Magnetic Strip and Barcode Decoding

Abstract

Version 1.1
## Revision History

<table>
<thead>
<tr>
<th>Date</th>
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<tbody>
<tr>
<td>February 13, 2007</td>
<td>1.0</td>
<td>The first draft.</td>
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<tr>
<td>February 17, 2007</td>
<td>1.1</td>
<td>Second draft after Dr. Yue’s feedback.</td>
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Abstract

MiniCheck MGR™ aims to minimize the losses due to fraudulent transactions in case of bad checks or credit/debit cards. The system empowers the sales representative at the counter by providing features for Check and ID verification.

The system comprises of two sub systems that complement each other to validate a customer and reduce the chances of fraud. These sub system include Check Validation and ID Validation.

- **Check Validation**: The check validation process extracts the information stored in the magnetic ink at the bottom of the check using a process called MICR (Magnetic Imaging Character Recognition) this magnetic ink contains the account, routing and check number. In addition the text on the check is captured using the Optical Character Recognition progress; this information can later be compared to the information on the ID for authentication.

- **ID Validation**: The information stored in the barcode or the magnetic strip can be extracted, parsed and can be used to validate the ID itself and the check. In addition to the information stored on the ID the MagnePrint enabled magnetic readers can extract extra unique patterns / signature of the magnetic strip that is embedded in strip during the manufacturing process and cannot be duplicated; thus this provides an extra level of protection, this also requires storing and validation of extra information.

Project emphasizes on the following tasks.

- Study AAMVA Standards for magnetic strip and barcode State IDs and Drivers Licenses.
- A flexible solution will be implemented that complies with the AAMVA specifications to parse Information in either case i.e. a magnetic strip or a barcode.
- Storage and Verification of the information extracted.
- Study the existing database design and propose improvements if required.
- Integration of the barcode and the magnetic strip modules in the MiniCheck MGR™.