

Section 14 – Appendix

Files

The following files are installed in the Design-Expert® program folder:

- **dx6.exe**, main program
- **dx6.hlp**, help file
- **dx6.cnt**, help file contents
- **custdata.ini**, Customer data: name, rank, and serial number
- **read_me.htm**, latest info and program tips as an html document
- **read_me.txt**, same as above, but in generic text format
- **unwise.exe**, WISE Uninstaller—used to remove the program
- **install.log**, installation log file used by unwise.exe.

The following files are installed in either the Windows/WinNT system32 folder or Design-Expert program directory depending on the user's choice:

- **mfc42.dll**, Microsoft Foundation Class 4.2 library
- **msvcp60.dll**, Microsoft Visual C++ 6.0 library
- **msvcrt.dll**, Microsoft Visual C run-time library
- **csch.dll**, Context-sensitive help library
- **roboex32.dll**, RoboHelp helper

These files will be placed in the designated data directory:

- **Battery.sim**, simulation of general factorial design data
- **Biker.dx6**, data file for foldover tutorial
- **Clearcoat.dx6**, mixture design with categorical factors
- **Filtrate.sim**, simulation of two-level factorial design data
- **Fish Patties.sim**, simulation of fish patty formulation (mixture)
- **Mix.dx6**, mixture design data, unanalyzed
- **Mix-a.dx6**, mixture design, analyzed
- **Original.dx6**, retain sample data (basis for d-optimal selection)
- **Paper.dx6**, data from split plot design
- **Plasma.dx6**, two-level factorial split plot
- **Purity.dx6**, data from nested design
- **Rsm.dx6**, response surface design data, unanalyzed
- **Rsm-a.dx6**, response surface design, analyzed
- **Taguchi-L16.dx6**, Taguchi design data
- **Turbine.sim**, simulation for fractional two-level design.

The following file is placed in your Windows or WinNT directory:

- **dx6.ini**, program initialization file. Preferences are stored here.

Changing Icons

You can change your computer's desktop to display 256 colors if you have the Microsoft Plus! option on Windows 95 or NT. Right click on the blank area of the desktop and select **Properties** from the menu. Under the **Plus!** tab, check the box labeled "Show icons using all possible colors." You may have to restart your computer for this change to take effect. Windows 98 has these options built in. Right click on a blank area of your desktop and select **Properties** from the menu. Under the **Effects** tab, check the box labeled "Show icons using all possible colors." You may have to restart your computer for this change to take effect.

If you prefer an alternate icon, you will need to open the Start menu by right clicking on it and choosing **Open**. Open the Programs window then the Start-Ease window. Right-click on the program icon and choose properties. Under the **Shortcut** tab choose **Change icon...** and the choices will appear. Highlight your choice and click on **OK**.

Right-Click Menu Locations

In design layout:

- First column header (standard order)
- Run header
- Block header
- Factor headers
- Response headers
- Row headers.

In model editing:

- Model list window (include or exclude terms from model).

In any selected grid view:

- Editing commands (Cut/Copy/Paste).

In statistical reports:

- Editing commands
- Help for cell contents.

In graphs:

- Contour graph and 3D graph background
- Contour
- Text labels
- Flags.

In the factor space toolbox:

- Factors (to change axes or constants).

Network Installation with Built-in Metering

Design-Expert software runs on NT, Novell, and other common networks. Stat-Ease offers a special version with built in metering that limits the number of concurrent users to the number of seats purchased. However, as you will see from the descriptions below, the metered version of Design-Expert is not very flexible. Therefore, if your site has its own metering software, we recommend that you use it in conjunction with the unlimited version of Design-Expert included on all installation CD's.

Central (Server-Based) Versus Distributed Network Installation

Our standard network installation copies the program files to a folder on a central shared (server-based) network drive. Included in that folder is a workstation setup program, WrkSetup.exe, which creates local shortcuts, a data directory, and (optionally) installs the DLLs to the local machine. This standard version of the program is not metered--you must provide metering software to restrict the number of copies to the licensed number of seats. In this case, the network acts as a file server for Design-Expert. When users run the program from a workstation, the .EXE is loaded into the local machine's memory across the network. If you do not have metering software, you must install the special metered version of Design-Expert, which will be limited to the number of concurrent seats you purchase. This version includes an additional control folder for recording the metering. Users must be given full access to this folder. When they launch Design-Expert, the program checks for an available seat. If one exists, the program loads--otherwise, the message "No more user licenses are available" is issued, and access is denied.

The server-based scheme may be too slow for users on a low-speed connection to the network. Alternatively, you could install individual copies on each workstation, regulated by a central metering system. Under this distributed network scheme, the program loads from the local drive only after checking with the server to be sure that a seat is available. Microsoft's Back Office provides this distributed scheme, which works with the standard version of Design-Expert. We recommend you use this if you can. Stat-Ease does offer a special metered version of Design-Expert that permits local installation. However, prior to obtaining this version, you must specify the exact network path to your control directory. When the local copy of the program is launched, it checks the control path for an available copy. Should the network path change, we must send you a new build for reinstallation on each workstation. This restriction makes the special metered version a less desirable option than use of your own metering software, which we highly recommend.

Installation Procedure

See Section 1 under *Network Installation* for instructions on how to install on a network server and to set up the workstations.

Troubleshooting

Built-in Metering

Some problems have been noted with the built-in metering. One important issue is that, in the event of a computer or program crash, the usage counter may not be reset properly. In this case, fewer concurrent users will be allowed to log in.

If you suspect this problem, take the following steps.

1. Have all users exit the program.
2. Check the contents of the dx6\control folder with My Computer or Explorer. Be sure your options are set to show hidden files and folders. If there are any files in the folder, either
 - a. Someone is still using the program, or
 - b. The counter has been corrupted.
3. Delete the file(s). If you get a sharing violation, someone is still using the program. A successful delete will restore the proper count.

To simplify this, consider having an automated process run at night that deletes any files in this folder.

Long filenames

Some older servers (Novell 4.1, for instance) do not support long filenames. Some of the sample data files and all of the user manual files have long filenames and may not install properly. If you encounter this problem, install the files on a workstation and copy them to the server. They should get converted to 8.3 filenames when copied.

References

Books

1. Anderson and Whitcomb, *DOE Simplified*, Productivity Press, Portland, OR, 2000.
2. Box, Hunter, and Hunter, *Statistics for Experimenters*, John Wiley and Sons, New York, 1978.
3. Cornell, *Experiments with Mixtures*, 2nd Edition, John Wiley and Sons, New York, 1990.
4. Draper and Smith, *Applied Regression Analysis*, 3rd Edition, John Wiley and Sons, New York, 1998.
5. Kraber, et al, *The Experimenter's Handbook*, Stat-Ease, Inc., Minneapolis, 2000 (free to registered users).
6. Montgomery, *Design and Analysis of Experiments*, 5th Edition, John Wiley and Sons, New York, 2001.
7. Myers and Montgomery, *Response Surface Methodology*, John Wiley and Sons, New York, 1995.
8. Press, et. al., *Numerical Recipes in Pascal*, Cambridge University Press, 1989.
9. Taguchi, *System of Experiment Design*, Volume 1, page 189, Quality Resources, New York, 1991.
10. Weisberg, *Applied Linear Regression*, 2nd Edition, John Wiley and Sons, New York, 1985.

Articles

1. Addelman, "Irregular Fractions of the 2ⁿ Factorial Experiments," *Technometrics*, Volume 3, pages 479-496.
2. Draper and Lin, "Small Response-Surface Designs," *Technometrics*, May 1990, Volume 32, Number 2.
3. John, "Three-Quarter Replicates of 24 and 25 Designs," *Biometrics*, Volume 17, pages 319-321.
4. Lenth, "Quick and Easy Analysis of Unreplicated Factorials," *Technometrics*, November 1989, Volume 31, Number 4, page 169.
5. Oehlert, Gary and Whitcomb, "Sizing Fixed Effects for Computing Power in Experimental Designs," Fall Technical Conference, 2000.
6. Sitter, Chen and Feder, "Fractional Resolution and Minimum Aberration in Blocked 2^{n-k} Designs," *Technometrics*, November 1997, Volume 39, Number 4.

7. Sun, Wu and Chen, "Optimal Blocking Schemes for 2^n and 2^{n-p} Designs," *Technometrics*, August 1997, Volume 39, Number 3.