

## GRAPHIC COMMUNICATION AND PRINT MEDIA TECHNOLOGY - ENHANCING INNOVATION FOR MEDIA COMPETITION

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### ABSTRACT

Nowadays, communication becomes more and more complex. In order for the print media to face the competition with digital media, advanced strategies are required, implemented by sophisticated technological innovations.

The present study investigates introduces these technological innovations which aim in providing added value to print media communication. In particular, the application of science and technological innovation is presented through selected examples with printing, finishing and packaging. As an example, the case of the label printing company Forlabels S.A. from Greece is investigated and analyzed.

**Keywords:** *Graphic Communication, Printing, Finishing, Packaging*

### 1. GRAPHIC COMMUNICATION – ROADMAPS TO INNOVATION

Printing, finishing and packaging are the stakeholders that support the communication of brands, goods and services. Print media are present along with digital media and contribute quite considerably in promotion, advertisement and sales. This paper investigates innovations that are taking part in graphic communication – print and packaging, especially these that add value to products and brands.

Such innovations originate from intensive research in new technologies, materials and engineering. Their application, not only enhances expanding not only visual communication but also stimulates other human senses such as haptic, smell and sound.

Brands, products, sales and marketing strategies present quite strong bonds with media and communication and there is no doubt that graphic communication triggers the attraction on products. Marketing rely quite considerably in graphic communication, expressed with print and digital media. Hence, the visual communication is only one of the senses that contribute to the attraction for products and lead to decisions for sales.

As such, no matter that digital and online media are increasingly used, **print**, and the related technologies are those that implement the actual product distribution and enable sales together with packaging [1].

Continuous development in packaging is increasingly based on enhanced applications of graphic arts science and technology. Modern packaging requires a holistic design based on the following aspects:

- Product data,
- The requirements of brand owners,
- Product-related marketing strategies and sales planning,
- the (constantly changing) market characteristics.

Nowadays, printing and finishing technologies, materials and innovative processes, offer a wide variety of solutions for products promotion and tools for applying advanced marketing strategies. As such, graphic arts science and technology contributes decisively:

- in the quality packaging
- the successful presence of products on the market [2]

Hence brand owners and marketing managers should be aware on new technologies offered by print and packaging sectors [3].

## 2. GRAPHIC COMMUNICATION AND PRINT MEDIA – EVOLUTION IN SCIENCE AND TECHNOLOGY

Traditionally, in the graphic arts/communication and printing industry, print is one of the products that contribute quite considerably into the communication process. Additional technologies, named after “finishing or post-print processes”, nowadays, are increasingly applied in order to add value on printed matters. These processes vary from varnishing to laminating and from embossing to die-cutting and the creation of special effects with certain innovations.

The purpose of such advanced finishing technologies is to enhance communication, by adding elements not only related with color and visual domain, but also by expanding communication with additional senses such as smell, odor and haptics. Nowadays, innovations in print and finishing are expanding in application of finishing techniques, with digital machines and equipment such as Scodix and MGI.

Such technologies expand to a wide range of innovative applications. A short classification includes (among others):

- Hybrid printing technologies (combination of various printing methods, namely offset, digital printing, flexography, and silk-screen printing)
- Hybrid printing and finishing technologies (combination of printing and post-press technologies and processes)
- New materials such as fluorescent substrates
- Printing of interactive information – printed electronics, RFID/NFC Tags, printing of thermo/time indicators. Technologies that print interactive data, such as Augmented Reality (AR)
- Variable data printing, 6,7,8 color printing, effects printing (such as Mosaic patterns that make every printing sample unique) digital textile printing
- Finishing technologies such as die-cutting, embossing, hot and cold foil application, thermo-transfer, calendaring, spot varnish, metallization effects
- Application of varnishing technologies for the achievement of odor
- Functional printing, functional packaging, 3D printing

## 3. INNOVATIVE PRINTING AND FINISHING TECHNOLOGIES CONTRIBUTING IN ENHANCED COMMUNICATION

The innovative applications of printing and finishing go beyond simple visual communication, implying new features, which include the participation of additional senses such as taste, odor and, of course, haptic – the absolute nature of feeling! As such, they trigger a multiple - holistic communication sensation, by creating a so-called “Hybrid Communication model” [4].

An example is presented by the Follmann company in Germany, as it regards smell and odor: Follmann has developed aroma varnishes that contain fragrances enclosed in microcapsules. When customers touch a printed package, the capsules release their scent. According to the manufacturer, the enclosed fragrances are potent for up to 12 months. With a view to a wide range of applications and multichannel marketing campaigns, the scented coatings can be used in sheet-fed and web offset printing as well as in flexographic and screen printing. They are applied by using a special varnish applied at the finishing coating process, with microcapsules including the aroma [5].

## 4. CASE STUDY – APPLIED RESEARCH AND INNOVATION IN GRAPHIC COMMUNICATION AND PACKAGING BY FORLABELS S.A., SCHIMATARI, GREECE

Forlabels, is a leading and innovative label printing company in Greece. The company develops and applies in reality scientific research in advanced printing technologies. Among others, Forlabels develops labels and packaging by implementing various innovative technologies in printing and finishing [6].

For example, the company implements the mosaic technology as well as the variable data printing technology. Examples are an innovative product in the field of gastronomy, namely a series of miniature ouzo bottles.

Thus, twelve different labels, corresponding to the twelve Gods of Olympus, were created, with shrink sleeves dressing miniature ouzo-bottles as illustrated in image 1 [6].



Hybrid printing and Variable data printing technology

Further, Forlabels applies the **mosaic technique**. With this technique, a very attractive, very impressive and very differentiated image on the shelf, can be created, catching the eye of the consumer and building a special relation, as it can be seen at the image below, with an exceptional packaging for high quality olive oil (Image 2).



Figure 2 Mosaic printing technology



Figure 3 Hybrid printing and Variable data printing technology

Variable and mosaic technologies allow to create collectible packaging to commemorate an event, personalized packaging for a specific consumer providing even personal bits such as his photo, packaging with an educational purpose that may display recipes, information about the product's place of origin, etc., as it can be seen in image 3 at beer labels.

## 5. DISCUSSION AND CONCLUSIONS

The above presented examples constitute only a fraction of the world of applications and innovations in materials, print and finishing processes and the structural and creative design, as the graphic communication and print media industry has to show today. Brands, products, supply chain, sales and marketing strategies are strongly related with Print, Packaging and Graphic Communication.

Technological innovations on graphic communication, print, finishing and packaging, offer added value for brands and retailers, and as such, they support significantly marketing and contribute to the increase of sales to the products.

The present study leads to the outcome that the enhancement of communication, with technological innovations and their application by print, finishing and packaging, offer added value and contribute to the increase of sales for products. As such, relying on advanced print and finishing technologies, definitely is a stable and concrete basis for print buyers, media consumers and packaging [7].

Finally, the combination of advanced print and finishing technologies applied by innovative printing companies around the globe, drive communication beyond a simple visual communication., incorporating haptic, and other senses. Further, they add value to products by introducing augmented reality and the implementation of interactive data, extending the dimensions of communication by eliminating the borders among physical and digital worlds.

Printing and finishing innovations are the dynamic and efficient answer in an effort to keep business in print further in the future.

The result is a dynamic evolvement of graphic communication industry in the media landscape and the competition with digital media.

Among others, Typography is nowadays the principal quality specification for advanced media communication. Print, Finishing and Packaging are present and they produce hybrid communication, being the most prominent stakeholders for brands and products.

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