# Appendix

This section includes helpful tips on using DataCAD Plus vis.

# Keyboard Shortcuts

| | |
|---|---|
| Ctrl + Icon | Bypass dialog box and use previous settings; same as clicking the icon alone and closing the dialog box with OK |
| Ctrl + Object | Collision detection when placing objects |
| Alt + F4 | Exit the program |
| F1 | Help |
| Shift + ▨ or Ctrl + ▨ | Increase speed during walk-through by a factor of 4 |
| Shift + Ctrl + ▨ | Increase speed during walk-through by a factor of 16 |
| Shift + ✛ or Ctrl + ✛ | Increase speed while changing the viewpoint |
| Ctrl + ▨↓ | Move down one floor – animated |
| Ctrl + ▨↑ | Move up one floor - animated |
| Ctrl + O | Open file |
| Ctrl + P | Print file |
| Alt + Shift + Backspace | Redo one step |
| Ctrl + S | Save file |
| Shift + several Objects | Select several objects at a time; lets you move, copy, or cut several objects at the same time |
| Ctrl + U | Switch between building views |
| Alt + U | Switch between floors or buildings |
| Ctrl + Z | Undo one step |
| Alt + Backspace | Undo one step |
| Ctrl + + | Zoom in |
| Ctrl + - | Zoom out |
| Ctrl + Tab | Switch between document windows |

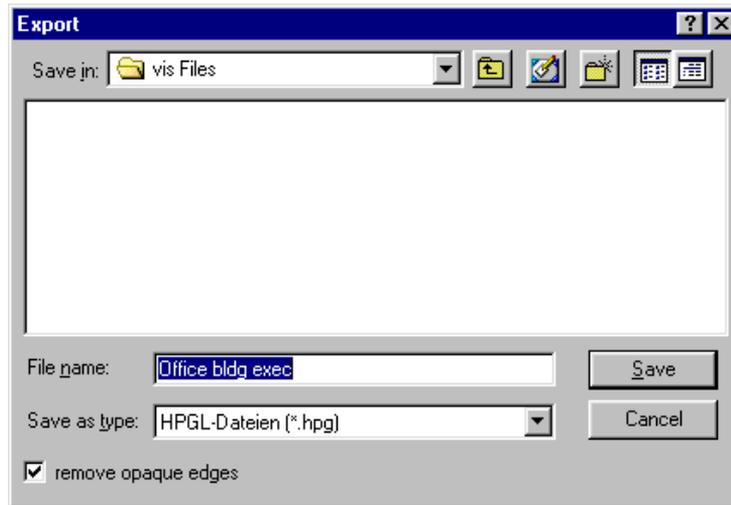Numeric keypad shortcuts:

| | |
|---|---|
| 0 | Show everything |
| 1 | Move the window downward and to the left |
| 2 | Move the window downward |
| 3 | Move the window downward and to the right |
| 4 | Move the window to the left |
| 6 | Move the window to the right |
| 7 | Move the window upward and to the left |
| 8 | Move the window upward |
| 9 | Move the window upward and to the right |
| + | View window is zoomed in, around the center |
| - | View window is zoomed out, around the center |
| * | View window is zoomed in, centered around the mouse cursor |
| / | View window is zoomed out, centered around the mouse cursor |

In perspective view, the cursor arrows have the same functions as the four directional arrows on the ✛ icon.

# Exporting DataCAD Plus vis Projects

DataCAD Plus vis supports importing other formats as transparencies plus exporting vis projects. All export formats except VRML use the same information to export: the current view as a line drawing with or without opaque edges.

➔ To export the current view to a non-VRML format:

1. Select Export vector graphic… from the pull-down File menu.

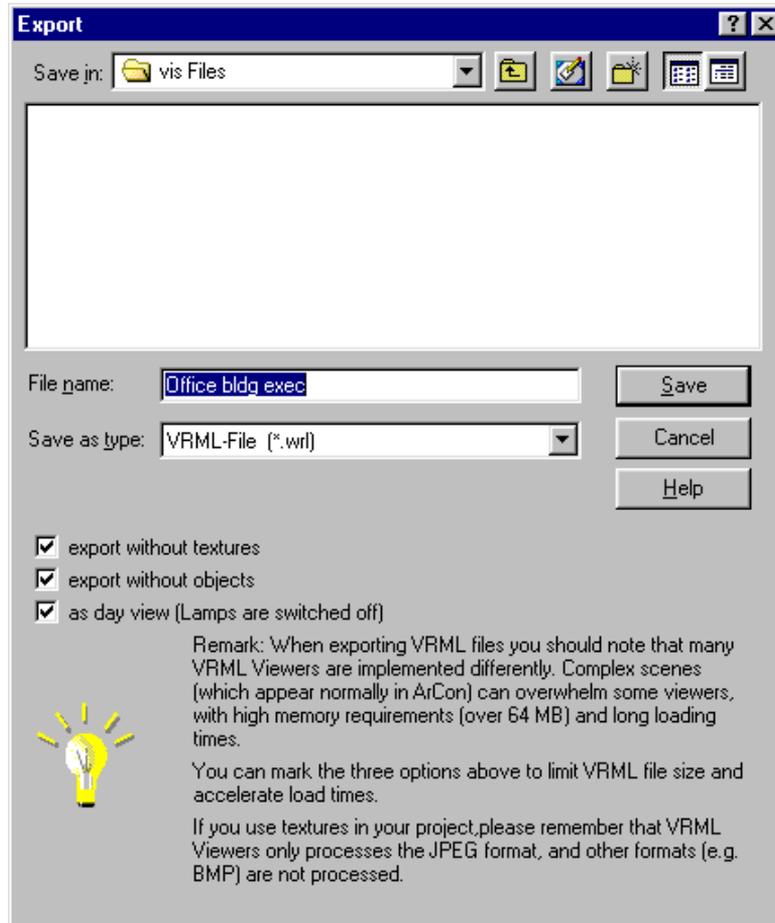2. Choose the export format: MB Exchange Format, HPGL, or DXF. The Export dialog box appears.



3. Activate (checkmark) remove opaque edges to export only visible edges of the wire model.

4. Supply a file name and click on Save or press Enter. The current view (either as a 3D or overhead view) is exported in the selected format.

➔ To export the current view to a VRML format:

1. Select Save as VRML … from the File pull-down menu. An Export dialog box appears.

In this extended dialog box, you can also select whether to export textures and/or objects and the lighting in the day view. The dialog box contains extensive notes on these options.

2. Activate (checkmark) the options you want.

3. Supply a file name and click on Save or press [Enter]. The complete 3D model of your project is exported.

## VRML Export Hints

Generally, you see exactly what is to be exported (i.e., the current 3D view). Projects exported by DataCAD Plus vis correspond to the VRML specification version 1.0. Despite this unique specification, VRML files can be displayed differently depending on the viewer. Particularly when using textures and light sources, the VRML viewer/browser can react differently. This depends on both the viewer/browser manufacturer and its version number.

If you do not export objects, the size of the VRML file will be substantially reduced, resulting in faster loading times and display rates. This helps you deal with the many VRML viewers/browsers that can only handle scenes of low complexity.

Using textures in VRML viewers/browsers may have two problematic effects. Loading textures over the internet may take a long time since this requires transferring large amounts of data. The texture formats used in DataCAD Plus vis are not absolutely supported all by all viewers/browsers. VRML viewers/browsers only support JPEG files; they do not support BMP and other image formats. Depending on the viewer/browser, these foreign formats may not be displayed. With some viewers/browsers, you cannot use image files as textures if they are not specifically represented.

If you want to create a project for VRML, stay within the VRML-inclusive specifications. You should use only JPEG textures. When in doubt, you can also use GIF files since most VRML viewers/browsers support this format, too.

VRML viewers/browsers do not have uniform methods for searching the path specification for external and internal files. Therefore, it is almost impossible to create textured VRML files that can be loaded from local disks to the internet for use on all viewers/browsers.

## VRML Export as Day View

If you export a DataCAD Plus vis project in the night view, you are also exporting lamps which you may be switched on. Some VRML browsers/viewers control lamps differently from DataCAD Plus vis.

In DataCAD Plus vis normal view (without raytracing) , a lamp only illuminates items located in the same room. VRML viewers/browsers do not support this characteristic; instead, all light sources illuminate all objects in a scene. This can result in an overexposed scene. Some viewers/browsers ignore the fact that a light source is switched off (i.e., lamps that are switched off still light up the scene).

To avoid problems, export the day view. Then, no light sources will be exported.