

# CADD5<sup>®</sup> 5i Release 14 Release Notes

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December 2005

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# Preface

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*CADDS 5i Release 14 Release Notes* include:

- System Considerations for UNIX and Windows
- Tips
- Considerations

## Related Documents

The following documents may be helpful as you use *CADDS 5i Release 14 Release Notes*:

- *Installing CADDS 5i*
- *CV-DORS User Guide*
- *What's New in CADDS 5i Release 14*
- *Using the License Manager*

## Book Conventions

The following table illustrates and explains conventions used in writing about CADD5 applications.

Convention	Example	Explanation
Menu selections and options	List Section option, Specify Layer field	Indicates a selection you must make from a menu or property sheet or a text field that you must fill in.
User-selected graphic location	X, d <sub>1</sub> or P1	Marks a location or entity selection in graphic examples.
User input in CADD5 text fields and on any command line	<code>cvaec.hd.data.param</code> <code>tar -xvf /dev/rst0</code>	Enter the text in a CADD5 text field or on any command line.
System output	<code>Binary transfer complete.</code>	Indicates system responses in the CADD5 text window or on any command line.
Variable in user input	<code>tar -cvf /dev/rst0 filename</code>	Replace the variable with an appropriate substitute; for example, replace filename with an actual file name.
Variable in text	<b>tagname</b>	Indicates a variable that requires an appropriate substitute when used in a real operation; for example, replace <b>tagname</b> with an actual tag name.
CADD5 commands and modifiers	INSERT LINE TANTO	Shows CADD5 commands and modifiers as they appear in the command line interface.
Text string	"SRFGROUPA" or 'SRFGROUPA'	Shows text strings. You must enclose text string with single or double quotation marks.
Integer	<i>n</i>	Supply an integer for the <i>n</i> .
Real number	<i>x</i>	Supply a real number for the <i>x</i> .
#	<code># mkdir /cdrom</code>	Indicates the root (superuser) prompt on command lines.
%	<code>% rlogin remote_system_name -l root</code>	Indicates the C shell prompt on command lines.
\$	<code>\$ rlogin remote_system_name -l root</code>	Indicates the Bourne shell prompt on command lines.

## Window Managers and the User Interface

According to the window manager that you use, the look and feel of the user interface in CADD5 can change. Refer to the following table:

**Look and Feel of User Interface Elements**

User Interface Element	Common Desktop Environment (CDE) on Solaris, HP, and IBM	Window Manager Other Than CDE on Solaris, HP, IBM, and Windows
Option button	ON — Round, filled in the center OFF — Round, empty	ON — Diamond, filled OFF — Diamond, empty
Toggle key	ON — Square with a check mark OFF — Square, empty	ON — Square, filled OFF — Square, empty

## Online User Documentation

Online documentation for each book is provided in HTML if the documentation CD-ROM is installed. You can view the online documentation in the following ways:

- From an HTML browser
- From the Information Access button on the CADD5 desktop or the Local Data Manager (LDM)

Please note: The LDM is valid only for standalone CADD5.

You can also view the online documentation directly from the CD-ROM without installing it.

From an HTML Browser:

1. Navigate to the directory where the documents are installed. For example,
  - `/usr/apl/cadd5/data/html/htmldoc/` (UNIX)
  - `Drive:\usr\apl\cadd5\data\html\htmldoc\` (Windows)
2. Click `mainmenu.html`. A list of available CADD5 documentation appears.
3. Click the book title you want to view.

From the Information Access Button on the CADD5 Desktop or LDM:

1. Start CADD5.
2. Choose Information Access, the *i* button, in the top-left corner of the CADD5 desktop or the LDM.
3. Choose DOCUMENTATION. A list of available CADD5 documentation appears.
4. Click the book title you want to view.

From the Documentation CD-ROM:

1. Mount the documentation CD-ROM.
2. Point your browser to:  
CDROM\_mount\_point/html/doc/mainmenu.html (UNIX)  
CDROM\_Drive:\html\doc\mainmenu.html (Windows)

## Online Command Help

You can view the online command help directly from the CADD5 desktop in the following ways:

- From the Information Access button on the CADD5 desktop or the LDM
- From the command line

From the Information Access Button on the CADD5 Desktop or LDM:

1. Start CADD5.
2. Choose Information Access, the *i* button, in the top-left corner of the CADD5 desktop or the LDM.
3. Choose COMMAND HELP. The Command Help property sheet opens displaying a list of verb-noun combinations of commands.

From the Command Line: Type the exclamation mark (!) to display online documentation before typing the verb-noun combination as follows:

```
#01#!INSERT LINE
```

## Printing Documentation

A PDF (Portable Document Format) file is included on the CD-ROM for each online book. See the first page of each online book for the document number referenced in the PDF file name. Check with your system administrator if you need more information.

You must have Acrobat Reader installed to view and print PDF files.

The default documentation directories are:

- /usr/apl/cadd5/data/html/pdf/doc\_number.pdf (UNIX)
- CDROM\_Drive:\usr\apl\cadd5\data\html\pdf\doc\_number.pdf (Windows)

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## Documentation Comments

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# System Considerations

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This chapter provides system considerations for CADD5 5i Release 14 in the following areas:

- What's New in CADD5 5i Release 14
- Web Sites
- Post-installation Considerations
- CADD5 and Optegra Compatibility
- XML Parser
- Supported Oracle Versions — UNIX
- Setting Up the New License File

## What's New in CADD5 5i Release 14

You can view the What's New document in HTML format in the new Java HTML browser.

If you have an old `.caddsrc-local` file, set the variable `CADD5_SHOW_WHATS_NEW<nn>` to `yes` in the `.caddsrc-local` file to see what is new in CADD5 5i Release 14. The value of `<nn>` is replaced by the current release number. The variable is set as follows:

```
setenv CADD5_SHOW_WHATS_NEWR14 yes
```

## Web Sites

The main Web site for Parametric Technology Corporation is  
<http://www.ptc.com>.

### Accessing Open or Resolved Issues

To search and view reported issues that are specific to a release, follow these steps:

1. Access <http://www.ptc.com/support/support.htm>.
2. Search for Technical Application Notes under Search the Knowledge Base or Track Technical Application Notes (TAN).

To access the search tool, you must have an account with PTC. To open an account go to <http://www.ptc.com/support/support.htm>, click sign up here, or call PTC Customer Service. For details on PTC Customer Service worldwide, see [http://www.ptc.com/company/contacts/tech\\_support.htm](http://www.ptc.com/company/contacts/tech_support.htm).

## Post-installation Considerations

Ensure that Java and Java Script support is turned on in Netscape Navigator 4.06. To enable these features used by Help and Toolkit Wizard documentation, follow these steps:

1. From the Edit menu, click the Preferences option to display the Preferences window.
2. Click the Advanced option in the Preferences window.
3. Select the Enable Java and Enable Java Script options.

Please note: On the IBM RS6000 platform, after installing Help, verify that the environment variable `MOZILLA_HOME` is set to the complete path of the `MOZILLA_HOME` directory. This directory contains the Netscape executable. If this environment variable is not set correctly, Netscape does not find all the files required to operate correctly.

# CADD5 and Optegra Compatibility

EPD-Enabled CADD5 5i for Release 14 works only with Optegra 8 and not with the earlier Optegra versions.

## XML Parser

CADD5 uses XML parser software in C++ and Java developed by the Apache Software Foundation (<http://www.apache.org/>). Source and binary codes for the software can be found at <http://xml.apache.org>.

## Supported Oracle Versions — UNIX

For CADD5 5i Release 14, Oracle 10g Release 2 (10.2.0.1.0) is supported on all platforms.

## Setting Up the New License File

You must set up a license file for revision 10 of the License Manager before running CADD5. The new FLEX $lm$  license daemons work with the current license files.

### Commands for Obtaining Host IDs

To obtain the host ID for an HP platform, type the following command:

```
echo `uname -i` 160 p | dc (754380)
```

### Setting Up Dual Display

To enable Dual Display for CADD5, you must have a 5910 license in the license file. The 5910 license is available with CC5-CV6528-F (CADD5 EPD.Connect Dualscreen Activation).



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This chapter provides tips for working efficiently in CADD5 5i Release 14 in the following areas:

- General CADD5
- CVMAC
- Interactive Surface Designing
- CADD5 Database
- CADD5 on Windows

## General CADD5

### Windows XP

On the Windows XP operating system, if the splash screen is not visible and the following error message appears in the startup session, ignore the error. CADD5 5i starts successfully.

```
Exception in thread "main" java.lang.NpClassDefFoundError::
```

### DATASHOP GUI for the IGES Translator

When you start the IGES translator, the DATASHOP GUI for CADD5 5i Release 14 on Windows produces the following error message:

```
Error: Can't open display: system:0.0
```

To avoid this error, load the Xserver from the CADD5 5i CD-ROM and start Hummingbird's Exceed X Server 9.0 before starting the DATASHOP GUI on Windows.

The Xserver environment is required for the DATASHOP GUI to function.

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# CVMAC

## CVMAC ACTPRT Command

When issuing the ACTPRT (Activate Part) command from CVMAC, the Activate Old or New Drawing menus are not displayed. You must use the ACTDRA (Activate Drawing) command after an ACTPRT command in CVMAC for activating an old or new drawing.

## CVMAC CALLF Functions

When using the CALLF function in CVMAC, use the charconvtosys() function to convert a character string to a system-specific character string. Similarly use the charconvfromsys() function to convert a system-specific character string to a character string format.

## UNIX Format for Text Files

Text files created using CVMACS on CADD5 5i Release 14.0 on the Windows platform are created in DOS format, which is not compatible with CVNC programs. Set the following environment variable in the .caddsrc-local file to convert the text files in DOS format to UNIX format.

```
NT_TXTOUT_FORMAT UNIX
```

## Interactive Surface Designing

Nsurfaces created with degree 3 in the u-direction and v-direction on CADD5 5i Releases 9, 10, and 11 may fail to regenerate on CADD5 5i Release 14. In such cases, edit the command used for creating the surface and recreate these surfaces on Release 14.

## CADD5 Database

A View Part entity (entity 90) added to the database for the HLR and CAMU modules can cause an increase in database size. It can also cause database fragmentation when several View On or Off operations are performed. You can avoid filing the View Part entity into the database both in the Part mode and Assembly mode on CADD5 5i Release 12 and later.

### Part Mode (Multipart Access)

Execute the VIEW PART OFF ALL command before filing and exiting the part in Multipart access. This will remove all View Part entities from the database. Execute the CHECK DBASE command to pack the database and remove fragmentation. You can then file the checked part.

### Assembly Mode

Use the FILE & EXIT option from the top menu bar. If you file and exit the part separately by selecting the FILE ASSEMBLY option followed by the QUIT & EXIT option, the View Part entity is filed in the database.

# CADD5 on Windows

## Installing CADD5 5i Release 14 on Windows

This section describes the following:

- Removing the Previous Version of CADD5
- Installing CADD5 5i Release 14

## Removing the Previous Version of CADD5

Follow the procedure below before you install CADD5 5i Release 14 on a windows machine on which a previous version of CADD5 is installed.

1. Remove the previous ONC portmapper by typing the following command in the command window:  

```
portmap -remove
```
2. Uninstall the following applications in the order listed, using the Add/Remove Programs option on the Control Panel.
  - CADD5 5i
  - MKS Platform Components 8.x
  - Hummingbird Exceed 3D
  - Hummingbird Exceed
3. Remove the perl5 from the location where CADD5 5i perl5 is previously installed, since CADD5 5i Release 14 includes a new version of perl5. Generally, this location is C:\.

## Installing CADD5 5i Release 14

Follow the procedure below to install CADD5 5i Release 14.

1. Disable any firewalls running on the machine.
2. CADD5 5i Release 14 includes a new version of the Xserver. You must install both CADD5 5i and the X Server from the CADD5 5i Release 14 CD-ROM.
3. If you get the following warning message while installing CADD5, then install the ONC portmapper separately by issuing the command `portmap -install` on the command window after the CADD5 setup is completed.

```
Failed to register with Service. Make sure the Service is running
```

## Functionality Supported on Windows

This release of CADD5 provides the following capabilities on Windows:

### Parametric Modeling

- Java-based Tree Navigation Tool
- ISD (Interactive Surface Design)
- Sketcher

### Explicit Modeling

- Drafting and Dimensioning
- Hidden Line Removal (HLR)
- Sectioning
- Associative Topology Bus
- Physical Properties
- CVNC M2
- CVNC M3
- Basic Shading
- Image Design
- CGM Plotters
- Compatibility between CVMACS and CVNC

### Databases

- Automatic DB Validation
- Explicit view part
- Drawing update in Parametric file part

### Assembly

- Displaying a CAMU assembly tree
- CAMU — displaying Java-based assembly tree

### CVNC

- T2, M2, M3, M3, M5

- CVGP11 support

## General

- JDK version 1.4.2 and MKS Operating Environment
- CADD5 5i ISSM
- Enhanced mouse dynamics
- Setting layer colors automatically
- Importing Pro/ENGINEER TIMs converted from CATIA
- Using additional commands in the TIS window
- Maximum instances of an active part for viewing
- Importing Explicit entities into Parametric environment

## New APIs to Support

- CV-DORS
- CADD5 5i ISSM

## AEC Shipbuilding

- ASM (Advanced Structural Modeling)
- Piping Modeling



# Considerations

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This chapter provides considerations for this release of CADD5 in the following areas:

- ATB-Enabled CADD5 5i
- Graphics
- CVNC
- Database Migration
- Retired Products

## ATB-Enabled CADD5 5i

### ATB Features Not Supported for This Release

- When you update a CADD5 5 TIM assembly, the assembly features created on the parent Pro/ENGINEER assembly are not updated.
- The coordinate system created on the Pro/ENGINEER side is not updated on the CADD5 side.

Please note: Datum features are not supported for conversion.

### ATB Transactions on an Active CADD5 Part

You can export an active CADD5 part to Pro/ENGINEER TIM. You can also verify and update the Pro/ENGINEER TIM part when the source CADD5 part is active. However, you can not update an active CADD5 5 TIM part. In this case, you should exit from the active CADD5 TIM part and then update it.

### Switching between Environments

Do not switch from the LDM environment and the desktop of CADD5 or from the desktop to the LDM environment of CADD5, when a part that you have selected is being checked to determine whether it is a Pro/ENGINEER part or a Pro/ENGINEER TIM part.

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# Graphics

## New Explicit Single Graphics Window Support

The new explicit graphics window provides the ability to shade or graphically perform hidden line removal for any surface, solid, or AEC application entity, such as pipes, structural objects, HVAC, and so on, within the same window as the traditional wire frame representation. On initial part or assembly activation the display is driven by the older graphics engine. This new single graphics window is enabled by default and CADDShade II is disabled. The rendering is performed using new commands, the details of which are available in *What's New in CADD5i Release 14, Explicit Modeling User Guide and Menu Reference* and other manuals. To revert to only using the older graphics mode and CADDShade II set an environment variable as follows:

```
setenv EXP_SINGLE_WINDOW no
```

The first phase of this two-phase project provides a fully capable design environment supporting all CADD5 explicit design applications relevant to the supported platforms. The second phase will support drawing, labeling, text, dimensions, plotting, and other manufacturing outputs available in the older graphics mode.

It is important to read *Database Policies and Procedures* to understand how to correctly migrate parts, figure libraries, and drawing forms from earlier releases of CADD5, either manually or using the tools provided for the migration.

The correct sequence to migrate old databases and the requisite tool is given below.

1. Drawing forms - Use `update_fig`
2. Library figures, starting with the lowest level figure for nested figures - Use `update_fig`
3. Standard library parts that are not figures - Use `update_gr`
4. Assemblies - Use `update_gr`

The new explicit single graphics window support capability is only available to customers with CADD5 Hybrid Modeling packages, that is, those packages that include the Parametric Modeling Application. The new explicit single graphics window support capability is not available at this time to customers with pure explicit packages.

## Unsupported Features

The new explicit graphics environment does not support the following at this time:

- Font appearance changes for line and curve entities
- Perspective views for the models
- ECHO ENTITY command
- PUT STL command
- Text font with proportional space modifier

## 3D View Clipping and Zoning

3D view clipping and zoning is supported only in the OGL graphics mode.

## Color Discrimination of Entities

In the new explicit graphics environment, the color discrimination of entities discriminated using the DISCRIMINATE ENTITY or COMPARE ENTITY command may not be retained when you switch between drawings.

# CVNC

## GPOST for CADD5 5

The GPOST for CADD5 5i postprocessor provides a complete solution for the generation of Machine Control Data (MCD) from CVNC CLFiles, for NC machine tools. You can install GPOST while installing CADD5 5i.

GPOST uses the binary version of the CLFile and an option file to generate an MCD file. The MCD file has the same filename as the CLFile and the `.tap` extension. The option file stores the postprocessing options required for the NC machine. GPOST reads the option file and configures GPOST's internal variable table before reading the CLFile. Thus, allows you to configure GPOST for your NC machine.

Using GPOST: Do the following before using GPOST:

1. Set the `PRO_DIRECTORY` environment variable to the path of the GPOST executable file. For example,
2. Set the `MC` environment variable to the type of the computer on which you are creating the option file. For example, for a Sun Solaris, type

```
setenv PRO_DIRECTORY <loadpoint>/usr/apl/ai
```

```
setenv MC sparc_5
```

Run GPOST using the following command:

```
cvgpost <absolute path to the CLFile> <option file>
```

GPOST creates the MCD file in the directory in which the CLFile exists.

Creating an Option File: In addition to the available standard option files, you can create your own files specific to your NC machine. To create your own files, perform the following steps.

1. Use the following command:  

```
$PRO_DIRECTORY/$MC/obj/optfile -sy:2
```

The Option File Generator appears.
2. Set the options for your NC machine and create the option file. For details, see the *G-Post Reference Manual*.
3. Set the `POST_DIR` environment variable to the directory containing the generated option file.

When you now run GPOST, you can use the generated option file.

## Constraints for the SURFINT5 Command

The following list outlines the constraints when using the SURFINT5 command for surface intersection machining in CVNC-M5:

- Collision checking is not available.
- When using flat-end or corner-radius tools to machine flat or convex surfaces, it is not always possible to predict the location of a contact point on the flat surface area. This can result in a rocking motion of the tool during machining. The part surface is not gouged, but the surface finish may suffer.
- The DEFRET4 and DEFPLUN4 commands do not work with the SURFINT5 command. Use the DEFPLUN5 and DEFRET5 commands with the SURFINT5 command.

Please note: The features and constraints mentioned in Chapter 10, “Machining Surface Intersections,” of the *CVNC-M5 User Guide* apply only to the SINTCUT4 command and not to the SURFINT5 command. The SURFINT5 command is discussed only in Chapter 9, “Surface Intersection Machining.”

## SHADE TOOL Command

The SHADE TOOL command is currently not supported for fastening tools.

# Database Migration

When migrating to a new release of CADD5, it is important to establish a baseline of part validity for parts and figures from earlier releases. It is also important to regenerate old drawing and shade files to be up to date with any changes in the part or graphics database. This can be done as follows.

1. Run `validate_db` or `CHECK DBASE` on the part using the earlier release of CADD5 to ensure that the part is clean on the earlier release.
2. Delete the drawing files (TVFs) and shade files (`_td`). Activate the part and all the drawings using the new release. Shade the part and save it.

You can perform the above actions on a batch of parts using the `update_gr` script for parts and the `update_fig` script for figures.

3. Run `validate_db` or `CHECK DBASE` on the part after saving it using the new release to ensure that the database is clean.

## Retired Products

Beginning with CADD5 5i Release 14, the following PTC products are no longer supported:

CADD5 Raster Mode	CC5-CV1050-F
Design Optimizer	CC5-CV3141-F
Advanced Optimizer	CC5-CV3142-F
CADD5 Composites	CC5-CV3160-F
CADD5 5 Advanced Composites Option	CC5-CV3162-F
Upgrade to CADD5 5 Advanced Composites Option	CC5-CV3162-UF

### CVGP II

As previously announced, CVGP II applications are not distributed with CADD5 5i from Release 14 onwards. However, you can still continue to use the CADD5 packages that previously contained CVGP II.

If you have any concerns or queries regarding these retirements, please contact PTC Technical Support or send e-mail to Marc Donoghue ([med@ptc.com](mailto:med@ptc.com)).