

Gambling is good for you if you are a supplier to the industry. Back in the late 1970's I was asked to go to a Bingo hall to meet up with the owner to talk about supplying Bingo balls with special printed logos. It was the end of a session and I was escorted into his office by a doorman. Upon entering I was faced with all but a few square feet of floor covered in piles of banknotes, many thousands of pounds. These were that days takings. This was not Las Vegas but Sunderland. Even with the restrictive regulations of the 1970's there were vast amounts of cash to be made in the Bingo business. Nowadays we are surrounded by opportunities to divest ourselves of cash, lotteries, casinos, scratch cards, on line poker etc. A sector that is omnipresent is fruit machines, with the increase in Jackpot values their popularity is growing. A little understood aspect of fruit machines is their life cycle. Apparently venues that operate fruit machines come into different categories the top end venues will use particular designs of machine for a limited period sometimes as short as 6 weeks after which times the machines are moved down to a less prestigious location. It will stay there for a longer period but then drop down again until eventually ends up in small pub in some urban backwater. Not unlike some premier league footballers who through their career drop down the divisions ending up on a cold Sunday morning on Hackney Marshes bow legged and battered, having made vast sums of money in the process. If they were fruit machines they would have captured and retained most of the money on the way down. So why is this important to our industry? The graphics are key to the machine's success. Just like point of sale the punter has to be persuaded to thrust their hard earned cash into the slot in search of instant gratification. (That's enough thrusting thank you Ed.)

Traditionally every part of the printed image on a fruit machine was screen printed but now in many cases there is a happy marriage of screen printing and digital printing. Solid special colours and white are all screen printed with some of the full colour elements digitally printed. Combine this with mirroring using silver nitrate and ammonia and you have a highly compelling graphic that will act as a magnet to money once mounted on to the machine.

A key element of all these decorating processes is cleanliness. The finished image is always back lit and any flaw will be obvious. This applies to single layers of colour or multiple layers, dust particles, squeegee marks, banding will be there for all to see. Ideally printing should take place in a clean room but certainly lint free wipes must be used and the glass well cleaned before printing. It has been known for a solitary thumbprint to ruin an otherwise perfect ten colour print. Of course the culprit cannot hide with a thumbprint broadcasting his guilt for all to see.

This is not a process to be taken on lightly, glass processing and subsequent printing is a challenging activity but specialist companies like Shades Screenprint Limited have gained pre-eminence. Sometimes they take the origination from their customers and on other occasions create the image from start to finish. Two considerations in image design are registration accuracy and the effect of back illumination on the perceived colour. It may only be a game but designers, quite rightly, are pedantic about colour matching and tonal range. This is where digital printing can produce graduations that would be very difficult with screen printing.

The techniques used in the printing of gaming machine displays can be transferred seamlessly to other applications where close visual inspection is the norm; none more so than vending machines. Getting the froth on the cappuccino coffee just right on the side of the ubiquitous coffee machine is an essential stimulus to assuaging the incessant quest for caffeine that belabours many a workplace. Some of us may be more attracted to the seductive blue of Cadburys Dairy Milk or even more so the past delights of Nestles Raison. What is common to all of these products these is the brand colour, even without contact or spectacle lens these colours fire the sensory neurone that sends chocolate demands to our conscious mind. Just try printing the Coca Cola Red a couple of shades off and see how people react let alone the marketing department of the manufacturer. The blood on the carpet will definitely not be the correct colour.

Whilst on the topic of cleanliness and best practice a colleague was working at an overseas client sorting out their Standard Operating Procedures. This was a very professional outfit who aimed for zero defects. The application was such that the substrate had to have no dust particles or contamination on the surface. Working in a clean room and supposedly using tacky rollers to remove any loose dust my colleague watched a printer from a distance place the substrate on the machine bed then remove his hat and wipe it across the surface of the substrate before operating the machine. Now I don't know about you but where I come from we don't wear tacky rollers hidden inside our hats. When confronted with his transgression he responded "Well the hat is clean!" At which point my colleague recognised we have a steep hill to climb. No matter how comprehensive the Standard Operating Procedures may be if the operators do not understand the reasoning behind them then such contraventions will regularly occur. Not just how but why. Once people understand why a particular process is employed you would be amazed how they can maintain and even improve the process rather than degrade it as was the case in this instance.

What we are seeing now in companies who are new to the screen printing process is a total change in culture. Gone completely is the concept of screen printing being a black art, replacing this is a clear understanding that it is an engineering process. This has come about because the process is being adopted by manufacturing particularly "High Tech." companies who are governed by statistical process control where every parameter is measured and recorded. No longer acceptable is checking mesh tension by the sound of a sharp tap to the mesh, mixing inks where the unit of measurement is a glug, a dollop, a dribble or a drop. More than five drops is a dribble and five dollops are a glug. These allow for measurements of thinners or ink! Replacing this calumny of process control is viscosity within specific tolerances, electronic weigh scales and controlled operating temperatures amongst controlling many other possible variables. Quite simply if you can't measure it you can't control it.

It was not so long ago when printing four colour graphics some practioners would print six colours or more. Cyan, magenta, process yellow and process black, then a "wash" of cyan, or a second layer of magenta, whatever was needed to correct the imbalance of colour. It is scary how much ink was wasted and work had to be reprinted. One of the advantages of the financial stranglehold the banks have on business is that we have to work smarter to extract more profit from reduced turnover. The aim has to be zero



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defects. In a typical print business working at a 5% profit margin one reject will require the production of twenty good prints to recover the loss of that single reject. This applies in any business as the cost of rejects comes directly of the profit. So it is not just the banks who are stuffing us there can be a lot of self strangulation going on that we cannot lay at their door.

How 2010 will treat us is an unknown but one thing is certain survival and prosperity is very much in our own hands. It is not just a matter of measuring ink mixes but monitoring and improving every part of our business. It is not going to be easy but we will come out of it far fitter and better placed to take advantage of the upturn. You might think this is stating the obvious but it applies to all of us, even scribblers.