

Fingerpainting for the 21st Century

Why would I spend several thousand dollars on a technology concerning which I knew very little, with only the flimsiest of intuitions as to what I might do with it?

I program in Allegro Common Lisp, under an ongoing license graciously provided by Franz Inc. The senior programmer there is Ken Cheetham, who for many years has been my go-to consultant and guru for any aspect of the language I couldn't handle. I emailed Ken to elicit whatever he might be able to tell me about touch technology, and he replied that he'd just finished writing a lisp interface to Microsoft's low-level touch functions, which he'd be happy to send me.

Clearly my stars were in alignment and it was time to roll; and to thank you, Ken.

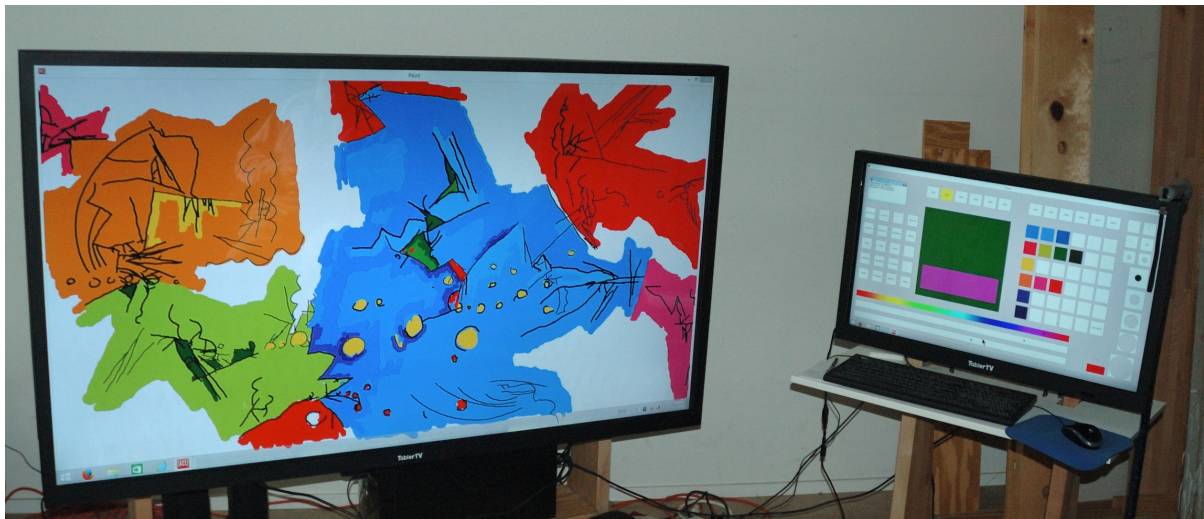


Fig. 1 AARON in Studio -- Touch Screen (left) and Control Screen (right)

There are three parts to my finger-painting system. The first is the AARON program running in its old home on a high-end LINUX machine, and tasked now, as it has been for several years, with making drawings for me to color.

When those drawings have been selected, they are ported over to the second – and central – part of the system, which runs on a Windows machine with two displays (Fig 1). One is a seven-foot touch sensitive screen where AARON's drawings are displayed and where the program then records the movement of my finger on the surface, my finger “being” a brush of selected size and color. The other is a smaller monitor, which serves as the controller for the entire system. The program stores the data for up to twelve images -- that's equivalent to

having twelve partially worked canvases in one's studio – and I can move freely between, and work on, any of the twelve, by clicking on one of the “job” buttons at the top.

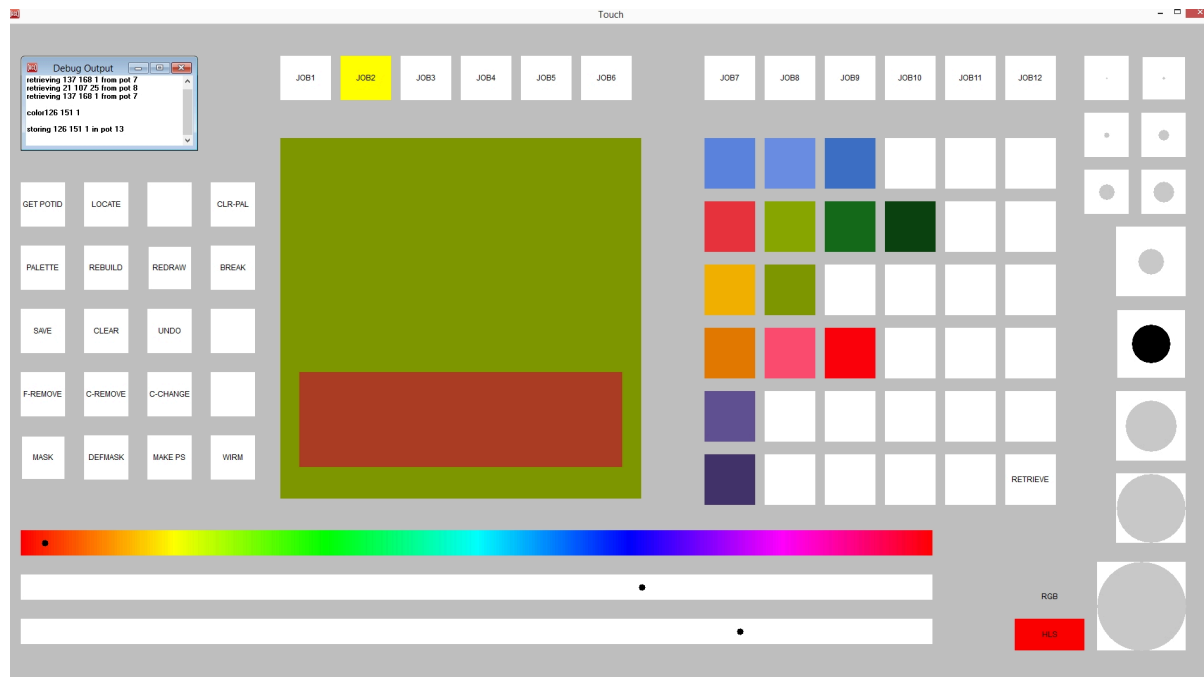


Fig. 2 AARON Control Screen Detail

Brushes are selected from the range of sizes on the right. Colors are mixed, either in RGB or HLS mode, using the three “sliders” at the bottom, and displayed in the lower part of the large area which shows whatever color is in current use. The buttons on the left activate a variety of functions – eg, save, redraw, repaint, remove-color, change-color – which determine, beyond moving my fingers, what will happen on the touch screen. (Fig 2)

Once mixed, colors are stored in “pots,” and AARON records the identifying number of the pot, rather than the color itself, for the path of each finger movement. That means that I can modify all the colors in a painting simply by modifying the contents of the pots, with none of the overpainting that would be required in a physical medium. By extension, I can also specify a particular area of the painting and remove, modify or replace every example of a particular color falling within that area. In practise, it means that I think about color more in terms of color relationships than I had previously.

Once a painting has been completed, the program generates a Postscript file, which is ported

to the third part of the system; a wide format printer, where it will be used to print the image on canvas, ready for stretching.

This part of the process is not as straightforward as it sounds. Some of the colors I can display on my big screen are outside the gamut of the printer; it simply can't produce them from the six "primaries" it uses. Obviously, getting the color relationships right on the canvas is more important than getting them to match those on the screen – no one will ever see the screen image – so there is a good deal of adjustment to be done at this stage, modifying color specifications by hand, until I'm satisfied that the printed image effectively does what the screen image did, though with slightly different colors.

What am I doing here?

I came to this place with the intention of unloading the skills, the technique, that one inevitably acquires with a physical medium like oil paint. I wanted my work to be simple, undecorated. And in providing myself with a set of tools for this new medium I found I had provided also a new way of thinking about and handling color relationships.

But where is "here?"

Hah! You may well ask. It never occurred to me until recently that I had changed the terms of my relationship with my program, my collaborator, in a very fundamental way. Before this new phase, it had always been necessary to bring AARON's contribution out of the program's space so that I could make my own physical contribution – that is, printing its drawings on canvas before I could start the coloring. Now I am working almost entirely in the program's space. Issues of physicality don't arise until the physical limitations of the hardware make that final stage of adjusting color relationships necessary.

I don't pretend to know why I think this is important. It could give rise to a new level of intimacy between my collaborator and myself, our roles freed of the restrictions of drawing on its part and coloring on mine. Or it could give rise to something I can't even conceive of at this moment. Have to wait (no, work) and see.

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