WAUSAU at a Glance

Key Facts

Founded in 1974
Locations: Mosinee, WI (HQ), Lynn, MA, Omaha, NB
Privately Held by Frontenac

Market Leadership

• #1 in receivables
• 650+ customer sites
• 50+ Fortune 500 companies
• 8 of top 10 FIs
• 3.5 billion+ payments processed annually
RemoteDepositCapture.com is an independent information & services resource for the Payments Industry.

- We are NOT a reseller, solution provider, etc.
- We ARE experts in, and an open resource for the industry.
- We work with the vast majority of leading solution providers, FIs, processors.
- Thousands of FIs, corporations, businesses and consumers visit the site each month.

Services

- RDCSummit.com
- News & Research
- Community Forums
- RDC Marketplace
- Solution Provider Directories
- RDC Overviews
- White Paper Central, and more.
Agenda

• Panelist Introductions
  – American Chartered Bank
  – Wausau Financial Systems
  – Mitek Systems

• What is Mobile RDC
  – The science behind it

• What is the Opportunity
  – What are the trends
  – Consumer and Small Business
  – The Business Drivers

• American Chartered Bank’s Smart Deposit RDC solution

• Risk Mitigation in Mobile Deposit
  – Opportunity and Risk – A measured approach
  – Risk Monitoring tools and approaches

• Summary and Challenges in Mobile Deposit

• Q&A
Today’s Panelists

- Jason Olson, Wausau Financial Systems
- Bill McGuckin, American Chartered Bank
- Daniel Simon, Mitek Systems
- Ed McLaughlin, RemoteDepositCapture.com

Moderator
American Chartered Bank

- Established 1987 headquartered in Schaumburg, IL
- Privately Held
- $2.5 billion in assets – 15 branches
- Serve the Greater Chicago metropolitan market – focus on commercial lending, typical client averages $10MM in annual sales. Primary competitors are banks significantly larger than ourselves, including Chase, B of A and Harris.
- Bill McGuckin- Treasury Management product development and implementation, sales and support; 25 years of Banking experience within Operations and Treasury Management
- Over 650 Remote Deposit clients currently with ACB since 2006
• Emerged today as the leader in financial document capture using camera-equipped smartphones.

• Our mobile apps help banks differentiate themselves by incorporating mobile deposit, mobile photo bill pay and other advanced imaging capabilities into their mobile banking services.

• 5 of Top 10 have signed to deploy Mobile Deposit®, the Gold Standard for mobile RDC.

• For more than 20 years, Mitek Systems has provided financial institutions with advanced imaging and analytics software to authenticate and extract data from imaged checks and other financial documents; processing over 10 billion items per year.

• Mitek currently holds 8 patents, and have 6 in process for our technology:
  • Our Vision: Camera Phone Apps for Every Business Person
  • Solve Simple, Practical Problems With Mobile Technology
Mobile Deposit – What is it?
Mobile Remote Deposit Capture?

- What is it?
- Why would a customer want to use mobile deposit?
- Who is doing it?
- Is it secure?
- What are the risks and how do we manage them?
- What is involved in the implementation?
- Do we offer it to all of our customers? Who do you offer it to and how do you qualify them to use it?
- What is the best approach? Do we need a mobile banking product in order to offer mobile deposit?
- What is the difference between a mobile image and other images we now process through our Check 21 systems?
- What happens if they lose their phone?
- Should my bank do it? Can we charge for it?
Consumer and Mobile Capture

1. What is “Consumer Capture”?  
   ▪ Solution Requirements

2. Basis for interest  
   ▪ Why some FIs are investing

3. Operational Results  
   ▪ Current Adoption Picture

4. What to Expect  
   ▪ Small & Micro Business  
   ▪ Consumer

1. What is “Mobile Capture”?  
   ▪ Solution Requirements

2. Basis for interest  
   ▪ Why some FIs are investing (& some are not)

3. Operational Results  
   ▪ Current Adoption Picture

4. What to Expect  
   ▪ Small & Micro Business  
   ▪ Consumer
Mobile Deposit – How does it work?

1. Initialize
2. Authenticate
3. Enter $ Amount
4. Photograph Front & Back
5. Send -Secure Transmission
6. Process Deposit
7. Deposit Received by Bank

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Mobile Deposit – How does it work?

1. Initialize
2. Authenticate
3. Enter $ Amount
4. Photograph Front & Back
5. Send -Secure Transmission
6. Process Deposit
7. Deposit Accepted
8. Acknowledgement
It’s Very Hard To Do Mobile Deposit Right . . . Consider the Challenges

- Arbitrary location and orientation of documents
- 3D-distortions (projective, skew, warp)
- Unknown document size
- Unknown color(s) of document and background
- Image dimensions
- Poor lighting conditions
- Shadows, etc.
Mobile Capture Image Correction

Raw Image ➔ Processed Image

Source: Mitek Systems

Note: MICR line and Account Holder Info purposely blurred

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Mobile Capture Image Correction

- Feedback with Mobile Data Capture can Enhances the Customer Experience

Unusable because of extreme contrast
Msg: “Please retake the photo with less shadows”
Source: Mitek Systems

Unusable because of cut corners
Msg: “Please retake the photo ensuring all 4 check corners are in the photo”

Unusable because of insufficient light
Msg: “Please retake the photo with better lighting”
What are the Driving Forces behind Mobile Deposit?
Four in Ten Small Businesses Owners Desire Mobile Remote Deposit Capture Services

Q54: Do any of the following describe you? Small business owner.
Q35: How desirable is it to be able to deposit checks by photographing them using your camera phone or digital camera and sending the image during an online banking or mobile banking session so the bank can immediately deposit the funds in your account?

April 2009, n=356, 2,779
Base: Households that own a small business, all households.

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Consumers Likely to Use Mobile RDC Are Heavy Online Service Users

Q12: Please indicate the last time you conducted each of the following: In the past 90 days only, other options apply.

- Logged into your bank or credit union’s website for online banking
  - Likely to use remote deposit capture: 86%
  - All households: 76%

- Transferred funds to another individual online
  - Likely to use remote deposit capture: 48%
  - All households: 37%

- Transferred funds between your own accounts from one institution to another institution online (including automatic transfers)
  - Likely to use remote deposit capture: 43%
  - All households: 35%

- Sent money by e-mail to another person, using a service such as PayPal
  - Likely to use remote deposit capture: 39%
  - All households: 30%

- Received a financial alert by e-mail (i.e. low balance alert)
  - Likely to use remote deposit capture: 37%
  - All households: 23%

- Received a financial alert by text message (SMS)
  - Likely to use remote deposit capture: 17%
  - All households: 8%

- Transferred funds using a wire transfer through a bank or credit union
  - Likely to use remote deposit capture: 17%
  - All households: 11%

- Transferred funds using a wire transfer through a money service business (such as Western Union)
  - Likely to use remote deposit capture: 13%
  - All households: 8%

April 2009, n= 696, 2,641
Base: All households with banking products.
© 2010 Javelin Strategy & Research
Customers Self Service Channel Preferences

Q: What is your primary method of accessing financial accounts? (Among Mobile Banking and Mobile Credit Card Customers)
Banking N = 645 Credit Cards N = 512
Q4 2010
Source: comScore Mobile Financial Advisor

<table>
<thead>
<tr>
<th>Percent of Respondents</th>
<th>Mobile Banking</th>
<th>Mobile Credit Card</th>
</tr>
</thead>
<tbody>
<tr>
<td>By going online from a fixed device</td>
<td>47%</td>
<td>44%</td>
</tr>
<tr>
<td>Using my mobile device or cell phone</td>
<td>26%</td>
<td>36%</td>
</tr>
<tr>
<td>By visiting the branch or agent in person</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>By calling the company on the phone</td>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>13%</td>
<td>2%</td>
</tr>
</tbody>
</table>

- Over three-quarters of US households own a PC
- 96% Penetration of Mobile phones, 302.9M subscribers, 78.2M Smartphones*
- US Census 2007 states >60 million US households use online banking

*Source: CTIA Wireless 2011
• Allows Smartphone users to…
  – Take photos of their checks with the camera on their phone
  – Deposit those items into their account

• How it helps your customers
  – Connect 24 x 7
  – Banking the way you want, when you want
    • Mobile, Home, Branch
  – Business or Consumers
  – Ease of use

• How it helps you
  – Reduces check transactions at the branch
  – Expands footprint
  – Maintain existing customers and entice new customers
**Requirements for Consumer Capture?**

<table>
<thead>
<tr>
<th>Convenient</th>
<th>Customers can deposit checks anytime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>Must profitably enable low price points (FREE?)</td>
</tr>
<tr>
<td>Easy</td>
<td>To provision and support - Will potentially serve a large number of users</td>
</tr>
</tbody>
</table>
| Exceedingly Simple  | • Simple user interface - Support costs could shipwreck P&L  
                      | • Users aren’t trained treasury personnel  
                      | • Usage may be occasional |
| Secure              | Access, transmission & Guidelines on Storage, Retention and Destruction |
| TWAIN Scanner       | Business case may not support the use of specialized scanners, provisioning, maintenance and support |

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### Requirements for Mobile Capture?

<table>
<thead>
<tr>
<th>Convenient</th>
<th>Customers can deposit checks anywhere, anytime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy</td>
<td>Application download and use - Integrate into existing mobile banking applications</td>
</tr>
<tr>
<td>Accurate</td>
<td>Captures and optimizes all checks; validates front and back of check</td>
</tr>
<tr>
<td>Check 21 compliant</td>
<td>Assesses image quality/usability against FSTC standards</td>
</tr>
<tr>
<td>Secure</td>
<td>Access, transmission &amp; Guidelines on Storage, Retention and Destruction</td>
</tr>
</tbody>
</table>
| Mobile requirements     | - n+ megapixel camera or higher resolution for image acquisition  
|                         | - SmartPhone: iPhone, Android, BlackBerry, Windows Mobile models |

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Smart Deposit at American Chartered Bank
American Chartered Bank Business Case

- Competitive Edge
- Keep up with Technology
- Qualify Applicants
- Monitoring Tools
- Meet Client Needs
- Additional offering to compliment desktop scanner/flatbed options
Smart Deposit @ American Chartered

- Smart phone with downloadable app
- Customer logs in, scans and submits deposits
- American Chartered receives items eligible for deposit via secure transmission, reviews the items
- Decisions each item for approval/rejection prior to acceptance

- Risk mitigation rules built in for $ value, etc.
- Notification sent to customer on acceptance or rejection
- Available 24x7
- Customer support desk available to answer questions
“Sign In, Enter Check Amount, Take Pics, Transmit… It’s that Simple!"

"Mobile Capture" is all about convenience for the customer
Solution – What is Mobile Deposit at American Chartered

High Level Workflow for American Chartered Bank – including integration points

1. User information passed from FI to Wausau
   1.1 User enrollment process handled by FI
   1.2 Authorized user information passed from FI to Mobile/Wausau application
2. User accesses the Mobile application on their Smartphone
   2.1 User enters check amount
   2.2 User captures front of item – image quality/duplicate detection
   2.3 User captures back of item – image quality
   2.4 User verifies transaction
   2.5 User submits deposit
3. Check information is passed from users Smartphone mobile application to Wausau’s ASP environment
4. Check items passed from Mobile Server to Acceptance/Optima Servers – all within Wausau’s ASP environment
   4.1 Mobile items available in Risk Monitoring
5. FI reviews and decisions (if necessary) Mobile items in Risk Monitoring
6. At designated cutoff times Wausau passes X9 file to FI for processing
ACB Smart Deposit

- iPhone, Droid, Blackberry
- 10 Pilot participants - both clients and employees
- Minimal activity currently - >10 checks per week @ $3,000 total
- User Feedback - very simple to use, easy download from stores
- Bank Feedback - nice interface for the smartphone, good tools to monitor deposit thresholds
- Clients have begun to ask if ACB has a smartphone deposit app
Best Practices

Project Planning

• Get Executive Sponsorship and Signoff
• Customer Support team focused on RDC
  • Knowledge based teams
    • Consumer vs. Small Business
    • Mobile vs. Merchant
• Include Risk Legal, Audit and Compliance in all phases
• Pilot then launch

Project Launch and Implementation

• Customer Selection and Qualification Criteria
  • Pre- Qualify Existing
  • On line banking customers
  • No overdrafts or returned checks
• Enrollment process
• Implementation process
  • Stand alone application
  • Integrated with mobile banking application
• Customer support center training
• Back office training and process development
• Risk parameters and thresholds established
Risk Mitigation in Mobile Deposit
- Opportunity and Risk a Measured Approach
Optimal RDC Risk Management should be tailored to each end-user, location and device, yet leverage system and enterprise risk management capabilities.
A Risk Monitoring application should...

- Allow for all RDC items to be reviewed
  - Merchant, Consumer and Mobile
- Web-based
- Customizable
  - Different flags and parameter settings
  - Only work with items pertinent to your area of responsibility
    - Consumer vs. Commercial
- Review and Decision on Day 1
  - Accept or reject based on Financial Institution’s criteria
  - Notifications sent back to end-user’s Smartphone
Examples of Risk Monitoring Parameter Settings for Mobile

- Flags based on MICR information

<table>
<thead>
<tr>
<th>Flag Sets</th>
<th>Flag Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aux missing</td>
<td>✓</td>
</tr>
<tr>
<td>Routing missing</td>
<td>✓</td>
</tr>
<tr>
<td>Account missing</td>
<td>✓</td>
</tr>
<tr>
<td>PC missing</td>
<td>✓</td>
</tr>
<tr>
<td>Amount missing</td>
<td>✓</td>
</tr>
<tr>
<td>Amount reco read then keyed</td>
<td>✓</td>
</tr>
<tr>
<td>Amount keyed</td>
<td>✓</td>
</tr>
<tr>
<td>Item has no MICR</td>
<td>✓</td>
</tr>
<tr>
<td>Code line contains can't reads</td>
<td>✓</td>
</tr>
</tbody>
</table>
Examples of Risk Monitoring Parameter Settings for Mobile

- Flags based on limits

<table>
<thead>
<tr>
<th>Templates</th>
<th>Flags defined for Mobile Deposit Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>abc</td>
<td>Over item dollar limit</td>
</tr>
<tr>
<td>abcd</td>
<td>Over daily dollar limit</td>
</tr>
<tr>
<td>Raise All Warning Flags</td>
<td>Over monthly dollar limit</td>
</tr>
<tr>
<td>Review New or Inactive Customers</td>
<td>Over daily item limit</td>
</tr>
<tr>
<td>Review Over All Limits</td>
<td>Over monthly item limit</td>
</tr>
<tr>
<td>Review Over Daily Limits</td>
<td>Deposit from new depositor</td>
</tr>
<tr>
<td>Standard Deposit Risk Review</td>
<td>for the first 5 days with a deposit</td>
</tr>
<tr>
<td>TestDFS</td>
<td>Deposit from inactive depositor</td>
</tr>
<tr>
<td></td>
<td>for the next 3 days after inactivity</td>
</tr>
<tr>
<td>American Chartered Bank</td>
<td>Check drawn on customer account</td>
</tr>
<tr>
<td>AAA</td>
<td>when 0% over the limit</td>
</tr>
<tr>
<td>Hello</td>
<td>when 0% over the limit</td>
</tr>
<tr>
<td></td>
<td>when 0% over the limit</td>
</tr>
<tr>
<td></td>
<td>when 0% over the limit</td>
</tr>
<tr>
<td></td>
<td>when 0% over the limit</td>
</tr>
<tr>
<td>Mobile Deposit Flags</td>
<td>when 0% over the limit</td>
</tr>
<tr>
<td>New Merchants</td>
<td>when 0% over the limit</td>
</tr>
<tr>
<td>Review over All Limits</td>
<td>when 0% over the limit</td>
</tr>
<tr>
<td>Warn all Capture Apps</td>
<td>when a check is found</td>
</tr>
<tr>
<td>Warn on All</td>
<td>when a check is found</td>
</tr>
</tbody>
</table>
Risk Monitoring Solution for Mobile

- Day 1 accept or reject items
Summary and New Challenges
Summary of Risk Management and Security Features

• Risk Mitigation Tools Provide Control
  – Duplicate detection
  – Rear side endorsements
  – Use of appropriate risk parameter settings
  – Deposit review and approval
  – Funds availability

• Technology Tools Provide Security
  – Secure Sign On
  – Multi-factor authentication
  – Encryption of data and images
  – Secure Internet transmission
  – Secure application with no data stored on the phone

• Reporting Tools cover a multitude of sins
  – Gather as much information as possible to make informed decisions
  – Report on all products not just RDC
  – Identify Sources
  – Track trends, returns, renewal dates, adjustments
  – Have your process documented and follow it
New Challenges

- Mobile, Flatbed, Merchant, Fax
  - Treat as new products in the process
  - Device security
  - Check security
  - Compliance
- Mobile for small business and the consumer
  - The farther down you go the less the sophistication of the business
    - Keep it simple
    - Fewer checks and balances
    - Segregation of duties
    - Documented risk practices
- FFIEC Guidance is risk management oriented, not device oriented
- Current applicable guidance exists (FFIEC Authentication, Reg. CC, Reg E) but I would not be surprised to see new requirements
Questions?
Looking for More Information?

What is your mobile RDC strategy and how do you plan to mitigate the risks involved?

WAUSAU Financial Systems can help!

To:

- **Request a copy of the presentation**, and/or
- **Arrange for a private consultation** and overview of WAUSAU’s RDC solution suite

Please contact John Gustafson at 715.241.4639, or email jgustafson@wausaufs.com.