



Cadra 2004 Release Notes

SofTech is pleased to provide you with this Cadra Release. This release includes a number of enhancements in addition to some high priority corrections. This document will briefly review the new features and changes to Cadra. A summary of the installation process is also included toward the end of the document. The enhancements include:

1. Ability to read multiple Autogeometry RLB files at Cadra bootup.
2. All Cadra 2004 output files are compressed (on Windows and Unix).
3. New HPGL input translator
4. The clipping of geometry in AutoCAD viewports to the viewport boundaries is now optional.
5. New In-Place Figure Editing feature.
6. Ability to plot from the Show Figure page.
7. Output translators now handle existing enabled Cadra cutouts and detail views.
8. Increased the number of lines in the Kanji input window.
9. AutoCAD write translator enhancements.
10. Using AutoCAD text font mapping.
11. Multiple-Undo Enhancements.
12. CadraWorks now supports SolidWorks 2004 SP01.

New License Required

Cadra 2004 requires a new license. Please contact Cadra/SofTech Customer Service at 1-800-321-2372 if you need assistance in acquiring a new license.

Added the Ability to Have Floating Licenses Timeout

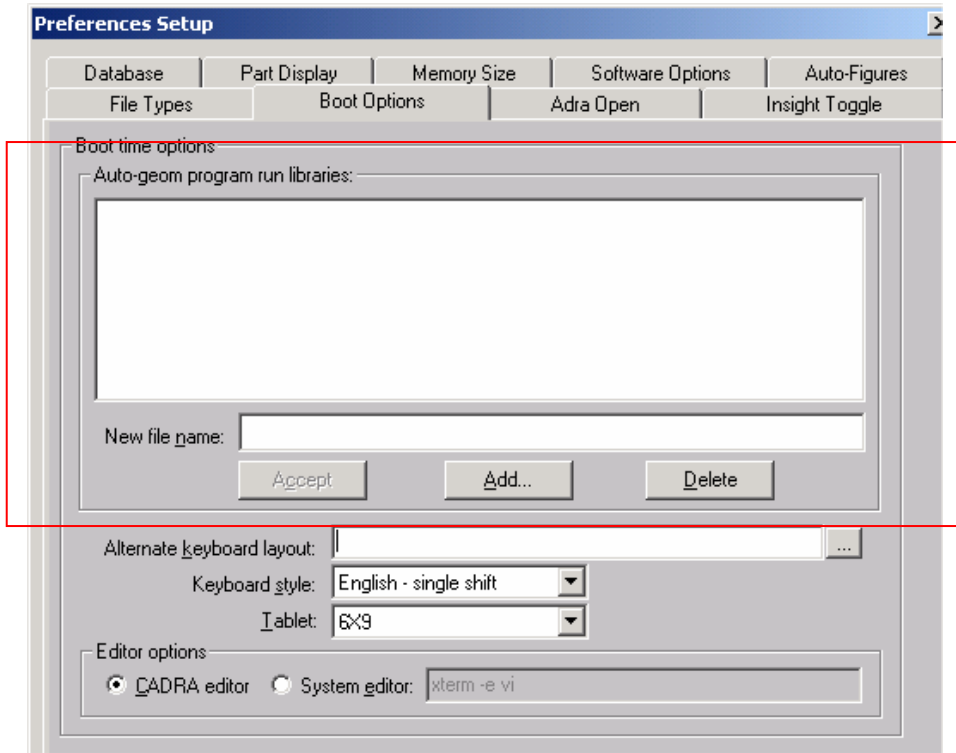
Floating Cadra licenses (either via Cadra FLM or Globetrotter FLEXlm) now time out after a specified period of time on the Windows platform. This time out capability has always been available in Cadra on the Unix platform.

The time out settings are different for the two licensing mechanisms. For Cadra FLM licensing, the time out time is set using the ADRA-NLS_TIMEOUT (or ADRA-NLS_LICENSE_TIMEOUT) value in the cadra.ini file. This setting specifies the number of minutes for the time out. The minimum value for this timeout is six minutes.

For Globetrotter FLEXlm the time out setting is added to an options file called softech.opt placed in the same directory as the FLEXlm .lic license files. The option is TIMEOUTALL and its value is specified in seconds. The minimum value for this timeout is fifteen minutes (900 seconds).

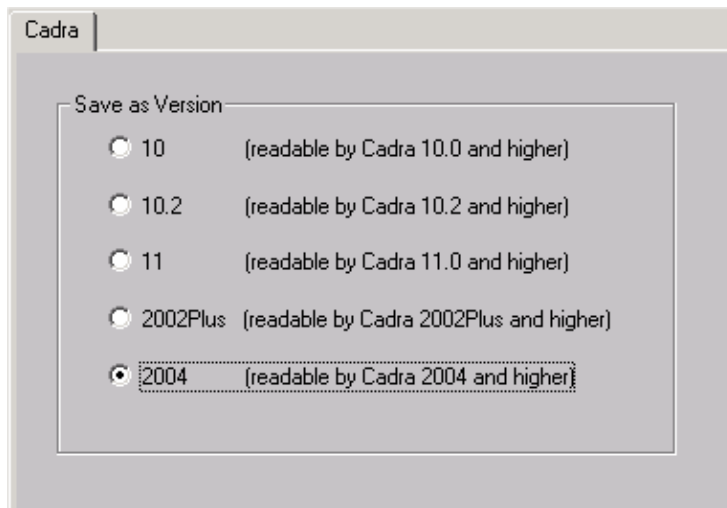
Ability to Read Multiple Autogeometry RLB Files at Bootup

It is now possible to specify multiple Autogeometry run library (RLB) files to be read in at Cadra bootup time. The **Boot Options** tab of the **Preferences Setup** dialog has been enhanced:



All Cadra 2004 Files are Compressed

All Cadra files saved to the current version are now compressed. This compression is automatic when saving to the current version (2004). This compressed format is platform independent so when Cadra 2004 is released on Unix it will also read and write this new compressed format. If you save a file as a pre-2004 version format file it will not be compressed. The Cadra Save As Options dialog has been changed to clarify the saving of older format Cadra files:



New HPGL Input Translator

A new HPGL input translator has been added to Cadra. This translator reads HPGL and HPGL/2 files into Cadra. The default extension for these files is **GL2**.

There is no options dialog for this translator. The HPGL translator will support all the entities used in the HPGL internal format. They will be translated into Cadra as follows:

1. Point → Point
2. Line → Line
3. Rectangle and Polygon → Linestring

4. Arc → Arc
5. Circle → Circle
6. Wedge → Arc + Linestring
7. Bezier → Spline
8. Label → Text
9. Hatch → XHatch
10. Pattern → Exploded into lines and points

All geometry will be translated into the TOP view and will be on layer zero. Note also that:

- a. All text will be written in the Cadra standard font. If the text is clipped by an HPGL cutout, it will be automatically exploded.
- b. Entity colors are preserved. Each entity read into Cadra will be assigned a color number corresponding to the color specified in the HPGL file. A color table will be defined in Cadra to match the colors defined in the HPGL file. If the number of colors is greater than 200, only the first 200 colors will be used to populate the Cadra color table. The colors above 200 will be matched to the closest color in the first 200.
- c. Line types and thickness are preserved. New line type table entries will be created in the Cadra line type table if necessary. Line thickness will be assigned to all input entities.

When reading a GL2 file into Cadra you may want to note the following:

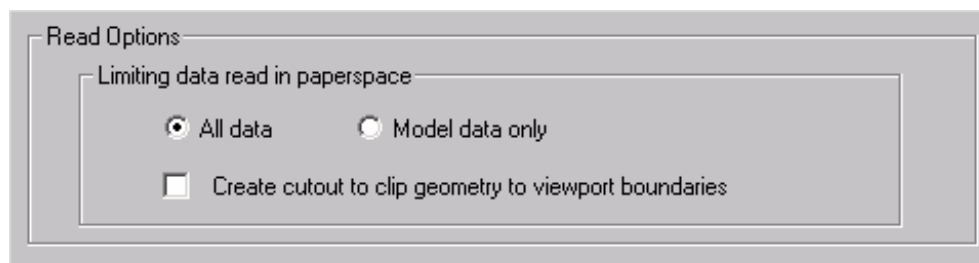
1. The HPGL file does not define the units of the geometry. Therefore you may want to set the database units prior to reading the file.
2. The HPGL file does not define Light, Medium and Heavy line widths. Therefore you may want to set these to desired values prior to reading the file.
3. When the HPGL file is read if lines are encountered which have the same width as Cadra has defined for Light, Medium or Heavy lines, the lines will be created in Cadra with those named widths. If lines have other widths they will be created in Cadra as Width Lines possessing the width specified in the file.

Clipping of AutoCAD Viewport Geometry is Now Optional

A new option has been added to the AutoCAD read file translator to allow specifying if the geometry in AutoCAD viewports should be clipped to the viewport boundary when read into Cadra. This viewport clipping was added in Cadra 2003. The clipping produces results that are closer to the appearance of these files in AutoCAD if viewports are being used.

If this clipping is desired then Cadra cutout entities are created in the viewports to do the clipping. If geometry in these viewports is subsequently changed (in Cadra) such that it would exceed the viewport boundaries and cutout clipping has been used the modified geometry will also be clipped. In these cases it may be desirable to disable or delete the Cadra cutouts. One way to accomplish this is to prevent their use when reading in the AutoCAD file.

This option has been placed on the DXF/DWG page of the **Translator Options** dialog (also displayed as the **Options** dialog when doing a **Save As** DXF or DWG file format). If the **All data** option is chosen then the **Create cutout to clip geometry to viewport boundaries** becomes available. If it is enabled Cadra cutouts will be created in the viewports and all geometry will be clipped to them. If it is disabled the cutouts will not be created and geometry that should be clipped will be displayed.



New In-Place Figure Edit Feature

A new feature has been added to allow the editing of figures while they are displayed in the drawing, e.g. without viewing them in isolation on the **Figure Show** page. With this new feature it is possible to add geometry to the figure by referencing the geometry in figure-instantiating view. Geometry can also be moved from the figure-instantiating view into the figure.

See **Appendix A - In-Place Figure Editing User Guide** at the end of this document. It provides more information about how to use this new feature.

Note that In-Place Figure Editing does not support draw mode figures and nested figures in this release.

Ability to Plot Figures from the Figure Show Page

It is now possible to plot internal (NOT external) figures when displaying them in the **Figure Show** page. Simply choose the **File/Plot** menu option when displaying a figure in the **Figure Show** page.

Output Translators Now Handle Cutouts and Detail Views

The AutoCAD (*.dxf, .dwg), CADAM Direct (.drt), IGES (*.dat) and CADAM/CATIA (*.cdd) output translators have been enhanced to handle Cadra cutouts and Cadra detail views.

These output formats do not support the concept of a cutout as Cadra does. Therefore the output produced in these formats does not preserve the original entities in their uncutout form. If these files are subsequently read back into Cadra the appearance will be preserved. However, the geometry in its uncut form and the cutout entities themselves will not be regenerated.

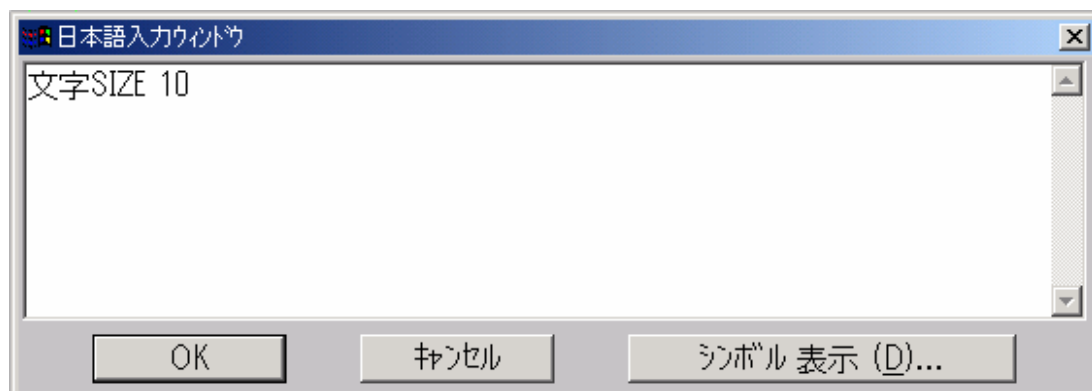
The output of entities cut by cutouts will occur only if cutouts are enabled (and their effects visible on the screen). If cutouts are disabled the entities that would have been affected by the cutout will be output as if they were not cut out.

Detail views will always be written out to the affected formats.

The cutouts added to figure definitions (details) are not currently handled.

Increased the Number of Lines in the Kanji Input Window

The Kanji Input window has been enhanced to default to displaying more lines of text and to be scrollable.



AutoCAD Write Translator Enhancements

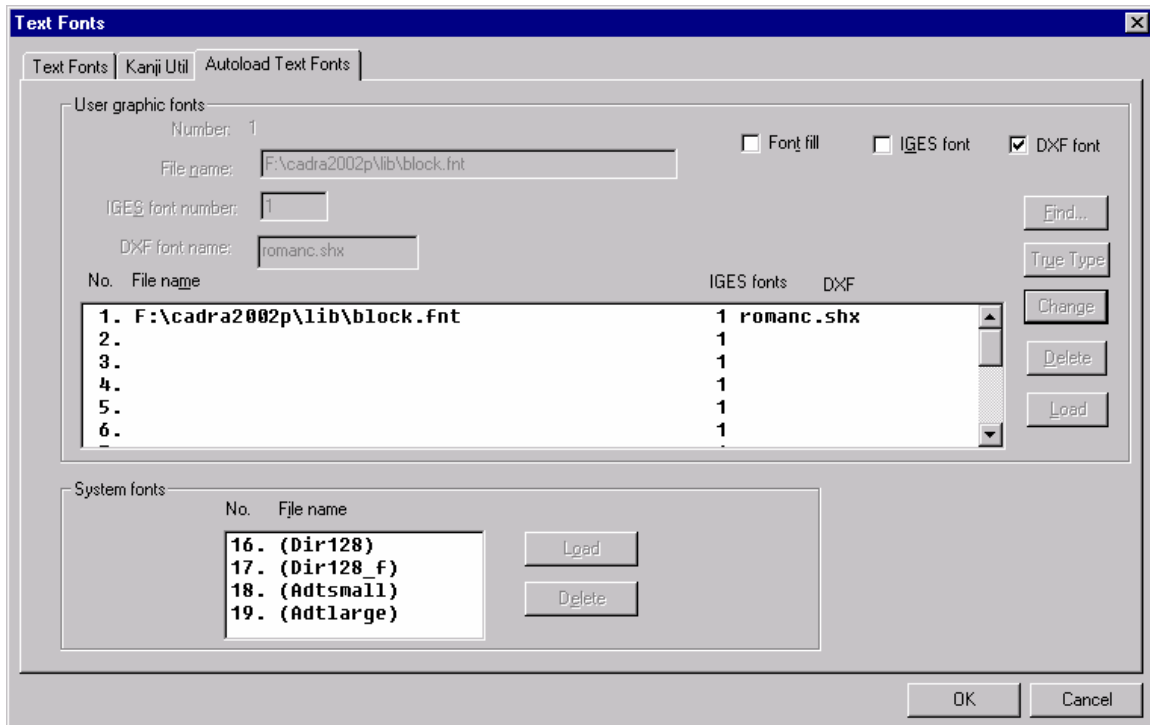
1. Cadra text is now written as different entities: **MText**, **Text**, **Tolerance** or exploded text geometry. If it is at the standard aspect ratio of 1.0, has no slant and contains no 2-byte characters then AutoCAD **MText** entities are written. If it is at a non-standard aspect

- ratio, has slant or contains 2-byte characters then AutoCAD **Text** entities are written instead of **MText** entities.
2. Cadra NURBs are now written out to the AutoCAD formats.
 3. Feature Control Symbols and Geometric Tolerances that are part of Cadra dimensions are now editable within AutoCAD. This has required that they be written to the AutoCAD formats as entities separate from their parent dimension entities.

AutoCAD Text Font Mapping

A feature that was added to Cadra in the Cadra 2002Plus version was the ability to map AutoCAD fonts to and from Cadra fonts. This is a convenient method to deal with text width issues when moving data between AutoCAD and Cadra.

The user can set up a mapping of AutoCAD fonts to Cadra fonts using the **Autoload Text Fonts** tab of the **Text Fonts** dialog (Setup/Text Fonts...). The user can add up to sixteen font mappings. The only AutoCAD fonts that can be mapped in Cadra are the AutoCAD fonts that are setup in the **Format/Text Style** dialog within AutoCAD.

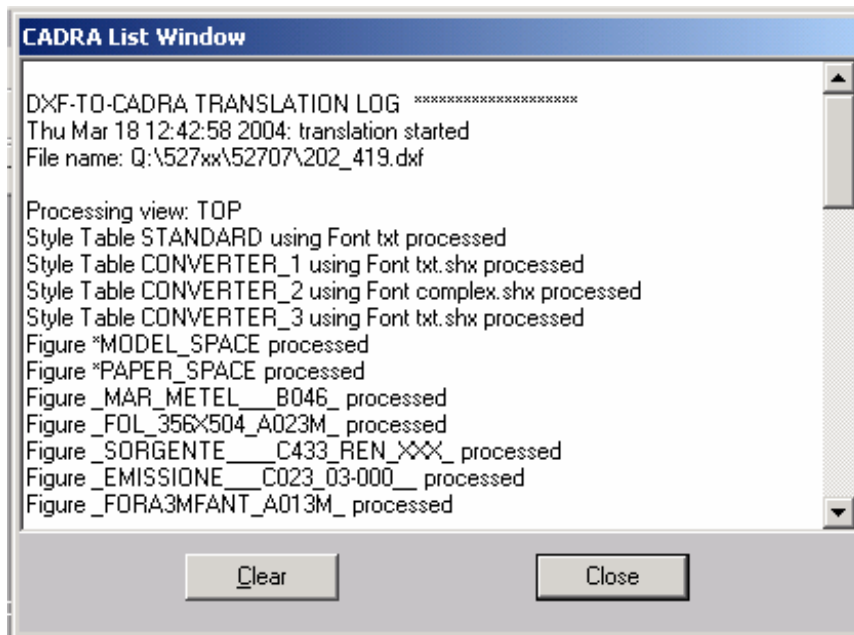


The steps to map an AutoCAD font to a Cadra font are:

1. Select **Setup/Text Fonts/Autoload Text Fonts**
2. Load your desired Cadra fonts.
3. Check the **DXF font** button.
4. Select the line with the Cadra text font you want to map to an AutoCAD font.
5. Key in the AutoCAD font file name (e.g., scriptc.shx, romanc.shx, etc.). It is not necessary to type in the .shx file extension – it will be assumed.
6. Press the **Change** button and the AutoCAD font name will appear in the font box along with the Cadra font to which it is mapped.

Note that to use filled TrueType fonts the **Font fill** checkbox must be checked before selecting the TrueType font using the **True Type** button.

Fonts are now listed in the translation log listing when reading in AutoCAD DWG and DXF files. The following shows the font printout for an example DXF file.



Multiple-Undo Enhancements

The behavior of Undo has been changed when in the context of the **Dimension** and **Figure** functions. It is now possible to undo a dimension operation without losing the entire context of the operation (e.g. in the case of change dimension, not losing the dimension originally selected). This allows the user the ability to correct changes with a minimum of mouse clicks. In previous releases, the multiple undo code always returned you to the top-level menu on any undo/redo operation. Now within the dimension function, undo/redo operations will have no effect on the dimension menus unless you back up over the first consecutive dimension operation in which case it will change back to the top-level menu as in most undo/redo operations.

Similarly, the "Insert Balloon", "Insert Delta", and "Insert Figure" options in the **Figure** function will restore the original context on an undo operation.

It should be noted that when operations are undone within one of these functions the menus may not change to what they were when the operation was initially executed.

Known Issue

If the user selects Cadra Version 11 as the **Save as Version** (via the **Setup/Translator Options** dialog or the **Options** dialog when doing a **Save as** operation) and then saves the Cadra profile the Save as Version will not be set to 11 in new Cadra sessions. It will be set to 2004 instead. A workaround is to select 2002Plus as the Save as Version. This will cause Cadra to save a version 11 file if there are 1000 or less figures in the model. It will save a version 2002Plus file if there are more than 1000 figures.

Installing the Cadra 2004 Release

Recommended Minimum System Configuration

Windows Systems:

- Microsoft Windows XP Pro SP1, 2000 (SP2), NT 4.0 (SP3 or higher) or Windows 98
- Intel Pentium-based computer
- 64 MB RAM
- 65 MB free disk space
- Screen resolution setting of 1024 x 768

Before You Begin Installation

- Have your Product Authorization License (PAL) available during the installation procedure.
- On Windows platforms, close all other programs before proceeding.
- Cadra requires either Internet Explorer 3.02 or greater, or Netscape Navigator 3.0 or greater to read the help files.
- For detailed information on installation options including license installation, print a copy of the **Installation Guide** in HTML format on the top level of the CD.

Installation Media

Multiple platform and languages versions of Cadra are available on the CD-ROM.

Cadra Installation

Windows Systems:

These instructions assume an English installation on Intel, with d:\ as the CD drive.

1. Log on to an Administrator account or one with Administrator privileges.
2. Insert the Cadra CD into the CD-ROM.
3. If autorun is active, the installation procedure should start automatically.
4. If you do not have autorun capabilities:
 - a. Click the **START** button and select **RUN**.
 - b. Type d:\setup.exe in the **OPEN** box.
 - c. Click **OK**.
5. Follow the Install Shield wizard to complete the installation.
6. After you have installed Cadra, reboot your system.

Troubleshooting a Sentinel Hardware Lock Problem:

If your hardware lock is creating a host ID of host-ID 0000000, try the following steps. If this solution doesn't work, contact Cadra/SofTech Customer Service at 1-800-321-2372.

1. Open Windows Explorer and go to the **CADRA\DRIVERS\WIN_NT** directory (or Win9x if you are running Windows 98 instead of XP Pro or NT).
2. Double click **SETUPX86.exe** (or **sentw9x.exe**).
3. Select **FUNCTIONS / INSTALL SENTINEL DRIVERS** (the path should be the directory listed above).
4. Click **OK**.
5. Before you reboot make sure that your registry entry (**AFH000**) is set for **2**. This value can be set in Cadra run using the older Cadra GUI. Select **Parameter/License** and then set the **HardLock/Local Card** toggle to enable a hardware lock. Alternatively, continue with the following steps:
 - a. Select **START / RUN / REGEDIT / OK**
 - b. Select **EDIT / FIND**
 - c. Key in AFH000
 - d. Double click the **a/b** icon to change default value to a **2**

You may need to reboot your system.

Corrective Maintenance

Every release of Cadra addresses corrective maintenance issues our customers and partners report as problems or issues throughout the world. The table below lists the most significant problems and issues addressed for this release:

SOFTECH SPR NUMBER	DESCRIPTION
31336	Fixed the extent calculation for detail views to allow zoom by extents to function correctly
52990	Extension lines for radius dimensions are not correct when moved in the negative DX, DY direction
53111	The arc entity is changed when using the DXF translator
53969	The dimension was created on the wrong side using Dimension, Quick Dim
53977	The centerline is not created on the active layer
53987	The selected entity is not changed to blank by Views, Blank function
54007	A figure is changed from internal to external after Move, cut and paste
54014	Cadra should not be able to create a figure with a duplicate name
54346	Can not release FLM license for the MicroCadam translator
54410	DXF files from ME10 application are not correct in Cadra
54414	No current entity position in CadraWorks using update draw function
54432	External figure text with attributes is very small after write and read of DWG
54433	Write then read DWG the text in format incorrect
54488	Undo following a figure insertion takes you out of Figure, insert menu
54508	Move selection of entities leaves stray geometry
54518	The mode change is incorrect after use of Undo, Redo function
54519	Read DWG, Group, explode nurbs, extraneous data is present
54597	An AGP routine that takes ten times longer than Cadra 2002
54621	Using Undo in Figure, Symbol creation is incorrect
54623	Undoing a leader for a Figure, Symbol, delta returns you to the base figure command
54659	Undo of a coordinate dimension brings you back to the dimension main menu
54707	Internal Extents error reading a DXF file created in AutoCAD 10
54710	Cadra hangs reading a DWG AutoCAD 2000 file.
54720	Cadra crashes reading second file in this MicroCadam container file
54740	Undo resets active layer to zero along with the last operation
54746	Symbol display button on IME Input Window has incorrect yen character
54747	Cadra GUI has an invalid character for the Undo menu in Japanese
54748	Unable to change the memory size in Cadra GUI if free memory size on PC is over 2 GB
54749	AGP programs developed for CadraNC not working properly
54755	A database corruption error occurs when doing a delete duplicates function on group, set entities
54756	Unable to read AutoCAD created DWG file
54759	Running an AGP program while multiple undo is active causes a database corruption error
54767	Error reading DWG file into Cadra
54838	2 byte character text is lost editing text in Japanese using the IME input window
54939	Incorrect characters are added after dimension post text in Japanese using Cadra GUI
54861	Error reading this DWG file created by AutoCAD 2000
54964	CadraNC, get error when character string is too long, while running .cld file
54993	Can not read this .model file into Cadra
55008	Read in DWG file get internal software failure
55010	Read in file from Cadam/Catia the splines are incorrect
55019	Unable to read this DWG file into Cadra
55021	Write, read DXF and the dimension text does not maintain width
55049	Read in .model file there is a stray label in the drawing
55056	Undo of a set delete causes a draw error
55063	Using Redo with group, sets causes a draw abort error
55066	Using View, scale causes a dimension to be in the wrong position
55084	Using Cadam/Catia translator the nurb curves are not converted to splines
55085	Using Plot PDF all lines have one weight
55097	Unable to display Nurb entity correct if on a Figure page
55099	Plotting with an AGP program using CadraHost to a system printer
55127	Unable to read DXF files into Cadra
55132	Geometry on locked layer can be deleted using IMS selection
55180	Unable to read DWG file with a rotated dimension
55185	Error in CadraWorks while creating a detail view
55187	Files dropped using background translation of MicroCadam using a 1.4GHz or higher OS
55234	Get a database corruption using Figure, Edit Inplc and delete
55251	Adobe unable to read a PDF file created in Cadra via an AGP program
55265	Read in DXF file, the text width is not correct
55266	Offset horizontal lines of a SolidWorks model is being combined into one angular line
55298	Unable to drag and drop a .gl2 file into Cadra
55299	Read HPGL file, line weights are incorrect
55301	Read in HPGL file, dimension arrows are not displayed

55307	Start Cadra GUI instead of Window GUI through Microsoft Office hyperlink
55308	Open parent file through Microsoft Office hyperlink and Cadra can not open children files
55326	Read in DXF file get an internal extents not updated error
55327	Using Figure copy, paste with duplicate figures, the figure from the paste was dropped. Now the names of figures added by a paste operation may be altered to preserve the figure definition if its name duplicates the name of an existing figure.
55351	Light weight centerline goes on the wrong layer using line, pt to pt, centerline
55352	Changed delete of duplicates to not delete duplicates if they belong to different sets
55356	Read in DXF file the angle dimensions are incorrect
55358	Read in this HPGL file, geometry is missing
55360	Write IGES with cutout and get an error, Error Saving Posit
55369	Able to create duplicate labels using CadraNC
55371	The value of the dimension is incorrect after using Undo
55400	CadraWorks, directory and file names with Umlauts, no projection into Cadra was possible
55444	Unable to read DXF file into Cadra
55448	Error using Figure, Transfer
55458	Blank entities did not stay blank using DXF variable in cadra.ini and DXF viewport enabled.

Platform Support

This release has been qualified for the platforms listed in the table below. The CD distributed with this update release contains software for all the supported platforms.

Workstation	Operating System	Revision Level
Intel Pentium PCs	Windows XP Pro	Service Pack 1
Intel Pentium PCs	Windows 98	All
Intel Pentium PCs	Windows NT	4.0 with Service Pack 3 or higher
Intel Pentium PCs	Windows 2000	Service Pack 2-4

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Appendix A - In-Place Figure Editing User Guide

Cadra figures are created using two methods. Figure/Create allows the user to start from scratch creating geometry and annotation entities. Figure/Construct starts by grouping existing geometry and annotation. After the figure is constructed the user will often add more detail.

Entities in a constructed figure are often originally generated using methods that involve referencing existing geometry on the drawing. The problem is that if geometry referenced to create the original figure changes it is difficult to reference that geometry to update the figure. The new In-Place Figure Edit feature addresses this problem by allowing the user to edit a figure within the context of the drawing in which it is instantiated.

The initial implementation of this feature will not allow the editing of nested figures (figures within figures) and does not support draw mode figures.

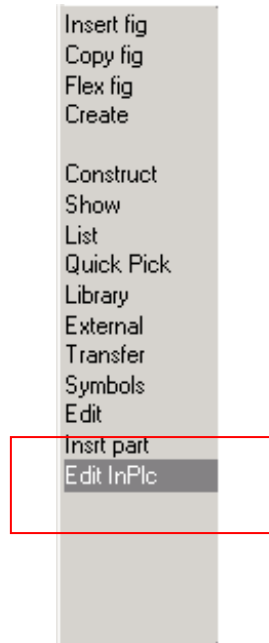
1 Features

- This function is entered by selecting the new menu pick **Edit InPlc** under the **Figure** function and selecting an instance of a figure.
- To exit the function the user selects **Return** under the **Figure** function.
- The selected instance of the figure then becomes the active partition. The user is then free to use any of the geometry creation, geometry manipulation, or annotation functions.
- All entities created or altered are added to or altered in the selected figure definition partition only. Geometry entities can be selected in the view in which the figure is instantiated as well as in the figure definition partition. Entities selected in the view are only selected for reference (unless **Move geom** has been picked). For instance, if under the offset function the user selected an entity in the view partition the new geometry will be created in the figure definition partition. **No entities in any other partitions are selectable. Only entities in the figure partition are alterable when editing the figure in-place.**
- When **Edit InPlc** is selected and a figure instance is chosen a new pick appears on the displayed sub-menu called **Move geom** that allows the user to select entities and move them from the view partition to the figure. **Move geom** toggles with **Ref. geom**. When **Move geom** is displayed view geometry selected will just be referenced. When **Ref. geom** is displayed view geometry selected will be moved from the view to the figure.
- When a user exits this function all instances of the figure reflect the updates made during the in place figure edit.
- If more than one insertion of the figure exists exiting **Edit InPlc** causes a redraw.
- An optional temporary dashed rectangle is displayed around the perimeter of the selected figure instance being edited for the duration of the edit.
- Optionally colors can be set to be used to display inactive figures (instances of the selected figure that are not the currently edited one) and the active view (the view containing the selected figure instance)

2 User Interface

2.1 Menus

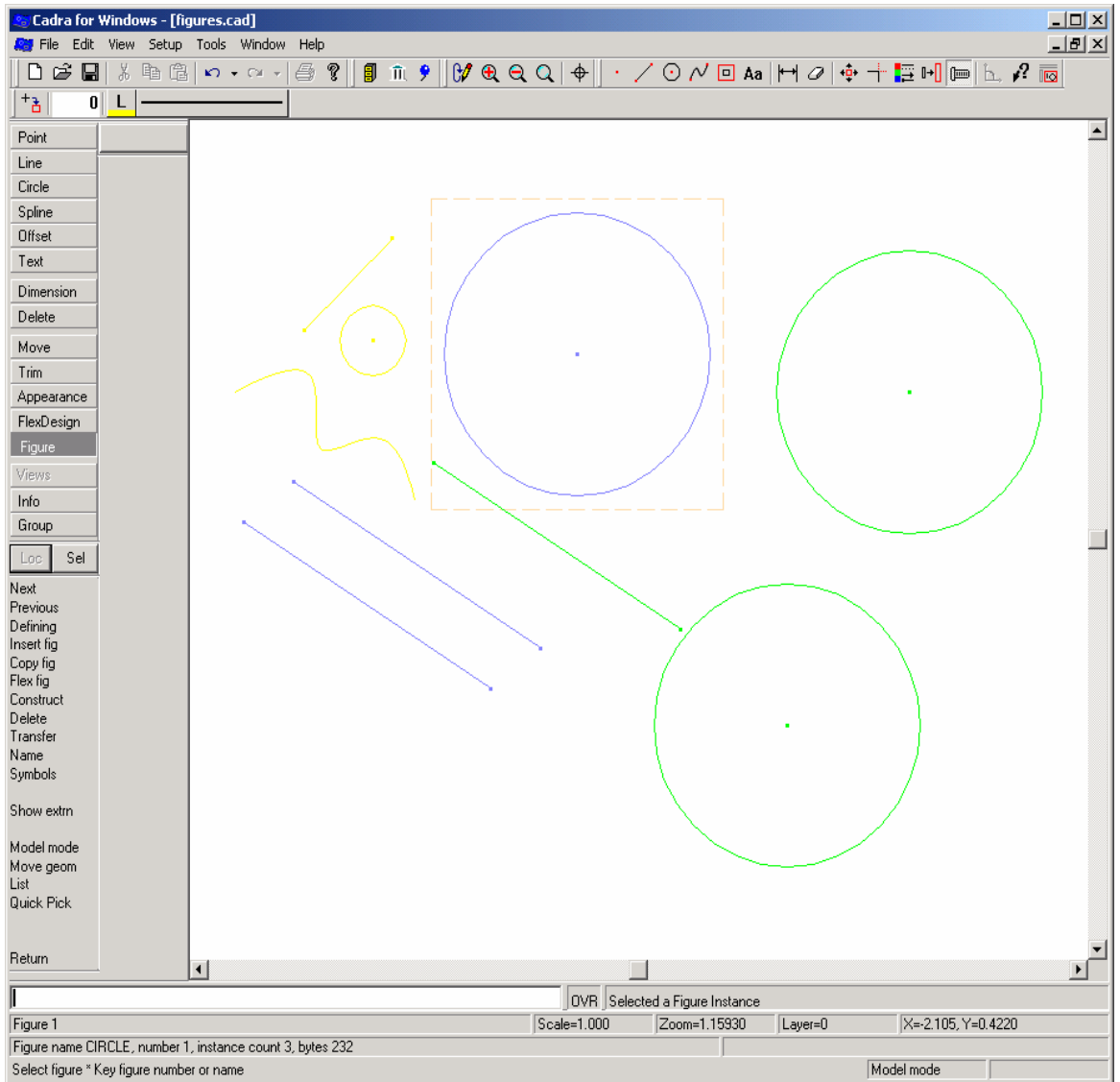
A new **Edit InPlc** item will be added to the main figure menu.



When **Edit InPlc** is selected and a figure instance is chosen the user is placed in a mode where they can edit the selected figure instance in-place. The selected figure instance can optionally be surrounded by a dashed rectangle. Note that the figure in the example pictured below is just the enclosed circle. There are three instances of this figure in the view.

The selected figure instance will always be displayed in its true colors. If there is an **In-Place Inactive Figure Color** set the other instances of the selected figure will be colored with the Inactive Figure Color. If there is an **In-Place Active View Color** set then all the entities in the view containing the selected figure instance (other than the instances of the selected figure) will be colored with the Active View Color.

The user is initially placed in a mode where geometry in the figure-including view is only selectable as reference geometry for the creation or modification of other geometry that is added to the figure.



A new **Move geom/Ref. geom** toggle menu item has been added to allow the user to either select view geometry for reference only when creating new geometry in the figure or to select it to be moved from the view into the figure definition.

Next
Previous
Defining
Insert fig
Copy fig
Flex fig
Construct
Delete
Transfer
Name
Symbols

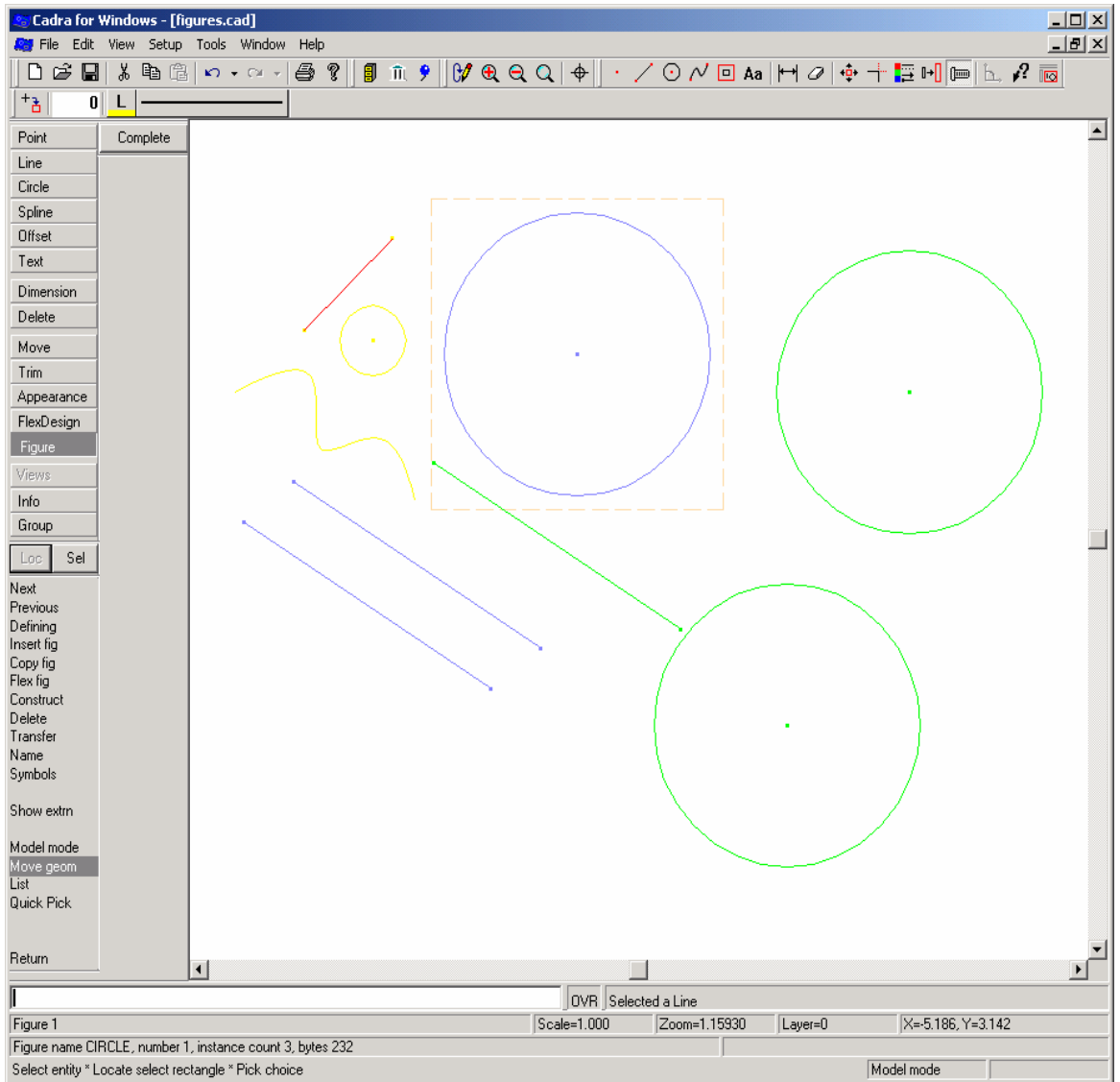
Show extrn

Model mode
Move geom
List
Quick Pick

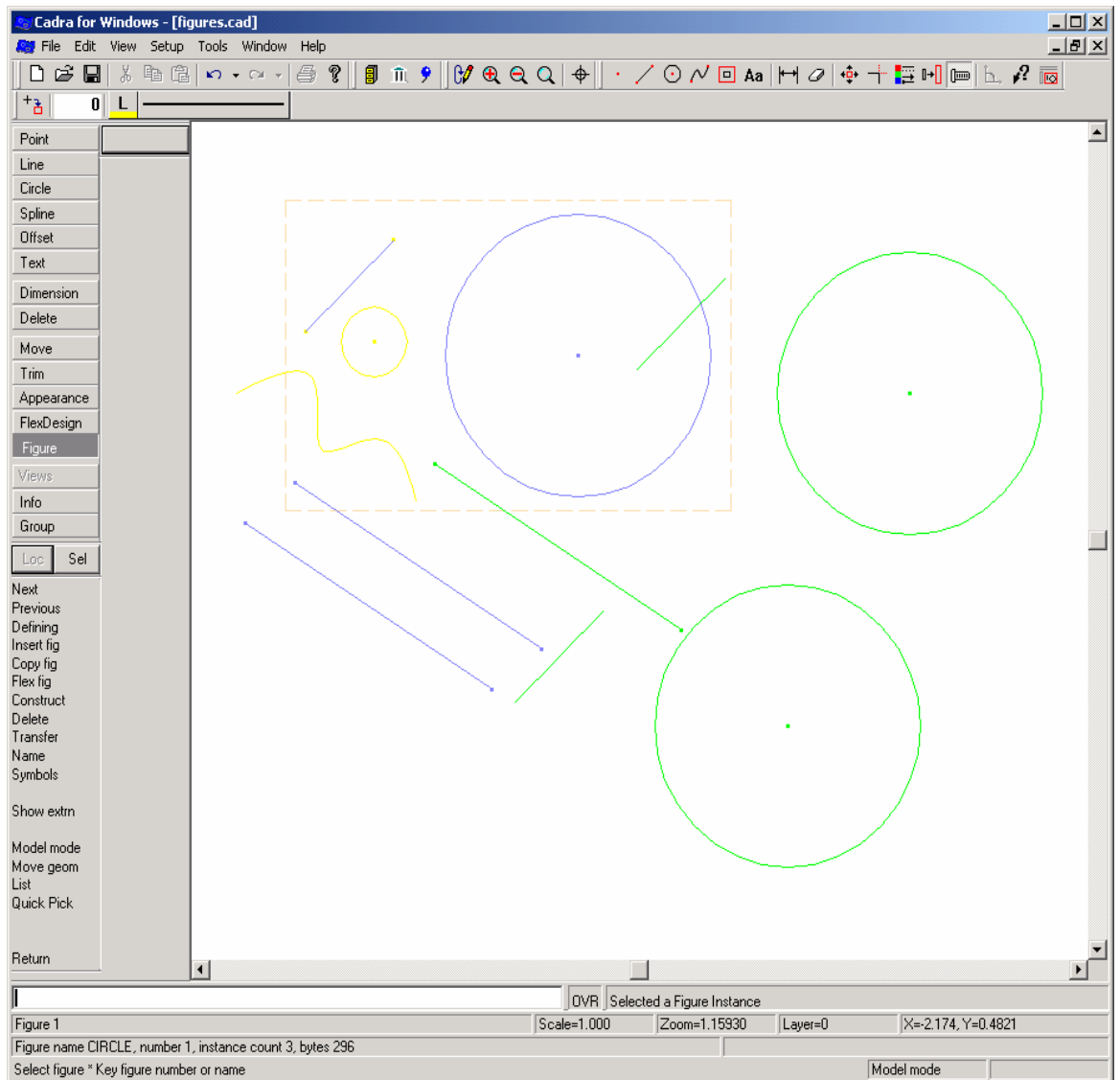
Return

2.2 States/Messages/Prompts

After **Move geom** is selected (and **Ref. geom** is displayed) the user is prompted to select entities to be moved. The user selects the **Complete** button to make the move operation happen. The selected entities (which will all be in the figure-including view) will be added to the figure definition and removed from the figure-including view. Selecting **Ref. geom** will take the user out of the move geometry mode and back into the reference geometry mode.



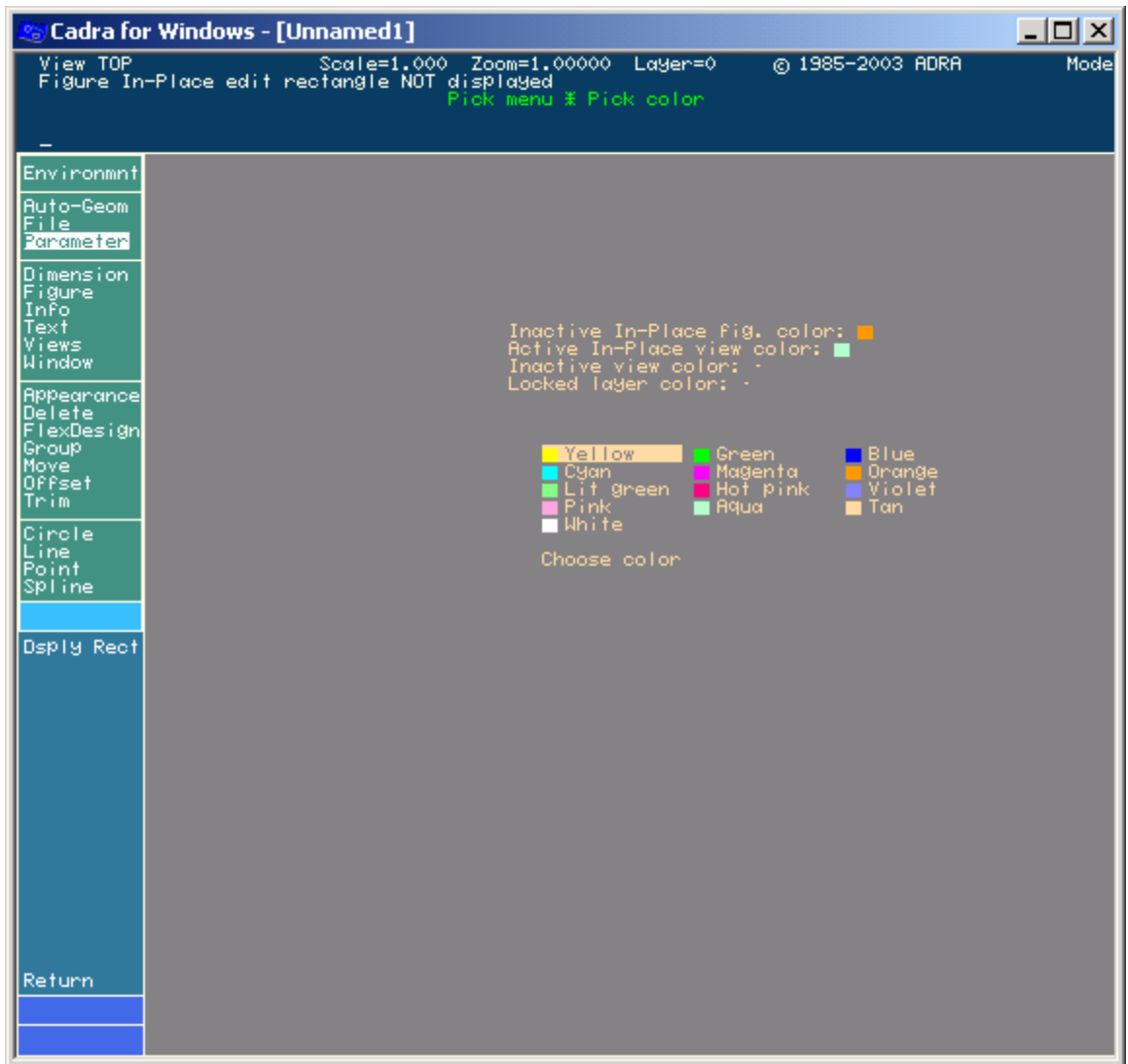
After the line is added to the figure the extents of the figure are changed. This shows the select box if **Edit InPic** was chosen again after the line was added. Note that the line now shows up in all three figure instances.



The In-Place display parameters are set by selecting the new Special Colors (**Spc colors**) menu item in the **Parameter/Colors** menu.

The sole menu item toggles between the display of the selected figure instance rectangle (**Dsply Rect**) and not displaying the rectangle (**No Rect**).

Four special colors can be set on the page – the **Inactive In-Place figure color**, the **Active In-Place view color**, the **Inactive View color** and the **Locked Layer color**.



2.3 Windows GUI

The In-Place display parameters are set in the new **In-Place figure edit colors** section of the **Part Display** tab of the **Setup/Preferences** dialog.

