

## **File Transfer Function**

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### **STI BATCH FILE LAYOUT**

#### **INTRODUCTION:**

Participants can upload STI Batch File to CCASS via STI File Transfer function. The function helps participants to avoid duplicate efforts in manually input each STI into CCASS in case of high input volume. This section shows the SSA batch file layout adopted by CCASS.

#### **DESIGN STANDARD:**

- a) All interchange files are of fixed length records. If the total number of bytes in a record is less than the record length, the record will be packed with spaces to make up the length. Every record must have a record delimiter of carriage return and line feed (ASCII hexadecimal value X'0D0A') at the end.

The characters that can be contained in the file are as follows.

- digit : 0 to 9
- alphabets : a to z, A to Z
- special symbols : SPACE / + - ? : ( ) , ' .
- record delimiter of carriage return and line feed
- a 1-character End-of-File Marker at the end of file (normally ASCII hexadecimal value X'1A')

- b) All interchange files are sequential files. There are two categories of records: detail and control records.

Detail records contain user information. A record checksum is calculated for each detail record by summing the data contents of essential numeric fields. It is calculated by the sender and checked by the receiver. Control headers contain information such as participant ID, file name, etc., relevant to the file as a whole. Control trailers further protect the file using record counts and hash totals. Should there be any inconsistency in the record checksums, record counts or hash totals, the whole file will be discarded.

Different types of records are indicated by the first byte in the records.

- c) The maximum length of the record checksum in the detail record, the count of detail records and hash totals in the control trailer record are all confined to the data size value specified in the data size column of the record layout. The implied decimal point of a numeric field, as well as the sign, if any, is ignored. Should overflow occur, the leading digit will be discarded. Note that the sum of all record checksums in the control trailer record is the sum of the record checksums of all detail records.
- d) The maximum size of the batch file is limited to 2 mega bytes or 8002 lines including the header and trailer control records. Batch file with file size or number of lines exceeded this limit will be rejected.

**STI BATCH FILE**

This file contains the detailed information of STIs prepared by participants' internal system, which will be uploaded to C3T for STI batch file input processing. Each record contains 120 bytes, followed by a 2-byte record delimiter.

<u>Data item</u>	<u>Data size</u>	<u>Remarks</u>
<b>Control Record</b>		
Record type	X(1)	"0" = control header
File Indicator	9(4)	Mandatory, unique indicator assigned by participant, cannot be re-used within same day
Participant ID	X(6)	Must input, if Sender BIC field is blank
Sender BIC	X(8)	Optional field - Default as blank
Participant own file reference	X(15)	
File transmission date	9(8)	YYYYMMDD
File name	X(15)	"STI BATCH INPUT"
Filler	X(63)	Spaces
<b>Detail Record</b>		
Record type	X(1)	"1" = detail records
Stock code	9(5)	Even with ISIN entered. "00000" should be entered for numeric field validation
ISIN	X(12)	Optional field - Default as blank
From Account	X(8)	<ul style="list-style-type: none"> <li>- If A/C no. has less than 8 digits, it should be padded with leading blank spaces or zeroes, e.g. A/C #21 should be formatted as " 21" (6 spaces + "21") or "00000021"</li> <li>- At least one of the 'From Account' or 'To Account' must be an SSA with Statement Service (i.e. account number starting from 21 onwards)</li> </ul>
To Account	X(8)	<ul style="list-style-type: none"> <li>- If A/C no. has less than 8 digits, it should be padded with leading blank spaces or zeroes, e.g. A/C #21 should be formatted as " 21" (6 spaces + "21") or "00000021".</li> <li>- At least one of the 'From Account' or 'To Account' must be an SSA with Statement Service (i.e. account number starting from 21 onwards)</li> </ul>

<u>Data item</u>	<u>Data size</u>	<u>Remarks</u>
Transfer Quantity	9(11)	
Money value	9(11)V9(2)	
Payment instruction	X(1)	"D" = DVP, "F" = FOP
Remarks	X(40)	
Record checksum	9(14)	Sum of stock code, quantity & money value of shares
Filler	X(7)	Spaces

**Control Record**

Record type	X(1)	"2" = control trailer
Total number of detail records	9(4)	
Sum of all stock codes	9(7)	
Sum of all quantities	9(14)	
Sum of all money values	9(16)	
Sum of all record checksums	9(17)	
Filler	X(61)	Spaces