

Getting Started with ICLs aka X9.37 Files

#### Personal Introductions

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# Cash Letters & Image Cash Letter

- A cash letter is an inter-bank transmittal letter that accompanies paper check items sent from one financial institution to another.
- Image Cash Letter (ICLs) are also known currently as X9.37 Files and are the electronic equivalent of a physical cash letter

#### **ICL - 2**

- X9.37 File is a file based on the Accredited Standards Committee X9's Specifications for Electronic Exchange of Check and Image Data (DSTU X9.37-2003) – *Draft Standard for Trial Use*
- ICL files combine check *images* and check image *data* in electronic format

#### Who Uses An ICL

- Financial Institutions
  - Banks
  - Credit Unions
  - Exchanges
  - Federal Reserve Board
- Lockbox Services
- Corporate Remote Deposit Sites, Kiosks
- Potentially everyone who receives a check





## Benefits Of ICLs

- ICLs Expedite item clearing:
  - Improves cash flow
  - Reduces float
  - Reduces risk
  - Improves fraud mitigation
  - Lower the cost of inbound and outbound return processing.

#### How Are ICLs Used

- Federal Reserve Board Check 21 Services
- Exchanges- SVPCO, EndPoint, ViewPoint
- Print IRD Substitute Check
- Intra-bank (International, Regional)
- Inter-bank
- Remote Deposit Capture Corporate

## Why A Standard?

- To expedite the flow of data
  - Send
  - Receive
- Ensure accurate flow of data

## Background ICL - 1

- An earlier version of the standard described the interchange of check data, i.e. Electronic Check Presentment (ECP). The file itself was an Electronic Cash Letter (ECL).
- The ANSI X9 Committee for Financial Services produced the Draft Standard for Trial Use DSTU X9.37–2003 Specifications for Electronic Exchange of Check and Image Data.

## Background ICL – 2

- The 2003 Draft Standard describes the interchange of image data in addition to check data or Image Check Presentment (ICP) and the file became an Image Cash Letter (ICL).
- The ICL file consists of variable length record structures containing check and bank data as well as various compressed images of the checks or other transaction data.

## Background ICL – 3

- The ICL file tries to mimic the physical form of cash letters
- Cash Letters
  - Bundles bundles of checks
    - Items checks
      - Records electronic data

#### ICL Structure

- Cash Letter
  - Cash Letter 1
    - Bundle 1
      - Item 1
        - Record
        - Record
      - Item 2
    - Bundle 2
      - Item 1
      - Item 2
  - Cash Letter 2
    - Bundle 1 for Cash Letter 2 etc

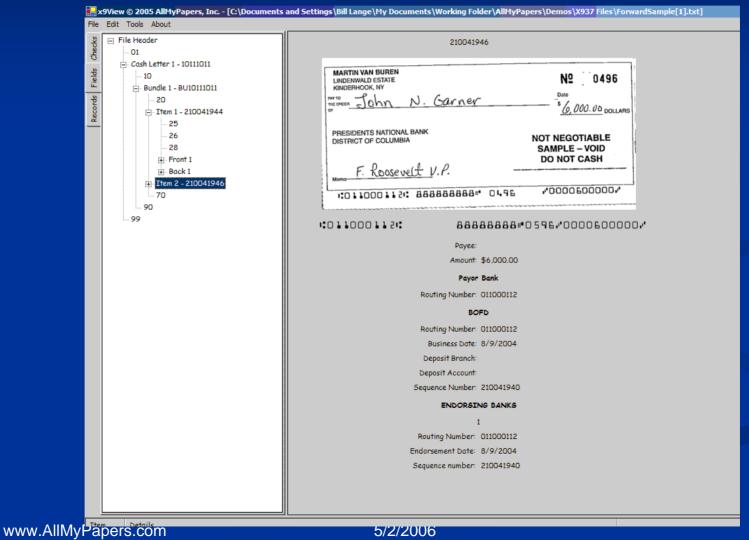
## Background ICL

- An ICL can contain multiple Cash Letters
- A Cash Letter can consist of multiple Bundles.
- A Bundle can consist of multiple Items
- Items consist of multiple records.
- Control Records for recording the totals in each of the different hierarchies.

### Demo X9.37 Viewer



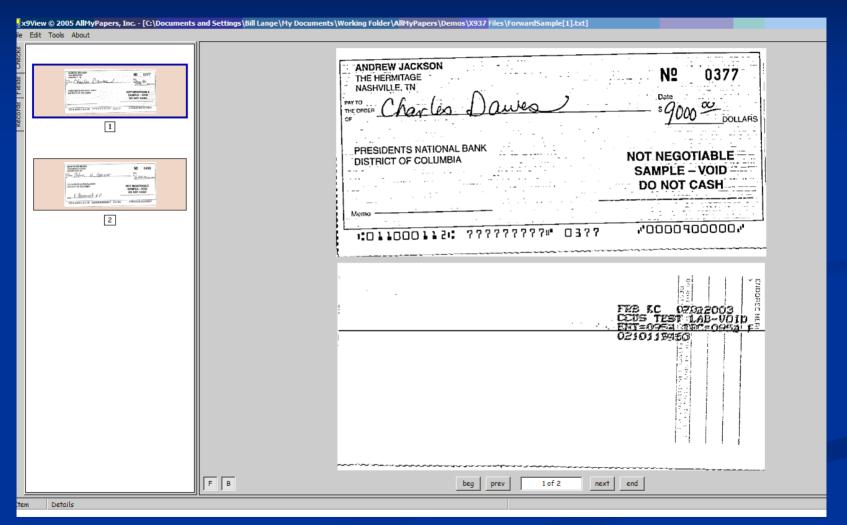
#### ICL Item Record





16

#### ICL Check Front & Back





#### **ICL Records**

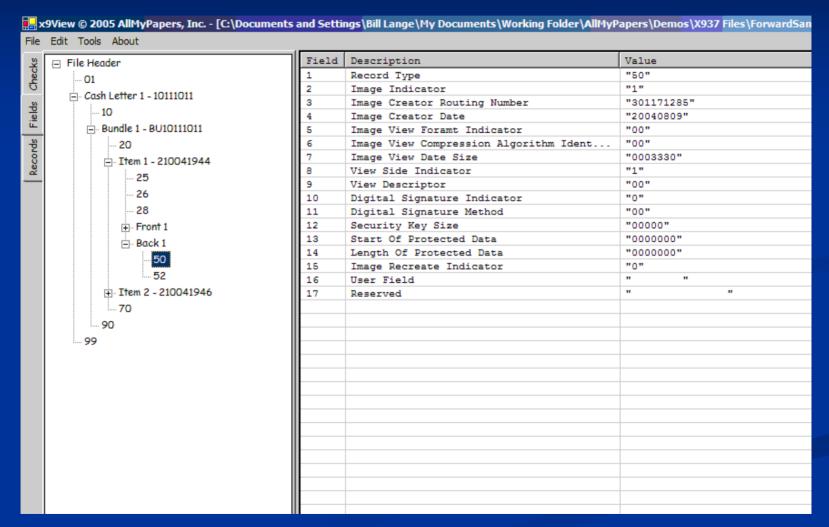
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	17	52				
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1	Field	Description	Value
П	1	Record Type	"50"
ı	2	Image Indicator	"1"
ı	3	Image Creator Routing Number	"301171285"
ı	4	Image Creator Date	"20040809"
ı	5	Image View Foramt Indicator	"00"
ı	6	Image View Compression Algorithm Ident	"00"
ı	7	Image View Date Size	"0005620"
ı	8	View Side Indicator	"0"
ı	9	View Descriptor	"00"
ı	10	Digital Signature Indicator	"0"
ı	11	Digital Signature Method	"00"
ı	12	Security Key Size	"00000"
ı	13	Start Of Protected Data	"0000000"
ı	14	Length Of Protected Data	"0000000"
ı	15	Image Recreate Indicator	"0"
ı	16	User Field	" "
ı	17	Reserved	" "
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#### ICL Fields





### ICL Components

- An Item is basically a check for forward presentment or for return processing described by records
- A check item within the X9.37 standard consists of multiple records. This is required since different records are needed to record the parts of a check such as endorsements, front image and back image.

## Basic Forward Presentment-Minimal Set of Records

#### # Record Description

- 01- File Header
- 10- Cash Letter Header
- 20- Bundle Header
- 25- Item (forward) Detail Record
- 26- Item (forward) BOFD
- 28- Item (forward) Endorsement
- 50- Item Image Detail Front View
- 52- Item Image data Front View
- 54- Item Image QA Front View
- 50- Item Image Detail Back View
- 52- Item Image Data Back View
- 54- Item Image QA Back View
- 70- Bundle Control Record
- 90- Cash Letter Control Record
- 99- File Control Record



#### Components of ICL

- Detail MICR line data
  - Auxillary OnUs
  - External Processing Code
  - ABA routing number
  - OnUs information
  - Amount

## Why A Standard?

- To expedite the flow of data
  - Send
  - Receive
- Ensure accurate flow of data

#### Standards and Guidelines

- X9 Committee for Electronic Exchange of Check and Image Data
  - 66 Voting Members
  - Multiple types and each with their own agenda, perspective, interests
    - Banks
    - Software Companies
    - Hardware companies
    - Check printing companies
    - Federal Agencies
    - International Agencies
- Federal Reserve Board Guidelines
  - Subset of standard
  - Sometimes conflicts



#### **The X9.37 Issues - 1**

- Federal Reserve Board is strongly encouraging electronic check *image* clearing – X9.37
- Creating files conforming to the X9.37 ANSI standard is more difficult than anticipated

#### The X9.37 Issues - 2

- Like TIFF, X9.37 files have many variations and customizations sometimes unique to each bank (custom data in various records)
- Deposit Slips
  - No specific record for deposit slips in X9.37 DSTU
  - FRB Guidelines no deposit slips
  - IRDs no "This is a legal copy..."

### Deposit Slips

- Three common ways of entering a deposit slips into an ICL
- 1. Non-valid ABA routing number
- 2. Record 61 (multiple versions)
- 3. Trans Code on a valid ABA routing number

- Control Records and Deposit slips
  - Since not in standard will double totals

## Issues with Developing ICLs

- Complex Standard
- Federal Reserve Board Guidelines
  - 53 page modifier to X9.37
- DSTU X9.37-2003
  - 144 page document
  - Lots of details

## Converting Check Images To ICLs

- MICR line data
  - Magnetic read substitution errors
  - MICR OCR E13B fonts, find, parse, confidence
- Bank Data Bases
  - EBCDIC
  - ASCII
- Image File Types
  - TIFF
  - Bitonal Grayscale Color JPEG

## Types of ICLs

- Forward Presentment
- Return ICL
  - Less than 15 financial institutions
  - Less than 5 vendors

#### Return X9.37 Files

- Need to return checks because account officers request returns for:
  - Insufficient Funds
  - Uncollected Funds
  - Lack of Endorsement
  - Can't find account number
  - Bad Signature
  - Not readable
  - Forgery

## Need for X937 Editing

- Fix problem files \$100 Million Cash Letter
  - Repair MICR line data
    - Account number
    - ABA Routing number
  - Add Bank of First Deposit Information
    - View back of check image to read endorsement
    - Copy BOFD info into correct record and field
  - IRD file that will not print

## New ICL Standard Coming Soon

- **X9.100-180-2006** 
  - X9.37 Draft Standard Trial Use >X.9.100-180
  - Substantive changes 144 pages to 206

#### New ICL Standard - 2

- Major Difference Of New Standard
  - 1. Credit/Reconciliation Record is added
  - 2. New definition for ABA Routing Numbers (Int'l)
  - 3. Capture MICR line and Corrected MICR line
  - 4. Pre-defined User Record for Payee Endorsement
  - 5. Image Quality Test Results
  - 6. Digital Signatures



## X9.100-80 Difference Example

- ABA Routing Numbers "Check 22"
  - X9.37 = 8 digits and a check digit current
  - Exceptions dashes in the middle, more than 8
- New Standard different
  - Support now for international routing numbers
  - IRDs IRD has to match data on check
  - FRB only excepts 8 plus check digit need conversion

## All My Paper's Solutions

- A suite of UNIVERSAL ICL (X9.37) software applications and toolkits
  - Applications
    - X9.37 Viewer/Validator Application
    - X9.37 Editor Application
  - Toolkits
    - AX9LIB Toolkit of X9.37 File Utilities
    - AX9SQL Toolkit to convert X9.37 to SQL files

## All My Papers

- All My Papers develops and distributes software products for:
  - Viewing, Creation Editing and Sorting of X9.37 files
  - Fast and accurate printing of valid Image Replacement Documents (IRDs),
  - High accuracy data extraction of the MICR line data on check images
  - Auto location and reading of barcodes.
  - Processes and repairs check images

## Questions



#### Thank You

