AFP®
Annual Conference
— November 7-10, 2010 | San Antonio —

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ORIGINAL
ESSENTIAL
UNBIASED
INFORMATION

Cybercrime May Be Headline News, But Traditional Payments Fraud is Alive and Well

Anita Patterson, CTP
Director
Cox Enterprises, Inc.

Jerl Rossi, CTP
Corporate Director
Northrop Grumman

Nick Alex, CTP
Senior Vice President
SunTrust Bank

Agenda

- Introductions and Definitions
- Current Fraud Landscape
- Company Overviews
- Fraud Stories
- Best Practices
- Wrap-up/Questions

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AFP Payments Advisory Group (PAG)

- **PAG was formed to promote the interests of the treasury profession in the development of payment systems.**

- **Its goals are to: monitor, evaluate and report to AFP members on changes in payment systems and their impact on treasury; promote best practices in payments; and present the treasury perspective to payment systems developers.**

- **The PAG is an AFP volunteer group composed of senior executives from corporate treasury and banking and an attorney-adviser:**

• Sharon Petrey, Coca-Cola (PAG Chairman)

• Jennifer Bezdek, Fluor
• Fred Butterfield, Trust Company of America
• Terry Crawford, AMC Entertainment
• Rue Jenkins, Costco
• Gary Kawka, Cytec Industries
• Brad Larson, Claire's Stores
• Bill Lundeen, Procter & Gamble

• Anita Stevenson Patterson, Cox Enterprises
• Jerl Rossi, Northrop Grumman
• Gavin Waugh, Wendy's/Arby's
• Karen Nash-Goetz, T. Rowe Price
• Nicholas Alex, SunTrust Bank
• Mary Burchette, U.S. Bank
• Claudia Swendseid, Federal Reserve

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Cybercrime versus Traditional Fraud

- ## Cybercrime
  - Criminal activity using computers and the internet to steal identities and/or millions of dollars from online bank accounts; also includes creating and distributing viruses

- ## Traditional
  - Criminal activity with the intent to deceive and steal through core bank processes, such as Cash, Checks, ACH, Wires and Cards

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2009 Fraud Landscape

- 79% of organizations experienced payment fraud in 2009
- 90% that experienced payments fraud in 2009 were victims of check fraud
- For other payment methods – organizations report increased attempts for:

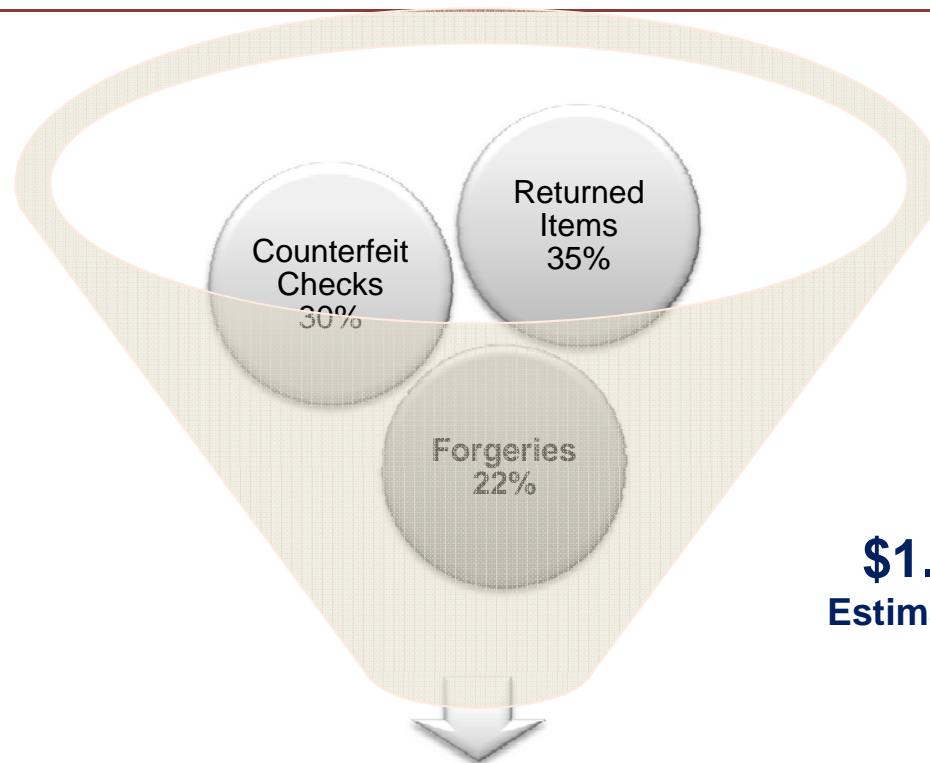|	
ACH Credits	7%
ACH Debits	25%
Corporate Commercial Cards	17%
Consumer Credit/Debit Cards	20%
Wire Transfers	3%

Checks remain the payment method most frequently targeted

Source: 2010 AFP Payments Fraud and Control Survey

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Check Fraud – Still Booming

Counterfeit Checks 30%

Returned Items 35%

Forgeries 22%

$1.024 Billion
Estimated 2008 Losses

Eight in 10 banks reported check fraud losses

Check fraud cases increased 26% between 2006 to 2008

Source: 2009 ABA Deposit Fraud Survey

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Check Fraud: Identity Theft

© Original Artist
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www.CartoonStock.com
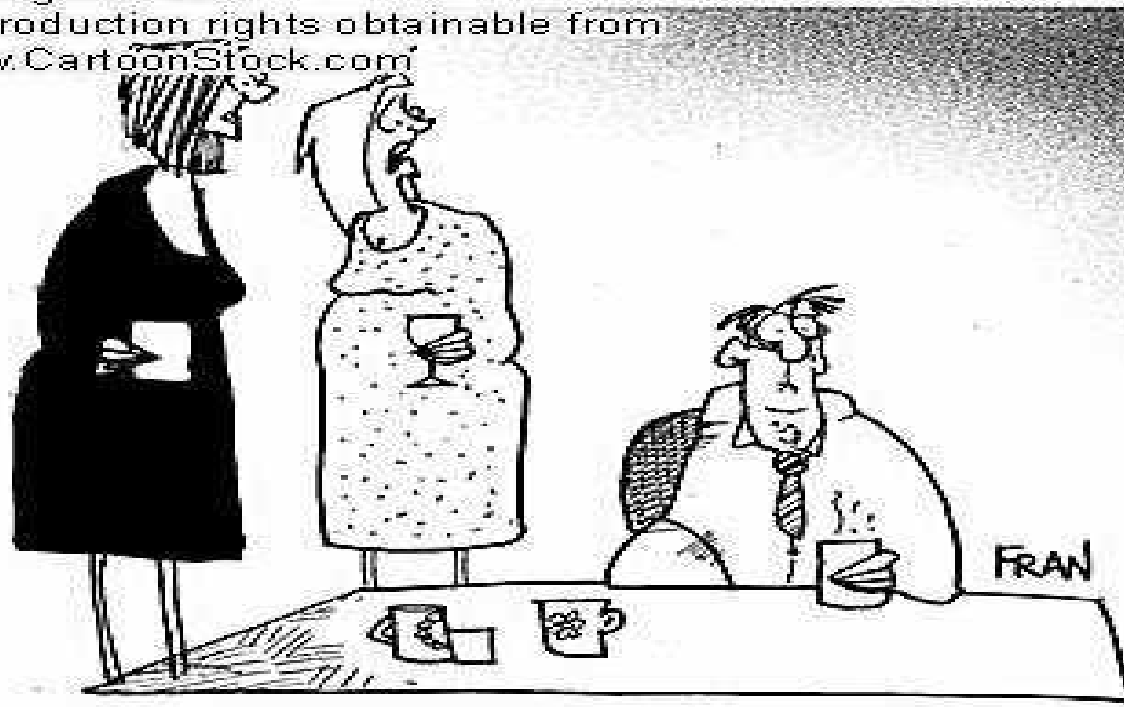
HE'S UPSET BECAUSE THE FRAUDSTERS WHO
STOLE HIS IDENTITY GAVE IT BACK...

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ACH Fraud

11% of victims suffered losses in 2009

More than half of the banks surveyed experienced ACH fraud

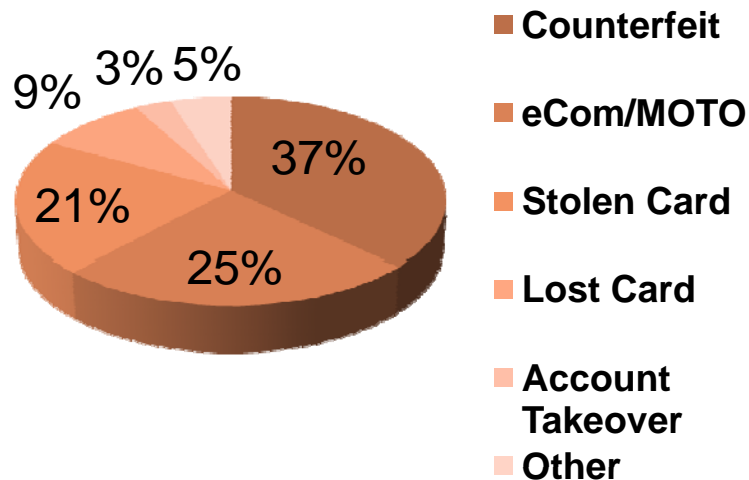Over **50%** of companies that suffered losses did not use fraud control services

Most accounts affected by ACH fraud belonged to individuals and/or small businesses

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Debit Card Fraud – Alive and Well

POS Signature Debit
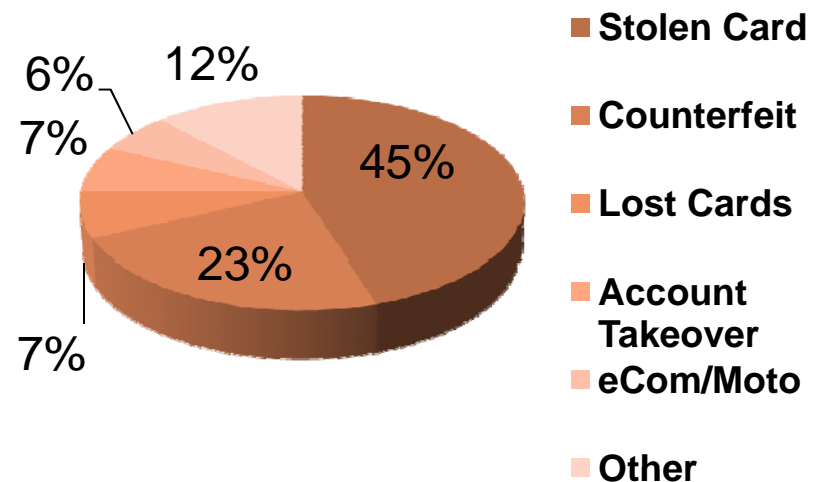
- Counterfeit
- eCom/MOTO
- Stolen Card
- Lost Card
- Account Takeover
- Other

37%
25%
21%
9%
3%
5%

POS PIN Debit

- Stolen Card
- Counterfeit
- Lost Cards
- Account Takeover
- eCom/Moto
- Other

45%
23%
7%
7%
6%
12%

$788 Million
Estimated 2008 Losses

Source: 2009 ABA Deposit Fraud Survey

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Corporate Commercial Card Fraud

Purchasing Card

Travel & Entertainment

43%

of organizations suffered losses in 2009
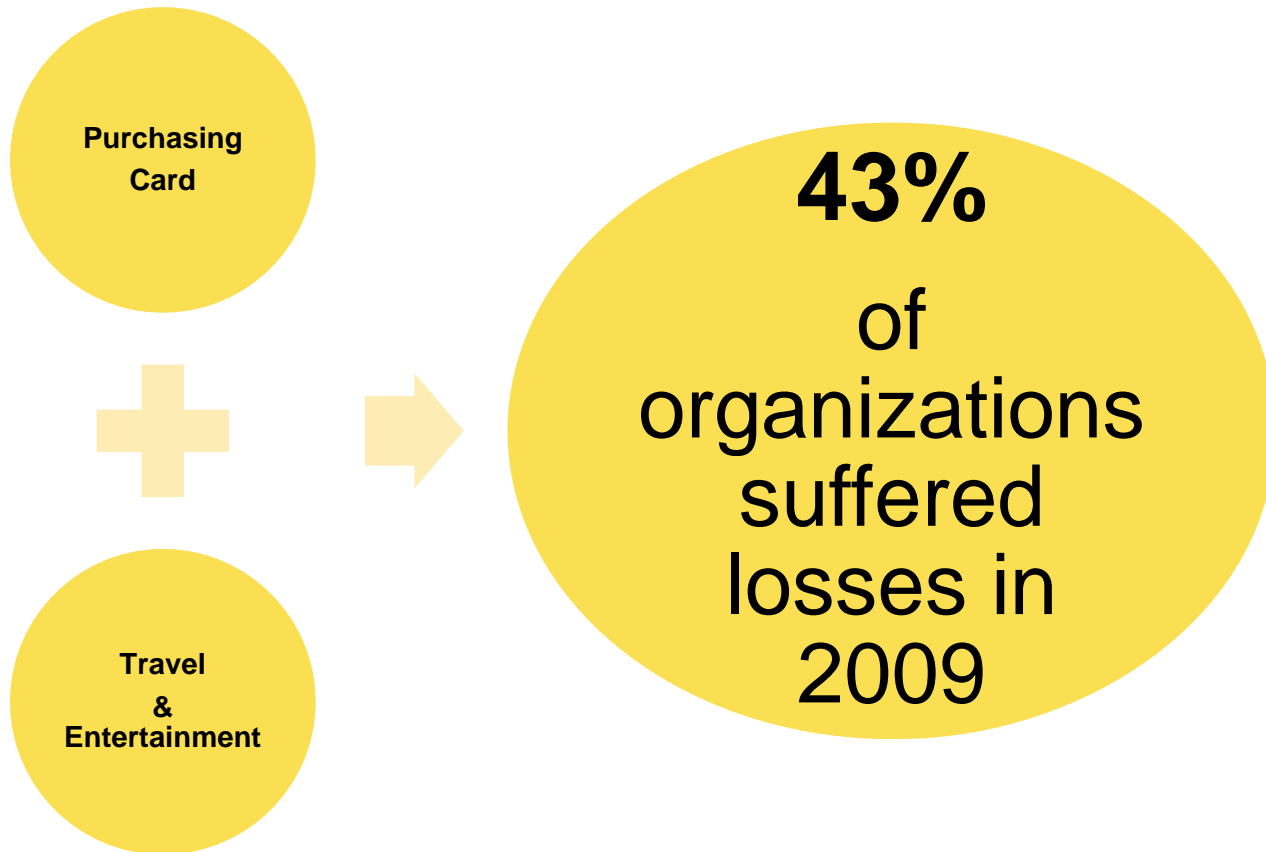
Source: 2010 AFP Payments Fraud and Control Survey

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James M. Cox – Our Founder

Farmer

School Teacher

Reporter

Publisher

Entrepreneur

Community Leader

Politician

"It was my policy to give all these men a helpful general supervision, but never to fetter their initiative."

Gov. James M. Cox

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Cox Enterprises Inc. (CEI) Is…

… more than 66,000 employees working for 300 businesses in 6 major operating subsidiaries.

6M residential + commercial customers

10M vehicles touched; 5M vehicles sold

17 dailies, 1.4M Sunday circulation; 45M Valpak homes

15 stations reaching 30M viewers

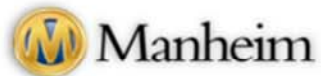86 stations reaching 240M weekly listeners

16M+ viewers; largest auto marketplace in the world

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CEI Total U.S. Market Reach

COX   **Manheim**   **COXMEDIA** GROUP   **AutoTrader.com**

Cox media and technology outlets reach 1 in 3 Americans each day.

CEI - Fraud Experienced

- Check Fraud

- ACH Fraud

- P-Card fraud

- Cash Fraud

  – Passing counterfeit bills

  – Stealing of cash

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Northrop Grumman - Company Overview

- **Founded in 1939**

- **Leader in global security**

- **Located in 50 states and 25 countries**

- **120,000 employees**

- **$34 billion in revenue in 2009**

- **$69 billion total backlog**

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Northrop Grumman – Company Overview

- One of the nations largest aerospace and defense contractors

- Major customer is the U.S. Government and other major A&D companies – Lockheed Martin, General Dynamics, Raytheon, Boeing

- Majority of payment receipts are made by ACH

- Significant initiative to convert supplier payments to ACH

- High level of electronic payroll by ACH

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Northrop Grumman - Fraud Experienced

- Check Fraud
- Commercial Card Fraud
  - Procurement Card (P-card)
  - Travel and Entertainment (T&E) Card
- No cash transactions

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Northrop Grumman -
Incidences of Check Fraud

- Investigations performed by corporate Security
  - Approximately 35 to 40 attempts of check fraud per year
  - Follow up with Fed/State/Local authorities

- Average check amount
  - $5,000 to $10,000 with a range of $500 to $80,000

- Typical scenarios
  - Origination from West Africa
  - Internet-based scams involving Craigslist or EBay
  - Check issued for greater amount; excess to be returned via Western Union

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Northrop Grumman -
Typical Check Fraud Investigation

- Notification to Northrop Grumman and handling by Corporate Treasury and Corporate Security
  - Suspicion by payee not expecting NGC check or involving odd email exchange
  - Payee contacts Northrop Grumman entity by phone, email, fax, or web
  - Fraudulent item forwarded to corporate Treasury with subsequent investigation by corporate Security

Example of Fraudulent Check Discovered Through Positive Pay Service

Payables Web Services

Print

Exception Type: Item Paid, No Issue Data

Decision:

Chk#: 243662   Acct#: ▮▮▮▮▮▮ $Amt: 574.33

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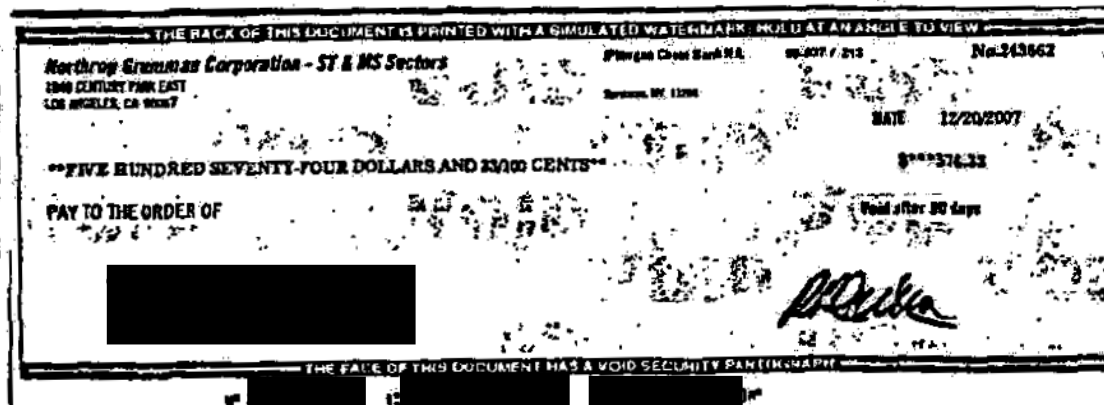
Example of Fraudulent Check:
"Post No Checks" check block would prevent payment

THIS DOCUMENT HAS A GRADUATED BACKGROUND. DARK TO LIGHT. THE REVERSE SIDE INCLUDES AN ARTIFICIAL WATERMARK.

**Northrop Grumman Space &
Mission System Corp.**
12900 Federal System Park Dr.
Fair Faxi, VA 22033

JP Morgan Chase Bank
P.O. Box 27307
New York City, NY 10081

CHECK NO.   1990

DATE 05/18/2009

$ **4,998.00

PAY   FOUR-THOUSAND NINE-HUNDRED-NINETY-EIGHT AND 00/100*************************   DOLLARS

TO
THE
ORDER
OF

MEMO   Payment

⑈001990⑈ ⑆   ⑆   ⑈

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Fraud Protection Results

No Financial Losses To-Date!

More Check Stories..

- Employee was to contact vendors who had not cashed checks. Employee was to then void the original check and reissue. He reissued the checks alright – to himself!! He set up fictitious vendors or in some cases just changed vendor name to himself.

- Employee in Accounting had checks cut to himself complete with fictitious back-up. All money recovered.

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ACH Fraud??

- National theater chain is required to send checks for refunds for gift cards

- Started seeing ACH <u>credits</u> come through
  - Small amounts 41¢; 35¢
  - No debits yet!
  - Accounts closed to debits, opened to credits

ACH Fraud??

- Auction location received ACH <u>credits</u> to AP account sent via PayPal
  - Small amounts – 2¢; 20¢
  - Notified bank – bank worked with PayPal & PayPal immediately closed the sender's account

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Debit Card Fraud

- Counterfeit Card
  - Elderly client reports several PIN transactions
  - Fraud amount About $1100 with $300 in fees
  - Mostly gas charges – but she does not drive

- Skimming
  - Skimmer attached to a bank ATM machine
  - 100 clients used ATM and information was captured

P-Card Fraud

- Charges for $1 from convenience store
- Card issuer called to verify
- No harm, no foul – card cancelled and reissued

Companies seem to catch the external fraud

it's the fraud by employees that seems to get away!

– at least for a while

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P-Card Fraud

AND SPEAKING OF INTERNAL…

- IT Manager used P-card to buy personal "stuff".
    - Created fictitious receipts
    - Caught because of evasive answers
- Former university employee sentenced to 10 years in prison!!
- 3 employees from a Washington state company indicted – trial was set for June 6, 2010 but more charges filed

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More P-Card stories

- Internal company manager defrauds company using the company's P-card
  - Set up shell company to funnel funds
  - Created invoices and falsified data
    - Officially "received items" at shipping dock
    - Enlisted services of a legitimate company who took funds and then forwarded to employee (took a 10% cut)
  - Improprieties discovered through internal audit
  - Employee and others involved serving 5 year jail sentence in Los Angeles

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Cash – Still out there!

- Cash "fraud" -
  - Paying with counterfeit 20's, 50's and 100's

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Cash – Still out there!

And then there is outright thievery –

- Snatch and grabs of safes!

- Employee placed petty cash order; delivered to the company location; pocketed cash and did journal entry to balance.

- Accounting supervisor took cash deposits and substituted "check only" deposit slip - $115,000 worth!

- 3rd party payment vendor would take cash payments and never submit the funds to company

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Few Losses

- Corporations experience few losses IF they:
  - Reconcile accounts timely
  - Have controls in place
  - Use fraud prevention services (payee match positive pay, debit blocks/filters)
 - Notify providers as soon as fraud is suspected

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Best Practices – Checks

- Use Payee Positive Pay or Reverse Positive Pay
- Implement ACH debit blocks to prevent electronic fraud
- Reconcile your accounts timely – daily if possible
- Add Check block ("Post No Checks") on demand deposit (depository) accounts –
- Convert checks to ACH
- Use Universal Payment Identification Code (UPIC)

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Check Security Features - Survivable
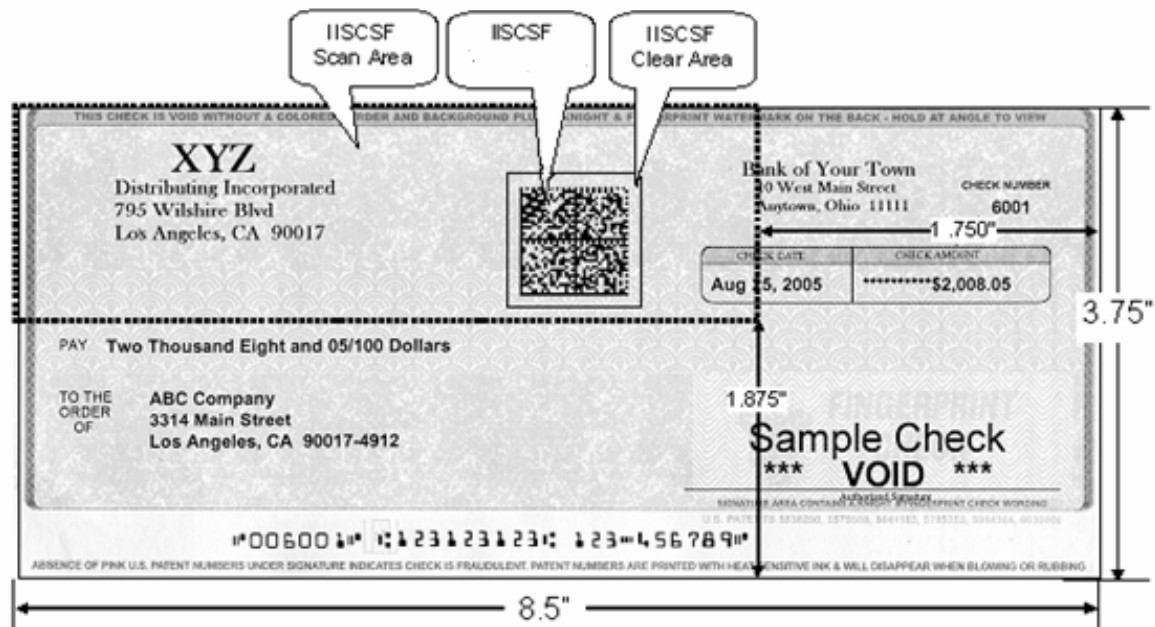
Standard Showing Location of Image-Survivable Check Security Features

Source: 2010 Federal Reserve Bank of Minneapolis

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Best Practices – ACH

- Protect your accounts with debit filters/blocks
- Reconcile your accounts timely
- Use ACH positive pay
- Use ACH Daily Transaction Reviews
- Use "Post no Checks" restriction on depository accounts

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Best Practices – Debit Cards

- Transaction level monitoring
  - Review transaction history
- Real-time authorization declines
- ATM devices checked for strange devices
- Pay close attention to capture devices
- Make sure you are aware of surroundings

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Best Practices – P-Card

- Implement detailed policies & procedures
- Appoint permanent administrator
- Implement a detailed cardholder agreement
- Design a card that minimizes accidental use
- Establish reasonable limits
- Require original receipts
- Institute a recurring audit process

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Best Practices – Cash

- External –
  - Use counterfeit bill detection devises
    - Pens, machines
  - Secure safes
- Internal
  - Segregation of duties is imperative
    - Separate cash taking & ordering from reconciliation
  - Run a "cleared check" report to see if there are "suspicious" vendors
  - Institute a recurring audit process

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Counterfeit Money

**What to do if you suspect a counterfeit bill?**

At one company they tell their employees:

- DO NOT PUT YOURSELF IN DANGER
- Do not return the bill to the payer
- Delay the payer by some excuse, if possible, without risking harm
- Observe and record the payer's appearance and that of any companion
- Note the license plate number and make of the payer's car
- Telephone the police or the U.S. Secret Service
- Write your initials and date on an unprinted portion of the suspect bill
- Do not handle the bill more than necessary
- Place the bill in a protective envelope
- Surrender the bill only to a properly identified police officer or a representative of the U.S. Secret Service

Questions

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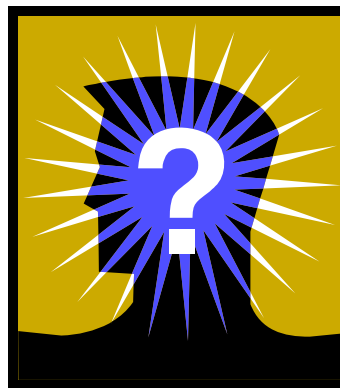
The Message is Clear…

© Cartoonbank.com

P.C.VEY

"You know, you can do this just as easily online."

Resources

- Best Practices: www.afponline.org

- Fraud Survey & Statistics: *2010 AFP Payments Fraud & Control Survey* and *2009 ABA Deposit Fraud Survey*

- Know Your Money: www.secretservice.gov and www.moneyfactory.gov

- Image Survivable Check Security Features: *Federal Reserve Bank of Minneapolis*

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Image Survivable Check Security Features

What are Check Security Features

Image-Survivable Check Security Features

Industry Efforts to Address ICSF
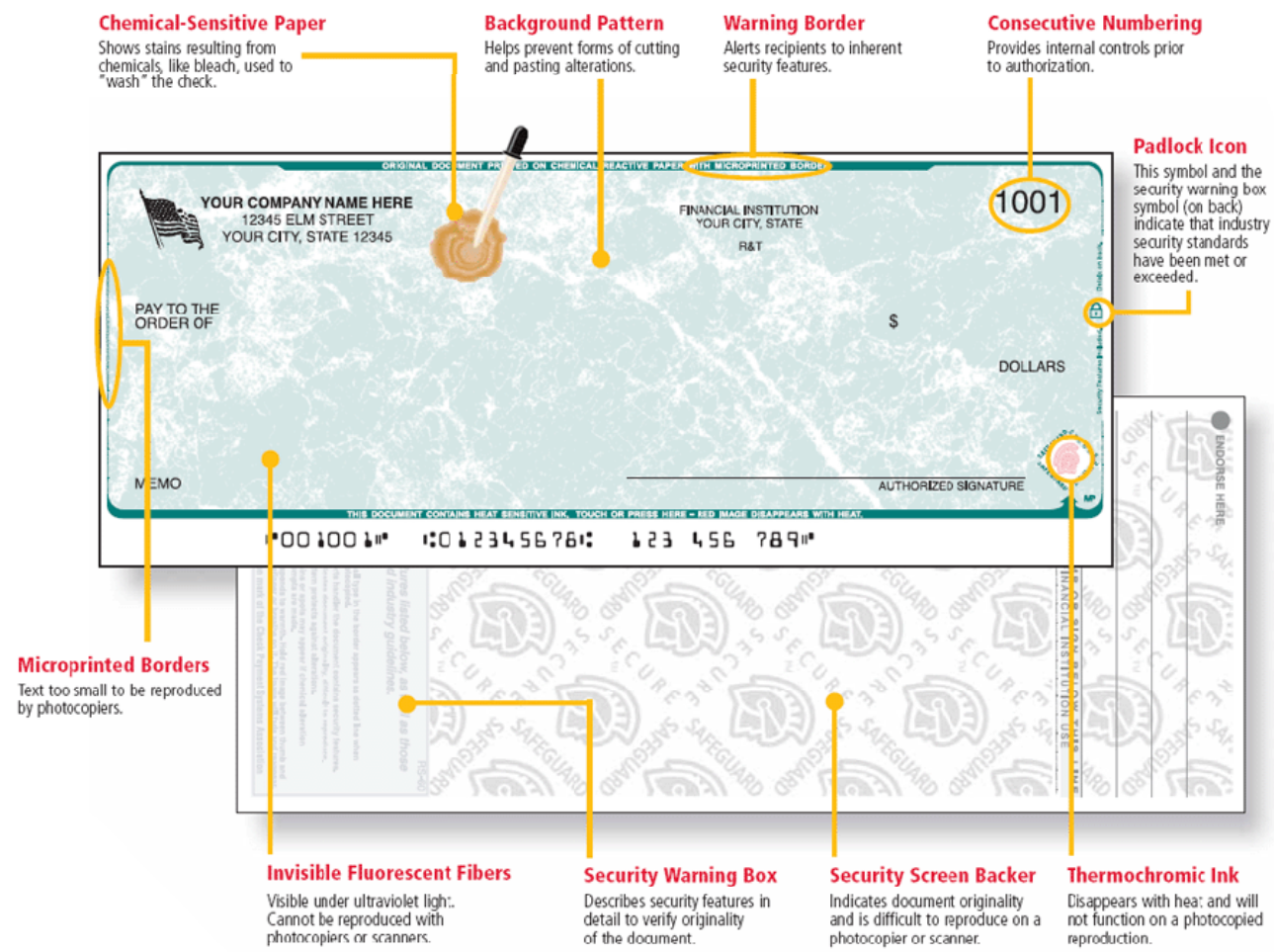
DSTU X9.100-172

New Work Item

Check Security Features

- Check Security features help to reduce check fraud associated with paper check processing

- Check imaging has made many traditional check security features useless, because they do not survive the imaging process. For example:
  - Chemical & thermal sensitive paper
  - Paper incorporating security threads, micro-printed lines, prismatic images, or fluorescent fibers
  - Paper printed with watermarks, embossing, or foils
  - Holograms
  - Anti-splice borders
  - Paper with "original document" or other screens on the back of check
  - "VOID" or other pantographs designed to appear on a photocopy

- Other check security features & processes continue to be effective
  - Modulus check serial numbers/reference numbers
  - Signature verification
  - Positive pay, payee positive pay, etc.

Traditional Check Security Features

Chemical-Sensitive Paper
Shows stains resulting from chemicals, like bleach, used to "wash" the check.

Background Pattern
Helps prevent forms of cutting and pasting alterations.

Warning Border
Alerts recipients to inherent security features.

Consecutive Numbering
Provides internal controls prior to authorization.

Padlock Icon
This symbol and the security warning box symbol (on back) indicate that industry security standards have been met or exceeded.

Microprinted Borders
Text too small to be reproduced by photocopiers.

Invisible Fluorescent Fibers
Visible under ultraviolet light. Cannot be reproduced with photocopiers or scanners.

Security Warning Box
Describes security features in detail to verify originality of the document.

Security Screen Backer
Indicates document originality and is difficult to reproduce on a photocopier or scanner.

Thermochromic Ink
Disappears with heat and will not function on a photocopied reproduction.

3

Image-Survivable Check Security Features

- New image-survivable check security features (ICSFs) have been developed to address issues caused by check imaging

    - Encode check payment data (e.g., payee, check number, account number, amount) into a security mark that is printed on the check

        - Encoding is accomplished via a cryptographic algorithm

        - Party decoding the security mark must use software that encoded the ICSF in order to verify check image

        - Use typically limited to corporate checks where payment data is known at time that check and ICSF is printed

    - Three types of ICSFs: bar-coding, seal-encoding, & digital watermarks

    - A number of software vendors offer image-survivable check security features in their payment products*

Vendor	Product	URL
Security Litho	Image Secure	www.securitylitho.com
Wausau Financial Systems	Fraud Detection	www.wausaufs.com
ProdDocument Solutions	ImageSecure	www.prodocumentsolutions.com
SafeChecks	Secure Check Writing	www.safechecks.com
Troy Group	Scan Check	www.troygroup.com
International Security Products	Image Secure	www.isp-vft.com

* Not an exhaustive list

Check Security Features – Survivable
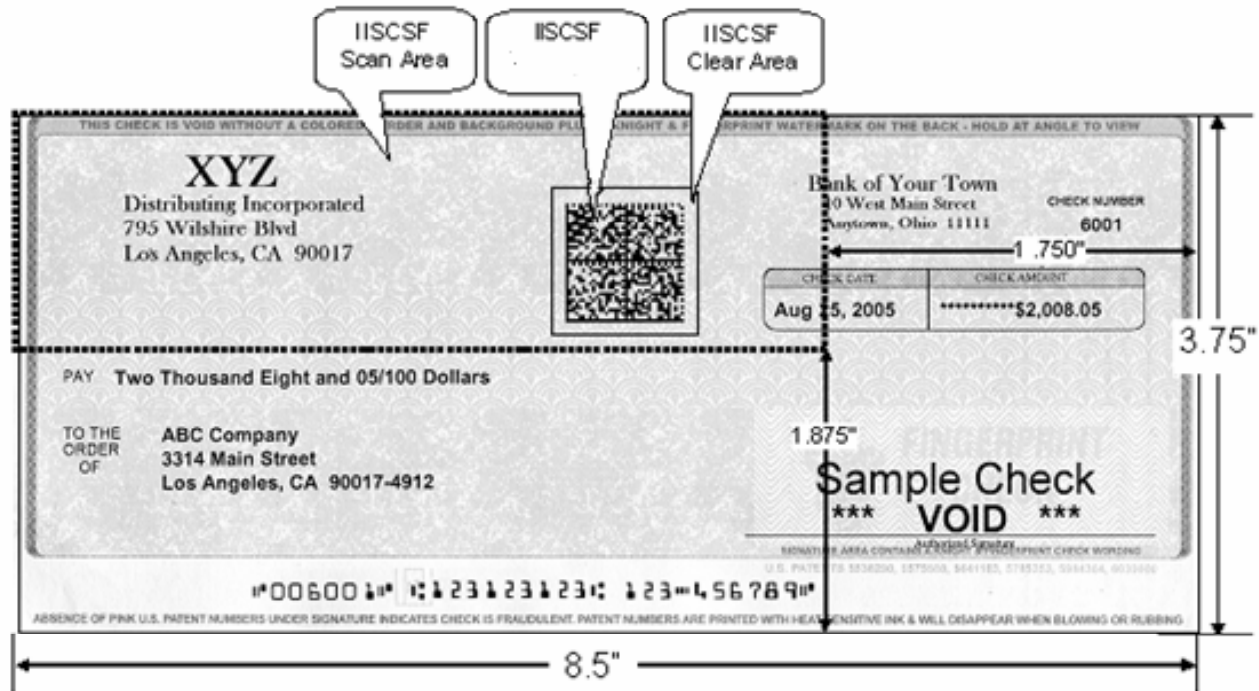
Standard Showing Location of Image-Survivable Check Security Features

Industry Efforts to Address ICSF

- In 2004, Financial Services Technology Committee (FSTC) initiated an industry project to address barriers to ICSF adoption, primarily the need to implement proprietary vendor software to validate each unique ICSF

  - Recommended standard location & size of ICSF on a check & process for registering cryptographic algorithms & methodology for validating ICSFs

- ASC X9 revised standard to define where on check ICSF would be positioned

- Treasury checks printed by Federal Reserve Banks use an ICSF developed by Fiserv

- Litigation initiated related to ICSF copyright infringement has slowed progress with adoption on ICSFs, generally

DSTU X9.100-172

- ASC X9 adopted DSTU X9.100-172, based on FSTC's work
  - Enables party accepting check & BOFD to validate check upon receipt without need to implement proprietary vendor software
  - Expires August 7, 2010
- The standard:
  - Part 1 Overview and Security Marks
    - Defines logical roles and processes for using and validating ISCFs
  - Part 2 Data Definitions
    - Data elements in the ICSF Registry, account Directory, and RT Feature List
  - Part 3 Message Definitions
    - Defines communication between systems to validate ISCFs
  - Part 4 Application and Registration Policies and Process
    - Define the roles and responsibilities of the applicant, Registration Authority, and Registration Management Group
    - Defines policies for the ICSF Registry and criteria for an ISCF
    - Defines dispute resolution process
- Standard uses XML for interoperable validation

ICSF Framework

- **Check Acceptor** — the individual or company that accepts checks for payments or deposit, and decides whether or not to initiate a request to validate an ICSF.

- **Validator** — the company that processes ICSF requests for validation and performs the technical and business functions necessary for processing.

- **Verification Authority** — companies or financial institutions that maintain the information needed for the validation of ICSFs.

The ICSF framework also defines the messages exchanged in the process of validating a check protected by a compliant security feature. The two key messages are:

- **Get Mark Information** — used to determine whether or not a Security Mark should be present on a check, and if a check is protected by an ICSF, to obtain the information needed to validate the check.

- **Validate Marks** — used to request the validation of an ICSF.

Current State of ICSFs

- ViewPointe is the registration authority & six vendors have registered interoperable ICSFs

- The ICSF Registration Management Group is an X9 group and currently chaired by Curt Hunsicker, Federal Reserve Bank of Philadelphia.

- Although six vendors have registered products, no actual usage of registered data has occurred

- The registry can be found at

  - http://icsf.kgconnect.com

Vendor	Product	URL
Cheque guard	ChequeSeal	ww.cheque-guard.com
SQN Banking Systems	Sentry	www.sqnbankingsystems.com
Orbograph	Orbograph	www.orbograph.com
Advanced Software Design	SAND	www.asdc.com
John H. Harland Company	Validify	www.harland.com
Fiserv Imagesoft	Fraudguard and Secure Seal	www.imagesoft.fiserv.com

Next Steps

- Let DSTU X9.100-172 Expire
- Begin New Work Item Proposal
  - Co-Chairs: John McCleary, Harland Clarke
    Brian Salway, Symcor
  - Recording Secretary: Deb Hjortland, FRB
  - Participating Category A Members
    Nancy Grant, NACHA
    Dan Harman, Fiserv
    Rick Lugg, RDM
    Ann Kirkwood, Wells Fargo
    Mark Kielman, FRB

Know Your Money

1996 style consists of series years 1996, 1999, 2001, 2003, 2003A and 2006.

2004 style incorporates background color and consists of series years 2004, 2004A and 2006.

Paper Currency paper consists of 25% linen and 75% cotton and contains small randomly disbursed red and blue fibers embedded throughout the paper.

Portrait The 1996 style Federal Reserve Notes (FRNs) have an enlarged and off-center portrait enclosed in an oval frame of concentric lines. The 2004 style FRNs have an enlarged and off-center portrait without a frame.

① **Watermark** The 1996 and 2004 style FRNs have a watermark that is visible from either side when held up to a light source.

② **Color-Shifting Ink** The 1996 style FRNs have color-shifting ink in the lower right-hand corner, that shifts from green to black as the note is tilted 45 degrees. The 2004 style $10, $20 and $50 FRNs have color-shifting ink that shifts from copper to green as the note is tilted 45 degrees. The $5 FRN does not have color-shifting ink.

③ **Security Thread** Genuine FRNs have a clear polyester thread embedded vertically in the paper. The thread is inscribed with the denomination of the note, and is visible only when held up to light. Each denomination has a unique thread position and will glow a unique color in ultraviolet (UV) light.

④ **Serial Numbers** The first letter of the serial number on FRNs corresponds to the series year.

1996 Style		2004 Style
A=1996	D= 2003	E= 2004
B=1999	F= 2003A	G = 2004A
C=2001	H= 2006	I= 2006

Bank Indicators

⑤ **Federal Reserve Indicators** The 1996 style and 2004 style FRNs have a letter-number combination, which identifies one of the 12 issuing Federal Reserve Banks. This letter-number combination appears beneath the serial number on the left. The number corresponds to the position of the letter in the alphabet, e.g.: A1, B2, C3, etc. The second letter of the serial number is the same as the letter in the letter-number combination.

⑥ **Check Letter/ Quadrant Number**

⑦ **Face Plate Number**

⑧ **Series Year**

⑨ **Back Plate Number** *(Not shown)* Found on the reverse right hand side of the note.

1996 style $100 note issued March, 1996

Watermark

Green to black color-shifting ink

Under a UV light source, the security thread glows light red/pink.

2004 style $50 note issued October, 2004

Watermark

Copper to green color-shifting ink

Under a UV light source, the security thread glows yellow.

2004 style $20 note issued October, 2003

Watermark

Copper to green color-shifting ink

Under a UV light source, the security thread glows green.

Know Your Money

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6 **Check Letter/ Quadrant Number**

7 **Face Plate Number**

8 **Series Year**

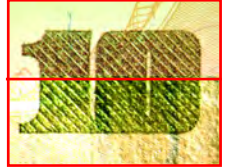**9** **Back Plate Number** *(Not shown)* Found on the reverse right hand side of the note.

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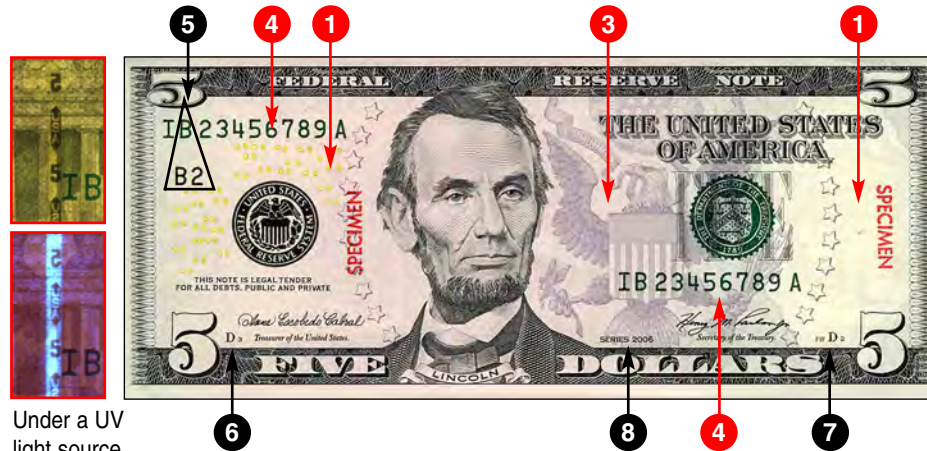## 2004 style $10 note issued March, 2006

Watermark

Copper to green color-shifting ink

Under a UV light source, the security thread glows orange.

2004 style $5 note issued March, 2008

Watermarks

The $5 FRN does not have color-shifting ink.

Under a UV light source, the security thread glows blue.

Know Your Money

	Portrait	Watermark	Security Thread	Portrait Microprinting	Other Microprinting	Color-Shifting Ink Front Lower Right Numeral
2004 Style						
50	Grant	Grant	Right of portrait	"THE UNITED STATES OF AMERICA" along Grant's collar	"50", "USA" and "FIFTY" in two blue stars to the left of the portrait; "FIFTY" along side borders	Copper to Green
20	Jackson	Jackson	Left of portrait	"THE UNITED STATES OF AMERICA 20 USA" in the border below Treasurer's signature	"USA20" borders beginning part of text ribbon "USA TWENTY", right of portrait	Copper to Green
10	Hamilton	Hamilton	Right of portrait	"THE UNITED STATES OF AMERICA" below portrait	"USA10" beneath torch to the left of the portrait; "TEN DOLLARS" along side borders	Copper to Green
5	Lincoln	Left: vertical "5 5 5"; Right: large "5"	Right of portrait	"E Pluribus Unum" at top of shield to the right of the portrait; "USA" between columns of eagle's shield; "FIVE DOLLARS" along side borders.	On back, "USA FIVE" on edge of purple 5.	None
1996 Style						
100	Franklin	Franklin	Left of portrait	"THE UNITED STATES OF AMERICA" along Franklin's collar	"USA100" in lower left numeral	Green to Black
50	Grant	Grant	Right of portrait	"THE UNITED STATES OF AMERICA" along Grant's collar	"FIFTY" along side borders	Green to Black
20	Jackson	Jackson	Left of portrait	"THE UNITED STATES OF AMERICA" in the lower oval framing of portrait	"USA20" in lower left numeral	Green to Black
10	Hamilton	Hamilton	Right of portrait	"THE UNITED STATES OF AMERICA" below portrait above Hamilton's name	"TEN" in lower left numeral	Green to Black
5	Lincoln	Lincoln	Left of portrait	"THE UNITED STATES OF AMERICA" in the lower oval framing of portrait	"FIVE DOLLARS" along side borders	None
1990 Style						
100	Franklin		Left of portrait	Around portrait "THE UNITED STATES OF AMERICA"		
50	Grant		Left of portrait	Around portrait "THE UNITED STATES OF AMERICA"		
20	Jackson		Left of portrait	Around portrait "THE UNITED STATES OF AMERICA"		
10	Hamilton		Left of portrait	Around portrait "THE UNITED STATES OF AMERICA"		
5	Lincoln		Left of portrait	Around portrait "THE UNITED STATES OF AMERICA"		

For further information, contact your local U.S. Secret Service Field Office. The phone number may be found under the Government section of your local telephone directory.
April 2008

All Federal Reserve Notes are printed on paper featuring red and blue embedded fibers.

Federal Reserve Notes designed before 1990 do not contain security threads or microprinting.

www.secretservice.gov
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