

# How do I pay thee...let me count the ways!

Kate Cole, AAP, CAE

Principal

MK Cole Consulting

[kate@mkcoleconsulting.com](mailto:kate@mkcoleconsulting.com)

612.910.9286



Gary B. Nesbitt, AAP

Principal

GNesbitt Consulting

[gary.nesbitt@gmail.com](mailto:gary.nesbitt@gmail.com)

704.609.4309

# How can I pay thee.....

- Cash
- Checks
- ACH
- Cards
- Wires
- Mobile Wallet
- Virtual Currencies



**What was the first form of payment?**

# What was the first form of payment?



# Payment Choices

- Currency & coin dominated US payments until the mid-20th century
- 1930s – 1960s checks battled for dominance
- Credit Cards introduced in 1950s
- ATMs & ACH emerge in the 1970s
- Debit Cards in the 1980s
- ACH Check Conversion “eChecks” in the late 1990s & into 2000s
- Check 21 & Image Exchange in 2004-2006
- Remote Deposit Services become popular around 2005
- Mobile payments and wallets in their adolescence
- Virtual Currencies still in its infancy



We accept:  
Cash  
Check  
Visa  
MasterCard

# 2000 Payment Systems Comparison

	Transaction Volume (Millions)	Dollar Volume (\$Millions)	Average Payment Value
Checks	49,600	\$47,700,000	\$965
Wires	108	\$379,709,005	\$3,506,085
Cards			
General Purpose Credit	12,300	\$1,072,555	\$87.20
Private Label Credit	2,749	\$162,819	\$59.24
Offline Debit	5,269	\$209,980	\$39.85
Online Debit	3,010	\$138,151	\$45.89
EBT	538	\$13,744	\$25.56
ACH	5,600	\$5,674,851	\$1,009.40

Source: FRB Retail Payments Study 2000  
Press Release (November, 2001)

# 2012 Payment Systems Comparison

Type	Transaction Volume (Billions)	Dollar Volume (\$Trillions)	Average Payment Amount
Checks	18.3	31.6	\$1,420
Wires	131.6 (Millions)	599.2	\$4,550,000
Debit Cards	47.0	1.42	\$39
Credit Cards	23.8	1.96	\$94
ACH	22.1	37.2	\$2,186

Source: FRB Retail Payments Study 2012  
Press Release (December, 2013)

# Cash is Still King!

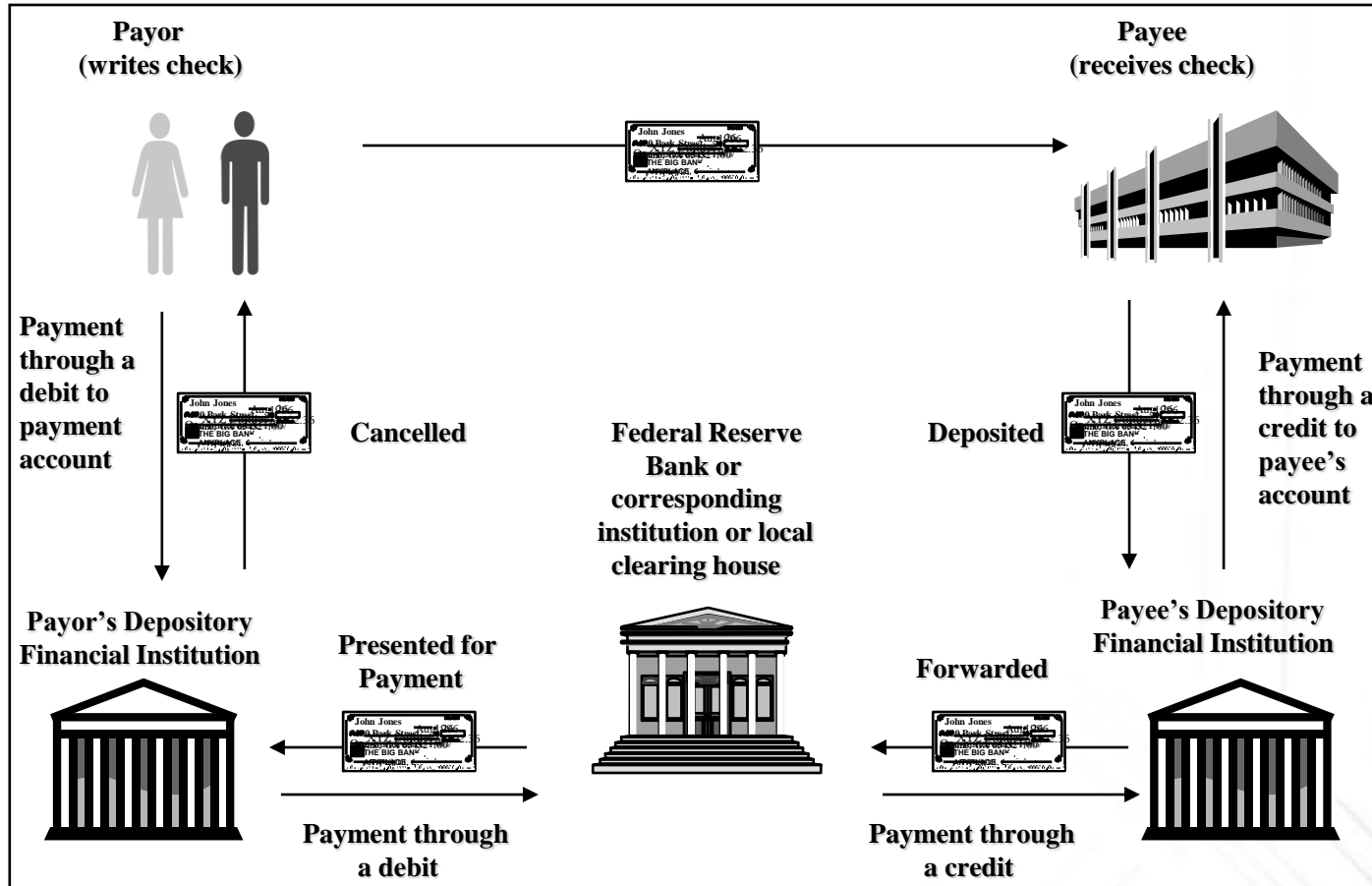
- Not all businesses accept cash
- Cash can be counterfeited
- Risk of loss greater than other types of payments
- Cost to “process” may be greater than other payment types due to risk controls.
- Payment is “final” immediately
- Great for P2P Payments







# Elements of the Check-Clearing System



# Remote Deposit Capture & Mobile RDC

- Paper checks over the counter
- Image checks using a scanner
- Transmit 'electronic' deposit to FI
- Benefits
  - Fewer trips to FI to make deposit
  - Faster funds availability
- Issues
  - What to do with paper?
  - Possibility for duplicate deposit of items
  - Liability and responsibility



# Legal Framework for Check Payment Process

- Uniform Commercial Code
  - Articles 3 and 4
- Regulation CC
- Regulation J
- Check 21



# ACH

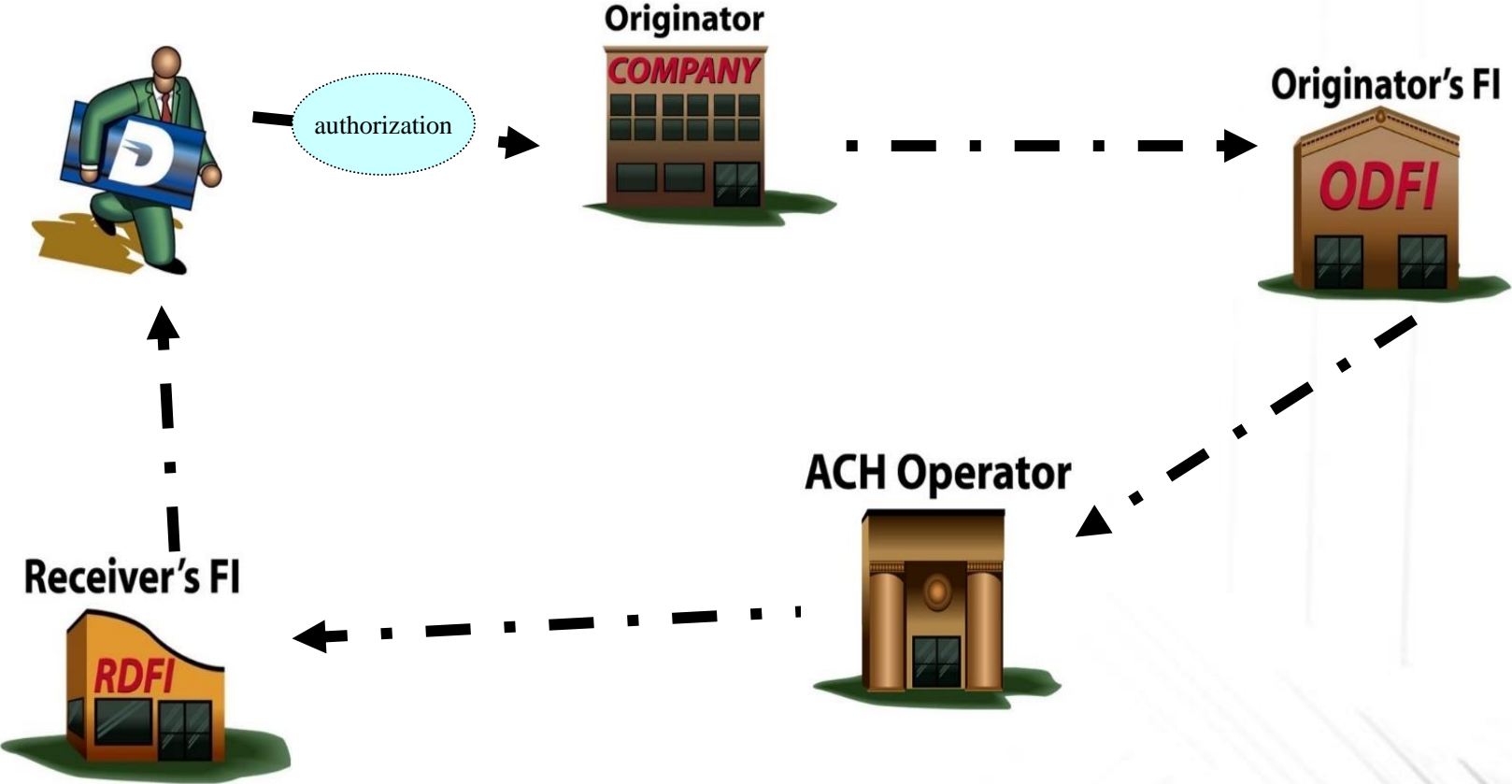
- **Automated Clearing House**

- Electronic payments network used to facilitate exchange of small dollar transactions
  - Debits or Credits
  - Based on authorizations
- Early 1970s was inception
- 22 billion transactions in 2013

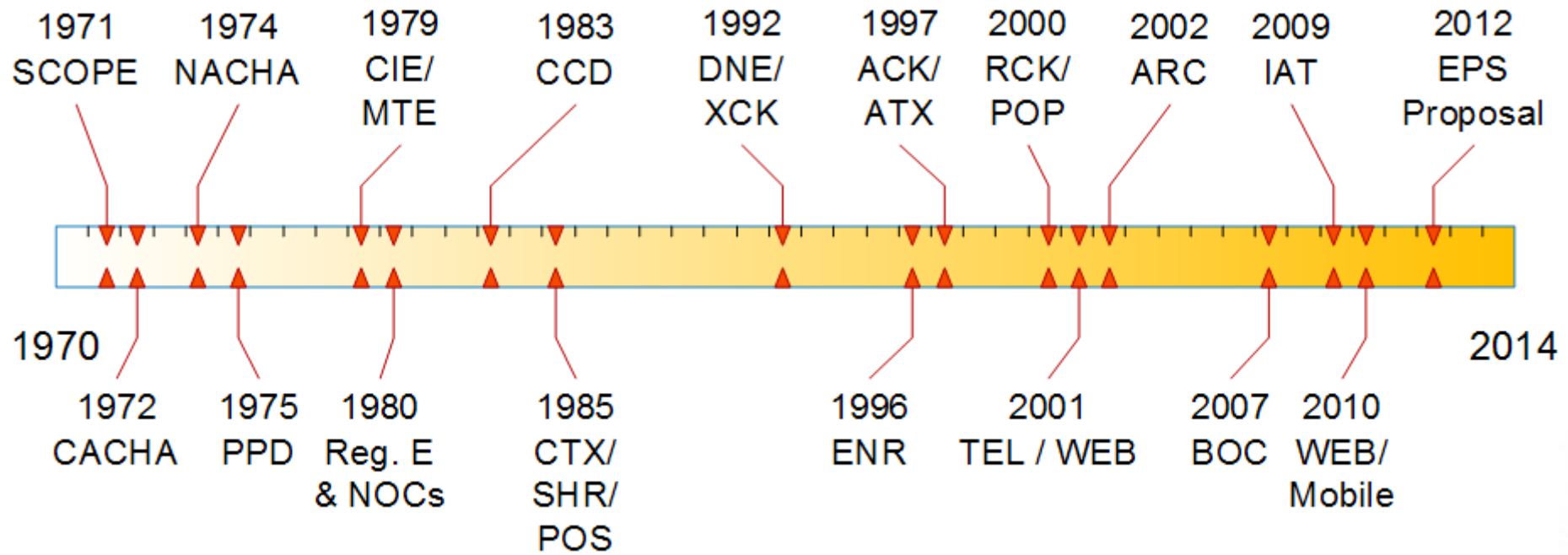
- **Key Features**

- Universally accepted
- Debit and credit

# ACH Flow



# ACH Timeline



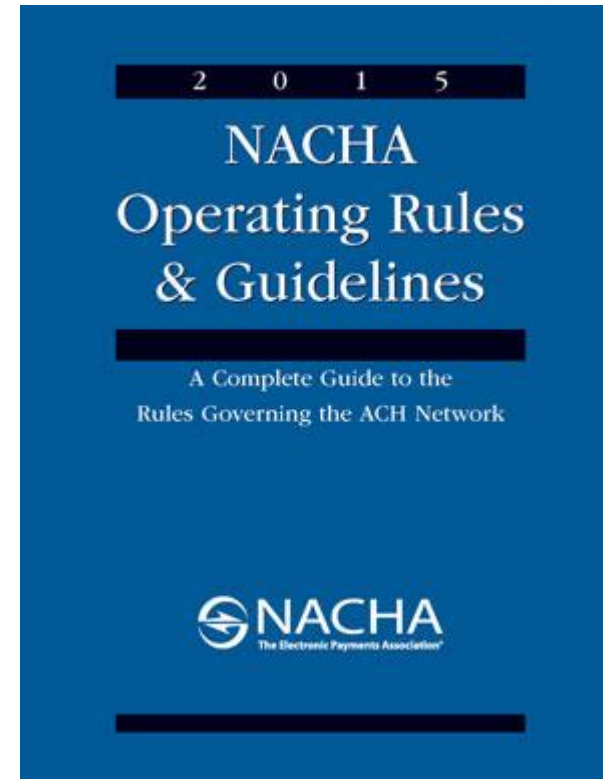
# eChecks

- **Includes:**
  - Accounts Receivable (ARC)
  - Point-of-Purchase (POP)
  - Back-Office Conversion (BOC)
- **Eligibility**
  - Pre-printed check serial number
  - Blank Auxiliary On-Us Field
  - Under \$25,000



# Legal Framework for the ACH Network

- ACH Rules
  - Contract law
- Regulation E
- Uniform Commercial Code Article 4A



# Card Payments

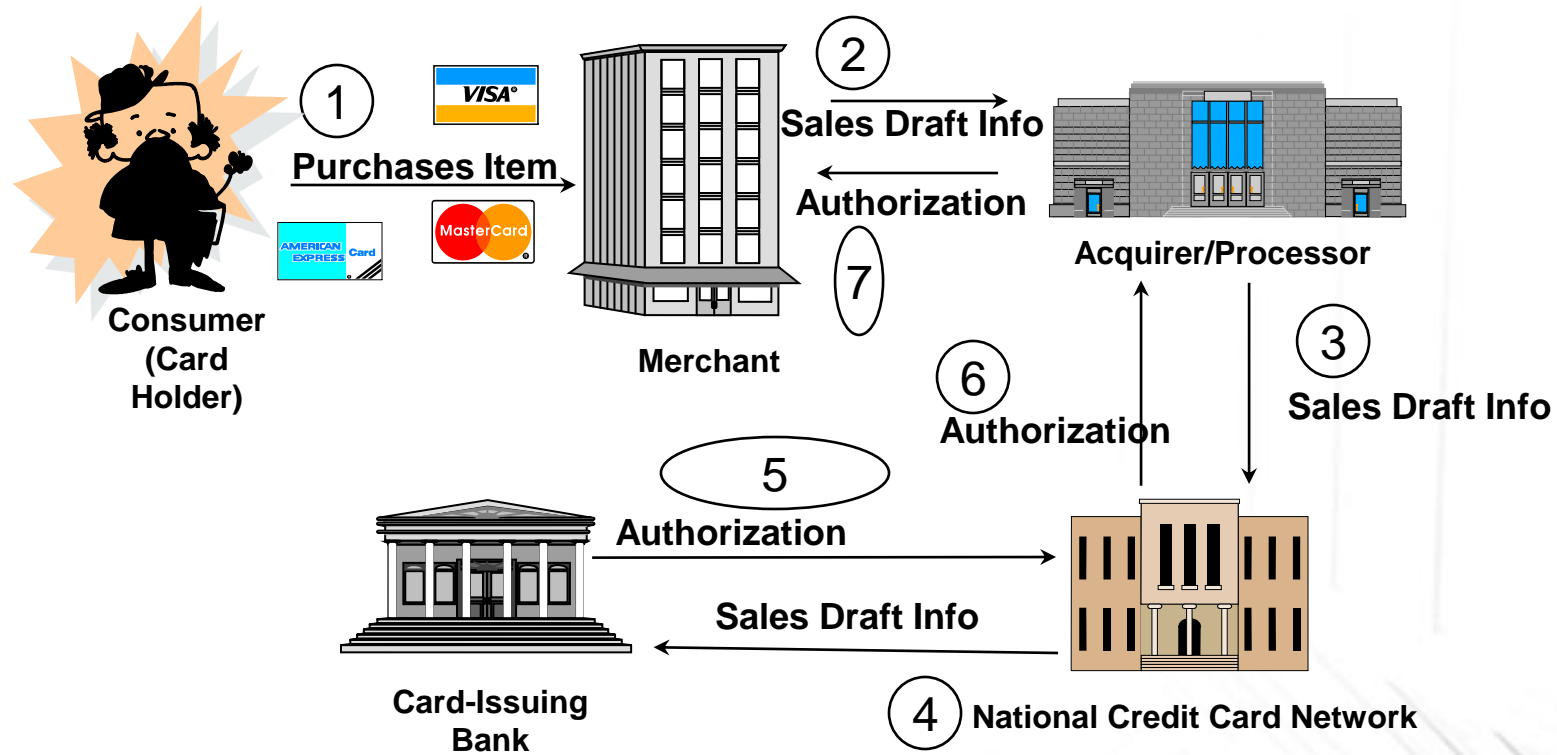
- **Credit Cards**
  - Creates debt for user
- **Prepaid Cards**
  - Gift cards, reloadable cards
  - Used to pay for goods and services
- **Debit Cards**
  - Funds taken out of checking account for purchases of goods and services
  - Pinned or pinless

# Cards

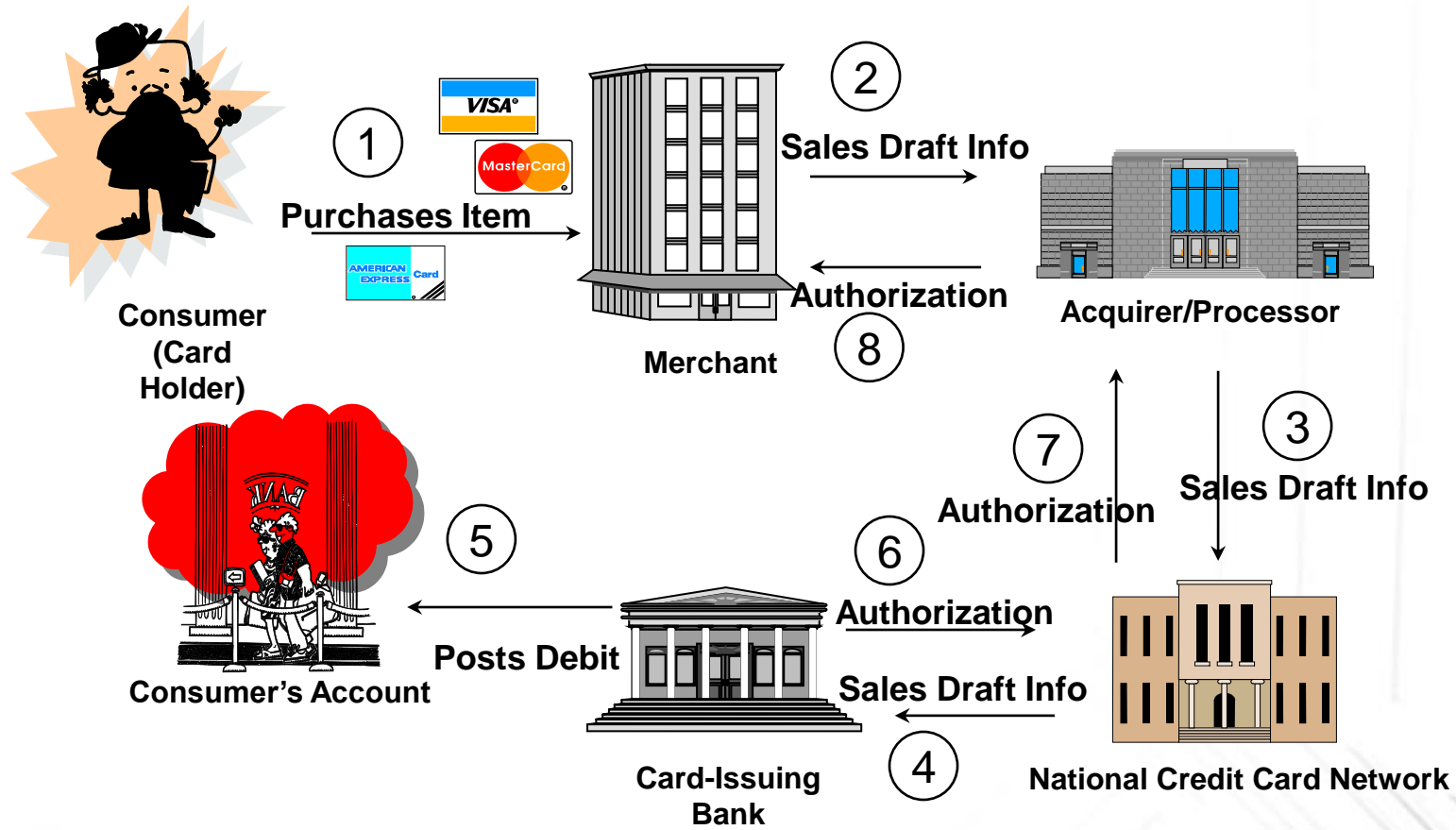
- **Key Features**
  - Internationally accepted
  - Consumer protections for unauthorized entries
  - Debit only
  - Easy to steal
  - Must pay interchange



# Signature Debit POS/Credit Card - Pinless



# PIN Debit POS Purchase



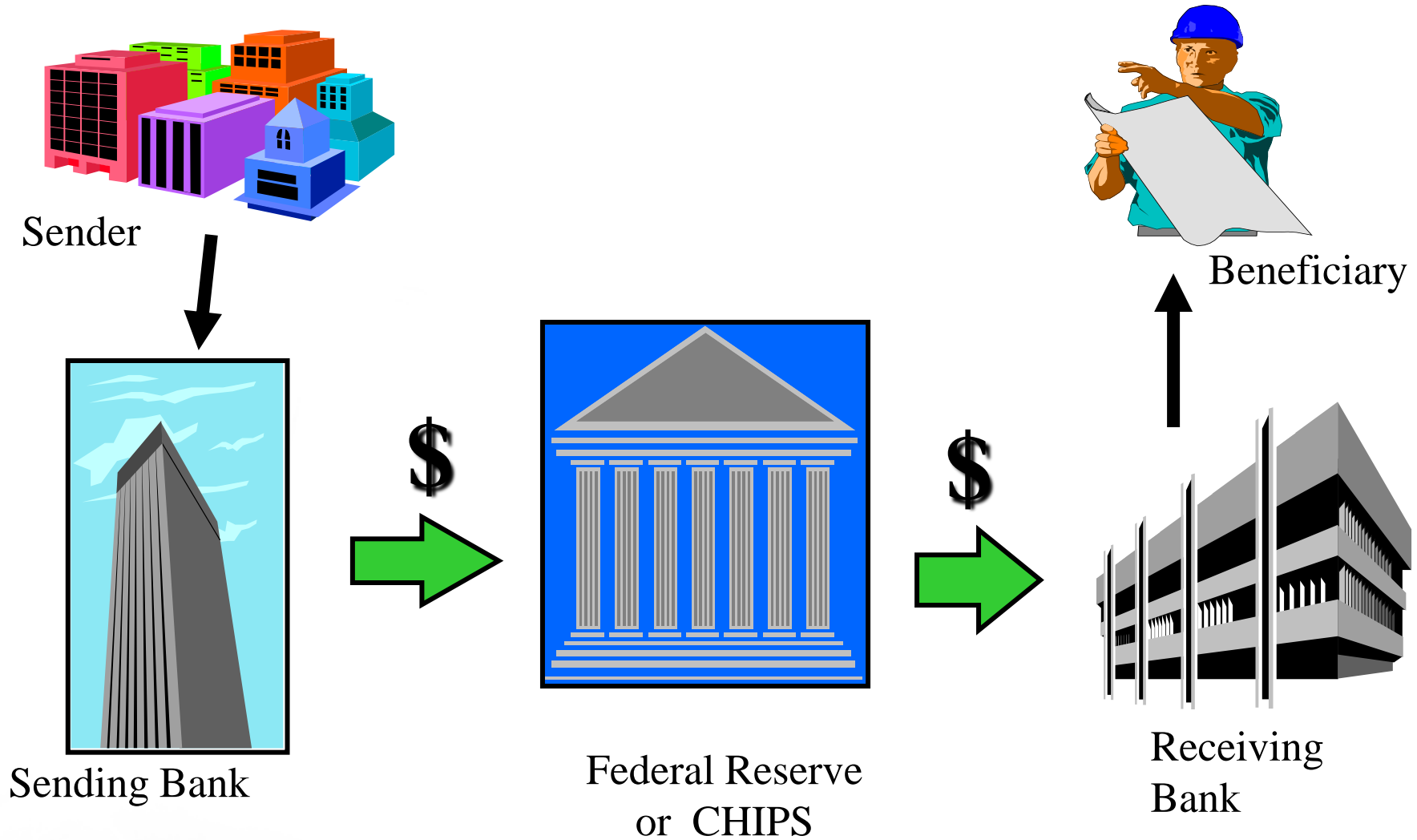
# Card System

- **Legal Framework**
  - Requirements and responsibilities of a participant in a POS or ATM network are governed by the rules governing the POS or ATM network to which the participant belongs

# Wire Transfers

- Real-time, gross settlement system
- Used for large dollar payments and transfers
- Payment final when received
- Credit only
- Larger fees
- Regulations
  - UCC4A
  - Reg J Subpart B
  - BSA/AML and OFAC

# Wire Transfer Flow





# Mobile Wallet

- Held by a company
  - Google, Apple, CurrentC, Square, Softcard
- Funded electronically with either a credit card or ACH from bank account
- May use QR Code
- May use Near Field Communication
- Like a wallet, may hold a variety of credit, debit and loyalty cards



# Virtual Currencies

**Bitcoin**

**Vpal**

**Litecoin**

**Dogecoin**

**Ripple**



# Virtual Currencies

- **Similar to stocks**
  - Volatile
  - Anonymous
- **Not universally accepted**
- **Not federally insured**
- **Not backed by the US Government**
- **Accepted internationally**
  - No exchange



# Virtual Currencies

- Purchase using your computer
- Purchase using your phone
- “Coins” can be used in pieces

# Why so many choices?

- **Financial institutions**
  - Revenue opportunities
  - Reduced operating costs
  - New customer products and services
- **Companies**
  - Increased profitability
  - Reduced costs
  - Enhanced customer loyalty
- **Consumers**
  - Faster, cheaper, better options
  - Convenience,
  - Desire to use new technologies

# Any Questions??

- Kate Cole
- [kate@mkcoleconsulting.com](mailto:kate@mkcoleconsulting.com)
- 612.910.9286
  
- Gary Nesbitt
- [Gary.nesbitt@gmail.com](mailto:Gary.nesbitt@gmail.com)
- 704.609.4309