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## **NCN ELOGX Guide for ECC and VISA POS**

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About this document...

## Purpose

This document describes the ELOGX format available from NCN and identifies best practices for using these logs.

## Audience

The primary audience and users of this document are customers that want to clear and settle ECC and/or VISA POS transactions based on NCN ELOGX files.

## Comments

- This document is limited in scope to the ELOGX format only.

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# 1. Introduction

This section contains the document's revision history and a list of other documents included by reference.

## 1.1 Revision History

| Rev | Date        | Author      | Reason          |
|-----|-------------|-------------|-----------------|
| 1.0 | 28 Nov 2007 | Sean Eskins | Initial release |

## 1.2 Data Types Used In This Document

The following table defines the abbreviations used to define data types:

| Modifier | Definition                                 |
|----------|--|
| a        | Alpha characters, [a-z, A-Z]               |
| n        | Numeric digits, [0-9]                      |
| p        | Pad character, space                       |
| h        | Hexadecimal characters, [a-f, A-F, 0-9]    |
| s        | Special characters, [-_!@&+##\$/'=~^]      |
| an       | Alphabetic and numeric characters          |
| as       | Alphabetic and special characters          |
| ns       | Numeric and special characters             |
| ans      | Alphabetic, numeric and special characters |
| YY       | Year, 00 through 99                        |
| CCYY     | Same as "YY" but including century         |
| CCYMM    | Same as "CCYY" but including month         |
| MM       | Month, 01 through 12                       |
| DD       | Day, 01 through 31                         |
| hh       | Hour, 00 through 23                        |
| mm       | Minute, 00 through 59                      |
| ss       | Second, 00 through 59                      |
| n        | Fixed length of <i>n</i> characters        |
| ..n      | Variable length up to <i>n</i> characters  |

| Modifier | Definition   |
|----------|--|
| { }      | An empty field entry   |
|          | An "OR" symbol used to separate elements on an enumerated list. Only one element of the enumerated list may be used at a time. |

## Examples

- a1 One alphabetic ASCII character
- n..19 Up to 19 numeric ASCII characters
- s1 One binary special character
- ansp..26 Up to 26 alpha, numeric, binary special, or ASCII <space> characters

## 1.3 Data Values Used In This Document

The following table defines the abbreviations used to define various standard ASCII data values:

| Name | Value   | Definition   |
|------|---------|--|
| <FS> | 28d 1Ch | A File Separator character is the primary method used to separate data fields.           |
| <GS> | 29d 1Dh | The Group Separator is a secondary method used to separate data within a field.          |
| <RS> | 30d 1Eh | The Record Separator is a secondary method used to separate data within a field.         |
| <US> | 31d 1Fh | The Unit Separator character is a secondary method used to separate data within a field. |
| <LF> | 10d 0Ah | The Line Feed character is used to separate records.                                     |

## 2. NCN Transaction Logs

NCN Transaction Logs contain transactional information on check verification, electronic check conversion, batch results, and other requests from the POS device. This section will document the current NCN transaction log format known as ELOGX.

### 2.1 ELOGX Format

#### Description

Transactions from POS devices using the enhanced electronic check input format (ECHK) will be placed in the ELOGX format. It is identical to ELOG with additional fields for collection fee amount (+ tax), refer to *NCN Elog Guide for ECC and VISA POS* to review the ELOG format. The NCN Verification system or some other 3rd Party (possible under the Visa Check Pilot) authorizes transactions.

Thus, the log will contain authorized ECC transactions that should not be processed by the ACH Engine in Albuquerque (authorization was provided by some other Visa 3<sup>rd</sup> Party processor) as well as ones that must be processed (authorization was provided by the NCN database).

It includes voids by the merchant at the point of sale when the following conditions are met depending on the type and/or capabilities of POS terminal used:

1. Voids are accepted against the preceding transaction received from the merchant.
2. Voids are accepted only within 10 minutes of the preceding transaction.
3. Voids are accepted only if the terminal batch is still open, cannot void closed batches.

#### Filename

ElogxCCYYMMDD.csv

#### File Format

Individual transaction records are delimited with a trailing <LF>.

Fields within a record are comma-separated.

#### File Contents

| Field | Field Name | Data Type | Value      | Description   |
|-------|------------|-----------|------------|---|
| 1     | Date       | an10      | MM/DD/CCYY | Transaction Date (Mandatory). Leading zeroes of month or day omitted. |
| 2     | Time       | an8       | hh:mm:ss   | Transaction Time (Mandatory)  |

| Field   | Field Name  | Data Type                             | Value                 | Description  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
|---------|---|---------------------------------------|-----------------------|--|---------|-------------|----------|---|-------|--|-------|---|-------|--|-------|--|-------|--|-------|---|-------|--|-------|--|-------|---|-------|--|-------|--|
| 3       | Site# - Loc#.Lane#  | an21                                  | nnnnn-nnnnnn.nn       | <p>Complete NCN ID. (Mandatory)</p> <p>An ASCII "-" follows Site# and precedes Rule#. If Lane# is present, it is separated from Loc# by an ASCII "."</p> <table border="1"> <thead> <tr> <th>Element</th> <th>Format</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>Site#</td> <td>n..5</td> <td></td> </tr> <tr> <td>Loc#</td> <td>n..6</td> <td></td> </tr> <tr> <td>Lane#</td> <td>n..3</td> <td>Optional, present only for multi-lane</td> </tr> </tbody> </table>   | Element | Format      | Comments | Site#   | n..5  |  | Loc#  | n..6  |       | Lane#  | n..3  | Optional, present only for multi-lane                  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| Element | Format  | Comments                              |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| Site#   | n..5  |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| Loc#    | n..6  |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| Lane#   | n..3  | Optional, present only for multi-lane |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| 4       | Batch#  | n3                                    | nnn                   | Batch number (Optional)  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| 5       | Service   | an5                                   | cccc                  | <p>Responsible Service (Mandatory)</p> <p>Indicates the service responsible for the response. Valid entries include:</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>ECHK</td> <td>Format Error, Data Error, or non-verification transaction (batch deposit, batch detail retrieval)</td> </tr> <tr> <td>NCISC</td> <td>Non-participating transaction, Conversion Only</td> </tr> <tr> <td>NCISV</td> <td>Non-participating transaction, Conversion with Verification</td> </tr> <tr> <td>NCISG</td> <td>Non-participating transaction, Conversion with Guarantee</td> </tr> <tr> <td>NCISE</td> <td>Non-participating transaction, Service or Packet Error</td> </tr> <tr> <td>VISAC</td> <td>Participating transaction, Conversion Only</td> </tr> <tr> <td>VISAV</td> <td>Participating transaction, Conversion with Verification</td> </tr> <tr> <td>VISAG</td> <td>Participating transaction, Conversion with Guarantee</td> </tr> <tr> <td>VACQC</td> <td>Visa Acquirer Process Error, Conversion Only</td> </tr> <tr> <td>VACQV</td> <td>Visa Acquirer Process Error, Conversion with Verification</td> </tr> <tr> <td>VACQG</td> <td>Visa Acquirer Process Error, Conversion with Guarantee</td> </tr> <tr> <td>VACQE</td> <td>Visa Acquirer Process Error, Invalid Service or Packet</td> </tr> </tbody> </table> | Value   | Description | ECHK     | Format Error, Data Error, or non-verification transaction (batch deposit, batch detail retrieval) | NCISC | Non-participating transaction, Conversion Only | NCISV | Non-participating transaction, Conversion with Verification | NCISG | Non-participating transaction, Conversion with Guarantee | NCISE | Non-participating transaction, Service or Packet Error | VISAC | Participating transaction, Conversion Only | VISAV | Participating transaction, Conversion with Verification | VISAG | Participating transaction, Conversion with Guarantee | VACQC | Visa Acquirer Process Error, Conversion Only | VACQV | Visa Acquirer Process Error, Conversion with Verification | VACQG | Visa Acquirer Process Error, Conversion with Guarantee | VACQE | Visa Acquirer Process Error, Invalid Service or Packet |
| Value   | Description   |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| ECHK    | Format Error, Data Error, or non-verification transaction (batch deposit, batch detail retrieval) |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| NCISC   | Non-participating transaction, Conversion Only  |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| NCISV   | Non-participating transaction, Conversion with Verification                                       |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| NCISG   | Non-participating transaction, Conversion with Guarantee  |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| NCISE   | Non-participating transaction, Service or Packet Error  |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| VISAC   | Participating transaction, Conversion Only  |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| VISAV   | Participating transaction, Conversion with Verification   |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| VISAG   | Participating transaction, Conversion with Guarantee  |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| VACQC   | Visa Acquirer Process Error, Conversion Only  |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| VACQV   | Visa Acquirer Process Error, Conversion with Verification   |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| VACQG   | Visa Acquirer Process Error, Conversion with Guarantee  |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| VACQE   | Visa Acquirer Process Error, Invalid Service or Packet  |                                       |                       |  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| 6       | Primary reference #   | an10                                  | Rnnnnnnnn             | NCN Retrieval Reference Number (Mandatory)   |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| 7       | Secondary Reference #   | { }   an16                            | { }   Vnnnnnnnnnnnnnn | Visa Tracking Number (Optional). Present for all transactions processed through Visa   |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |
| 8       | Amount  | { }   n..10.2                         | { }   \$nnnnnn.nn     | <p>Total Transaction Amount (Conditional, required for AUTH and VOID, optional on all other actions).</p> <p><i>Visa ISO-8583 de4</i></p>  |         |             |          |   |       |  |       |   |       |  |       |  |       |  |       |   |       |  |       |  |       |   |       |  |       |  |

| Field | Field Name  | Data Type    | Value                       | Description   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
|-------|---|--------------|-----------------------------|---|-------|-------------|------|-------------------------|------|-----------------------|------|--|------|------------------------------|------|---|------|--|------|--|------|--|------|--|------|--|------|---|------|---|------|--|
| 9     | Action (Note 2)   | a4           | cccc                        | <p>Overall Action or Result (Mandatory)</p> <p>Indicates the overall action taken by the responsible service. Valid entries include:</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>AUTH</td> <td>Transaction authorized.</td> </tr> <tr> <td>DECL</td> <td>Transaction declined.</td> </tr> <tr> <td>WARN</td> <td>Warning (May be overridden to force processing as an ACH item.</td> </tr> <tr> <td>OVRD</td> <td>Override of previous warning</td> </tr> <tr> <td>DUPP</td> <td>Duplicate transaction detected, original response returned.</td> </tr> <tr> <td>VOID</td> <td>Reversal of previously authorized transaction.</td> </tr> <tr> <td>AREV</td> <td>Automatic reversal due to system error</td> </tr> <tr> <td>MISC</td> <td>Error in packet or error in specific field such as MICR or ID.</td> </tr> <tr> <td>BOUT</td> <td>Terminal initiated batch deposit record. Terminates current batch.</td> </tr> <tr> <td>BDET</td> <td>Batch detail information returned to point of sale</td> </tr> <tr> <td>BSUM</td> <td>Batch summary information returned as the first record when retrieving batch detail information</td> </tr> <tr> <td>BEND</td> <td>Final record returned to the point of sale when retrieving batch detail information</td> </tr> <tr> <td>HCLS</td> <td>Batch automatically closed by the host. Only fields 1-5 exist in such a record</td> </tr> </tbody> </table> | Value | Description | AUTH | Transaction authorized. | DECL | Transaction declined. | WARN | Warning (May be overridden to force processing as an ACH item. | OVRD | Override of previous warning | DUPP | Duplicate transaction detected, original response returned. | VOID | Reversal of previously authorized transaction. | AREV | Automatic reversal due to system error | MISC | Error in packet or error in specific field such as MICR or ID. | BOUT | Terminal initiated batch deposit record. Terminates current batch. | BDET | Batch detail information returned to point of sale | BSUM | Batch summary information returned as the first record when retrieving batch detail information | BEND | Final record returned to the point of sale when retrieving batch detail information | HCLS | Batch automatically closed by the host. Only fields 1-5 exist in such a record |
| Value | Description   |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| AUTH  | Transaction authorized.   |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| DECL  | Transaction declined.   |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| WARN  | Warning (May be overridden to force processing as an ACH item.                                  |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| OVRD  | Override of previous warning  |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| DUPP  | Duplicate transaction detected, original response returned.                                     |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| VOID  | Reversal of previously authorized transaction.  |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| AREV  | Automatic reversal due to system error  |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| MISC  | Error in packet or error in specific field such as MICR or ID.                                  |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| BOUT  | Terminal initiated batch deposit record. Terminates current batch.                              |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| BDET  | Batch detail information returned to point of sale  |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| BSUM  | Batch summary information returned as the first record when retrieving batch detail information |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| BEND  | Final record returned to the point of sale when retrieving batch detail information             |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| HCLS  | Batch automatically closed by the host. Only fields 1-5 exist in such a record                  |              |                             |   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| 10    | ABA field   | { }   n9     | { }   nnnnnnnnn             | <p>Bank routing number (Conditional, required for AUTH and Void, optional for all other actions).</p> <p>Parsed from MICR data.</p>   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| 11    | Account number  | { }   n5..19 | { }   nnnnnnnnnnnnn         | <p>Customer's Account Number (Conditional, required for AUTH and Void, optional for all other actions).</p> <p>Parsed from MICR data</p>  |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| 12    | Check number  | { }   n3..8  | { }   nnnnnnnn              | <p>Customer's Check Serial Number (Conditional, required for AUTH and Void, optional for all other actions).</p> <p>Parsed from MICR data, dashes removed.</p>  |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |
| 13    | Raw MICR (normalized)   | { }   an..65 | { }   <normalized raw MICR> | <p>Normalized raw MICR (Conditional, required for AUTH and Void, optional for all other actions).</p> <ul style="list-style-type: none"> <li>Leading and trailing blanks deleted.</li> <li>Multiple blanks compacted to a single blank</li> <li>Lower case "toa-" substitution ("- " used for dash)</li> </ul> <p>Visa ISO-8583 de125.9</p>   |       |             |      |                         |      |                       |      |  |      |                              |      |   |      |  |      |  |      |  |      |  |      |  |      |   |      |   |      |  |

| Field | Field Name            | Data Type  | Value                      | Description   |
|-------|-----------------------|------------|----------------------------|---|
| 14    | Request Packet        | an..240    | "request_packet"           | Original NCN transaction packet in ECHK format. <ul style="list-style-type: none"> <li>Overall message enclosed with ASCII quote characters</li> <li>Non-printing characters converted to their ACII equivalent. For instance, a null character is converted to &lt;NULL&gt;</li> </ul> |
| 15    | Response Packet       | an..240    | "response_packet"          | Original NCN response packet in ECHK format. <ul style="list-style-type: none"> <li>Overall message enclosed with ASCII quote characters</li> <li>Non-printing characters converted to their ACII equivalent. For instance, a null character is converted to &lt;NULL&gt;</li> </ul>    |
| 16    | Auxiliary             | { }        | additional_information     | Various tagged fields with additional information including check writer presence, MICR entry method, Thomson results, etc.   |
| 17    | Collection Fee Amount | { }   n..7 | 9999.99      Maximum value | The total amount of collection service fee to charge if this transaction returns: fee + tax<br>If blank or 0.00 then do not charge a fee.   |
| 18    | Collection Fee Tax    | { }   n..7 | 9999.99      Maximum value | The tax associated with the collection fee. Subtract from field 17 to determine the amount of the fee prior to tax.   |

## Notes

1. Voids of a previous ACH entry are accepted after a Batch Deposit transaction has occurred. This could result in a negative batch amount if the merchant voids a transaction but does not obtain an authorized transaction to offset the void.
2. The following events will block a transaction from the ACH system:
  - The check is POP or ARC has no check sequence number in the MICR line;
  - The check is already encoded with a \$ amount in the MICR line. (An amount in the MICR line is an indication the check has probably passed through the banking system already.);
  - The check is POP or ARC and the check ABA, routing number, and sequence number are manually keyed instead of read via a MICR reader;
  - The ABA number is present in the NCIS Blocking file. (All routing numbers under this ABA number will be blocked);
  - The ABA and account number combination is present in the NCIS Blocking File. (This particular checking account number will be blocked);
  - A payroll check is presented; and
  - All ID-only transactions.
3. The Response packet includes parsed, normalized MICR for the point of sale terminal in the form: <ABA number n..9><Account number n..>#<check number>

## Example ELOGX Transactions

**Filename: Elogx20071112.csv**

**ECC**

11/12/2007,07:40:02,1565-7420,143,NCISV,R316028687,,,\$49.00,AUTH,064000046,  
0000000387902,6001,t064000046t0000000387902o 6001,"1565-007420-0999:ECHK:7V:  
CR:t064000046t0000000387902o 6001:A49.00:JRAD ONE DIAG IM SPEC;SOUTHAVEN;MS;38671:  
E0070","SECURITY CHK ECCAUTH NUM 707-066:M0640000460000000387902#6001:R316028687:  
SNCISV:B143,NA=1,AA=\$49.00,NV=0,AV=\$0.00:E0070","POS[S60101S6410010105]SVC[NCN]  
COMS[D]TLOG[11/12/07,07:40:00,707066,1565,7420,999,0,49.00,,AUTH A,  
0640000460000000387902,NF,6001,,,t064000046t0000000387902o 6001]",32.07,2.07

**Filename: Elogx20071112.csv**

**Visa Participating**

11/12/2007,19:48:00,2111-462863,23,VISAV,R316045484,V307317100796947,\$4.83,AUTH,  
122000247,7527616234,00107,t122000247t 7527616234o 00107,"2111-462863-100:ECHK:7V:  
CR:t122000247t 7527616234o 00107:A4.83:DCA-D2952112:JBOSTON HOUSE OF PIZZA;HANFORD  
;CA;93230:E1055","VISA RETURNS AUTH NUM 010-858:M1220002477527616234#00107:  
R316045484:V307317100796947:SVISAV:B023,NA=191,AA=\$4703.83,NV=0,AV=\$0.00:E1055",  
"DL[CA-D2952112]POS[S60101S6410010105]SVC[VISA]COMS[I]",,,

**Filename: Elogx20071113.csv**

**Close Batch Transaction**

11/13/2007,23:56:23,493-25556,325,ECHK,R317595608,,,BOUT,,,,,"493-025556-503:ECHK:  
L:B325,NA=4,AA=107.58,NV=0,AV=0.00:E661","ECHKBATCH SAYS ACCEPTED :R317595608  
:SECHK:E661","POS[S6010166410010105]SVC[NCN]COMS[D]TLOG[11/13/07,23:56:21,685390,49  
3,25556,503,1,0.00,,,?? A,ACH-LOG-ENTRY,LG,,,,<0x22>NA=4,AA=107.58,NV=0,  
AV=0.00<0x22>]",,,

## 3. Transaction Log ACH Filtering Guidelines

The following sections document ELOG filtering guidelines when used as the input to a clearing and settlement system.

### 3.1 ELOGX Filtering

Data contained in an ELOGX requires filtering prior to ECC or VISA POS clearing and settlement.

Voids can be matched and processed for next day or same day settlement based on terminal batches or a moving void window. The following describes void matching/removal for next day settlement, please contact **ECHO** Customer Service for information or instruction regarding same day void matching techniques:

The following algorithm is used to select records from the ELOGX Transaction Log:

*Settle only those transactions with an "AUTH" or "OVRD" response not followed by a "VOID" response. Do not settle any other transactions.*

Because merchants may void transactions from the previous day up to the first few hours of the next day, process two days of transaction data as follows:

1. DAY1 transactions processing:
  - a) Obtain the previous day's transactions from 00:00:00 to 23:59:59.
  - b) Remove transactions without the following action codes:
    - i) "AUTH" MICR swiped personal check, First Presentation.
    - ii) "OVRD" MICR swiped personal check, Override Transaction
    - iii) "VOID" Reversal of previous "AUTH" or "OVRD"
2. DAY2 transactions processing:
  - a) Obtain the current day's transactions from 00:00:00 to 03:00:00.
  - b) Remove transactions without the following transaction codes:
    - i) "VOID" Reversal of previous "AUTH" or "OVRD"
3. Concatenate filtered DAY1 and DAY2 transactions.
4. Sort the concatenated file by site #, merchant #, route, account, sequence, and date/time to group all transactions against a single check item into date/time order.
5. Settle only if the last transaction on an item (i.e., the site, merchant, route, account, and sequence number of the check are identical) does not have the following action code:
  - a) "VOID" Reversal of previous "AUTH" or "OVRD"