Whitepaper:  
Digital Signage in a Printed Sign Universe

Introduction

This document defines the various sources and workflows of in-store Visual Merchandising (VM) materials in the modern retail store. The retail system framework can be relied upon to provide a common data infrastructure for each VM technique. It should therefore not be necessary to create a new system infrastructure or “business silo” purely for Digital Signage.

In the retail store there are a number of sources of VM:

- Printed at the corporate headquarters either in-house or at a third-party print provider
- Printed in Store with distributed print networks
- Printed at the local third-party print organizations
- Supplied by vendors
- Output to Digital displays

Printed at the Corporate Headquarters

Static signage, by its nature, has no active data input or access requirement and templates would normally be printed on an offset, litho, or web press. To achieve the economies of scale in this type of print operation, signage should be printed at one location and distributed via mail or incorporated in a standard distribution process to each store. Due to the nature of this type of signage and with adequate planning there is typically no time constraint on delivery to the store.

Examples of this type of VM materials would be:

- Large format branding exercises or concept theme signage
- Concept backdrops
- Cutouts and unusual shaped signage
Template blanks i.e. Sale, Manager’s Special, Shelf Tag, Shelf Talker’s etc. would be printed on offset presses with the objective of being overprinted with decentralized laser or inkjet printers on site or in store.

Printed in Store

As retailers move more toward more regional or neighborhood pricing there is a requirement to promote/ price related items in the store with localized content. The intent is to mold the customer experience to the local consumer.

In this process a template may be populated with messages in a number of places and the final “document” rendered only at the point of print. This process ensures that there is little or no print waste or distribution charges and little manual work is required to ensure the efficient delivery of the signage regardless to the complexity of the retailers’ promotional campaigns and pricing matrixes.

Examples of this type of VM would be items with dynamic prices or promotional concepts that would normally be subsets of A4 or letter or 13” X 19” or tabloid size pieces depending of the printer hardware selection in store.
Shelf Tags
Shelf Talkers
End Cap or Gondola Signs
Informational signs with images
Promotional themes with active price or concepts

In some stores, with the current low cost of large format inkjet printers i.e. less than $3,000, a business case can be developed for the acquisition of this type of printer for in-store use to complement the existing letter or tabloid printers.

This process ensures a direct data relationship between the corporate headquarters’ promotions management system and pricing files as well as the ability to create business and design rules as part of the inherent process.

Thus the development of this kind of signage would require:

- Design templates in all shapes and sizes to match the needs and fixturing in the store
- Data integration at the corporate headquarters that would include non-dynamic items such as:
  - SKU Number
  - Description
  - Features in bullet points
  - Comparative Information
  - Images
  - Cross and Up selling items
  - Suggested Uses
  - Was Price etc.

If the local pricing files are stored at the corporate headquarters, the current price can be integrated into the digital template using the corporate LAN/WAN. In the case where the price files are maintained at the actual store, In-Store Processor (ISP), the final template would have to be generated...
by an integration to the price file at the store before the final “document” is rendered for print.

![Diagram of Print Network](image)

**Figure 2 -- Printed in the Store With In-store Distributed Print Network**

**Printed at local Third-Party Print Provider**

If the signage requirements call for larger volume, higher quality, larger format or the costs of producing these items in-store are prohibitive or the local store printers are unable to support the requirement, a local third party digital print provider is necessary.

An assessment should always be made whether the cost of printing in a larger batch or run plus the associated cost of distribution warrant the decision to print. The cost of every print job should be calculated at a cost per-piece basis + the cost of distribution, including the internal resources to package the finished product for distribution.

Printing at the local third-party print provider would normally include signage that requires messaging to reach the local consumer. Based on this assumption, data integration with the print provider is as critical as if the piece was printed in-store; instead of sending the print job to the local store printer it should be sent via a link to the third-party provider’s print operations “digital press”.
Therefore, the workflow for third-party printing is identical to in-house printing except at the time of the actual print the final job is redirected to the third-party print operations.

![Diagram of workflow](image)

**Figure 3 -- Printed Off-Site at a Local Third-Party Print Provider**

**Supplied by the Vendors**

Signage that is static in nature and specific to a vendor should be delivered at the same time and in the same manner as the product being delivered.

- These types of materials could include:
  - Merchandising stands or shelves
  - Cutouts
  - National branding campaigns
  - Vendor specific promotions

In an effort to ensure brand consistency with local input, vendors should endeavor to utilize the local store’s distributed print network’s infrastructure available to them.

Vendor brand managers should consider utilizing the retailers distributed print networks allowing them to achieve product positioning within a store while incorporating local content, making it look like it was developed for that specific
store. The possible limitations in quality with in-store digital printers can be overcome by designing store signage with these concepts in mind:

- Matching Store branding with product branding
- Localizing content to enhance customer experience
- Localizing pricing to ensure best available value to consumers, while enhancing margins in areas of less competition
- Ensuring that price and promotion are not shown as an afterthought. A well-crafted marketing piece may be spoiled by the store handwriting the price on the piece or prices badly “stuck on” to the piece

Digital Signage Network

In a digital signage network (DSN), understanding the printed signage network requirements and functionality should eliminate the need to implement another “business silo” of data for this implementation. The DSN should not be considered as a new project but should be considered as an additional module on the current promotions management, visual merchandizing or advertising (AMP) systems. This eliminates the need for a separate DSN plan and the potential friction that could arise between contributing groups created within the company. When the DSN is incorporated as part of the store’s layout and VM infrastructure, it becomes easier to gain internal corporate consensus. In addition, by incorporating the DSN into the existing infrastructure, a number of seemingly unrelated organizations gain a level of synergy.

Traditionally the printed signage networks are controlled and integrated by store operations, planning, VM and IT respectively. DSNs are normally
implemented by marketing and advertising as well as business development and sales. By working within the existing infrastructure the issues of system requirements and implementation are overcome, allowing for the various groups within the company to come into alignment.

DSN content is outsourced or provided by the internal marketing department by creating content in the form of templates and incorporating data “calls” using integration tools that already exist. More flexible marketing pieces can be generated due to the local availability or access to price or promotional information.

Furthermore, due to the ability to access price, DSN pieces would be more available to attract additional vendor’s Marketing Development Funds (MDF), or “direct to consumer” marketing funds, since this insertion of price alone effectively eliminates the necessity to claim these pieces as part of national co-operative campaign funds. This feature alone would ensure that the DSN is funded by the vendors rather than self-funding the DSN by the retailer alone.

By integrating the localized requirements with the national branding message, it becomes easier to attract MDF or “direct to consumer” marketing funds from the national brands. This results in content that satisfies the national brand and the local consumer. This strategy will go a long way to enticing national brands to fund local DSNs.

![Figure 5 – Digital Signs as an Integral Part of the Visual Merchandising Infrastructure](image-url)
Print Replacement Strategies

In an effort to calculate a favorable Return on Investment (ROI) for a DSN, the ability to eliminate or reduce the dependency on large-format and/or high quality printed signage represents a huge savings. This is because of the expensive print cost requirements for these type of signage. In addition, the ongoing replacement and updating of printed signage for new promotions represents a significant long-term expense to the store’s VM strategy.

In the circumstance where the retailer runs a weekly promotion that use a single color or multi-color posters advertising the 5 new promoted items of the 200 weekly promoted as posters in the store windows. When the customer approaches the store their “eye” should “zero in” on these specials while walking from the parking lot to the store entrance. Since the cost of a poster is typically $15 - $20 per piece, 5 posters per week and 52 weeks per year demonstrate a cost of more than $5,000 per year, per store for this type of promotion.

This expense could be eliminated with implementation of 5 displays in portrait mode where the retailer could actually advertise 20 to 50 products in the prime location. Furthermore, since this location is so prime, the “spots” could be sold to vendors participating in these promotions.

With implementation of the DSN, a fresh look should be taken at the presentation strategies adopted by retailers. Certain products may be better sold utilizing a multi-media digital format rather than a printed format.

Figure 6 – Diagram of the Sources of all Visual Merchandising Components in the Modern Store

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Conclusion

The implementation of a Digital Signage Network should not be viewed as an independent or new operation within the retail environment. It should be viewed as an integral part of the visual merchandising infrastructure of the modern retailer. Employing the store’s existing infrastructure provides a shorter route to a successful DSN initiative.

Effectiveness of marketing decisions for various in-store promotional campaigns should be considered when deciding to print or display:

- **Best results** – Directly related to sales uplift, more consumer friendly environment or other pertinent criteria
- **Efficiency** – Easiest and most flexible route to delivery
- **Multiple Options** – Does this promotion lend itself to a single product or should more than one product be promoted in this space
- **Income** – Can this promotion be revenue generating, i.e., can this concept or space be “sold”
- **There are a number of rationales to implement a DSN that may not only be operationally or ROI based.**
- **Business Opportunity** – Ad sales and resultant sales uplift
- **Employee Communications** – DSN is typically forward facing to the consumer but can also be inward facing to employees providing training and to facilitate corporate communications
- **Print replacement options** – Reducing the spend on printed items by replacing them with digital displays
- **Enhance customer experience and reduce perceived wait times**
- **Employee Training** – Sales are directly related to educating the sales force on the product range and selling techniques
- **Management controls all communication internally and externally. Management will create a uniquely personal relationship with all it’s customers and employees**

Once the Digital Sign Network is in place, a number of new visual merchandising opportunities exists that may never have been considered in the past.

- **Introduce business models for new display technologies** – Hologram, 3D, LED, etc.
Utilize the infrastructure for a number of existing or proposed initiatives like interactive kiosks, lobby screens, building LED signs, ATM’s, etc.

Sell screens like end caps

Ensure that content drives revenues from the core business. The opportunity cost of short-term income from “eyeballs” may be seductive, however, may lose significance over time if fresh content is not updated

Executive management will only be judged on revenue and/or profit growth and, therefore, all decisions in relation to the implementation of the DSN should relate back to the product sales uplift and the effect on the in-store customer experience

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