SpeedChex Recurring Scheduler API
Implementation Instructions
Version 1.2

Introduction

The ***SpeedChex Internet Gateway*** provides merchants with the ability to establish secure automated communications between an Internet aware software application and the SpeedChex check processing system. Merchants have the ability to use their merchant administration website at www.speedchex.com to create and run Recurring Schedules. These Recurring Schedules instruct the SpeedChex system when to automatically create new transactions on a recurring basis.

As an alternative to the Merchant Administration website, the ***Recurring Scheduler API*** allows merchants to use their own internal software applications to issue commands to the SpeedChex Internet Gateway that create and run, modify, or stop Recurring Schedules electronically. Merchants who want to use ***Recurring Scheduler API*** must be responsible for collecting and submitting all data required.

Process Overview

The concept behind the ***Recurring Scheduler API*** process is fairly simple and should not take very long to implement. The following list shows the major steps involved in this process:

Step 1. **Data Gathering** - Merchants are responsible for collecting and submitting all data associated with a recurring schedule command packet.

Step 2. **Command Packet Submission** – The merchant's software application uses the HTTPS protocol to submit a recurring schedule command packet over the Internet to a secure URL located on the SpeedChex Internet Gateway.

Step 3. **Transaction Packet Validation** – The SpeedChex Internet Gateway parses the command packet for missing data, invalid field values, security violations, etc.

Step 4. **SpeedChex Express Verify** (optional) – For merchants who have activated this feature through their sales rep, SpeedChex will perform bank account verification.

Step 5. **Command Response Status Notification** – The SpeedChex Internet Gateway will return a "Command Response Status Packet" to indicate whether the recurring schedule command packet was accepted for processing or rejected. If rejected, a reason will always be provided.

Data Security and Protection

All transaction data sent to and from the ***SpeedChex Internet Gateway*** is secured during transmission using 128-bit SSL encryption verified by Comodo Class 3 Security Services. The data received by the gateway is ultimately stored on the SpeedChex servers which are protected by a state-of-the-art firewall system and restricted physically to authorized personnel only.

Every merchant is assigned a unique Merchant ID, Gate ID, and Gate Key that must be included as part of each data packet sent to the gateway. In addition, an IP filtering scheme is used to ensure that transaction packets are only received and processed if the IP address of the computer system sending the transaction fits into the IP address range specified in the merchant's security profile.

Other Integration Options

There are other options available for automating communications to and from the SpeedChex check processing system including ***Express Authorization, Express Verify, Batch Processing***, ***Transaction Status Tracking***, and a simple ***Customer Interface*** that can be integrated into any E-Commerce application. Please talk to your SpeedChex representative if you are interested in any of these options.

Implementation Instructions

Command Packet Definition and Rules - Familiarize yourself with the different *Command Packet Format* tables located on the next page. These tables define all data elements that are required for issuing the different recurring schedule commands.

Data Gathering - Create the processes and data input tools necessary for your software application to collect the required data elements. Please make sure that your software also validates the user input according to the format rules specified for each field in the command packet.

Command Packet Submission – To submit recurring schedule commands to the SpeedChex Gateway, use either HTTP POST or GET to transmit all required data to the following secure URL:

https://www.speedchex.com/datalinks/merchants/recurring-scheduler.asp

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

Command Response Status Processing – In response to the HTTP POST or GET, the SpeedChex Internet Gateway will send a Return Code, an Error Description, and an Error field contained in a single text string of name/value pairs delimited by commas. The values in these fields will indicate whether the transaction was accepted or rejected, and if rejected, the reason for rejection and the field associated with the error.

The *Command Response Status Format* table on the last page defines these three fields and their potential values. Your software will need to be able to parse this name/value text string to extract and process the authorization information.

If you have any questions about this process, please contact your support representative or send an email to support@speedchex.com.

NACHA SEC Codes – Brief Explanation

NACHA requires that a transaction submitted to the Federal Reserve for processing must include something called a Standard Entry Class (SEC) Code to communicate exactly how the customer gave you authorization to debit/credit their bank account. There are only a few authorization methods allowed by NACHA, so this list of SEC Codes is very short.

The following table shows the proper SEC Codes to use depending on how you obtained the authorization to debit/credit an individual or company's bank account:

Authorization Method	SEC Code
Document Signed by Individual	PPD
Document Signed by Company*	CCD
Via the Internet	WEB
Recorded Telephone Call	TEL
Check Converted to Electronic Transaction at the Point-of-Sale	POP
Check Received via Mail/Courier and Converted to Electronic Transaction	ARC

* All transactions from a business account must be CCD and authorized by a signed document or an equivalent electronic signature.

Please refer to the document entitled *NACHA SEC Codes* for further explanation of each SEC Code and its proper use. This document can be found at http://www.speedchex.com/technicaldocuments.

Create a New Recurring Schedule - Command Packet -Control Field Format

Field Name	Usage	Field Value Format Constraints	Max Length
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	-
Command	Required	Value must be 'Create' (without the quotes) to create and run a new recurring schedule.	6
All other fields		Please see the ***Data Field Format for Command Packets*** table for a list of required, optional, and conditional fields to include when creating and running a new recurring schedule.	

Modify an Existing Recurring Schedule - Command Packet - Control Field Format

Field Name	Usage	Field Value Format Constraints	Max Length
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	-
Command	Required	Value must be 'Modify' (without the quotes) to modify an existing recurring schedule.	6
RecurringScheduleID	Required	This field value was returned to you in the Command Response when the recurring schedule was first created.	38
All other fields		Any field or combination of fields listed in the ***Data Field Format for Command Packet*** table may be modified by appending each field (and its new value) to this command packet - as long as the value format constraints are obeyed.	

Stop a Running Recurring Schedule - Command Packet - Control Field Format

Field Name	Usage	Field Value Format Constraints	Max Length
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	-
Command	Required	Value must be 'StopNow' (without the quotes) to stop a running recurring schedule now.	6
RecurringScheduleID	Required	This field value was returned to you in the Command Response when the recurring schedule was first created.	38
IfScheduledToday	Optional	If the recurring schedule you are stopping has created a transaction going out "today", you can control what happens to that transaction with this field. Value must be either 'AllowToProcess' to let the transaction still process today or 'Cancel' to stop the transaction from processing today. Default value is 'Cancel' if this field is not included	14

Data Field Format for Command Packet

Field Name	Usage	Field Value Format Constraints	Max Length
ReferenceID	Optional	The unique internal ID or invoice number your company has assigned to this transaction	25
Description	Optional	A description of this transaction	100
PaymentDirection	Required	Value must be either 'FromCustomer' to indicate you are collecting money from the customer or 'ToCustomer' to indicate your are sending money to the customer	12
CheckAmount	Required	The amount of the check. Do not include $ sign or comma	-
CustomerID	Optional	The internal ID your company has assigned to this customer. If this field is not defined, SpeedChex will create a new customer record even if this is a repeat customer.	20
CustomerName	Required	Customer's personal name	40
Company	Conditional	Customer's company name. This field is required if the *AccountType* field value is 'Company'.	40
Address1	Required	Customer's address	40
Address2	Optional	Customer's address	40
City	Required	Customer's city	40
State	Required	Customer's state. Accepts any valid state name or 2 letter abbreviation.	20
Zip	Required	Customer's zip. (Format: ##### or #####-####)	10
Phone	Required	Customer's phone number. Any format, but must contain 10 digits	10
SSN	Conditional	Customer's Social Security Number. Any format, but must contain 9 digits. Merchant has option in SpeedChex Admin to require SSN.	9
NotificationMethod	Required	NACHA regulations require a written notification to be sent for each ACH transaction if a signed authorization is absent. Value must be one of the following: 'Email' – SpeedChex will send an email notification 'Ground' – Merchant will ground mail a notification 'None' – A notification is not necessary	6
Email	Conditional	Customer's email address. This field is required if the *NotificationMethod* field value is 'Email'	40
BankName	Required	Name of customer's bank.	50
AccountType	Required	Customer's bank account type. Value must be either 'Personal' to indicate a personal checking account or 'Company' to indicate a business checking account	8
AccountClass	Required	Customer's bank account category. Value must be either 'Checking' or 'Savings'	8
RoutingNumber	Required	ABA routing number on customer's check. Must be nine digits only.	9
AccountNumber	Required	Customer's bank account number	30
TestMode	Optional	Value is 'On'. This field should only be included when sending test transactions.	2

Data Field Format for Command Packet (continued)

Field Name	Usage	Field Value Format Constraints	Max Length
LocationName	Optional	You may assign this recurring schedule to a valid location name you created in the Merchant Administration website. The default value is 'Corporate' if this field is not defined.	25
SECCode	Required	Values must be one of the following: 'PPD', 'CCD', 'WEB', 'TEL', 'POP', 'BOC' or 'ARC'. Please refer to the section of this document entitled ***NACHA SEC Codes – Brief Explanation*** to know which value to put into this field.	3
RecurringFrequency	Required	Indicates how often the recurring schedule will create each transaction. Value must be one of the following: 'Daily', 'Weekly', 'Monthly', 'SemiMonthly', or 'Yearly'	12
Interval	Required	Indicates how often the RecurringFrequency occurs. For example, if RecurringFrequency is Monthly then a 1 would mean every month, a 2 would mean every 2 months, etc.	
StartDate	Required	Indicates the date you want the recurring schedule to create the first transaction. This date must match the day settings you define later in this packet. (Format: MMDDYYYY).	8
ExpirationType	Required	Defines how to automatically stop the recurring schedule. Value may be one of the following: 'NoExpiration' – Schedule runs until manually stopped 'ExpirationDate' – See *ExpirationDate* field for details 'NumberOfPayments' – See *NumberOfPayments* field for details.	16
ExpirationDate	Conditional	If ExpirationType is 'ExpirationDate', the recurring schedule will stop on the date provided in this field. (Format: MMDDYYYY).	8
NumberOfPayments	Conditional	If ExpirationType is 'NumberOfPayments', the recurring schedule will stop when the number of transactions created matches the number specified in this field.	-
Please include only the day setting fields that correspond to your RecurringFrequency choice			
If RecurringFrequency is set to Daily			
No day setting fields are necessary			
If RecurringFrequency is set to Weekly, use the following day setting fields:			
Weekly_Monday	Conditional	Set to 'True' to create a transaction on this day.	4
Weekly_Tuesday	Conditional	Set to 'True' to create a transaction on this day.	4
Weekly_Wednesday	Conditional	Set to 'True' to create a transaction on this day.	4
Weekly_Thursday	Conditional	Set to 'True' to create a transaction on this day.	4
Weekly_Friday	Conditional	Set to 'True' to create a transaction on this day.	4
Weekly_Saturday	Conditional	Set to 'True' to create a transaction on this day.	4
Weekly_Sunday	Conditional	Set to 'True' to create a transaction on this day.	4
* Please note that you can schedule transactions to occur on more than one day of the week.			

Data Field Format for Command Packet (continued)

Field Name	Usage	Field Value Format Constraints	Max Length
Please include only the day setting fields that correspond to your RecurringFrequency choice			
If RecurringFrequency is set to SemiMonthly, use the following day setting fields:			
Semi_1stDay_DaySettingType	Required	Defines which day setting fields you are using to chose the first day on which transactions will be created. The value may be either 'DayOfTheMonth' or 'Irregular'.	13
Semi_1stDay_DayOfTheMonth	Conditional	Use this field to specify a day number between 1 and 31. Note: If you want to create transaction on the last day of the month, please use the Irregular fields.	-
Semi_1stDay_Irregular_DayPosition	Conditional	This field is used in conjunction with the *Semi_1stDay_Irregular_DayChoice* values to provide a variety of irregular day options. The possible values for this field are '1st', '2nd', '3rd', '4th', and 'Last'	4
Semi_1stDay_Irregular_DayChoice	Conditional	This field is used in conjunction with the *Semi_1stDay_Irregular_DayPosition* values to provide a variety of irregular day options. The possible values for this field are 'Day', 'Weekday', 'Weekend Day', 'Sunday', 'Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', and 'Saturday'	
Semi_2ndDay_DaySettingType	Required	Defines which day setting fields you are using to chose the second day on which transactions will be created. The value may be either 'DayOfTheMonth' or 'Irregular'.	13
Semi_2ndDay_DayOfTheMonth	Conditional	Use this field to specify a day number between 1 and 31. Note: If you want to create transaction on the last day of the month, please use the Irregular fields.	-
Semi_2ndDay_Irregular_DayPosition	Conditional	This field is used in conjunction with the *Semi_2ndDay_Irregular_DayChoice* values to provide a variety of irregular day options. The possible values for this field are '1st', '2nd', '3rd', '4th', and 'Last'	4
Semi_2ndDay_Irregular_DayChoice	Conditional	This field is used in conjunction with the *Semi_2ndDay_Irregular_DayPosition* values to provide a variety of irregular day options. The possible values for this field are 'Day', 'Weekday', 'Weekend Day', 'Sunday', 'Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', and 'Saturday'	11

Data Field Format for Command Packet (continued)

Field Name	Usage	Field Value Format Constraints	Max Length
Please include only the day setting fields that correspond to your RecurringFrequency choice			
If RecurringFrequency is set to Monthly, use the following day setting fields:			
Monthly_DaySettingType	Required	Defines which day setting fields you are using to chose the day of the month on which transactions will be created. The value may be either 'DayOfTheMonth' or 'Irregular'.	13
Monthly_DayOfTheMonth	Conditional	Use this field to specify a day number between 1 and 31. Note: If you want to create transaction on the last day of the month, please use the Irregular fields.	-
Monthly_Irregular_DayPosition	Conditional	This field is used in conjunction with the *Monthly_Irregular_DayChoice* values to provide a variety of irregular day options. The possible values for this field are '1st', '2nd', '3rd', '4th', and 'Last'	4
Monthly_Irregular_DayChoice	Conditional	This field is used in conjunction with the *Monthly_Irregular_DayPosition* values to provide a variety of irregular day options. The possible values for this field are 'Day', 'Weekday', 'Weekend Day', 'Sunday', 'Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', and 'Saturday'	11
If RecurringFrequency is set to Yearly, use the following day setting fields:			
Yearly_January	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_February	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_March	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_April	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_May	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_June	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_July	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_August	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_September	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_October	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_November	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_December	Conditional	Set to 'True' to create a transaction in this month.	4
Yearly_DaySettingType	Required	Defines which day setting fields you are using to chose the day of the months on which transactions will be created. The value may be either 'DayOfTheMonth' or 'Irregular'.	13
Yearly_DayOfTheMonth	Conditional	Use this field to specify a day number between 1 and 31. Note: If you want to create transaction on the last day of the months, please use the Irregular fields.	-

Data Field Format for Command Packet (continued)

Field Name	Usage	Field Value Format Constraints	Max Length
Please include only the day setting fields that correspond to your RecurringFrequency choice			
If RecurringFrequency is set to Yearly, use the following day setting fields (continued):			
Yearly_Irregular_DayPosition	Conditional	This field is used in conjunction with the *Yearly_Irregular_DayChoice* values to provide a variety of irregular day options. The possible values for this field are '1st', '2nd', '3rd', '4th', and 'Last'	4
Yearly_Irregular_DayChoice	Conditional	This field is used in conjunction with the Year*ly_Irregular_DayPosition* values to provide a variety of irregular day options. The possible values for this field are 'Day', 'Weekday', 'Weekend Day', 'Sunday', 'Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', and 'Saturday'	11
* Please note that you can schedule transactions to occur on more than one month of the year.			

Command Response Status Format

Return	Field Value Format Constraints	Max Length	Purpose
ReturnCode	000 – Accepted 001-999 – Rejected with Reason Please refer to the ***Return Code Definitions*** table for more details	3	Provides the internal code SpeedChex uses to reference the exact return status of this transaction
ErrorDescription	Please refer to the ***Return Code Definitions*** table	100	If the transaction was rejected, this field gives a text description of the reason for rejection
ErrorField	One of the Field Names defined in the ***Electronic Check Transaction Packet Format*** table	16	If the transaction was rejected, this field specifies and the field name in the original transaction packet that corresponds to the reason for rejection
RecurringScheduleID	The globally unique id (GUID) assigned to this Recurring Schedule	38	If the command was not Create, this field returns the same ReturnScheduleID used in the command packet
TrackingCode	A unique alphanumeric id assigned to this check authorization attempt	-	This value can be used as reference when talking to SpeedChex technical support regarding a specific check authorization attempt.

Return Code Definitions

Return Code	Error Description	Error Field
000	Transaction Approved. No Errors.	-
001	Invalid Login	-
002	Required Field Missing	Any Required Field
003	Field Value Violates Format Constraint	Any Field
004	Field Value Exceeds Maximum Length	Any Field
005	Routing Number Fails Authentication	RoutingNumber
006	Return Code not used for this API	CheckNumber
007	Please Contact Support Representative	-
008	Failed Verification. This field will contain the *SpeedChex Express Verify* Response Code and Response Text separated by a colon. Example: P00:ACCOUNT NOT LOCATED See document **SpeedChex_ExpressVerify_Response_Codes.doc** for a list of all possible negative response codes.	-
009	Either the new or the original Start Date has already occurred	StartDate
010	The Start Date does not match the day settings	StartDate
011	The Expiration Date is invalid	ExpirationDate
012	One or more day setting fields missing for specified Recurring Frequency	RecurringFrequency
013	RecurringScheduleID not found	RecurringScheduleID
012 – 997	Reserved for Future Use	
997	Other – Please Contact Support Representative	-
998	Other – Please Contact Support Representative	-
999	Other – Please Contact Support Representative	-

Note: These error descriptions and error field values are for merchant reference only. To prevent fraudulent activity, please do not display the Error Description or Error Field values to the public when a transaction is rejected.

Version Changes

Version 1.1 - Modified February 1, 2007

Removed the required field *SignedAuthorization* from the ***Data Field Format For Command Packet*** section and added the required field *SECCode* in order to better comply with NACHA regulations regarding proper coding of payment authorization by the customer.

Added the section titled ***NACHA SEC Code – Brief Explanation*** to help merchants understand how to determine the proper *SECCode* value to send with each Recurring Schedule definition.

Version 1.2 - Modified July 17, 2007

All references to SpeedChex *bank account verification* services have been changed to reflect the new product name which is S*peedChex Express Verify*.