

Adrian Stokes takes a trip down memory lane to recall how technology has changed the way designers work

Painting by numbers

I was at lok-n'store recently and looking at archived presentations from 1984 to about now. In 1984 we had just invested in a self correcting type writer, were three years away from our first seat of AutoCAD and an office PC and 10 years away from our first seat of Unigraphics. There were some lovely examples of great individual skill on show.

In 1977, when I left college, the techniques employed by designers had remained fairly constant, probably since the interwar period; the only major innovation being the magic marker and unfortunately there were few Wizards. But by the early 1980's the first whispers of change were airborne, the nature of which even the most futuristic of futurists couldn't have envisaged.

My Granddad fought in the trenches in WW1 and in the 1970's I used to reflect with him on how we would never again see change on such a scale as that he'd lived through; socially, culturally or technically. From carts to Concorde and men were walking on the Moon - incredible. For most

people in the west, that period saw a colossal hike in their quality of life and the range of experiences they could enjoy. Only Philip K Dick could have envisaged such change. But by the time Granddad tripped up and breathed his last, the scale and speed of the next wave made even PKD look like someone with writers block.

The effects on designers and design practice has been no less spectacular, rather like asking a tree surgeon to step up and try his hand at brains. In a 1970's design studio the time served becoming a competent illustrator or draftsman was somewhat greater than that required to produce the same end results using a CAD programme. Furthermore, without some artistic talent it was unlikely you'd ever get any magic from your markers, or any other medium for that matter. If you're under 35 try to imagine for a moment being asked to design and represent a new vacuum cleaner with a box of felt pens, a ruler and some crayons to hand. When you've done that, reflect further on the fact that what you've created is a single image; one moment in

time and if you wanted to see it in a different colour or with a tweak to the detailing you would have to start all over again; no select> shift-alt and drag. If it needed making, it was head down with your BS guide to make a working drawing, no 'smart dimensioning'.

Designers have moved from impressionism to photo-realism. The process now taking a fraction of the time and with an end result, which in 1984 we would have never have dreamed possible - it was complete fantasy. A skill that took an age to hone then (often with resolutely 'iffy' results) can now be bettered by a 13 year old using the right programme in days, or even a day if they have the bit between their teeth.

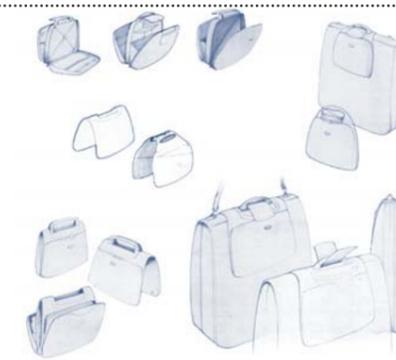
One common factor down the years is that a client confronted by good technique can be mesmerised; a rabbit in a spotlight unable to act rationally. Perhaps I'll come back to this later but for now it's worth holding two well authored adages in mind 'lipstick on a donkey' and 'rubbish in rubbish out'. Just because you can draw doesn't make you a good designer and nifty CAD skills can't



1 | **Smiths Industries:**
marker render 1982



2 | **Loctite glue gun:**
airbrush render from 1983



4 | **Carlton Luggage:**
sketch presentation 1997



5 | **Acoustic Energy:**
Alias render 1998

turn poor design into good design.

As luck would have it, my generation was caught between two worlds. Having learnt to get by with a drawer full of dried out markers we had to start all over again... bloody hell. I think few of us ever 'kept up' and found ourselves off the pace as a new generation made our hand skills as obsolete as those of a shorthand typist.

For the under 35's here's a history lesson: At college we had visiting tutors specifically brought in to demonstrate rendering techniques and technical drawing. Our renderer was called Bruce Renfrew and boy could he use markers. He'd take the tops off and swish the contents across the page. He'd layer the stuff on until the future was staring out in glorious Technicolor. Wow, this is what designers do. I could do a reasonable facsimile of Bruce's efforts but, like many, never had the self confidence to do it freestyle. Most of us were Barrichello, he was Button; melting the edges of our rulers and getting high on the fumes as we tried our best. You could waste

an age of thinking, doing and making time prattling about with a rendering and it never actually solved anything. So, personally, I switched to crayons and a pared back style of my own. Markers were for stylists not designers. I could sketch well and make things. I could also write so, in my early working life, if I needed presentation renderings I had a Rolf Harris who did airbrush pictures, which were the handmade forerunners of what we produce with 'Hyper-shot' today. Actually we also had a marker 'Rolf' called Dick Powell.

I also felt that the real spirit of an idea was more than likely to be found in a simple sketch, capturing the intent without any of the fanfare; and that a three dimensional representation should be higher up the presentation tree. But computers changed all that.

My first contact with CAD was in the mid 1980's when for £250/hr you could hire in the services of an agency that used a programme called Paint-Box. Needless to say we didn't bother. But soon after it was clear that CAD was unstoppable and in most design studios the entry was via AutoCAD. In 1987

we paid around £20K for a seat together with Olivetti hardware, designed by Mario Bellini and an A0 pen plotter to out-put the drawings. If a man walking on the moon was incredible 18 years earlier, this was its design studio equivalent. I used to employ pencil draftsmen and I loved the technical proficiency and quality of an engineering drawing, but out of the blocks, computers elevated the process from the shop floor to the lab. Living through these developments is quite different to being born into them in much the same way as being born into wealth makes you a little more blasé about it, than if you'd gained it on merit.

For me, after every new step along the way, only one word would do 'AMAZING'. My pencil draffie was upgraded and I would watch 'amazed' as the drudge of technical drawing was replaced by the efficiency of technical wizardry. We started to produce 3D isometric drawings of items and it became the standard working alongside a variety of conventional presentation techniques. The jump from drawing boards to computers started

then and was the cause of a lot of hand wringing in design offices around the country - for or against, spend or save. For me there was never a choice - it was clear AutoCAD was the beginning and car companies were the catalyst for the emergence of 3D CAD where the advantages for simultaneous engineering and visualisation were self evident. For designers we were still at the 'occasional hiring in' stage but there were alternatives and in the early 1990's help came under the banner of Adobe whose Photoshop and Illustrator programmes allowed designers without rendering skills to express their ideas and, more than that, as it allowed the combination of imported imagery, rendered images and text to be combined into sophisticated documents.

For my generation with our own design practices, it just got serious and we either went with it, or risked being irrelevant. The investment in hardware, software and staff training was like jumping from a Raleigh onto a Ducati, very costly. In effect I was buying my staff Ducati's and I was still fast pedaling but losing ground. I can't tell you how unset-

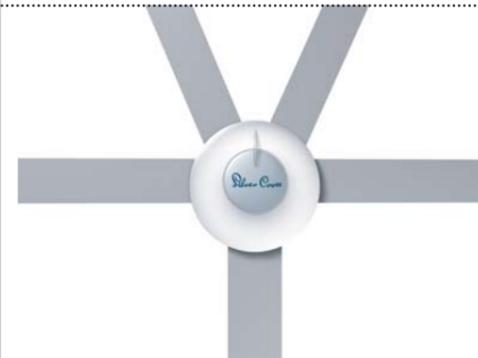
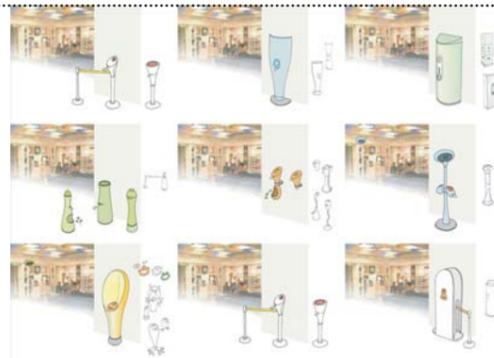
ling this was for many of us. We didn't have the time to learn but if we didn't we might as well have been struck dumb because we were less and less able to communicate in the same language as our staff who were disappearing over the horizon.

On the plus side the technologies themselves went from amazing to bloody amazing. I bit down hard and opened my wallet. A seat of Unigraphics with Silicon Graphics hardware and Unix operating system was an eye watering, heart stopping £45K and that wasn't for the best version, which would be double the amount. UG was closely followed by Alias, the queen bee of rendering packages. In the next two years we acquired more computers and finally I was the only one sat at a drawing board, which was really a large white place to put my papers because almost everything was done better on computers. My new position was gawping over someone's shoulder like Zaphod Beeblebrox and about as much use.

Since then technology has become more accessible and students whiz bang away, but in some ways they have regressed to become

'stylists', one of a small army of new 'specialists' (experience designers/ interaction designers/ interface designers/ product engineers...) Personally I did find my own feet and in doing so rediscovered my voice as a designer. But having served my time, I feel like one of a dieing race carrying some ancient wisdom that is the foundation of civilisation. Funnily I heard one of the Apollo engineering team talking recently about his regrets at the programme being stopped in the early 1970's. He said that his biggest regret was that the knowledge that enabled them to make such a complex almost failsafe machine was just left on the shelf and that as a result we are further away from repeating the feat than we were 48 years ago when President Kennedy announced the moon missions. He didn't know what he was talking about, nowadays we can watch movies walking down the street, whilst simultaneously ordering a pizza (hands free).

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8 | **Ideal Standard:**
Alias/Photoshop composition
2001

9 | **Clarks shoes:**
Hand sketch/ Photoshop
composition 2002

10 | **Rolls Royce:**
Illustrator drawing 2003

12 | **Silver Cross:**
Maya render 2006

13 | **Screen solutions:**
Maya render 2007

15 | **Audio 3:**
Hypershot render 2009