. insert CGS optional CD CGS_6.2.4
REMARK: This and the next four steps are optional.

14. mount CD

15. install all optional products from CD
in shell: $CGS_HOME/gsaf/config/bin/installer.tcl

Continue

Select for **Installation Source** path /<mountpoint>/gsaf

Continue, Install, -- for CGS optional
Previous,

Select for **Installation Source** path /<mountpoint>/addon

Continue, Install -- for add-ons (unsupported)
Exit

16. unmount CD

17. register version
in shell: vit_manager -upd_item cgs_optional VERSION 6.2.4

18. update the MDB / MDB stored procedures
in shell:

$CGS_HOME/patches/CGS_6.2.4/patch_mdb.sh

-- needs ca. 2 minutes

verify output: MDB patch successfully installed

REMARK: The next command is only necessary for an update of the internal data structure of the MDB (e.g. new data structure delivery for extended databases (user defined data types)). During initialization all user entries in the flexible tool invocation and flexible reports are deleted.

This command is optional and the usage shall be decided by projects.

$CGS_HOME/gsaf/mda/config/mdb/install/admin_scripts/initialize_mdb

$CGS_HOME/gsaf/mda/config/mdb/install/admin_scripts/update_plsql_stored_procedures

REMARK: The next command is only necessary for a better performance of MDB access.

This command is optional and the usage shall be decided by projects.

$CGS_HOME/gsaf/mda/config/mdb/install/admin_scripts/gather_mdb_stats

19. update your NODE_STATUS_UPDATE_INTERVAL in
$CGS_HOME/etc/tscv_configuration_file.dat (recommended value 5)

20. reboot server and if the server is ready, reboot all clients

6. Acronyms

CCU	*Configuration Control Unit*
CGS	*Core Ground SW*
MDBD	*Mission Data Base Data*
PDB	*Project Data Base*
SW	*Software*