Detail of Changes from SuperSMITH 5.0 to 6.0:

If you are used to SuperSMITH 5.0, the initial changes to SuperSMITH 6.0 may take some learning. This section explains the changes in detail to help you get used to it.

These are categorized with

1. User Interface
2. Organization of program
3. New Features

User Interface

SuperSMITH 6.0 was designed to be compatible with a touch screen tablet, while retaining all the usability that you expect from a desktop application.

You can customize your view by clicking on the Setup Icon, and then option M for Main Display Options. The following features can be toggled

Main Image Size (Icons)
While SuperSMITH has large icons for touch screen, you may prefer to see all the icons on two rows, With this toggle, you can change the view to two rows of icons. You can also toggle this by clicking <ctrl><alt> and the Home Tab

Main Tab Automatic Select
When active, the tab will activate when the mouse is over the tab. When it is "No", you need to click the tab to change tabs

Edit in Data Grid
You can click on a cell in the data grid, and the little edit box comes up to edit, change numbers by typing them on the keyboard. You can turn on a Menu, so that a menu with a keyboard comes up. This is useful when you are on a tablet with no keyboard.

Extreme Display Highlight
When the mouse is over an icon, there is a yellow highlight around it for emphasis. If you are demonstrating the software or training, the extreme highlight turns on a large Orange highlight around the icons that can be easily seen on a zoom call or in a room presentation

Windows Keyboard
When this is turned on, the windows On Screen Keyboard (OSK) will enable whenever you are in a text input mode, such as plot titles or file save modes. You can size or move the keyboard. If you close it, it will reappear when you select another text entry condition

Menu Bar Size
For Touch screen, larger menu bars reduce errors. But if you are using a mouse, you may prefer to see more lines of menu on each screen. Changing this will improve the options. But if a menu line requires 2 lines to display information, the menu will be the wide bars. Also, if there are less than 7 menu items, the menu will display the wide bars

Options on Big Plot
This was an option on prior versions. It puts Zoom, label, and other icons on the plot in the corners

SuperSMITH Start Size
When SuperSMITH starts, it can be full screen, or a midsize form. You can select this in the Setup Menu, under Main Options.

Y Value in Data Grid
This was an option in prior versions. You can turn the Y plotting positions on and off in the data grid.

Menus
All menus have a common form and style. You can make a choice by clicking/taping an icon or a menu bar item. You can also select a menu item by typing the letter at the beginning of the menu item

If there are more icons than can be displayed, there are continuation icons at the end. For the menu bar, there will be a scroll bar with touch screen friendly buttons.

You can click and drag the icon bar or the menu bar to move it up and down. On the keyboard, the Up/Down arrows will scroll the menu, while the Left/Right arrows will scroll the icons.

At the ends of the scroll bar is a number that shows how many more menu items there are before/after the menu items showing. You can click/tap this number to go to the beginning or end of the menu list.

If you drag a menu to a different part of the screen and then close it, when you open it again it will open in that same place. This makes it easier if you want to use SuperSMITH on your second screen of a dual screen system.

<alt> Menus. On many forms, you can press and release the <alt> key, then type a letter as indicated by black boxes with white letters. Experienced users may find it faster to execute commands with series of letters rather than mouse clicks or touch screen actions.

Touch Screen
Many actions can be performed on a touch screen, such as menu selection or scrolling. You can scroll a menu (or icon strip) by touching and dragging. On Menus, if you touch below the menu and drag up, you will see the potential menu item turn blue. When you lift your finger, that item is selected. To cancel, just drag your finger off the menu items.

Number Input
The number input menu has a number pad. You can enter numbers on the keyboard, or use the pad. There are also up/down buttons next to the value. You can tap these to increment/decrement the value. Below that is a frame that shows what the increment will be. You can tap those to change. Holding down the buttons will repeatedly apply a change.

Mousewheel Support
Many menus and forms also support the mousewheel. Scroll to change menu or icon choices. On later versions, <ctrl>Mousewheel can also zoom the data grid and reports.

Exiting a Form
For most forms, clicking the X icon or the <ESC> key will take you back to the previous menu

Program Organization

Smithw.exe is the main executable. SuperSMITH Visual and YBath run by calling smithw with flags. This reduces the disk space required on your hard drive and makes the programs more similar. For example, now it is easier in Weibull to look at a mixture.

The plotting routine is the same for all 3 main programs.

The Weibull Dice routine is now available under the ?/+ tab, rather than a separate program. This is used in class in place of twisting wire for breakage.

The Monte Carlo menu was updated and better organized to handle Mixtures.

New Features

SuperSMITH now has several NEW/Improved features

Library
The library now has the ability to load and search a reference file. You still access it through the library icon, but the menu is now sequential for the items.

Logbook
Want to take a note? Open the logbook and type your notes. The logbook stays with your data file, so you can put in reports, or various items. The Logbook can also be saved as a data file, or copied to paste into your word processor.

Missing Data
Sometimes you are missing data. There is a new algorithm under the tools group where you can estimate how many points are missing. This technique was presented at RAMS 2021. Also look for a presentation in the c:\Smithdat directory for more details. As an example, Figure 3-11 on Vintage cables has data where cables were buried in 1971, but they didn't start collecting data until 1976. The data appears curved, and one way to analyze this is to use a failure free period (t0). But the cables weren't failure free, its just that no data were taken. By using the Missing Data technique, you can estimate that there were probably 67 failures before data recording was started.

Algorithm Improvements
Several algorithms were improved. Mixtures can now have inspections and use Inspection Option #1. The mixture algorithm was improved for faster modeling. Contour plots are smoother.

The help file now shows apparent screen resolution, and has tools to check system files for debugging installations.