

Scientific Workplace Commands

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January 22nd, 2007

1 General Comments and Suggestions

This guide is intended as a short reference for the keyboard commands I most commonly use in Scientific Workplace. It also contains a short section on how to add your own keyboard shortcuts as well as a section on how to change the margins. I do yet have any experience working through all the details of preparing the formatting of a paper so that it fits the standards of a journal. I hope this guide is helpful. Please give me some feedback if there is anything I can do to improve it!

If this is the first time you have used Scientific Workplace, it would be a good idea to do a couple preliminary tasks to make your experience a little easier. First, because the paragraphing and spacing tends to be a bit unpredictable in Scientific Workplace, it is helpful to turn on the "invisibles." (Though the interface becomes significantly less attractive!) In order to do so,

1. Click on the "View" menu
2. Click on "Invisibles"

You will now see a green underscore wherever there is a space in the document, you will see a downward arrow wherever there is a line skipped, and you will see a backward P at the end of each paragraph. These extra objects turn out to be quite useful when Scientific Workplace is acting finicky.

Next, Scientific Workplace has many helpful buttons and menus that are not available by default. To turn them on,

1. Click on the "View" menu
2. Click on "Toolbars..."
3. I usually check "Standard," "Stop," "Math Templates," "Compute," "Math Objects," "Typeset," "Symbol Panels," "Tag," and "Fragments."

2 Keyboard Shortcuts

It is surprising how many objects can be displayed without ever having to use the mouse. There are four types of keyboard shortcuts that are used frequently. The first are standard ones that do not involve any complicated keyboard sequences. For example, to insert a radical sign ($\sqrt[3]{2}$), one need only hold down control, press r, and then release. For what follows, I will denote this sequence of keyboard strokes as (Ctrl+"r"). The parenthesis indicate that one must hold command while typing what is in quotes before releasing command. The most common commands that I use are:

(Ctrl+"m")		toggles "math" mode
(Ctrl+"f")	$\frac{a}{b}$	creates a text box for fractions
(Ctrl+"r")	$\sqrt[3]{2}$	creates a text box for a radical
(Ctrl+"d")		creates a centered display window
(Ctrl+"h")	2^3	creates a text box for superscripts
(Ctrl+"l")	H_0	creates a text box for subscripts
(Ctrl+"9")	$(a + b)$	inserts a pair of parentheses
(Ctrl+"[")	$[A]$	inserts a pair of brackets
(Ctrl+"{")	$\{x_1, x_2\}$	inserts a pair of braces
(Ctrl+" ") ¹	$ x $	inserts absolute value signs
(Ctrl+"e") ²		evaluates highlighted expression

¹ Note that the "|" sign used in the keyboard shortcut for the absolute value is the key directly above the enter key on most standard keyboards

² Highlighting a mathematical expression and pressing (Ctrl+"e") evaluates it. For example, if one were to highlight the expression $2 + 3$ and press (Ctrl+"e"), the output would be " $= 5$ ".

The parentheses, brackets, and braces are quite handy, because they come in pairs and can only be deleted in pairs, greatly reducing the chance that you will have too many or too few parentheses, brackets, or braces!

Economists, mathematicians, and whoever else uses Greek letters (Greeks?) will find the following set of commands useful:

(Ctrl+"g") (a)	α	(Ctrl+"g") (r)	ρ	(Ctrl+"g") (C)	Ψ
(Ctrl+"g") (b)	β	(Ctrl+"g") (s)	σ	(Ctrl+"g") (D)	Δ
(Ctrl+"g") (c)	ψ	(Ctrl+"g") (t)	τ	(Ctrl+"g") (E)	ϵ
(Ctrl+"g") (d)	δ	(Ctrl+"g") (u)	ν	(Ctrl+"g") (F)	Φ
(Ctrl+"g") (e)	ε	(Ctrl+"g") (v)	ϖ	(Ctrl+"g") (G)	Γ
(Ctrl+"g") (f)	ϕ	(Ctrl+"g") (w)	ω	(Ctrl+"g") (K)	\varkappa
(Ctrl+"g") (g)	γ	(Ctrl+"g") (x)	ξ	(Ctrl+"g") (L)	Λ
(Ctrl+"g") (h)	η	(Ctrl+"g") (y)	θ	(Ctrl+"g") (P)	Π
(Ctrl+"g") (i)	ι	(Ctrl+"g") (z)	ζ	(Ctrl+"g") (R)	ϱ
(Ctrl+"g") (j)	φ			(Ctrl+"g") (S)	Σ
(Ctrl+"g") (k)	κ			(Ctrl+"g") (T)	ς
(Ctrl+"g") (l)	λ			(Ctrl+"g") (U)	Υ
(Ctrl+"g") (m)	μ			(Ctrl+"g") (W)	Ω
(Ctrl+"g") (n)	ν			(Ctrl+"g") (X)	Ξ
(Ctrl+"g") (p)	π			(Ctrl+"g") (Y)	Θ
(Ctrl+"g") (q)	χ			(Ctrl+"g") (Z)	ϑ

The next set of commands is also quite handy:

(Ctrl+"s") (a)	\angle	(Ctrl+"s") (r)	$\sqrt[3]{2}$	(Ctrl+"s") (A)	\forall	(Ctrl+"s") (1)	\rightarrow
(Ctrl+"s") (b)	\bullet	(Ctrl+"s") (t)	\otimes	(Ctrl+"s") (C)	\cdot	(Ctrl+"s") (2)	\uparrow
(Ctrl+"s") (c)	\subset	(Ctrl+"s") (v)	\vee	(Ctrl+"s") (D)	\diamond	(Ctrl+"s") (3)	\leftarrow
(Ctrl+"s") (d)	∂	(Ctrl+"s") (w)	\approx	(Ctrl+"s") (E)	\notin	(Ctrl+"s") (4)	\downarrow
(Ctrl+"s") (e)	\in	(Ctrl+"s") (x)	\times	(Ctrl+"s") (F)	$\frac{a}{b}$	(Ctrl+"s") (!)	\Rightarrow
(Ctrl+"s") (f)	$\frac{a}{b}$	(Ctrl+"s") (z)	\exists	(Ctrl+"s") (I) ¹	∞	(Ctrl+"s") (@)	\uparrow
(Ctrl+"s") (h)	e^x	(Ctrl+"s") (<)	\leq	(Ctrl+"s") (M) ²		(Ctrl+"s") (#)	\Leftarrow
(Ctrl+"s") (i)	\int	(Ctrl+"s") (>)	\geq	(Ctrl+"s") (N)	\neg	(Ctrl+"s") (\$)	\downarrow
(Ctrl+"s") (l)	H_0	(Ctrl+"s") (-)	\equiv	(Ctrl+"s") (P)	\varnothing		
(Ctrl+"s") (m)	$\begin{matrix} 1 & 0 \\ 0 & 1 \end{matrix}$	(Ctrl+"s") (_)	\cong	(Ctrl+"s") (S)	\oplus		
(Ctrl+"s") (n)	∇	(Ctrl+"s") (=)	\neq	(Ctrl+"s") (V)	\wedge		
(Ctrl+"s") (o)	\emptyset	(Ctrl+"s") (+)	\pm	(Ctrl+"s") (W)	\aleph		
(Ctrl+"s") (p)	\prod			(Ctrl+"s") (X)	\div		

¹ The "I" here is the capital "i."

² The command (Ctrl+"s") (M) creates a matrix of the size of the last matrix you created using the "Matrix" button.

The final set of keyboard shortcuts is quite extensive, and this by no means an exhaustive list of them. Though I have not used a tex editor other than Scientific Workplace, I am under the impression that many of these commands are derived from their tex counterparts. For example, (Ctrl+"infty") creates the infinity symbol (∞) Because many of these commands are quite long to type, it does require some coordination to

be able to use them. As you will see in the section on "Adding Fragments," you can create shorter keyboard short-cuts for the symbols you commonly use. To illustrate this, note that (Ctrl+"underbrace") creates a brace below a box of text: $\underbrace{(X \times \cdots \times X)}$. I usually create a fragment for this to shorten the command to (Ctrl+"ubr") Several commands are listed below. If there are any you find yourself using frequently that are not on this list, please let me know so I can update it!

(Ctrl+"pagebreak") ¹		(Ctrl+"vdots")	\vdots	(Ctrl+"prod")	\prod
(Ctrl+"allowbreak") ²		(Ctrl+"bigcap")	\bigcap	(Ctrl+"sum")	\sum
(Ctrl+"ell")	ℓ	(Ctrl+"bigcup")	\bigcup	(Ctrl+"bar") ⁴	\bar{a}
(Ctrl+"widehat") ³	$\widehat{g(\beta)}$	(Ctrl+"cap")	\cap	(Ctrl+"not") ⁴	$\not\phi$
(Ctrl+"underbrace") ³	$\underbrace{X \times \cdots \times X}$	(Ctrl+"cup")	\cup	(Ctrl+"hat") ⁴	\hat{a}
(Ctrl+"overbrace") ³	$\overbrace{f(x)}$	(Ctrl+"preceq")	\preceq	(Ctrl+"dot") ⁴	\dot{a}
(Ctrl+"dots")	\dots	(Ctrl+"prec")	\prec	(Ctrl+"sim")	\sim
(Ctrl+"cdots")	\cdots	(Ctrl+"succeq")	\succeq	(Ctrl+"bot")	\perp
(Ctrl+"ddots")	\ddots	(Ctrl+"succ")	\succ	(Ctrl+"amalg")	\amalg

¹ Inserting a pagebreak ensures that, upon typesetting your file, everything after the pagebreak will end up on a separate page

² Inserting an allowbreak ensures that allows a mathematical expression to wrap over to the next line.

³ These commands create a text box that are adorned with the corresponding symbol

⁴ To use these commands, make sure the cursor directly follows the character you would like to alter

2.1 Adding Fragments

There are undoubtedly many fragments that you would like to be able to use a keyboard command for that, for whatever reason, are not standard. For example, defining a piecewise function $\left(e.g. |x| = \begin{cases} x & x \geq 0 \\ -x & x < 0 \end{cases} \right)$ can be a pain, because it involves at least seven clicks of the mouse. I currently have Scientific Workplace set up so that if I press (Ctrl+"pw"), $\{ \cdot \cdot \}$ is inserted.

In order to create your own fragment,

1. Highlight the object for which you would like to create a keyboard shortcut
2. Click on the disk icon at the bottom of the screen
3. Type in the (non-case-sensitive) command you would like to use to conjure this object
4. Click the "save" button

From now on, if you press (Ctrl+"command"), your object will appear. For ease of use, shorter commands are generally preferred to longer ones. Make sure that the command you want to use is not already in use by Scientific Workplace. To do this, try typing (Ctrl+"command") before you create your fragment. If you accidentally generate a fragment using a command that Scientific Workplace already uses, your fragment will not work.

Some of the fragments that I use commonly are:

(Ctrl+"pw")	$\begin{cases} -x & x \geq 0 \\ x & x < 0 \end{cases}$	Array for piecewise functions
(Ctrl+"ub")	\bar{a}	A bar which goes over a block of text
(Ctrl+"lb")	\underline{a}	A bar which goes under a block of text
(Ctrl+"above")	\overline{X}	A text box which goes over a block of text
(Ctrl+"below")	$\sup_{x \in X}$	A text box which goes under a block of text
(Ctrl+"cond")	εX	A

2.2 Other Keyboard Shortcuts

Perhaps you want to make your text bold or italicized, or you want to add a new section to a document. There are keyboard commands that work for these as well. For example, if you want to write in **bold**, you can press the sequence (Alt+"3") ("bo") (Enter). To stop writing in bold, you can press (Alt+"3") ("(") (Enter). (Yes, that is a left-parenthesis in the latter command.)

(Alt+"1") Brings up the item tag menu
(Alt+"2") Brings up the section/body tag menu
(Alt+"3") Brings up the text tag menu

After bringing up the menu, type the first couple letters of the tag you would like to apply to your document and then press enter. To stop using a particular tag (only applies to item tags and text tags), use the (Alt+j) ("(") (Enter) sequence, where j is either "1" or "3"

If you find yourself using certain symbols from the drop down menus often, you can hover your mouse over them to learn the keystrokes necessary for generating them. For example, if one hovers the mouse over the plus sign (\oplus) that has a circle around it (under the Binary Operations menu), a yellow box with the letters "oplus" appears. Typing (Ctrl+"oplus") gives the sign \oplus .

3 Changing Margins

Changing margins in Scientific Workplace is certainly no easy task, so it is a bit of a pity that the default margins are very wide. Nevertheless, they can be changed, and here are the eleven steps for doing so:

1. Click on the "Typeset" menu
2. Choose "Options and Packages"
3. Choose the "Package Options" tab
4. Click "Add"
5. Click "Geometry"
6. Click "Ok"
7. Click "Ok"
8. Click on the "Typeset" menu
9. Choose "Preamble"
10. At the bottom of the text box, type:

```
\geometry{left=1in,right=1in,top=1in,bottom=1in}
```

11. Click "Ok"

From now on, when you typeset your document, all the margins will be one inch. To change the value, simply go back to the "Preamble" editor and change the values in the

```
\geometry{left=1in,right=1in,top=1in,bottom=1in}
```

line.