# ACHQ Status Tracking API

Implementation Instructions

Version 1.3

## Introduction

The *Transaction Status Tracking API* is designed for ACHQ merchants that want to create an automated link between their software and the ACHQ Electronic Gateway for tracking the return status on each electronic check transaction submitted for processing. Merchants who wish to use this tool should assign a unique value to the Invoice/Reference ID field for each transaction. The best way for two separate applications to communicate is to have a unique identifier that is common to both applications.

This document is not only designed to give the technical instructions for integrating the *Transaction Status Tracking API* into your software, but it also presents the concepts necessary for understanding what data will be exchanged, when exchanges should take place, and what the exchanged data should mean to your software application. Please read each section carefully.

## Conceptual Overview of ACH Clearing

Unlike credit cards, electronic check transactions cannot be instantly verified and approved. This is due to the nature of the Federal Reserve and the fragmented structure of the current banking system. The banking industry is working now to make all forms of check processing and authorization occur in real- time, but due to political, economic, and consumer protection issues, that technology is still years away from widespread implementation.

What has been implemented instead is a system that still provides authorization, but over a period of days instead of seconds. There are several reasons for the slowness of the process, but the bottom line is that the process has been made logistically slow on purpose to prevent fraud and error.

Instead of submitting a transaction in real-time, all transactions must be batched and sent between banks overnight on banking business days only. Next, the banks typically take one to three business days to indicate if a transaction is rejected (*returned*) and why. If no response is received within that timeframe, the transaction is considered approved (*cleared*). And finally, the bank's response also must be batched and sent back overnight.

Please note that although banks are expected to respond within the 48 hour timeframe, this is not a requirement and it is possible for funds from a *cleared* transaction to be *charged back* due to a late *return* notification (rejection) . This does not happen very often, but it does occur.

As absurd as this process seems in an age of global networks and real-time information exchange, electronic check processing was designed as an extension to the proven paper

check process that the banking industry has used for over 100 years.

Credit card transactions can be approved instantly because they are simply loans that can be paid back or disputed over time. Check transactions, however, provide direct access to a customer's money and are therefore currently subject to a slower and more careful authorization process.

# Events and How They Affect Transaction Status

When tracking and reporting the status an electronic check transaction, it is important to understand that events (such as those detailed on the chart in previous section) progressively determine the Current Status of a transaction.  This means, for example, that when a transaction is submitted for authorization or when a bank indicates that a transaction has been rejected, the Current Status of the transaction will change because of this event.

The following chart shows every possible Event that can affect the Current Status of a transaction and it shows the actual syntax used by the *Transaction Status Tracking API* for the Event name and for the new Current Status of the transaction:

ACHQ Transaction Events

| Possible Events | Event Name | New Current Status |
|---|---|---|
| Transaction Created | Created | Scheduled |
| Transaction Cancelled | Cancelled | Cancelled |
| Transaction Submitted for Authorization | Submitted | In-Process |
| Transaction Approved | Cleared | Cleared |
| Transaction Failed Verification | Rejected | Failed Verification |
| Transaction Rejected for Non-Sufficient Funds | Returned-NSF | Returned-NSF |
| Transaction Rejected for Administrative Reasons | Returned-Other | Returned-Other |
| Transaction Rejected After Approval | Charged Back | Charged Back |

This chart will be a useful reference later for knowing all the potential status values that can be returned by the ACHQ Electronic Gateway in response to a status query.

# Understanding the Process

Integrating the ACHQ *Transaction Status Tracking API* into your current application is not difficult. The following is an overview of the major components of this task:

- Query Packet Submission – You must create a script or program that use the HTTPS protocol to submit a query packet over the Internet. The rules for constructing the HTTPS query packet are defined in the next section of this document titled *Implementation Rules and Specifications*. There are several tools available for constructing and submitting HTTP POST or GET packets. Merchants running on Linux or Unix systems have access to several different options including 'curl' and 'wget'. Merchants running on the Microsoft Windows platform can use a free component from Microsoft called WinHTTP. Please visit Microsoft's website and search for WinHTTP to find and download this tool.

- Returned Information Processing - The ACHQ Electronic Gateway will return an HTTP text response after it receives and processes the query packet. For each transaction listed in the response, the gateway will provide the Invoice/Reference ID, the Customer ID, the customer's name, the customer's company, the description on the transaction, the date the transaction was submitted for processing, the amount, the event that occurred to the transaction on the date specified in the query, and the new status of the transaction.
  This returned status information will be easier to process if the merchant assigns each transaction a unique Invoice/Reference ID that has meaning to its internal software application. If no Invoice/ Reference ID is defined when the transaction is created, you will obviously need to use the other returned fields to figure out how to process the status results in your software. *Please note* that querying this method does not provide the status for all transactions, but instead, it returns only those transactions whose status has been changed by an event that occurred on the date specified in the query. The specifications for the layout of the HTTP text response are defined in the next section of this document titled *Implementation Rules and Specifications*.

- The Tracking Schedule - The ACHQ system performs all transaction status updates every night before 12:00 AM Central Standard Time. Most merchants will want to query the *Transaction Status Tracking API* every night on or after 12:00 AM CST to update their database with the latest status changes. This is certainly not a requirement, but it is a good idea.

- Auditing and Error Handling – There may be times when a tracking update does not occur properly. Reasons for this might include an execution failure of your application, a communication problem over the Internet, or even a problem on the ACHQ Electronic Gateway.
  It would be wise to incorporate some form of auditing and error handling into your

system that knows when your tracking query executed successfully and when it did not. Not only will this help you know when a problem occurred, but it can also be useful if you want to automate the process of resubmitting the query.

# Implementation Rules and Specifications

1. Packet Definition and Rules – The following table defines all data elements that are required when submitting a query to the tracking system:

| Field Name | Usage | Field Value Format Constraints |
|---|---|---|
| MerchantID | Required | Provided to you by your Sales Rep |
| GateID | Required | Provided to you by your Sales Rep |
| GateKey | Required | Provided to you by your Sales Rep |
| TrackingDate | Required | The date for which you want status & event update information. (Format: MMDDYYYY). |
| IncludeReturnCodes | Optional | The value for this field must be either Yes or No. If the field is not included, the default value for this field is "No" |

2. Transaction Packet Submission – To submit the data packet containing the query parameters to ACHQ, use either HTTP POST or GET to transmit the packet to the following secure URL:

   https://www.speedchex.com/datalinks/merchants/status-tracking.asp

   If using HTTP GET, please make sure that all data values have been encoded to be URL-safe.

3. Return Information Processing – In response to the HTTP POST or GET, the ACHQ Electronic Gateway will send a simple text response containing a list of all transaction status changes for the date specified in the query. Every transaction will be on a separate line and each line will be contain the following fields delimited with a vertical bar:

| Return Field | Value Format Constraints | Max Length |
|---|---|---|
| Invoice/Reference ID | A unique ID that may have been assigned to this transaction when it was created. | 25 |
| Description | A description that may have been assigned to this transaction when it was created. | 100 |

| | | |
|---|---|---|
| Date Created | The date this transaction was created. (Format: MMDDYYYY) | 8 |
| Date Scheduled | The date the user scheduled this transaction to process. (Format: MMDDYYYY) | 8 |
| Customer ID | A unique ID that may have been assigned to the customer for whom this transaction was created. | 20 |
| Customer Name | The customer for whom this transaction was created. | 40 |
| Company | The company for whom this transaction was created | 55 |
| Check Amount | The amount of this transaction. (Format: Numeric only. No commas and no dollar sign) | |
| Payment Direction | Possible values: 'From Customer' or 'To Customer' | 13 |
| Event Name | The event that occurred to this transaction. The possible values are defined in the chart titled ACHQ Transaction Events and Current Status Values above. | 20 |
| Event Date | The date when this event occurred. (Format: MMDDYYYY) | 8 |
| Event Time | The time when this event occurred (Format: HH:MM:SS – using 24-hour military time) | 8 |

| | | |
|---|---|---|
| Resulting Status | The new status of this transaction resulting from the event that occurred. The possible values are defined in the chart titled ACHQ Transaction Events and Current Status Values earlier in this document.<br><br>If the optional *IncludeReturnCodes* query parameter was set to Yes and the value of the Event Name field is Returned-Other, Returned-NSF or Charged Back, this field will contain the Resulting Status and the corresponding Return Code separated by a colon.<br><br>Example: Returned-Other:R03<br><br>A complete listing of all possible return codes and their meaning can be found later in this document under the section entitled Return Codes Reference List. | 20 |
| Verification Status | Returns one of three possible responses from the ACHQ *Express Verify* system:<br>  POS – account found in good standing<br>  NEG – account invalid or has negative status<br>  UNK – bank not participating/ account status unknown This field will only contain data if transaction was verified using ACHQ *Express Verify*. | 3 |
| Verification Code | Please see document entitled ACHQ Express Verify Response Codes for all possible values for this field. This field will only contain data if transaction was verified using ACHQ *Express Verify*. | 3 |
| Verification Text | Please see document entitled ACHQ Express Verify Response Codes for all possible values for this field. This field will only contain data if transaction was verified using ACHQ *Express Verify*. | 100 |

***Very Important:*** Since it is possible that the query response may be empty (null), the very last line of every response will be "-999|EOF". If the response text contains this as the first line, this means there is nothing to process (no events that effected a status change) for the date specified in the query.

The Invoice/Reference ID field, the Customer ID field, the Company field, and the Description field are optional input fields when the transaction is created. If these fields do not return a value because a value was never defined by the user, ACHQ will still include the field in the text response, but it will be empty (meaning there will be nothing between the vertical line delimiters for this field).

The following is an example of a text response from the tracking system:

```
16334|Dues|02142003|02142003|1123|Joe Buyer|Sales, Inc.|123.10|From Customer|Cleared|02202003|01:00:00|Cleared|POS|P70|Validated
16337||02142003|02172003|1157|Jane Doe||52.50|From Customer|Rejected|02202003|15:00:00|Failed Verification|NEG|P01|Account Closed
16341||02202003|02202003||John Smith|Media Co.|25.00|To Customer|Submitted|02202003|15:00:00|In-Process|UNK|P50|Non Participant
16341||02202003|02202003||John Smith|Media Co.|25.00|To Customer|Submitted|02202003|15:00:00|Returned-NSF:R01|UNK|P50|Non Participant
-999|EOF
```

# Return Codes Reference List

| Return Code | Explanation | Source |
|---|---|---|
| I00 | PREVIOUSLY RECEIVED R02,R03,R04,R20 ON THIS ACCOUNT (RCK) | Internal |
| I01 | Invalid Amount | Internal |
| I02 | Transaction Still Pending | Internal |
| I03 | Check Represented Maximum Times | Internal |
| I04 | Max Check Amount Exceeded | Internal |
| I05 | Max Fee Exceeded | Internal |
| I06 | Invalid Date | Internal |
| I07 | Transaction Too Old | Internal |
| I08 | Invalid Routing Number | Internal |
| I09 | Duplicate in Batch | Internal |
| I10 | Duplicate from Other Customer | Internal |
| I11 | Fee Rejected for Invalid Check | Internal |
| I12 | Duplicate in POS Batch | Internal |
| I13 | VOIDED POS Transaction | Internal |
| I14 | Invalid Account Number | Internal |
| I15 | Invalid Check Number | Internal |
| I16 | Missing Amount | Internal |
| I17 | Invalidated per Request | Internal |
| I18 | Item PAID | Internal |
| I19 | Reserved | Internal |
| I20 | Item Refunded | Internal |
| I24 | PREVIOUSLY RECEIVED R02,R03,R04,R20 ON THIS ACCOUNT (RCK) | Internal |
| I25 | PREVIOUSLY RECEIVED R02,R03,R04,R20 ON THIS ACCOUNT (EFT) | Internal |
| I26 | EFT Received within Window | Internal |
| I27 | EFT Too old | Internal |
| I28 | Void Transaction Successful | Internal |
| I29 | Void Could Not Be Matched | Internal |
| I30 | POS Batch Duplicated (re-processed) | Internal |
| I31 | LOCKBOX AMT OVER 5000 | Internal |
| I40 | Internal Return Code | Internal |
| I41 | DRAFT Batch Rejected | Internal |
| R01 | Insufficient Funds | NACHA |
| R02 | Account Closed | NACHA |
| R03 | No Account, Unable to Locate Account | NACHA |
| R04 | Invalid Account Number | NACHA |
| R06 | Returned per ODFI's Request | NACHA |
| R07 | Authorization Revoked by Customer | NACHA |
| R08 | Payment Stopped | NACHA |
| R09 | Uncollected Funds | NACHA |
| R10 | Customer Advises not Authorized | NACHA |
| R11 | Check Truncation Entry Return | NACHA |
| R12 | Branch Sold to Another DFI | NACHA |
| R13 | RDFI not qualified to participate | NACHA |
| R14 | Representative Payee Deceased or Unable to Continue in that Capacity | NACHA |

| R15 | Account Holder Deceased | NACHA |
|---|---|---|

| | | |
|---|---|---|
| R16 | Account Frozen | NACHA |
| R17 | File Record Edit Criteria | NACHA |
| R18 | Improper Effective Entry Date | NACHA |
| R19 | Amount Field Error | NACHA |
| R20 | Non-Transaction Account | NACHA |
| R21 | Invalid Company Identification | NACHA |
| R22 | Invalid Individual ID Number (CIE-MTE) | NACHA |
| R23 | Credit Entry Refused by Receiver | NACHA |
| R24 | Duplicate Entry | NACHA |
| R25 | Addenda Error | NACHA |
| R26 | Mandatory Field Error | NACHA |
| R27 | Trace Number Error | NACHA |
| R28 | Routing Number Check Digit Error | NACHA |
| R29 | Corporate Customer Advises Not Authorized | NACHA |
| R30 | RDFI Not Participant in Check Truncation Program | NACHA |
| R31 | Permissible Return Entry (CCD and CTX only) | NACHA |
| R32 | RDFI Non-Settlement | NACHA |
| R33 | Return of XCK Entry | NACHA |
| R34 | Limited Participation DFI | NACHA |
| R35 | Return of Improper Debit Entry (CIE) | NACHA |
| R36 | Return of Improper Credit Entry (RCK) | NACHA |
| R37 | Source Document Presented for Payment | NACHA |
| R40 | Return of ENR Entry by Federal Government Agency (ENR only) | NACHA |
| R41 | Invalid Transaction Code (ENR only) | NACHA |
| R42 | Routing Number/Check Digit Error (ENR only) | NACHA |
| R43 | Invalid DFI Account Number (ENR only) | NACHA |
| R44 | Invalid Individual ID Number/Identification Number (ENR only) | NACHA |
| R45 | Invalid Individual Name/Company Name (ENR only) | NACHA |
| R46 | Invalid Representative Payee Indicator (ENR only) | NACHA |
| R47 | Duplicate Enrollment (ENR only) | NACHA |
| R50 | State Law Affecting RCK Acceptance | NACHA |
| R51 | The Amount of the RCK Entry was not Accurately Obtained from the Item | NACHA |
| R52 | Stop Payment on Item (adjustment entries) | NACHA |
| R53 | Item and ACH Entry Presented for Payment | NACHA |
| R61 | Misrouted Return | NACHA |
| R62 | Incorrect Trace Number | NACHA |
| R63 | Incorrect Dollar Amount | NACHA |
| R64 | Incorrect Individual Identification | NACHA |
| R65 | Incorrect Transaction Code | NACHA |
| R66 | Incorrect Company Identification | NACHA |
| R67 | Duplicate Return | NACHA |
| R68 | Untimely Return | NACHA |
| R69 | Multiple Errors | NACHA |
| R70 | Permissible Return Entry Not Accepted | NACHA |

| Return Code | Explanation | Source |
|---|---|---|
| R71 | Misrouted Dishonored Return | NACHA |
| R72 | Untimely Dishonored Return | NACHA |
| R73 | Timely Original Return | NACHA |
| R74 | Corrected Return | NACHA |
| R80 | Cross-Border Payment Coding Error | NACHA |
| R81 | Non-Participant in Cross-Border Program | NACHA |
| R82 | Invalid Foreign Receiving DFI Identification | NACHA |
| R83 | Foreign Receiving DFI Unable to Settle | NACHA |
| R84 | Entry Not Processed by OGO | NACHA |
| RET | Paper Draft Return | Internal |
| S01 | Invalid ABA Number | Internal |
| S02 | Blocked ABA/Account Number | Internal |
| S10 | Invalid Account Number | Internal |

# Implementation Support

If you need any help understanding this documentation or with any of the details of integrating the *Transaction Status Tracking API* into your application, please do not hesitate to contact our support team on the web at www.achq.com/support or by email @ tech@achq.com