

Software requirementS specification v. 1.0 (06/29/2017)

Chile Bank Deposit Generator

Contents

[Introduction 2](#_Toc486519872)

[Requirements 3](#_Toc486519873)

[Current Solution 3](#_Toc486519874)

[Proposed Solution 5](#_Toc486519875)

[System Interfaces 5](#_Toc486519876)

[User Interfaces 6](#_Toc486519877)

[Appendix 8](#_Toc486519878)

[A. Banco of Chile File Formats 8](#_Toc486519879)

[B. Ria Transmission Formats. 9](#_Toc486519880)

**Modification History**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Version**  **No.** | **Date**  **<mm/dd/yy>** | **Changes made** | **Author** | **Reviewers** | **Documents Affected** |
| 1.0 | 06/29/2017 | Creation | Carlos Valderrama |  | SRS |
|  |  |  |  |  |  |

**Software Requirements Specification**

**Chile Bank Deposit Generator**

## Introduction

In Ria Chile, currently there is a need to generate automatically bank account deposit to pay order customers transactions, vendor invoices and employee payroll.

This is a manual process which involves to generate transaction text files from scratch to upload to Bank Systems using information provided by the three sources (order payment transmissions, vendor invoices and payroll system). Ria Chile works with two bank systems: Banco de Chile and Banco Santander.

They both use different user and system interface to process payments to external entities so it is necessary to create manually two types of text files and a different logic to process these payments.

The user needs to validate information from different sources because there are issues with information received from these three sources, for example: the customer payment order is sent by mail but maybe it is sent repeatedly from internal systems, or when a vendor invoice payment order is sent by the internal system, the information of tax id, bank account or name is wrong and the process is rejected by the Banking System when payment is processed. Or in case of payroll, maybe the account number provided by the System is wrong and payment is also rejected.

## Requirements

1. Generate automatically payment transactions to be completely validated when Bank System processes these transactions.

2. Validate information for vendors, customers and employees before to generate transactions.

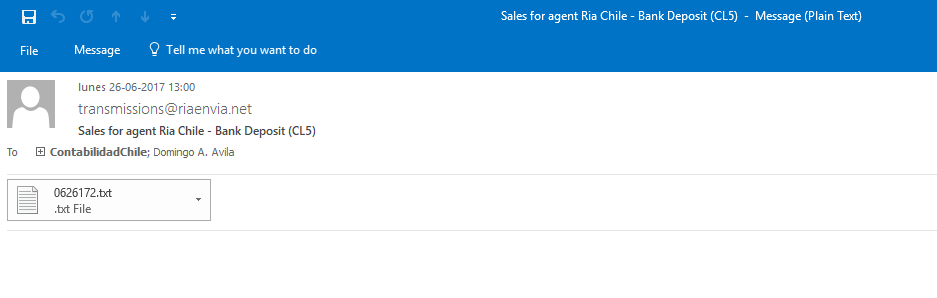
3. Generate evidences for processing these three types of sources to signal start of process, validating process and transaction completed in internal systems.

4. Notify actors involved in payment process by means of acknowledgment in database systems, e-mail or confirmation file generation.

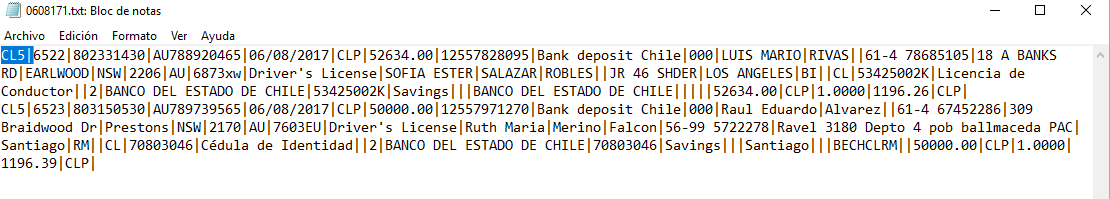
## Current Solution



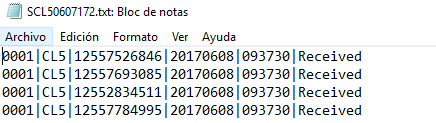
The current solution for bank deposit generation is only implemented for transmissions from CommServer.NET by means of e-mails. This is a manual process and automatic process which is only activated when it is sent the following e-mail:



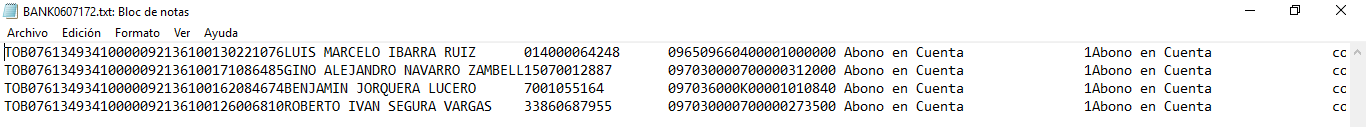
In this e-mail, it is attached a file with rows separated by pipes in a structure defined by “RIA Standard Export W AP Rate” (see Appendix B). For example:



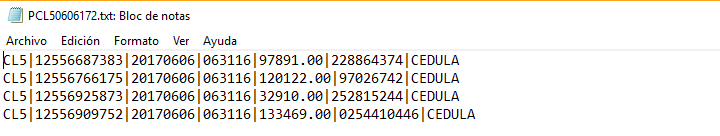
When this file is received, the user must respond to CommServer.NET with the following structure (see Appendix B):



This file is processed and transformed in a new file with a new structure defined in a text file by Banco de Chile (see appendix A):



Finally, when this file is uploaded to the Bank System, the user sends this file structure to confirm that payment was done (see appendix B):



## Proposed Solution



The proposed solution considers the following alternatives:

1. Build an automatic process to pull information from the different sources where information is stored. This information will be pulled to the system will be transformed, validated and generate the output transactions to be uploaded into external Chile Bank Systems.
2. A second choice may be to consider a passive approach where each system push information into a service waiting for these kind of information, transform data originated in internal systems and generate bank account transactions ready to be uploaded into external Chile Bank Systems.
3. A third approach consider to build a UI in FxPortal to generate bank deposits with information originated in these system databases. This interactive approach will consider to choose output formats, destinations and loading of missing information to generate bank account transactions and then download these output files to be used in external Chile Bank Systems.

## System Interfaces

* CommServer .NET: it is necessary to get information from orders in order to validate information received to pay in Chile Banks.
* FxClient: it is necessary for orders generated in this system.
* FxPortal: to be modified to generate new UI to host an interactive solution to generate Bank Account Transactions.
* GDExpress: the source for invoce received from providers as accounts payable.
* Payroll System: the source for getting information to generate pending payments for employees.

## User Interfaces

1. **Sourcing Process**

In this window the user select the type of transactions to generate and search all available pending transactions to generate according the structure of information. For example, for Payroll Transactions, the window will show all payments in the date selected and get all information to make the payments.



When the user click in Search, the window populates the grid with all the information according the process. Finally, the user can select the transactions and generate the transactions with the configuration by default in the system.

1. **Confirm Information for Bank Account**

This window is used to confirm the information supplied in the generation process and adding the text file format to generate. Also, it will be chosen the Bank Destination and select the records to use in the generation.



When the user pushes the Confirm button, the system will generate the file with all configuration provided by the bank destination and text format.

1. **Download generated transactions**

In this window the user will download the text with transactions generated for all the options, send the e-mail confirmation and finish the process.



## Appendix

### Banco of Chile File Formats

This record schema allows to entry operations massively. Each file contains no more than 100 transactions.

#### Transference Schema

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Description** | **Format** | **Start** | **Size** | **Observations** |
| Tipo de Operación ( TEC / TOB / TAM / TMC / TVV ) | X | 1 | 3 | Ingresar tipo de Transferencia **Ver Anexo N° 1** |
| Rut Cliente | X | 4 | 10 | Alineado a la derecha, completando el largo del campo con ceros |
| Cuenta de Cargo | 9 | 14 | 12 | Alineado a la derecha, completando el largo del campo con ceros |
| Rut Beneficiario | X | 26 | 10 | Alineado a la derecha, completando el largo del campo con ceros |
| Nombre del Beneficiario | X | 36 | 30 | Alineado a la izquierda, completando el largo del campo con blancos |
| Cuenta del Beneficiario | X | 66 | 18 | Alineado a la izquierda, completando el largo del campo con blancos, Campo no obligatorio para Transferencia a Vales Vistas |
| Rut Banco Beneficiario | X | 84 | 10 | Alineado a la derecha, completando el largo del campo con ceros,  Campo no obligatorio para Transferencia a Vales Vistas |
| Monto de Transferencia | 9 | 94 | 11 | Alineado a la derecha, completando el largo del campo con ceros |
| Abono Inmediato | Empty | 105 | 1 | Blancos |
| Motivo de la Transferencia | X | 106 | 30 | Alineado a la izquierda, completando largo del campo con blancos |
| Notificación Vía e-mail | 9 | 136 | 1 | 1=SI / 0=NO |
| Asunto del e-mail | X | 137 | 30 | Alineado a la izquierda, completando el largo del campo con blancos |
| Dirección e-mail | X | 167 | 50 | Alineado a la izquierda, completando el largo del campo con blancos |
| \* Tipo de Cuenta (CTD / AHB / JUV ) | X | 217 | 3 | \* Campo adicional solo para Transferencias a Otros Bancos.  **Ver Anexo N° 2** |

|  |
| --- |
| **Anexo N°1 ( Tipo de Operación )** |
| TEC = Transferencias a Terceros Banco de Chile |
| TOB = Transferencias a Otros Bancos |
| TAM = Transferencias Altos Montos ( SPAV ) |
| TMC = Transferencias Entre Cuentas Propias |
| TVV = Transferencias a Vales Vistas |

|  |
| --- |
| **Anexo N° 2 ( Tipo de Cuenta )** |
| CTD = Cuenta Corriente |
| AHB = Cuenta de Ahorro |
| JUV = Cuenta Vista |

#### Transference DVP Transfer Schema

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Description** | **Format** | **Start** | **Size** | **Observations** |
| Tipo de Operación | X | 1 | 3 | Ingresar " PAV " |
| Rut Cliente | X | 4 | 10 | Alineado a la derecha, completando el largo del campo con ceros |
| Cuenta de Cargo | 9 | 14 | 12 | Alineado a la derecha, completando el largo del campo con ceros |
| Rut Beneficiario o Vendedor | X | 26 | 10 | Alineado a la derecha, completando el largo del campo con ceros. Para tipo B ( Banco), rellenar campo con blancos. |
| Razón Social o Vendedor | X | 36 | 30 | Alineado a la izquierda, completando el largo del campo con blancos.Para tipo B ( Banco ), rellenar campos con blancos |
| Cuenta del Beneficiario o Vendedor | X | 66 | 18 | Alineado a la izquierda, completando el largo del campo con blancos |
| Rut Banco Beneficiario o Vendedor | X | 84 | 10 | Alineado a la derecha, completando el largo del campo con ceros |
| Monto Total | 9 | 94 | 11 | Alineado a la derecha, completando el largo del campo con ceros |
| Abono Inmediato | Blanco | 105 | 1 | Blancos |
| Motivo de la Transferencia | X | 106 | 30 | Alineado a la izquierda, completando largo del campo con blancos |
| Notificación Vía e-mail | 9 | 136 | 1 | 1=SI / 0=NO |
| Asunto del e-mail | X | 137 | 30 | Alineado a la izquierda, completando el largo del campo con blancos |
| Dirección e-mail | X | 167 | 50 | Alineado a la izquierda, completando el largo del campo con blancos |
| Tipo de Vendedor (T o B ) | X | 217 | 1 | T = Tercero / B = Banco |
| Código DCV Cliente | 9 | 218 | 5 | Codigo asignado por Institución DCV |
| Código DCV Beneficiario o Vendedor | 9 | 223 | 5 | Codigo asignado por Institución DCV |
| Claves | X | 228 | 15 | Claves de Transacción asignadas por DCV, alineadas a la izquierda, completando largo del campo con blancos, con un máximo de 10 claves por registro. |

### Ria Transmission Formats.

System Interface: File Formats Technical Specifications

Format: RIA Standard Export W/AP Rate

(July 21st, 2010)

Overview

This document explains the procedures and formats for communications between RIA Envia and RIA Correspondents.

Files containing orders for payment are prepared from the RIA system and transmitted to the Correspondent. The Correspondent imports those files into their order processing system.

When the Correspondent pays the order to the recipient the Correspondent will mark the order as “Paid” and send a return file to RIA showing the orders that were paid with the details of when the orders was paid and Recipient Identification information.

File Formats

The files that will be transmitted are ASCII delimited text files. There is an Orders file format specification and a Paid Orders file format specification. The technical details, field explanations and layouts of these files are included within this document.

Transmission

The files are to be transmitted electronically between RIA and the Correspondent, presently via FTP.

File Identifiers

File Identifiers included as the first field within each file is a Correspondent Identification number provided by RIA. This number identifies the Correspondent to the RIA system. This number must be used in all transmissions.

Procedures and Verification

Please review the included file descriptions carefully. Use the attached sample files to test the ability of your Information System to import Orders for Payment and to export Orders Paid.

When you are ready to use these file formats send to RIA a sample Paid Orders file with the same orders that were included in the sample Orders for Payment file. When RIA verifies that the returned order information is correct, RIA will notify the Correspondent to commence operations with the system.

#### Orders for Payment Sales Export File (RIA🡺Correspondent)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field | Data Type | Length | Description | Format |
| RIA Correspondent ID | Character | 20 | RIA ID number (Assigned by RIA to correspondent) |  |
| Paying Agent Sequence ID | Numeric | 8 | Correspondent sequence ID |  |
| RIA Order ID | Numeric | 8 | RIA internal sequence ID |  |
| Order Number | Character | 20 | RIA Receipt Number |  |
| Order Date | Date |  | Order Date | mm/dd/yyyy |
| Currency to Pay | Character | 3 | Currency for Payment |  |
| Amount to Pay | Numeric | 15.2 | Amount to pay beneficiary. | 123.45 |
| PIN/Clave | Character | 50 | Number beneficiary will provide to collect transfer. |  |
| Correspondent Branch Name | Character | 50 | Branch Name (Assigned by correspondent) |  |
| Correspondent Branch Number | Character | 20 | Branch Number (Assigned by correspondent) |  |
| Customer First Name | Character | 50 |  |  |
| Customer Last Name 1 (Paternal) | Character | 50 |  |  |
| Customer Last Name 2 (Maternal) | Character | 50 | Mother's given name |  |
| Customer Tel No | Character | 20 |  |  |
| Customer Address | Character | 255 |  |  |
| Customer City | Character | 50 |  |  |
| Customer State | Character | 20 |  |  |
| Customer Zip Code | Character | 20 |  |  |
| Customer Country | Character | 50 |  |  |
| Customer ID number | Character | 50 | Only if required by correspondent. |  |
| Customer ID type | Character | 50 | Only if required by correspondent. |  |
| Beneficiary First Name | Character | 50 |  |  |
| Beneficiary Last Name 1 (Paternal) | Character | 50 |  |  |
| Beneficiary Last Name 2 (Maternal) | Character | 50 | Mother's given name |  |
| Beneficiary Tel No | Character | 20 |  |  |
| Beneficiary Address | Character | 255 |  |  |
| Beneficiary City | Character | 50 |  |  |
| Beneficiary State | Character | 50 |  |  |
| Beneficiary Zip Code | Character | 20 |  |  |
| Beneficiary Country | Character | 50 |  |  |
| Beneficiary ID number | Character | 50 | Only if required by correspondent. |  |
| Beneficiary ID type | Character | 50 | Only if required by correspondent. |  |
| Message for Beneficiary | Character | 255 |  |  |
| Delivery Method | Numeric | 1 | 1 - Office Pick Up 2-Bank Deposit 3-Home Delivery |  |
| Bank Name | Character | 50 | For Bank Deposit |  |
| Bank Account Number | Character | 50 | For Bank Deposit |  |
| Type of Account | Character | 10 | For Bank Deposit |  |
| Bank Branch Name | Character | 80 | For Bank Deposit |  |
| Bank Branch Number | Character | 10 | For Bank Deposit |  |
| Bank Branch City | Character | 50 | For Bank Deposit |  |
| Bank routing code | Character | 50 | For Bank Deposit |  |
| Bank routing type | Character | 20 | For Bank Deposit |  |
| Bank BIC –Swift | Character | 20 | For Bank Deposit |  |
| Unitary Account Number such as IBAN | Character | 50 | For Bank Deposit |  |
| Settlement Amount | Numeric | 20 | Amount to Pay Correspondent |  |
| Settlement Currency | Character | 3 | Currency to Pay Correspondent |  |
| Rate | Numeric | 20 | Buy Rate (Provided by correspondent) non-converted USD buy rate | \* |
| PA Commission | Numeric | 20 | Commission payable to Correspondent |  |
| Commission currency | Character | 3 | Commission Currency |  |

\*\* buy rate will be in same currency as the Settlement\*\*

Delimited File Use | as delimiter (ASCII 124)

File Name will be in the format mmddyy + daily sequence number + “.txt”

Sample: 07011001.txt

#### Sale Response File Format (Correspondent🡺RIA)

1. **Sales Response File Specifications**.

The field delimiter character to be used in the sales response files is the vertical bar (|) also known as the pipe symbol. If the field is omitted, a delimiter must be placed to preserve the format of the record. (ASCII 124)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| # | **Field** | **Type** | **Size** |  | **Format** |
| 1 | Order Status | Text |  | Required | **0001- Status Ok**  **9999- Not processed** |
| 2 | Correspondent Code | Text | 10 | Required | **(Assigned by RIA)** |
| 3 | PA Sequence Number or  PIN Number | Text | 20 | Required | **Reference Number** |
| 4 | Date Order Received | Text | 8 | Required | **AAAAMMDD** |
|
| 5 | Time Order Received | Text | 6 | Required | **HHMMSS** |
|
|
| 6 | (Message) | Text | 500 | Required | **Processed OK**  If rejected, please send reason of rejection**.** |
|
|
|  | | | | | |

1. **File Name**

The name of the file is created as follows:

S + PA Code + mmddyy + seq.txt

Where:

S = Type of file (Sales Response)

PA Code = Correspondent number assigned by RIA

mm= month

dd = day

yy = 2 digits for year

Seq = Sequential number from 1 thru 9999

txt = file extension

Sample: S500591011071.txt

Example:

0001|357|11044542411|20060510|141605|Received|

0001|357|11015587741|20060510|141605|Received|

9999|357|14520248751|20060510|141707|Duplicate Reference Number|

A Sales Response File has to be returned as a response of every transaction file sent.

This report must be deposited in their FTP folder.

#### Paid Orders Confirmation (Correspondent🡺RIA)

Every correspondent will be responsible of create and send their own payment confirmations files per the technical specifications provide by RIA.

The payment confirmation report should be deposited in their FTP folder.

The payment confirmation report should be sent at least once per day by preference at night no later than 12:00AM PST (if paid by confirmation this is mandatory).

The payment confirmation report will be process automatically in RIA system.

**File Format Specifications**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field | Data Type | Length | Description | Format |
| RIA Correspondent ID | Character | 20 | RIA ID Assigned to Correspondent |  |
| PA Sequence Number or  PIN Number | Numeric | 8 | Reference Number |  |
| Date Order Paid | Character | 8 | Date Order was Paid | yyyymmdd |
| Time Order Paid | Character | 6 | Time Order was Paid | hhmmss |
| Order Amount Paid | Numeric | 15.2 | Amount Paid to Recipient | 123.45 |
| Beneficiary ID Number | Character | 20 | Recipient Identification Number | A123456789 |
| Beneficiary ID Type | Character | 20 | Type of Identification Provided | Cedula |

File Type: ASCII Text Delimited

Field Delimiter: | (pipe) (ASCII Code 124)

Record Delimiter: Carriage Return/Line Feed (ASCII Code 13)

**File Name:**

The name of the file is created as follows:

P + PA Code + mmddyy + seq.txt

Where:

P = Type of file (Payment Confirmation)

PA Code = Correspondent number assigned by RIA

mm= month

dd = day

yy = 2 digits for year

Seq = Sequential number from 1 thru 9999

txt = file extension

Sample: P500590513011.txt

Example:

1014|375142|20020415|152500|125.00|N654987|Cedula

1014|375143|20020415|152501|50.00|C45684785-1|Passport

#### Cancellation request file Specifications (RIA🡺Correspondent)

**Field delimiter**

The field delimiter character to be used in cancellation files is the vertical bar (|) also known as the pipe symbol. If the field is omitted, a delimiter must be placed to preserve the format of the record. (ASCII 124)

**Cancel Request File Format**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **FIELD** | **TIPO** | **SIZE** |  | **FORMAT** |
| 1 | Type of Request | Text | 1 | Required | **C = Cancel** |
| 2 | Correspondent Code | Text | 10 | Required | **(Assigned by RIA)** |
| 3 | PA Sequence Number or PIN Number | Text | 20 | Required | **Reference Number** |
| 4 | Date of request | Text | 8 | Required | **AAAAMMDD** |
|
| 5 | Time of request | Text | 6 | Required | **HHMMSS** |
| 6 | Message | Text | 500 | Required | **Please cancel** |

**File name**

The name of the file is created as follows:

Cancel+mmddyy+s.txt

Where:

Cancel: type of file

mm: 2-digit month

dd: 2-digit day

yy: 2-digit year

s: A sequential number in the range 1 – 9999

txt: File Extension

Example:

Cancel0511061.txt

Sample of file:

C|570|12347|20050211|102500|Please cancel|

#### Cancellation Response File Format (Correspondent🡺RIA)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **FIELD** | **TIPO** | **SIZE** |  | **FORMAT** |
| 1 | Type of Request | Text | 1 | Required | **C = Cancelled**  **R= Rejected** |
| 2 | Correspondent Code | Text | 10 | Required | **(Assigned by RIA)** |
| 3 | PA Sequence Number or PIN Number | Text | 20 | Required | **Reference Number** |
| 4 | Date of request | Text | 8 | Required | **AAAAMMDD** |
|
| 5 | Time of request | Text | 6 | Required | **HHMMSS** |
| 6 | Message | Text | 500 | Required | **Cancelled**  **Reason of rejection** |

The name of the file is created as follows:

C + PA code + mmddyy + Seq.txt

Where:

C: type of file (Cancellations File Format)

PA Code: Correspondent code assigned by RIA

mm: 2 digits month

dd: 2 digits day

yy: 2 digits year

s: A sequential number in the range 1 – 9999

txt = file extension

C|570|12347|20050211|102500|Cancelled|

C|570|12371|20060511|145502|Cancelled by RIA request|

#### Complaints File Specifications (RIA🡺Correspondent)

**File Name Format.**

The name of the file that RIA will transmit to Correspondent Agent has to be as follows:

NOTEMMDDYYSEQ.TXT

|←Filename→|.|←→| Suffix.

|  |  |  |
| --- | --- | --- |
| **Place** | **Format** | **Description** |
| 1-4 | ALPHA | **File Type:**  **RIA File:**  **NOTE = RIA Complaint** |
| 5-10 | Numeric | mm: 2 digits month  dd: 2 digits day  yy: 2 digits year  s: A sequential number in the range 1 – 9999 |
|  | . | **Decimal Point** |
|  | ALPHA | **Suffix File Type:**  **TXT** |
|  |  |  |

#### Complaints Format Layout

(RIA File Format)

Example : NOTE0706101.TXT

Column Separator Value: Pipe (|)

One record per string line

Layout Specification:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Value** | Format |
| 1 | Type of message | Text | 1 | Required | **R = Complaint**  **N = Note** |
| 2 | Correspondent Code | Text | 10 | Required | **(Assigned by RIA)** |
| 3 | PA Sequence number or PIN | Text | 20 | Required | **PA Sequence Number** |
| 4 | Date | Text | 8 | Required | **YYYYMMDD** |
| 5 | Time | Text | 6 | Required | **HHMMSS** |
| 6 | Message | Text | 500 | Required |  |

Sample:

R|570|12346|20030211|153000|Beneficiary Second Last Name Smith

R|50149|20012|20110404|045311|PLS PAY THIS ORDER TO DOVILE

#### Complaints File Specifications (Correspondent🡺RIA)

**File Name Format:** XXDDDHHMM.NNN|←Filename→|.|←→| Suffix.

|  |  |  |
| --- | --- | --- |
| **Place** | **Format** | Description |
| 1-2 | XX | **File Type: Correspondent**  **CC = Correspondent Complaint** |
| 3-5 | DDD | **File Creation Julian Date:**  **DDD = 001, 002, …, 365** |
| 6-9 | HHMM | **File Creation Time:**  **HH = Hours (24 hrs format 01, 02, …, 24)**  **MM = Minutes (00, 01, 02, …, 59)** |
| 10 | . | **Decimal Point** |
| **11-13** | **NNN** | **Suffix File Type:**  **NNN = TXT (new files and unprocessed)** |

Sample: CC0431809.TXT (File created on Feb12, 2003 at 06:09 PM)

**Complaints Format Layout:** Column Separator Value: Pipe (|)

One record per string line

Layout Specification:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Field name** | **Type** | **Size** | **Value** | Format |
| 1 | Type of message | Text | 1 | Required | **N = Note**  **R = Complaint**  **C = Cancelled** |
| 2 | Correspondent Code | Text | 10 | Required | **(Assigned by RIA)** |
| 3 | PA Sequence number or PIN | Text | 20 | Required | **Reference Number** |
| 4 | Date | Text | 8 | Required | **AAAAMMDD** |
| 5 | Time | Text | 6 | Required | **HHMMSS** |
| 6 | Message | Text | 500 | Required |  |

Sample:

N|570|12345|20030211|082000|Invalid Beneficiary Phone Number

R|570|12346|20030211|153000|Beneficiary Second Last Name is wrong

C|570|12347|20060803|142500|Cancel by RIA request