

Banking in the Electronic Age

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President
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Agenda ...

- ▶ Where Have We Come From?
- ▶ Key Features of the ACH Network
- ▶ Other Electronic Options
- ▶ Bill Payment through the ACH Network
- ▶ Corporate Account Takeover & Payments Fraud
- ▶ Data Security in the ACH
- ▶ What's coming



1st Quarter 2011 Network Volumes

	1 st Qtr. '11	4 th Qtr. '10	% Change	1 st Qtr. '10	% Change
ARC	522,194,045	536,831,146	-2.73%	568,507,404	-8.15%
BOC	42,952,130	51,196,650	-16.10%	41,752,129	2.87%
CCD	517,908,200	526,405,508	-1.61%	493,017,592	5.05%
CTX	17,536,322	17,558,092	-.12%	15,479,665	13.29%
IAT	2,249,467	1,582,289	42.17%	1,589,672	41.51%
POP	119,141,994	137,359,174	-13.26%	115,488,075	3.16%
PPD Cr.	1,261,701,513	1,168,218,593	8.00%	1,223,542,619	3.12%
PPD Dr.	715,530,608	723,634,812	-1.12%	693,042,233	3.24%
RCK	1,565,076	2,088,681	-25.07%	2,138,672	-26.82%
WEB	664,587,253	641,500,130	3.60%	589,748,798	12.69%
TEL	93,186,912	92,263,914	1.00%	87,586,693	6.39%
Total Network	4,017,576,389	3,956,983,037	1.53%	3,884,725,334	3.42%

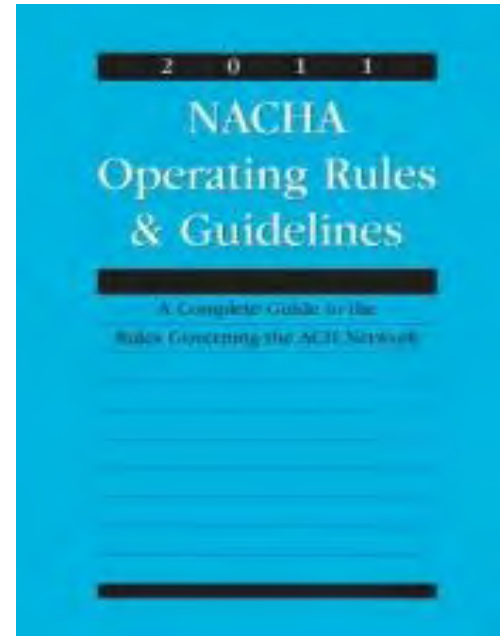
Automated Clearing House

- ▶ One method to move funds electronically
- ▶ Debit or Credit to:
 - Savings or Checking account
 - General Ledger account
- ▶ Credit to a Loan account
- ▶ Can be a single entry or recurring entry
- ▶ Considered a batch process, store and forward payment system (next-day)

Key Features

Legal Framework

- ▶ ACH Rules
- ▶ Regulation E
- ▶ UCC 4A
- ▶ 31 CFR 210
- ▶ Contracts



Authorizations

- ▶ In writing or,
- ▶ Signed or similarly authenticated
- ▶ Via the phone for certain types of entries
- ▶ Check (considered a source document)
- ▶ Via the Internet with certain restrictions

AUTHORIZATION FOR DIRECT PAYMENT

I authorize _____ (COMPANY NAME)
to initiate entries to my checking/savings account. This authority will remain in effect until I notify you in writing to cancel it in such time as to afford the company a reasonable opportunity to act on it. I can stop payment of any entry by notifying my financial institution 3 days before my account is charged.

(NAME OF FINANCIAL INSTITUTION) (BRANCH)

(CITY) (STATE) (ZIP CODE)

(SIGNATURE) (DATE)

(NAME - PLEASE PRINT)

(ADDRESS - PLEASE PRINT)

Account No. _____ Checking _____ or Savings _____

Financial Institution Routing Number _____
(between these symbols **1** **1** on the bottom left of your check)

RETAIN FOR YOUR RECORDS

On _____ (DATE) I authorized _____

(COMPANY NAME & DEPT.)

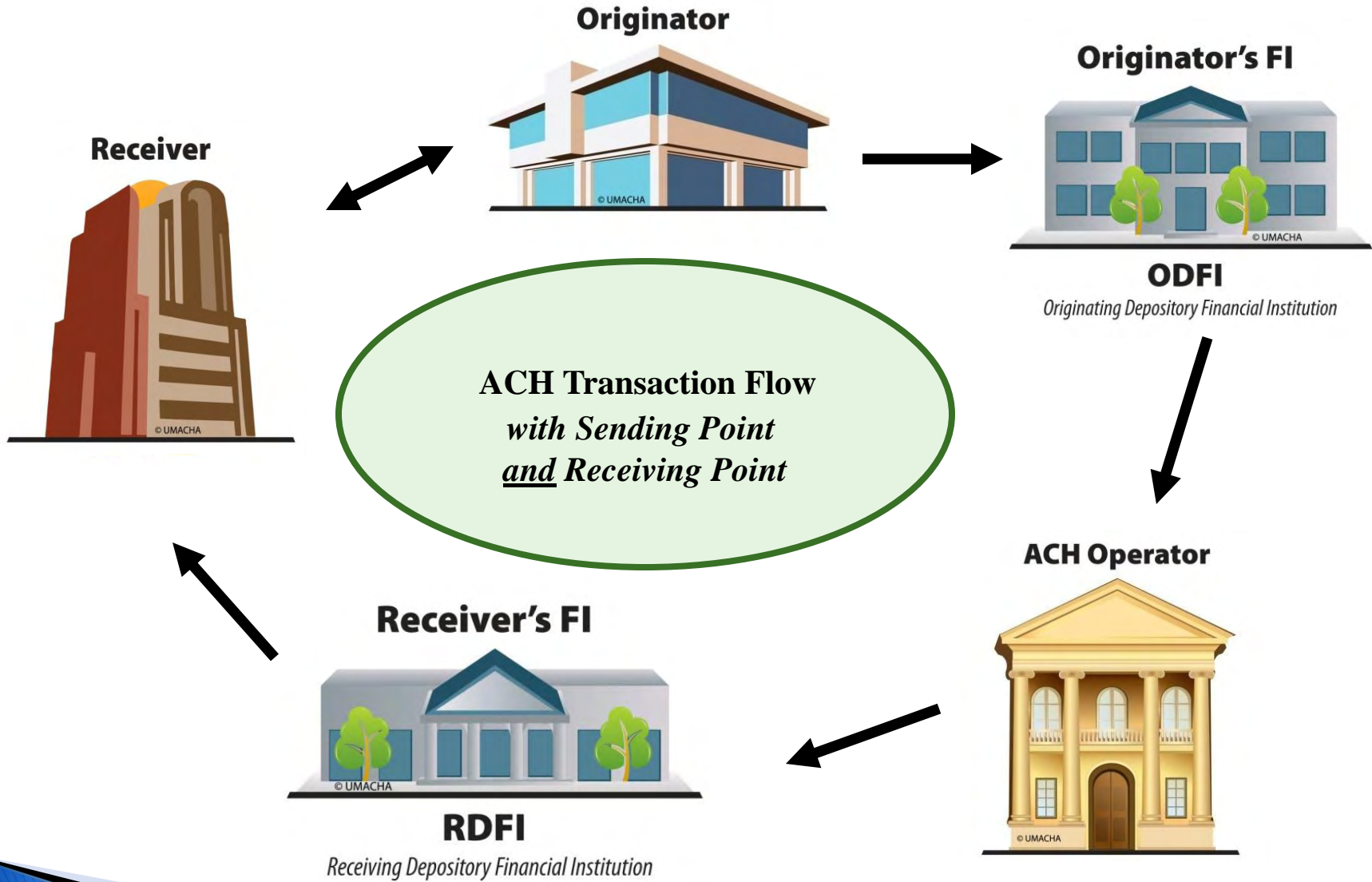
(ADDRESS)

PHONE _____

to initiate electronic entries to my checking/savings account and have agreed to the terms listed on the authorization. I may revoke my authorization with you at any time by writing to the address above.

Initial payment amount: \$ _____ (if payment amount changes we will notify you at least 10 days before the regularly scheduled payment date.)

Regular payment date _____



PPD, TEL, WEB

Record Type
Code
M (1)

Entry Detail Record

Receiving DFI
Identification #
M (4-11)

DFI Account
Number
R (13-29)

Individual
Identification
Number
O (40-54)

Discretionary
Data
O (77-78)

Trace Number
M (80-94)

6270910129874647-999

0000055000658-888-2468

Alex Dubrovsky

0099936340000015

Transaction
Code
M (2-3)

Check
Digit
M (12)

Amount
M (30-39)

Individual Name
R (55-76)

Addenda
Record
Indicator
M (79)

WEB uses the Discretionary Data Field as the Payment Type Code

Exception Entries

- ▶ Returns:
 - NSF or uncollected funds
 - Invalid acct # or no account that matches
 - **Unauthorized entry**
 - A long list of other reasons
- ▶ NOC's:
 - To correct an entry
- ▶ Reversals:
 - Single entry and file

How Does it All Tie Together?

▶ NACHA

- Councils (Internet, Electronic Check, Bill Payment, Global)
- Direct Members
- **Primary roles**
 - Rules and rules management
 - Network administration

▶ Regional Payments Associations

- 17 that cover the country
- **Primary roles**
 - Education
 - Communications and other assistance to members

Recent Rule Changes

- ▶ ACH Risk Assessments
- ▶ Rules Simplification
- ▶ Mobile Payments
- ▶ Recurring TEL
- ▶ Elimination of Opt-out (BOC, ARC)
- ▶ Collection of return fees
- ▶ Expansion of the use of XCK
- ▶ Pain Point updates (7)

Other Electronic Options

Remote Deposit Capture

- ▶ Deposit checks with your F.I. without leaving your office
 - Scanner based
 - Advantages
 - No trip to the F.I.
 - Faster availability
 - All items are imageable (except foreign items)
 - Disadvantages
 - Check storage and retrieval
 - Security of check data



Wire Transfer

- ▶ Immediate and irrevocable
- ▶ Developed for large dollar payments but can be used for any payment
- ▶ Expensive
- ▶ Significant levels of security in most cases

Bill Payment Through the ACH

Electronic Options

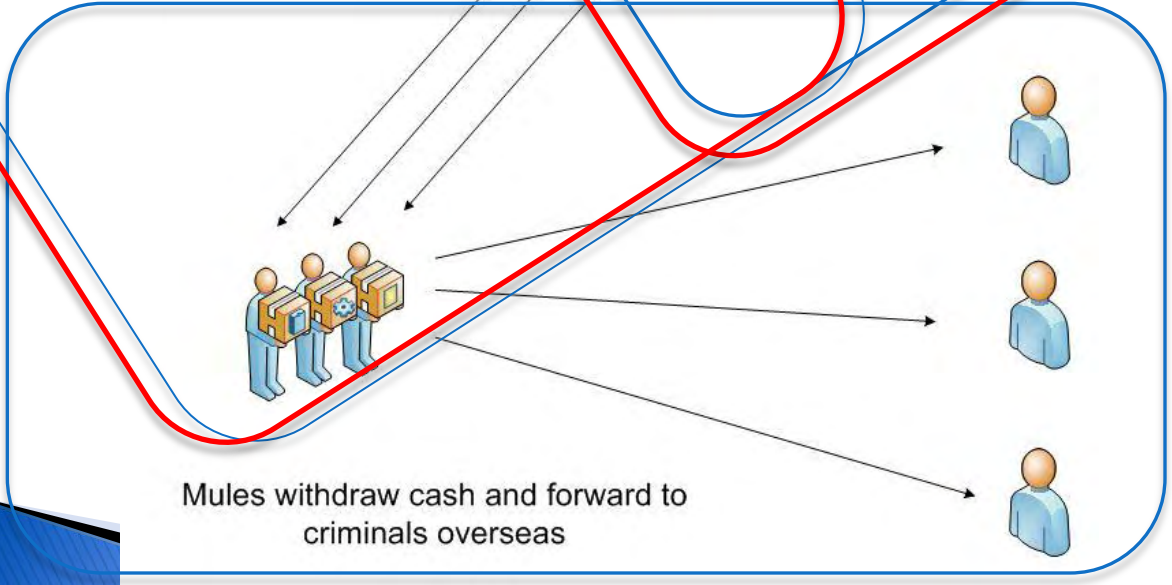
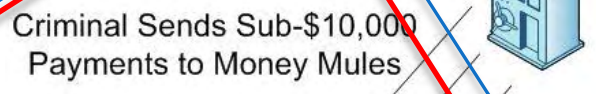
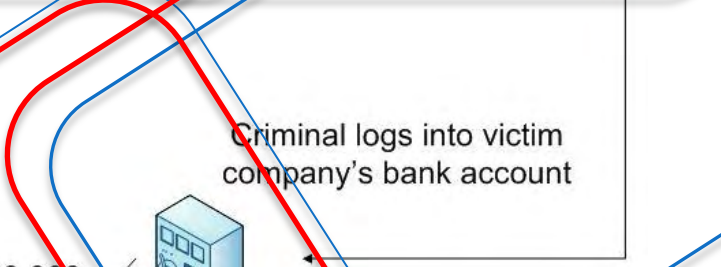
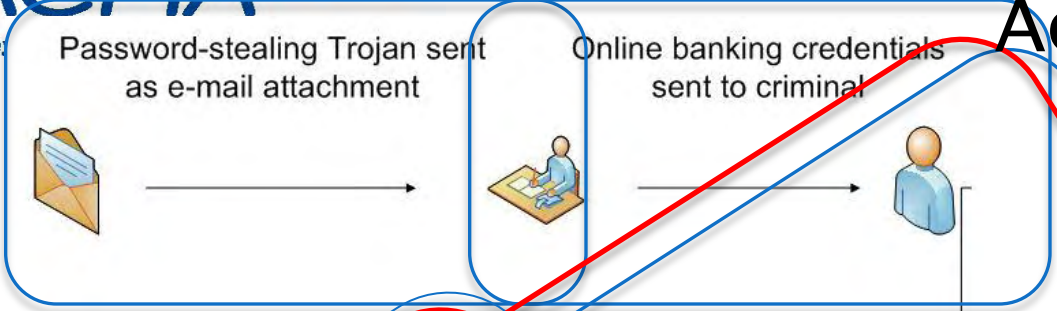
- ▶ **Biller Direct**
 - You allow your customer to come to your website and pay – should be a WEB debit
 - Security, privacy of data, and authentication or the key issues
- ▶ **Bill Payment Services Connection**
 - Consumer pays through a bank, CU, or third party bill payment service
 - Utility gets the data in a format (hopefully) you've agreed to – should be a CIE credit for the payment
 - Data MAY come in a different stream
- ▶ **Direct Payment**
 - Consumer allows you to debit their account on a regular basis
 - Should be a PPD debit
 - Issue – control over payment
- ▶ **New Option? – Mobile Bill Payment / SVP**

Corporate Account Takeover

Corporate Account Takeover Defined

- ▶ Also called Acct. Hijacking (ACH Fraud, Wire Fraud, etc.)
- ▶ A company's credentials are compromised
- ▶ Payment related business data is accessed and monitored
- ▶ At some point in time:
 - Vendor payments or payroll transactions are generated
 - Acct. data is to money mules rather than the normal recipients
 - Those dollars moved out of the country ASAP
 - And now.....

Account Takeover



Recent Litigation

- ▶ **Shames–Yeakel vs. Citizens Bank**
 - Negligence Claim, survived summary judgment
- ▶ **Patco Construction Co. vs. Ocean Bank**
 - UCC4A and Negligence claim
- ▶ **Western Beaver School District vs. ESB Bank**
 - Believed to be UCC4A and contract claims
- ▶ **JM Test Systems, Inc. vs. Capital One**
 - UCC4A claim
- ▶ **Plainscapital Bank vs. Hilary Machinery, Inc.**
 - FI asks court to declare that the security procedures for its Internet banking system at the time of the alleged unauthorized transfers was commercially reasonable within the meaning of UCC4A (settled, no further information)

Recent Court DECISIONS

- ▶ **Ocean Bank vs. Patco Construction**
 - Ocean Bank found to have complied with the FFIEC Guidance on Authentication in an Internet Banking Environment
 - Patco was saddled with the loss
- ▶ **Experi-Metal vs. Comerica**
 - Comerica ordered to pay, but we're not sure how much of the loss which was \$560,000!
 - Security not "commercially reasonable" even though they claimed they were in compliance with the FFIEC Guidance

Business, Municipal and School District Account Takeover Victims

Google maps

Find businesses, addresses and places of interest.

Search Maps

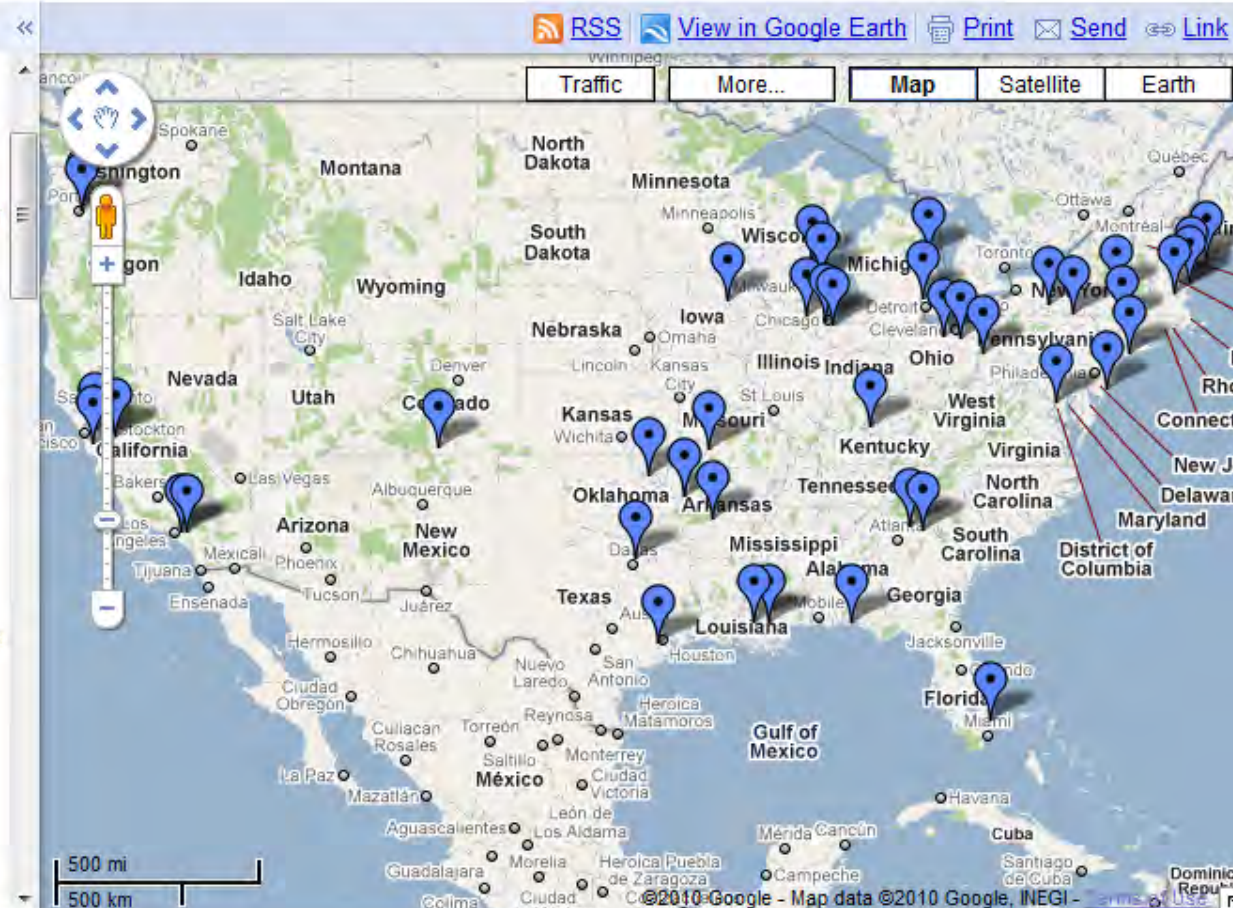
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Traffic More... Map Satellite Earth

- [Western Beaver County School District](#)
ESB Bank 12/1/2008 \$704,610 Washington Post
- [Bullitt County](#)
First Federal Savings Bank 6/22/2009 \$415,989 Wash
- [Battle Ground Cinema](#)
Umpqua Bank 3/1/2009 \$81,000 Krebs On Security
- [Shared Hope International](#)
Umpqua Bank 5/1/2009 \$179,000 Krebs On Security
- [Patco Construction Company](#)
Ocean Bank 5/7/2009 \$588,851 Washington Post
- [Ferma Corporation](#)
7/17/2009 \$447,000 Washington Post
- [Sign Designs](#)
Bank of Stockton 7/23/2009 \$99,953 Washington Pos
- [Unique Industrial Product Company](#)
Comerica 4/1/2009 \$1,200,000 Forbes
- [Duanesburg School District](#)
NBT Bank 12/1/2009 \$3,000,000 CBS
- [Sanford School District](#)
8/19/2009 \$117,000 Washington Post



Corporate Account Takeover - Step 2

- ACH credits are sent to one or multiple money mules throughout the U.S.
 - Money Mules: stay at home moms, out of work white collar workers
 - **Recruited thru Monster.com, Career Builder, Craig's list, foreign actors on J-1 VISAs**
- Money mules forward the money onto Eastern Europeans – via Western Union/MoneyGram

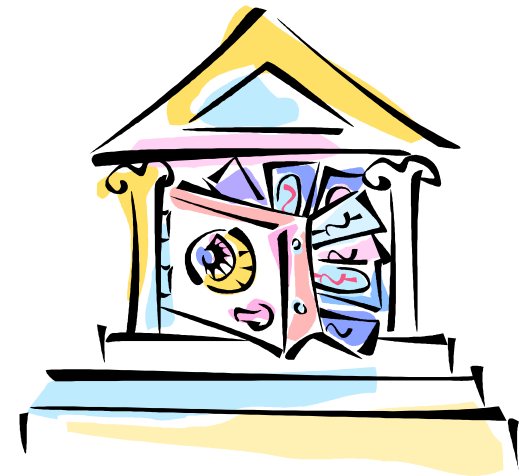
Mitigation Techniques

- Out-of-Band Authentication
 - Call-back
 - Fax
 - SMS
- Multiple tokens
- Managing by Data Review (looking at ALL the data)
- Layered security
 - Data bases
 - History
 - Computer parameters
- Separate computer, not used for anything but banking

ACH Data Security

ACH Data Security

- ▶ Comprehensive approach to ACH data security in the *Rules*
- Scope of coverage:
 - Data security requirements for all Network participants
 - Expanding data security audit requirement for WEB originators to all SEC codes
 - The NACHA Six (six principles)
 - Data breach notification requirement



Six Pillars of Data Security

- 
1. Protect Sensitive ACH Data
 2. Deploy Access Controls
 3. Assess Data Security
 4. Verify the Receiver's Identity
 5. Identify Third Party Senders and Originators
 6. Deploy Fraud Management Systems

What's Next?

Mobile

- ▶ Hottest topic in “banking” today
- ▶ Mobile banking vs. mobile payments
- ▶ Payment Issues
 - Security
 - What vendor gives you what your customers want?
 - Interoperability between vendors/carriers
 - Who owns the customer? (Carrier vs. F.I. vs. vendor)
 - What channel is used?
 - NFC (POS)
 - Tag (POS)
 - Web (non-POS)
 - Other?
 - Card vs. ACH vs. check vs. proprietary

Will Mobile Succeed This Time?

▶ YES - IF-----

- Tied to more than just payments – Mobile wallet
- WE (the marketplace) offers our customers EASY, USABLE, UNDERSTANDABLE options (NFC? at more than one store)
- Standards for things like Data Security are built
 - SE – Secure Element
- The Trusted Service Manager concept comes to fruition
 - F.I.'s and carriers can work together
- We can find a way to make this more ubiquitous

Formatted Addenda Records

- ▶ Allow XML-formatted data in Payment-Related Information field of addenda records for B2B payments (CTX, CCD)
- ▶ Next steps:
 - Analyze the different standards available for moving payment dollars and data via XML
 - Develop ballot or new RFC as appropriate



Questions & Contact Info.



Call UMACHA at: 763-549-7000 or 1-800-348-3692

Or visit our website at: www.umacha.org

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