

As a frequent business traveller to many parts of the world it is easy to become jaundiced to the “delights” of airlines, airports and hotel clones. Recently however I holidayed in New England staying in guest houses and visiting the numerous historical sights. Of the many impressions I gained two things in particular that struck me were the high esteem that the population held the British and the way they excelled in every aspect of customer service. Top quality service was not considered exceptional it was the norm. So much so that when less than ideal performance was experienced it was very obvious.

So what does this have to do with screen printing? Has the author been drinking too much tea in Boston? No, it is about understanding that it is possible to demonstrate a culture of excellence that can change the perception of a process. The aim has to be to delight the client with a product offering that exceeds their expectations. Screen printing had, in many cases, managed to become the poor performer of print technologies. This was particularly the case in graphics applications, none more so than Point of Sale. If you read these articles on a regular basis you will recall recent pieces were about screen printing excellence in Austria with state of the art equipment and in Thailand working under extreme climatic conditions with more basic equipment. What was common to both was the day to involvement by the owners of the companies and their insistence on continuous improvement.

It would be wonderful if time and money allowed us to achieve perfection in every aspect of the screen printing process but we should aim to excel where practical and achieve a product offering that exceeds the expectations of our customers.

As screen printers what can we offer our customers to fulfil this aim? Starting with the understanding that screen printing is a controllable, measurable and predictable printing process. Screen printing can be treated as an engineering technique. It is unsound practices that cause it to be unstable and printers have become experts at resolving problems they have created themselves. Remove this flawed approach and you are left with a highly profitable image creation system.

Virtually every other printing process needs inks specifically designed for the particular printing method. Screen printing is ink friendly. Any material that can be dispersed in a fluid, whose viscosity can be suitably adjusted, with a particulate size that it will pass through a mesh, can be screen printed. This can range from concrete to melted chocolate.

It is the ability to print wet film thickness up to 300 microns, 0.300 mm that is so attractive to graphics and PoS printers. The resulting printed image is vibrant and can be used to produce special effects very easily. The ability to print a vast range of inks means that equally wide selections of substrates are suitable for the process. If a substrate is wettable by the ink and the stencil can maintain contact with the substrate it can be printed.

This flexibility as to the range of substrates that can be printed is a compelling benefit for the client. Not only is there a huge range of printable substrates but the working

environments that the printed substrates will tolerate are much broader than with other processes. Screen printing enables the printer to satisfy the customer needs at a reasonable price.

Yes I know Wide Format Litho is faster and Digital doesn't require stencils. How much work do you need to pay for the multi-colour litho line? What true production rate do you get out of the £300,000 digital printer? Do you have an oil well to pay the inks and servicing costs? Are the Return on Investment calculations provided by the machine salesman fact or fantasy? The Survey of the UK Graphics Market provided by PRISM confirmed the reality of these assertions. One of the key responses in the survey was that for companies who use a combination of processes screen printing was the most profitable. Some companies who set out as pure digital print producers found that it was necessary to install screen printing lines to cope with the work that not suitable for digital print. These companies also combined print techniques on one job achieving results that gave them not only a unique selling point but also provided a profitable edge over the competition. The excellent Sensations book produced by FESPA demonstrates time after time the successful marriage of screen printing with other techniques. The Sensations book is being used by print specifiers as a demonstrator of the special effects they require.

The screen printing process hasn't stood still it has adopted digital technology in many different areas to enhance performance.

Improved instrumentation at reasonable costs is now available for every aspect of the process. Starting at the stencil with digital tensiometers for measuring mesh tension, coating thickness gauges for checking Emulsion over Mesh (EoM), moisture meters for ensuring emulsion moisture content is a minimum level before exposure. Moisture contents greater than 4% will alter the required exposure levels for the emulsion. If they are over 6% the emulsion will not cure completely. The coated mesh can then have the image created on it either by direct printing of a wax or ink image that is then exposed with conventional exposure unit. Better still the Computer to Screen exposure systems. These CTS systems are becoming increasingly popular. They use either the focussed UV that is directed by the Digital Mirror Device (DMD) or guided laser. Both systems give exceptional results and are ideally suited for profiling each of the process colours to achieve optimum print results. The actual image on the stencil can then be checked electronically to ensure it has been developed (washed out) correctly. Using process inks of controlled density and dot size, that are confirmed with a densitometer, digital technology provides the control that is necessary to give consistent results each and every time.

Printing machines have moved on from knarled workhorses to servo controlled highly sophisticated print engines linked to a range of different high efficiency dryers and curing systems. Positioning of substrate uses optical sensors and on multi-colour lines registration is verified at every print station. Power consumption of the modern units is often 50% that of 10 year old equipment.



All these advances are built on the adoption of digital technology in its various forms. Digital Workflows covering all the printing processes used in production adjust the images produced to provide a balanced result across a campaign allowing print providers to make use of the advantages of all the processes without compromise.

Screen printing has a proven technological base that has a two thousand year old history.

In the early 20<sup>th</sup> Century it was implemented as a “modern” production process since then it has advanced to the current highly developed imaging process.

There are some who don't recognise screen printing in this form but consider it to be dirty, inconsistent, outdated and slow; then they are not aware of the developments and how it fits into the current market.

It is the print providers who have the capability to work to high standards who gain the competitive advantage. Remember screen printing is a very profitable process. It may not be fashionable but then neither is paper currency. Give me a pile of fifty pound notes rather than a credit card any day.