Wide Format Digital Printing Industry

Ron Michael and Itay Shalit
NUR Macroprinters Ltd.
Lod, Israel

Abstract

The Digital Printing Industry

The advertising industry is undergoing major changes. One significant change is the growing need for a more segment-specific message integrated into campaigns. Today, with digital printing making possible an advertising message that "fits like a glove", the trend towards short to medium run print jobs is becoming common practice.

With the development of specific equipment for the wide-format and super-wide printing markets, the benefits of digital production are now reaching markets that were formerly served exclusively by the screen printing process.

Among the advantages digital printing offers over conventional methods is faster turnaround times due to quicker set-up, and consistent color throughout the print run. These benefits translate to improved efficiency and increased profit margins.

In typical screen-printing operations, the volume of work varies considerably from day to day, with significant 'peaks' in workload. Digital printing devices must be able to handle periods of modest activity interspersed with periods of very high demand and tight deadlines. Quick turnaround has become a key issue for screen printers choosing digital production methods.

With a wide format digital press, set-up costs are all but eliminated and short-run production becomes economically viable. Since jobs are entirely digital, they can be stored and reprinted quickly, providing additional benefits in terms of faster response times and improved customer service.

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Introduction— Wide Format Digital Printing for the Out-of-Home Advertising Market

When referring to wide format digital printing, one can envision many markets that can be served by it. Wide format printing refers to any printing from 1.2m to tens of meters wide or from 1 sq.m to hundreds and sometimes even thousands of sq.m. If we consider these print dimensions, many markets qualify to be defined as potential markets – out of home advertising (OOHA), packaging, wall/floor covering and more. This paper will only refer to the market of Out-of-Home advertising which is the market served by NUR Macroprinters' customers.

The Out-of-Home advertising market is defined as all advertising means, which a potential consumer is exposed to, outside his home. Traditionally, a terminology of indoor advertising was used. Changes in the retail environment and the increasing variety of applications made such definitions almost obsolete and today, advertisers are exposed to variety of media which can be either outdoor (billboards, wallscapes etc.) or indoor [POP/POS displays (Point-Of-Purchase/Point-Of- Sale), exhibition graphics etc] all belonging to the growing market of Out-of-Home advertising.

Among the various types of media available to advertisers, Out-of-Home advertising has been among the fastest growing segments of the industry. Although, in-home advertising media such as radio, TV, newspapers and others still represent the lion share of advertising expenditures, they are all on a very modest growth path, if-at-all. In the meantime, Out-of-Home advertising together with Internet advertising is becoming the fastest growing segment within the advertising industry.

Among the various applications representing the OOHA market one can find the wide format Point of Purchase (POP) displays, indoor banners, transit ads, bus shelter displays and the wider format (often referred to as Super-wide format) billboards, wallscapes, exhibition graphics and fleet graphics.

The tremendous growth of Out-of-Home advertising can be attributed to many causes, for example, the proliferation of other media, and hence the increase in the cost of exposure vis-à-vis Out-of-Home advertising. It is important to note however, that the growth of the OOHA market and its altered environment goes in many cases hand in hand with certain technological developments of the printing industry and was sometimes even led by such developments.

From Screen Printing to Digital Printing or From Evolution to Revolution

The printing expenditures associated with the OOHA market are estimated in the tens of billions of dollars neighborhood. Of this, digital printing produces less than 10b while the majority of output is still produced by the more traditional printing methods – mainly screen-printing. There are approximately 30,000 screen printers in the US alone, and appoximately a similar number in the rest of the world.[1]

Screen-printing is as old as the printing industry. Among its merits, is its ability to print onto a large variety of media at high speeds and high quality. With such a performance level, screen-printing catered to the majority of OOHA applications that were printed in run lengths of over 100 copies. On the other hand, screen-printing is limited to such run lengths due to the costly and time consuming set-up costs associated with each job. A typical preparation of a screen-printing job will include films development, screens creation (exposure) and more. The cost of set-up activities coupled with the reclamation after printing make the production of short to medium runs of screen-printing, a non-economical exercise. Of course, when a certain application consists of several tiles the set-up cost is multiplied accordingly. The following table depicts the set-up costs of various popular applications.

Cost To First Print (Wide Format Digital Printing)		
Application	Setup cost (Screen)	Setup cost (Digital)
King-Size bus ad	$600+	$0
8-Sheet poster	$1,200+	$0
Bus shelters	$600+	$0
Small truck	$2,400+	$0
30-Sheet poster	$3,000+	$0

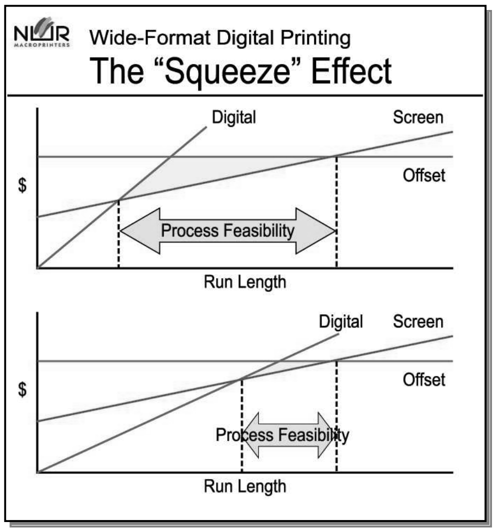
* Assumptions: $75 setup per reclaimed screen (54''X80'') using 4-color process incl. Labor[4]

Though screen-printing is not economical for short to medium runs, this has not been an issue neither for the advertising industry nor for screen printers, until several years ago. Its debatable whether the advertising industry had the need for this type of printing or whether the new technology created the demand. There is no debate, however, that the industry has changed in both needs and means. Both the advertising industry (the demand side) and the printing industry (the supply side) are entering a new era where new needs are finally met by a new alternative – Digital printing. There is no doubt anymore, that the trends in the OOHA market coupled with the emergence of new digital printing capabilities are about to change the wide format printing market for the first time ever, to change it for good.

Digital Printing – The New Age

As opposed to screen-printing, digital printing has no set-up costs. The introduction of digital technology to the printing market began two decades ago, not specifically in the printing domain, but actually in the pre-press part of the process. Digital technology revolutionized the pre-press processes and in fact today, pre-press is performed completely digitally. The revolution in pre-press, is a one of the factors enabling digital printers to produce short to medium runs of jobs significantly more cost-effectively. What had kept digital printing at an evolutionary stage rather than revolutionizing the printing industry in the past, was the key issue of productivity. Until recently, the majority of wide format digital printers consisted of slow devices capable of producing output at a speed of up to 5 sq.m/h. With such capacity, a cut-off point above which digital printing does not represent an alternative to screen-printing was in the neighborhood of 5 to 10 copies. This, evidently, limited the use of such digital devices to a small range of high price applications and certainly kept it outside the so-called production printing market. In such cases, the range of 10 to 100 copies printing was left untapped. Only recently, with the introduction of machines such as the NUR Fresco™, printing consistently at a speed of up to 80 sq.m/h, digital printing became for the first time a real alternative to screen printing in short to medium runs.

The following chart clearly shows the evolution of digital printing as a viable alternative to the screen-printing processes:



The following table describes the cut-off point between the screen-printing process and digital printing, based on the capacity of the NUR Fresco.

Cut-off Point Analysis (Wide Format Digital Printing)	
Application	Cut Off
King-Size bus ad	130
8-Sheet poster	110
Bus shelters	80
Small truck	110
30-Sheet poster	90

* Assumptions: $75 setup per reclaimed screen (54''X80'') using 4-color process incl. Labor and a NUR Fresco digital press printing up to 80 sq.m/h.[4]

With the introduction of a digital press such as the NUR Fresco, the wide format printing industry is seeing the end of a long evolutionary phase and the beginning of an unavoidable revolution. One might make an analogy to Internet technology that has been with us for decades, back to its early stages at American universities. It was only after years of technological evolution, that the technology met an industry ready for revolution. Once this revolution started, it affected almost every aspect of business. Looking at the wide format printing industry and the Out-of-Home advertising industry, the end of the evolutionary phase of digital printing arrives just in time to meet a changing advertising market. The cross fertilization of the two industries where one enjoys the capabilities of the other in order to meet new needs and to develop new ways of making business, marks the beginning of the new era in wide format printing for the OOHA market.

The Out-of-Home Advertising Market

The end of the evolutionary phase of digital printing arrives at the same time as the advertising industry is undergoing extraordinary changes. New technologies, new markets, a changing retail environment and new products are changing not only the advertising message being sent, but where, when and how it will be disseminated.

Out-of-Home advertising was traditionally dedicated to brand creation and enhanced brand awareness. Campaigns were nationwide and sometimes even media wide. Such campaigns were characterized on the printing side, by long runs of repetitive messages, which were suitable for this mass media. Campaigns were longer in duration and longer in planning, while implementation, and lead-time were accordingly longer. The type of relationship between retailers and manufacturers, empowered brand owners, gearing the advertising towards adapting the consumer to a certain brand, but then sourcing it elsewhere.

The late 90s and the beginning of the 21st century foresaw new trends and habits in the market. Nowadays, purchasing decisions are more and more impulsive and decisions are made most often in what is called the “last five feet” before the cashier. The relationship between retailers and brand owners has undergone a tremendous change as well. It is now the retailers who have the power. It is no longer what you buy – it is where you buy. Retailers are spending their advertising money to get the consumer to the retail outlet and make the decision of what to buy – in-store. Brand marketers are now facing the challenge of moving from brand loyalty to impulse purchasing. Advertising budgets have shifted as a result, from brand creation to brand promotion.

With advertising campaigns geared more and more towards promotion, the duration (turnaround) of advertising is becoming shorter and shorter. Promotion decisions are made in a matter of hours and the demand for implementing new advertising is now within a few days rather than a few weeks. If a few years ago, the dominant implementation method was print and distribute (i.e. print locally and distribute nationwide) the method today is to print in each location to reduce the time it takes to market.

This trend goes hand in hand with a customization trend. The information age provides brand marketers and advertising companies with an almost infinite amount of information on clients, demography, purchasing habits and more. With the widespread phenomenon of Just-In-Time inventory management and customer-centric approaches, the messages that were previously spread repetitively nationwide can now be customized to improve efficiency. This, in turn, makes the run lengths of printing shorter and shorter.

The combination of the increased importance of promotional advertising and the ability to segment customers into ever more accurate groups and create the “right” message for each, results in a need for shorter runs of wide format printing, meeting more and more competitive deadlines.

Implementing such advertising campaigns requires the cost effectiveness of printing short to medium run jobs, when printing them on the spot. Due to costly and timely set-up costs, screen-printing processes could not have met such needs. It is only with the advent of digital printing that these needs can be catered to.

Today, the technology is there and the need is growing, but it doesn’t stop here. The technology is becoming more and more advanced, enabling digital printing to push the cut-off point between digital and screen-printing higher and higher. Advertising companies are realizing the new opportunities, which have opened to them thanks to this technology, and are becoming more creative in exploiting digital technology by developing new applications and markets. Print service providers have not been ignoring the revolution. Gaining entry is now easier, allowing entrepreneurs to enter the market basing the business solely on digital printing technology. Screen-printing firms are increasingly adapting digital printing technology to offer one stop shopping services to clients, by complementing the screen-printing process for short to medium run jobs. The inference is clear – it’s only when traditional players adopt the new ways that the revolution begins.

Conclusion

The evolution of digital printing technology and new challenges faced by the advertising industry have combined to revolutionize wide format digital printing for Out-of-Home advertising.

The needs of the advertising industry in terms of short and medium runs of prints produced by ever shortening dead lines, can only be met by the wide format digital printing technology.

Similar to other markets that went from evolution to revolution, the digital printing revolution is not only providing a new technology but also fostering new ways of conducting business in the Out-of-Home advertising sector.

Screen-printers, who have dominated this market for many years, will have to adapt (and a few of them have already begun the process) to this new method of doing business.

They will have to adapt – or they will die.

References

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Biography

Itay Shalit has served as NUR's Director of Product Management since January 2001. Prior to that, Mr. Shalit has served as the product line manager for the wide format line of digital printers with NUR Macroprinters. Prior to joining the Company, from 1997 to 1999, Mr. Shalit served as Marketing Director of ACA Ltd., a software company. Prior to that he held several positions of project manager in the marine industry sector. Mr. Shalit holds a B.A. in Mechanical Engineering from Tel-Aviv University and an MBA degree from ENPC France.

Ron Michael, VP Marketing, NUR Macroprinters Ltd.

Ron Michael has served as the company's Vice-President of Marketing since June 1999. Prior to joining the company, from 1997 to 1999, Mr. Michael served as Managing Director of Hygiene Products Ltd., a McCarthy Group company. Prior to that he held several positions within Strategic Business Development ("SBD"), a leading Israeli strategy-consulting firm.

The last position he held at SBD was Senior Project Manager, specializing in structural business moves. Prior to that, he founded and served as Managing Director of Esprit Promotion Systems Ltd., a company specializing in the development and sales of direct marketing databases.

Mr. Michael holds a B.A. in Business Administration from Tel-Aviv College of Administra-tion, an LL.B degree in Law from Tel-Aviv University and an MBA degree from INSEAD France.