Capstone Final Presentation

Magnetic Strip and Barcode Decoding

Instructor: Dr. Kwok-Bun Yue
Mentor: Bruce Brenner

Team Members:
Islam, Rizwana
Mohammed, Mushtaq A.
Sheikh, Mudassir M.
Outline

- Client Information
- Introduction
- Project Objective
- System Design
- Magnetic Strip Decoding
- MagnePrint Technology
- Barcode Decoding
- Project Time Line
- Application Demonstration
- Challenges
- Conclusion
Client Information

- Bruce Brenner
  - President, MiniCheck-OCR.
  - (713)446-6676
  - bruce@minicheckocr.com; cmselpro@aol.com
  - http://www.minicheckocr.com/

- MiniCheck MGR [Check processing & clearance]

- MagTek
Introduction

- ID Verification and Validation
  - Magnetic Strip IDs
  - Two Dimension Barcode IDs
- Development in Visual C#
- Database MS Access
Project Objective

- Exploring AAMVA standards
- Extracting image using the scanner [incase of barcode IDs only]
- Parsing Magnetic Strip and Barcode IDs
- Storing information in database
- Validating IDs
System Design

Magnetic Decoding

Barcode Decoding

Report Generation

MagnePrint Validation

Clear Image SDK

www.magnesafe.com

Options Available

Card Scanned

RAW Data

Database

[Monitor / Printer]

Parsing

Parsing

April 12, 2007
http://dcm.cl.uh.edu/caps7g8/
Magnetic Strip Decoding

%TXDALLAS^GATES$BRIAN$A^900 BAY AREA BLVD.
#412^?;63601512345678=100919720712?#”
760580000 C A M811195BLABRN
2*)TI ?
MagnePrint Technology

%TXDALLAS^GATES$BRIAN$A^900 BAY AREA BLVD.
#412^?;63601512345678=100900000000?
|0300|231E50402360038EF7321CA35412994F63005B
FF1624C9F6DF4BCBB942C2D4FC51BD0A6340973E1C
148F3EE883B47D7DAC01A5564B428B1988F2F34EEA1
12F77|BE09F5260A5F89CA1C6FE1FBF007551E2DC7F3
24A2CE3D4BBD19F4C682DC0B8||002005A1|6E2CF1
E3DF49CA59622F593D1241770FF82439B2D97342B4E
8A40CBF6F00C446C08DBAB9309CEEB10DAB21329D5
BC035BEC1245487A93AC8||66236C6C167A25872|413
0344E373432000048|E706|B6530E3BA6826717
## Barcode Decoding

<table>
<thead>
<tr>
<th>State</th>
<th>Barcode</th>
<th>Address Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arkansas</td>
<td>![Barcode Image]</td>
<td>@AAMVA63603301DL00270194DAQ999000680DAASAMPLE,SUSAN,DAGP.O. BOX 1272 ROOM 2120DAILITTLEROCKDAJARDAK72205DARDIASDATDAU511DAW121DAYBRDAZBRDBA20031212DBB19701212DBCDBD20010416</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>![Barcode Image]</td>
<td>@ANSI6360020101DL00290136DAALAST-NAME, FIRST, MIDDLE, DAGPO Box 1234DAIAnytownDAJMAHAK12345DAQS9998888801DARDMASBDATDBA20050122DBB19550122DBCMDBD20001020</td>
</tr>
</tbody>
</table>
## Project Time Line

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Formation and Project Selection</td>
<td>1 day</td>
<td>01/18/07</td>
<td>01/18/07</td>
</tr>
<tr>
<td>Requirements and Specifications</td>
<td>10 days</td>
<td>01/18/07</td>
<td>01/31/07</td>
</tr>
<tr>
<td>Web Site Management and Project Documentation</td>
<td>71 days</td>
<td>01/19/07</td>
<td>04/26/07</td>
</tr>
<tr>
<td>Meetings and feedback from Instructor and Mentor</td>
<td>72 days</td>
<td>01/18/07</td>
<td>04/26/07</td>
</tr>
<tr>
<td>Technology Identification</td>
<td>17 days</td>
<td>02/02/07</td>
<td>02/24/07</td>
</tr>
<tr>
<td>Prototype Development</td>
<td>24 days</td>
<td>02/24/07</td>
<td>03/28/07</td>
</tr>
<tr>
<td>Deliver final product</td>
<td>16 days</td>
<td>03/28/07</td>
<td>04/18/07</td>
</tr>
</tbody>
</table>
Software Demonstration
Challenges

- Barcode decoding SDK’s limitation
- States that do not follow the AAMVA specifications
- Limited number of samples
  - Magnetic Technology = 25+ states
  - Barcode Technology = 40+ states
- Validation of MagnePrint [No APIs]
Conclusion

- Issues with Magnetic and Barcode technologies
- MagnePrint technology is still evolving and our effort will contribute in enhancing its practical use
- Special thanks to Clear Image SDK’s team
- Overall an excellent project
Thank you

Questions and Answers