

## Technical Reference

### **Access Control Cards – Printing Using Labels**

#### Applicability

This discussion applies to all types of AWID cards – low-frequency (proximity) and ultra-high-frequency – graphics-quality and clamshell cards.

The printed information may be company logos; instructions for cardholders; indication of a location, facility, or parking assignment; or identification of an individual person (the cardholder), perhaps with a facial photograph.

#### Common Printing

For **bulk printing** of an image or message that is the same for all cards, printing may be done by a local print-shop using offset printing equipment or another appropriate technique. Bulk printing can be done also by the user's desk-top card printer using a dye-sublimation ribbon. The method may be decided by the number of cards to be printed with the same information, or the relative costs, or time available.

For **individual printing** (commonly photo ID badge printing), the usual solution is a desktop card printer interfaced to a computer that stores the individuals' personal data and photo. Excellent printers with PC software are readily available online.

Bulk printing can be done on both graphics-quality cards and clamshell cards. Individual printing generally requires the graphics-quality cards that are offered by access control reader manufacturers and printer manufacturers and card supply houses.

#### Printing on Secondary Media

In some situations the users prefer to print on material other than the card itself, and then to transfer that secondary medium to the card's surface. If a card is not suited to direct printing (like a clamshell card or a card that was previously issued), it may be better to print on a "label" that can be affixed to the card after printing.

#### Types of "Labels"

A popular label for this purpose is the 10 mil overlay (0.010 inch thick). It is thin, flexible, transparent, and compatible in size and material for application to a card. It is supplied with a temporary backing to support the overlay during printing and handling. When the backing is removed, the overlay may be affixed to the card's surface by pressure-sensitive adhesive, or by heat-lamination. It does not affect the card's read range.

For short-term use, a paper or plastic label, with either temporary or permanent adhesive, may be used. The image on labels may be printed in a label-printer that is connected to a computer, or may be even handwritten for a quick solution. The label must have *no* metal on it.

#### Quality

Appearance and life expectancy differ for these techniques. **Dye-sublimation** on graphics-quality cards is ideal for both appearance and life and detail of the printed image (half-tones, shading, multi-color). **Offset printing** of a repeated image is best used for up to four colors in blocks, or large letters or numerals. **Overlays** may have the same high-quality printing as direct dye-sublimation printing, but their life depends on the amount and kind of handling and protection that they receive. **Paper labels** should be considered only for quick/short-term uses.

#### Reference

AWID's Technical Reference "Custom Graphics Printing on Credentials".