The Evolving of the Digital Card Market

The digital card market continues to evolve and is an ever increasing opportunity for digital printers of all types. This Tek Tip will talk about the changing marketplace in regards to the printing, processing, and films used to make digital cards.

Markets

In the early days of digital print, the market for digital cards revolved around the ability to print barcodes and variable data in small quantities for low security cards such as business cards and membership cards. Fast forward to today, and this has changed dramatically. High end security cards, such as credit cards and driver's licenses are being produced digitally and in large volumes with all the key security features by digital printers who meet the requirements to produce these high end cards. In addition, they have been able to offer increased value by allowing the end user to personalize their cards with their own images such as on their credit cards.

Now most digital printers do not have the capital and the security standards to create high end secure cards like credit cards and drivers licenses, but that does not keep them from the "card market". Standard "card construction" (laminated 2 sides, 30mil cards) is used in a wide variety of applications such as gift cards, loyalty cards, and hotel key cards. In addition this same type of construction is being used in non-card applications such as golf cart charts, alcohol mix cards, quick reference cards, calendars, and other durable card like applications, all of which can take advantage of the personalization and variable data efficiencies of digital print.

Card Construction

Core Material- In the past, most digitally produced cards were made on PVC (Polyvinyl chloride). The core of the card was either one sheet (solid core) or 2 sheets of PVC (split core) totaling between 10 to 24 mils thick and then laminated together with a clear laminate on both sides bringing the total thickness to the standard of 30 mils. These cards were typically laminated together in large sheets via platen lamination, which uses a combination of heat, pressure, and time to make all the layers of the card become one "unit" that could not be separated. This could be a long and expensive process in terms of time and equipment needed. Both the film and the process used are now changing.

The Evolving of the Digital Card Market - Continued

PVC is still the dominate film used to make cards. PVC offers superior flexibility and ease of emboss and lamination. However there are environmental and cost concerns with PVC. There is a growing trend to use other materials as the core of cards. Some choices printers are making instead of PVC include:

- **Polystyrene** – a more environmentally friendly material than PVC that offers a yield advantage. Some polystyrene blends add increase rigidity without lowering the impact strength or tear resistance.
- **Polycarbonate** – Durable product that is used for cards that are to last a "lifetime" such as National ID cards.
- **PETG** (Polyethylene terephthalate)- Gives the durability needed for long term cards with good clarity and has a more attractive price than polycarbonate
- **Biodegradable PVC** – additives are added to the PVC to aid in quicker degrading of the card when disposed of.

Printer Types- One of the earlier adopters to the digital card market was HP with their HP Indigo presses. The films used needed to have a print receptive coating to accept the digital inks. Tekra Corporation offers coated films for this press platform called Dura-Go. While HP Indigo is still a premier choice for a digital printer, recently other printer types have entered the market. Toner based printing systems such as Xeikon and Xerox presses have the ability to produce cards. Although a little more challenging to create because of the higher temperatures the presses fuse the toner to substrate at, companies like Tekra have developed coated films, such as ToneKote, to work in this process to aid in the toner adhesion during the printing and lamination process. These coatings added to the film are compatible with the lamination temperatures and most adhesive systems.

Lamination- Platen lamination, although still the go-to process for high end security cards, is no longer needed for the middle and low end card applications. Lamination companies such as D&K have created very strong laminations using special heat seal adhesives and two sided laminators. The combination of laminating films and equipment have lowered costs and allowed easier entry in the broader card market.

As you can see, the digital card market is continuing to evolve. There are more types of applications and more ways to create them. It is still very important to thoroughly test the films and methods you use to make sure they meet the expectations of the application. Companies like Tekra, can help you make the right decisions and will offer free samples for you to test.