• *What is SciType?*

SciType is a flexible combination of oft-ignored letterforms and innovative OpenType programming that can be incoporated into existing text fonts in order for them to function seamlessly when including common science formulas and equations in regular text. To simplify the above, a SciType-equipped font allows the user to type things like $h = 6.626 \times 10^{-34}$ Js, *The speed of light is 299 792 458 ms*$^{-1}$, $2SO_2 + O_2 \rightleftharpoons 2SO_3$, $c^2 = a^2 + b^2 - 2ab \cos \gamma$, and much more stuff along these lines, without having to constantly alternate between mouse and keyboard.

• *Who needs it?*

SciType should prove to be of great use to scientists, engineers, educators, students, statisticians, and everyone involved in general science writing. It allows quick and easy access to Greek characters and common math symbols for proper typesetting of scientific exponents, chemical formulae and mathematical equations, without the hassle of having to fuss with menus, palettes and odd key combinations.

• *Whose idea was it?*

The idea for SciType is the logical brainchild of Hans van Maanen, whose background as both science writer and type designer provided the perfect nucleus for such a synthesis. Hans had been publishing his fonts with Canada Type since 2007, so he approached Patrick Griffin with his idea and the bulk of the initial work. Together, Hans and Patrick expanded the idea and turned it into a functional reality.

• *Why SciType?*

One problem with commonly available text fonts is that their construct does not support science writing. This is due partly to the way digital type has evolved thus far, and partly to type designers focusing on the common ways of using Latin text fonts, hence neglecting to properly develop the requisites for basic science writing. Even in these days of advanced computing and typography, one cannot use a common version of, for instance, Garamond or Helvetica (or, at that, any available system font) to seamlessly include something like $\chi^2 = 3.85$ ($p < 0.05$) or $R' > 5$ μΩ in running text. SciType aims to intuitively work around this issue while using the tools currently accessible to pretty much everyone. It is essentially a makeshift system that gathers all the requisite forms and conditions for basic science writing, and webs them all together with OpenType programming that specifically addresses such a task.

• *So are SciType-equipped fonts good for any science publication?*

SciType isn't intended to be a substitute for full-fledged mathematical typesetting systems like LaTeX. It also isn't intended to be an equation editor. SciType is meant to make simple scientific writing easy by conveniently providing shortcuts to commonly used typographical conventions in mathematics, chemistry and other sciences, so it can be applied in widely available desktop publishing programs.

• *How many SciType-equipped fonts are out there?*

Hans van Maanen's Aragon ST was the very first published SciType font. It was released in June of 2013. Canada Type plans to release many more ST fonts in the future, both brand new designs and SciType-expanded versions of existing fonts.

• *How can I use SciType-equipped fonts?*

Three things are needed:

1. A SciType-equipped font (such as Aragon ST, or other Canada Type named with the ST suffix).
2. A program that supports OpenType stylistic sets (such as InDesign, QuarkXpress, Nisus, Pages, TextEdit).
3. A handy chart of the keyboard shortcuts to the forms you need for science writing. This chart is usually included in the same archive as the ST fonts.

The SciType programming is all inside the *SS20* stylistic set, so once you activate SS20 in the program you are using, you can use the keyboard shortcuts in the chart to type and the forms should appear accordingly. For example, if you type ^ (shift-6) before a number, it automatically turns into a exponent, or if you type $ (shift-4) or * (shift-8) before a letter, it becomes italic. The principles behind these shortcuts are very basic and easy to remember, so with very little practice you will be automatically turning something like $c^2 = $a^2 + $b^2 or $n = 1/2ln($P_1/$P_2) into $c^2 = a^2 + b^2$ and $n = ½\ln(P_1/P_2)$.

Please note: SciType is really a simple input method, not a re-encoding tool. It only works within a specific environment, where an SciType-equipped font is used in a stytlistic set-supporting program. This basically means that if you copy transformed text from an environment that contains requisite SciType parameters and paste it to one that doesn't, the text will revert back to what it originally was.
For example: While using Aragon ST in TextEdit (or any program that supports stylistic sets), you type $c^2 = $a^2 + $b^2 and it turns into $c^2 = a^2 + b^2$. If you copy the $c^2 = a^2 + b^2$ formula and paste it into Mellel (or any program that does not support stylistic sets), it will revert back to $c^2 = $a^2 + $b^2.

• *I really like using a particular font. Can I equip it with SciType?*

Certainly. Being a makeshift system, SciType is flexible, modifiable and module-friendly, so it's quite adaptable to existing fonts. However, as mentioned earlier, you should be aware that the majority of classic Latin fonts out there don't come with the requisites for such equipping. These requisites include some Greek characters, multiple figure representations, italicized forms, some math symbols, among a few other things. So expanding an existing font into a SciType one is quite a bit of work, not to mention such expansion may not be permissible in the licensing of some fonts. If you really want to do something like that, get in touch with us at *info@canadatype.com* for more information.