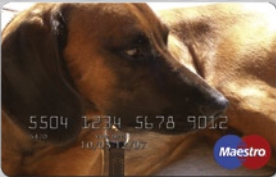
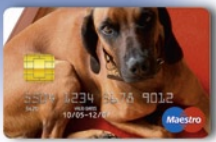


Picture Card

Driving individualization to the maximum



Giesecke & Devrient



Made just for you— End-to-end customized services

G&D Picture Card is the latest achievement of G&D's ambition to anticipate the future needs of its valued clients around the world. The demand for individualized products is steadily rising. Banks can trust in G&D's know-how built over many years. From magstripe all the way to chip card technologies, we have customized services and solutions ready for you!

Value

G&D's Picture Card solution perfectly blends into the issuer's webpage and brings a new dimension into online banking. Benefits for the banking industry:

- Emotionalize a commodity payment product
- Increase customer loyalty and card transactions

Market research reveals that 64% would use a customized card more often (Source: MasterCard International U.S. Research, 2005).

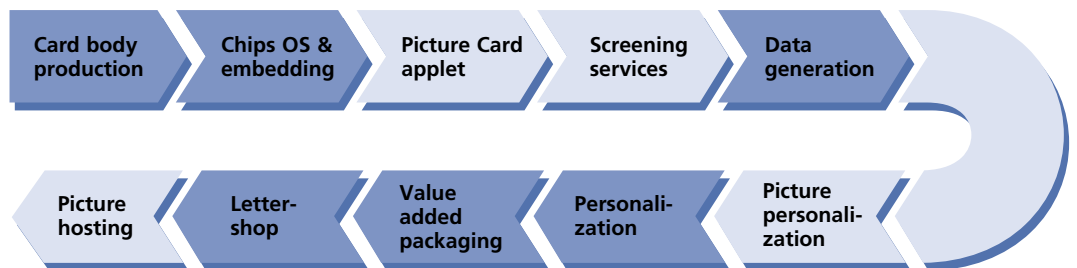
- Flexible stock management for small volume card programs
- Allow small to medium sized companies a cost-effective way for co-branded payment cards.
- Security and confidentiality throughout the whole value chain are self-evident and one of G&D's core principles.

By providing the Picture Card applet, G&D extends its value chain and offers a one-stop solution from chip card manufacturing to the Picture Card frontend, enabling consumers to design their unique payment card.

Modules

The modular set-up of the Picture Card solution allows for each issuer to implement exactly the services needed in order to complement particular business processes and product portfolios. All over the globe, G&D has implemented single modules of the Picture Card solution including screening services as well as complete set-ups from card body production to shipping and packaging of the individualized payment cards.

Extended service offerings:



G&D Picture Card modules

Basic solution

G&D's gallery module enables the issuer to provide and control an assortment of pictures to target selected consumer groups by offering themed galleries.

Full solution

On top of the gallery module, the full solution includes a second alternative to design the card: it allows the upload of individual photos by the end consumer and offers a variety of editing tools.

Design sets

In connection with the full solution license, G&D offers two additional design sets. All available design elements of both sets can be combined to give the consumer the widest scope of creativity and design.

Screening services

To meet the regulations of various stakeholders, G&D provides screening services. With its global presence and web-based screening interface, G&D is perfectly positioned to screen individual pictures using local resources abroad to ensure identification and avoid clashes with customs and traditions.

Statistics on screening results and denial codes support the marketing and controlling departments of the issuer with valuable insight into consumer behavior.

Hosting services

To relieve the issuer, G&D offers to host the applet on behalf of the bank. The screening functionality is

always provided on a G&D server. In addition, G&D stores the pictures in a secure production environment at least until the end of the regular product lifecycle of the payment card to enable later reproduction.

Personalization

Relying on many years of experience, G&D drives picture personalization to perfection, ensuring the highest quality for all variations of optical amendments. Due to its international presence and standardized production facilities around the world, G&D is able to migrate the personalization of Picture Cards fast and smoothly to its worldwide subsidiaries. Alternatively, the pictures can be transferred to a third-party provider





System

To minimize the investment in the implementation and adaptation of the interfaces, G&D relies on contemporary data formats and protocols.

The Picture Card applet uses Java technology, giving this solution maximum performance and security.

This technology allows for simultaneous access to local as well as remote data and enables the consumer to edit an individual picture locally on his PC without downloading any software nor using processing time and bandwidth of the issuer's systems.

Operation is self-explanatory and the consumer can see a preview of the card at all times during the design process. For a realistic preview of the card, G&D embeds simulated cardholder data into the picture. A quality meter indicates the quality of the uploaded picture.

G&D Picture Card—a solution to differentiate.

Workflow

1 Consumer enters issuer's web page and starts Picture Card functionality

2 Applet is either hosted by issuer or G&D

3 The applet is loaded to the consumer's PC

4 Consumer designs individual payment card

5
a. Consumer uploads picture to server
b. The server allocates a unique picture ID

6 Screening of individual pictures

7
a. Transfer of pictures to database in secure production environment or to 3rd party
b. Transfer of screening report to issuer

8 Issuer initiates card production

Technical data

Features

- Gallery pictures
- Individual pictures
- Extended picture editing design sets
- Quality meter
- Screening services
- Browser-independent
- OS-independent
- Smooth co-branding program implementation
- Hosting of individual pictures
- Standard languages; English, Spanish, French, German
- Picture ID generator
- Picture, chip and magstripe personalization
- Value added packaging and lettershop

Security

- Secure authentication to services
- Server cluster, high availability
- Token concept to limit risk of denial-of-service attacks
- SHA 256 and SHA 1 hash
- SSL, SFTP

Data formats and standards

- SOAP
- MIME Multipart
- XML
- SFTP
- WSDL

Support

- Java Runtime J2RE 1.4.2 et sqq.;
- JRE 5.0.x. et sqq.

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