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MYCLEAR INTERBANK GIRO (IBG) SYSTEM MESSAGE FORMAT

Malaysian Electronic Clearing Corporation Sdn Bhd (MyClear)	
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Approved by	**Ros Yusoff** Head of ISD, Information Services Division **Date:**

Document Details

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Document Owner:	Application Development Department

Revision History

Version No.	Date of Update	Summary of Change	Updated By
2.0	15th Aug. 2006	All pages to incorporate IBG Message Format Specification Enhancement of Specification V.1.2 and Verification of Identification Number In Message Format for Non-EPF Transaction Version 1.2	Patwant
2.1	21st Mar. 2007	Page 45 of 54 - To add one additional reason for **3.2 Unresolved Returns** (item **e**)	Patwant
2.2	5th Nov. 2007	Page 5 of 53 – To add Data Definition for Alphanumeric Field. Page 26 of 53 – To correct error on Length of Old IC Field.	Patwant
2.3	11 Dec 2008	Incorporate Copyright Notice	Rohaiza
2.4	11 Feb 2009	To add additional reason for unresolved returns on page 46 of 54	Patwant
2.5	2 Sept 2010	To include New 2nd Addenda Specification (to cater for the new enhancement of the New 2nd Validation IBG initiative which is planned to go live within the 4th Quarter of 2010)	Patwant
2.6	6 Jan 2011	To include the following : a) Code 7 – e-Dividend Payments b) Sample of Return Transaction for 2nd Validation and Non 2nd Validation (to cater for Addenda New Specifications for Payment Information and e-Dividend code which is planned to go live in April 2011)	Patwant
2.7	4 Jan 2012	Change name from MEPS to MyClear	Patwant
2.8	4 Apr 2013	To update Addenda Record specification to cater for Payment Reference Standard	Norshazaira

Note: The following IBG specifications shall be nullified and no longer in use in any IBG development and maintenance upon approval of this document i.e. MyClear INTERBANK GIRO (IBG) SYSTEM MESSAGE FORMAT Version 2.8:

(a) MEPS INTERBANK GIRO SYSTEM MESSAGE FORMAT Version 2.1;

(b) MEPS INTERBANK GIRO SYSTEM MESSAGE FORMAT Version 2.0;

(c) MEPS Interbank GIRO System Message Format (NACHA) Version 1.4;

(d) Interbank GIRO (IBG) System Message Format Specification Enhancement of Specification Version 1.2;

(e) Interbank GIRO (IBG) System Message Format Specification Comparison of EPF File Layout in PPD Format & CTX Format Version 1.0;

(f) Interbank GIRO (IBG) System IBG Message Format Specification Verification of Identification Number In Message Format For Non-EPF Transaction;

(g) MEPS INTERBANK GIRO SYSTEM MESSAGE FORMAT Version 2.2;

(h) MEPS INTERBANK GIRO SYSTEM MESSAGE FORMAT Version 2.3;

(i) MEPS INTERBANK GIRO SYSTEM MESSAGE FORMAT Version 2.4;

(j) MEPS INTERBANK GIRO SYSTEM MESSAGE FORMAT Version 2.5;

(k) MEPS INTERBANK GIRO SYSTEM MESSAGE FORMAT Version 2.6.

(l) MEPS INTERBANK GIRO SYSTEM MESSAGE FORMAT Version 2.7.

Table of Content

Document Summary

TITLE : MYCLEAR INTERBANK GIRO (IBG) SYSTEM MESSAGE FORMAT

VERSION : 2.7

REFERENCES:

1. ACH Rules 1993 published by National Automated Clearing House Association (NACHA) United States of America;

2. Interbank GIRO (IBG) System Operating Manual;

3. Interbank GIRO Operating Rules

SECTION 1: INTRODUCTION AND OVERVIEW

This section provides an introduction to the Malaysian Electronic Clearing Corporation (MyClear) IBG System message format. It includes an overview of message components and structures and its requirements. Later part in this documentation, it explains the requirements and how to handle rejected messages.

1.1 Data Specifications

In general, all alphabetic and alphanumeric fields must be left justified and followed by blank filled. All numeric fields must be right justified, unsigned and leading by zero filled. Characters used in ACH records are restricted to 0-9, A-Z, a-z, space, and those special characters which have an EBCDIC value greater than hexadecimal "3F" or an ASCII value greater than hexadecimal "1F". Occurrences of values EBCDIC "00" - "3F" and ASCII "00" - "1F" are not valid.

Please follow this general guideline, unless specified in a specific section to follow otherwise.

1.2 MyClear IBG System Message Components

The MyClear IBG message is made up of the following components, structured as shown below. Some of these elements are mandatory, others are optional or required. Each is discussed in depth on the following pages.

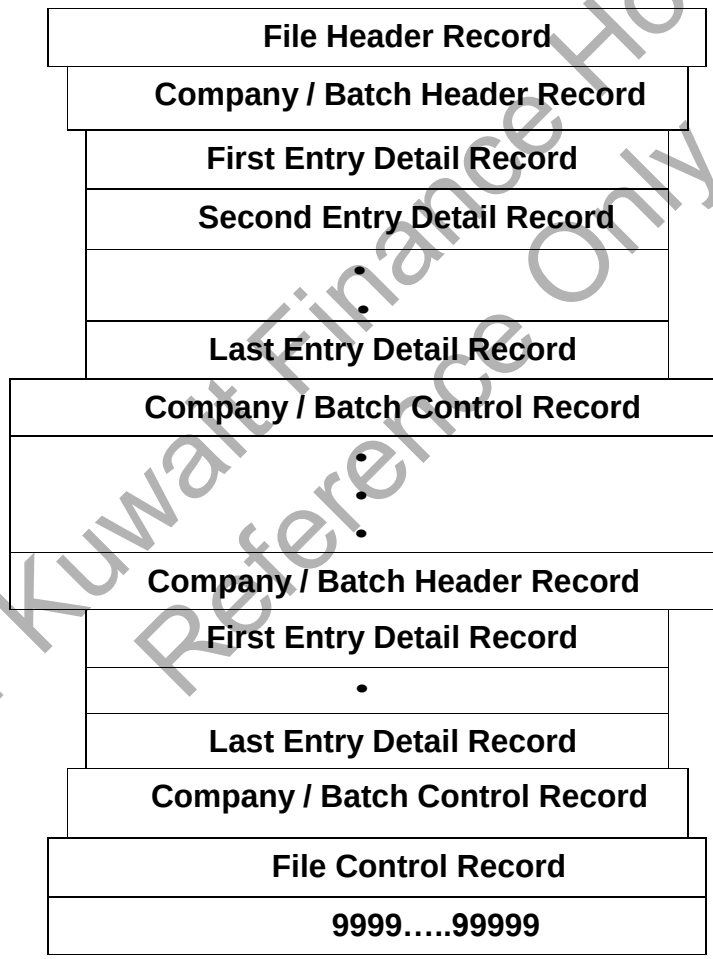
Structures	Length	Required
File Header Record	94 bytes	Yes
Company Batch Header (s)	94 bytes	Yes
Entry Detail Record (s)	94 bytes	Yes
Addenda Record (s)	94 bytes	Yes
Company Batch Trailer / Control (s)	94 bytes	Yes
File Trailer / Control	94 bytes	Yes

1.3 Data Structures

Each file begins with a File Header Record. After the File Header, there may be any number of batches. Each batch is identified by a Batch Header Record and contains one or more Entry Detail Records. The Addenda Records that accompany each entry is dependent upon whether the indicator in the Addenda Record Indicator (in the Entry Detail Record) is set to 'on' or 'off'.

In MyClear IBG System Message Format, the Addenda Record Indicator must always be set to 'on' i.e. 1. In view of this, an Entry Detail must always have Addenda Record.

Below are the details of each record of the MyClear IBG system message format.



1.4 Field Inclusion Requirements

The following information defines the need for inclusion of certain data fields in MyClear IBG entries. This involves the standardization of three definitions i.e. Mandatory, Required, or Optional.

(a) Mandatory (M) – A "mandatory" field is necessary to ensure the proper routing and for posting of a MyClear IBG entry. Any "mandatory" field not included in a MyClear IBG entry record will cause that entry, batch or file to be rejected. A rejected entry will be returned to the Originating Financial Institution (OFI) by MyClear. A rejected batch or file will be reported to OFI by MyClear.

(b) Required (R) – The omission of a "Required" field will not cause an entry at MyClear, but may cause a reject at the Receiving Financial Institution (RFI) . An example, if the FI Account Number field in the Entry Detail Record, is omitted by OFI, the RFI may return the entry as non-posted. Data classified as "Required" should be included by the OFI to avoid processing and control problems at the RFI.

(c) Optional (O) – The inclusion or omission of an "Optional" data field is at discretion of the OFI. However, if an OFI does originate files using optional data fields, the FI generating the Return must ensure the characteristics of these fields must be returned to the OFI if the entry is returned.

SECTION 2: DETAILED MESSAGE COMPONENTS

2.1 MyClear IBG Message Components – Original Entries

(a) File Header Record

The File Header Record introduces the file. It designates physical file characteristics and identifies the sender of the file, i.e. OFI and the party to which the file is being delivered i.e. MyClear. In addition, this record includes the date, time and File ID modifier fields, which can be used to identify a particular file.

The elements of File Header Record are as follows:

Field	Data Element Name		Contents	Length	Position	Example
1	Rec Type Code	M	'1'	1	01-01	1
2	Priority Code	M	Numeric	2	02-03	01
3	Immediate Destination	M	Alphanumeric	10	04-13	100011119
4	Immediate Origin	M	Alphanumeric	10	14-23	100002270
5	File Creation Date	M	YYMMDD	6	24-29	060625
6	File Creation Time	O	HHMM	4	30-33	0630
7	File ID Modifier	M	Upper Case A-Z Numeric 0-9	1	34-34	A
8	Record Size	M	'094'	3	35-37	094
9	Blocking Factor	M	'10'	2	38-39	10
10	Format Code	M	'1'	1	40-40	1
11	Immediate Destination Name	O	Alphanumeric	23	41-63	MYCLEAR
12	Immediate Origin Name	O	Alphanumeric	23	64-86	MAYBANK
13	Ref Code	O	Alphanumeric	8	87-94	

The key fields or elements of the File Header Record are briefly describes as follows:

i) Field 1: Record Type Code – Mandatory

The Record Type Code field is used by MyClear IBG System to identify its message components. It is the first position of all record formats. These codes are uniquely assigned for each type of record as follows.

1 File Header Record
5 Company / Batch Header Record
6 Entry Detail Record i.e. Consumer and Corporate
7 Addenda Record
8 Company / Batch Control Record
9 File Control Record

ii) Field 2: Priority Code – Mandatory

The Priority Code is included to allow for some future scheme for priority handling of files. At present, a value of "01" must be used.

iii) Field 3: Immediate Destination – Mandatory

The Immediate Destination field identifies the immediate party to which the file is being delivered. It contains the Routing Number of MyClear i.e. ACH Operator. The 10-character field begins with a blank in the first position and followed by transit routing number and the check digit number i.e. _100011119.

iv) Field 4: Immediate Origin – Mandatory

The Immediate Origin field identifies the immediate sender of the file. It contains the Routing Number of the OFI. The 10-character field begins with a blank in the first position and followed by transit routing number and the check digit number. In this example, 100002270 is used.

v) Field 5: File Creation Date – Mandatory

The File Creation Date is YYMMDD format. As an example, i.e. "060625" is used. It defines the date on which the file is prepared by OFI. Please note that the File Creation Date will be stamped by MyClear once the file is ready to be sent to RFI.

vi) Field 6: File Creation Time – Optional

The File Creation Time is the time in hours and minutes (HHMM) that the creation or exchange took place. The File Creation Time will be stamped by MyClear once the file is ready to be sent to RFI.

vii) Field 7: File ID Modifier – Mandatory

The File ID Modifier is provided in the File Header Record to permit multiple files created on the same date and between the same participants to be distinguished. Only upper case A-Z and numeric 0-9 are permitted. In the example, the File ID Modifier is ”A” because it is the first file that ABC Bank is delivering to MyClear on June 25. Subsequent files, if any would be labeled “B”, “C”, etc. The File ID Modifier coupled with the OFI routing number, along with other information, is used to trace the file.

viii) Field 8: Record Size – Mandatory

The Record Size field indicates the number of characters contained in each record. At this time, the value “094” must be used.

ix) Field 9: Blocking Factor – Mandatory

The Blocking Factor defines the number of physical records within a block (a block is 940 characters). For all files moving between FI and MyClear (either way) the value “10” must be used. If the number records within file is not a multiple of ten, the remainder of the block must be filled with “9s”. The example can be clearly seen in Appendix B and Appendix C.

x) Field 10: Format Code – Mandatory

This Format Code field identifies a code to allow for future format variations. Currently, it must be defined as “1”.

xi) Field 11: Immediate Destination Name – Optional

The Immediate Destination Name contains the name of the ACH Operator i.e. MyClear. Please note that MyClear IBG System will input the appropriate RFI Name into this field once the file is ready to be delivered / transmitted to the RFI.

xii) Field 12: Immediate Origin Name – Optional

This field contains the name of the ACH Operator i.e. MyClear or sending point that is sending the file.

xiii) Field 13: Reference Code – Optional

This field is reserved for information pertinent to the Originator.

(b) Company Batch Header Record

The Company / Batch Header Record identify the Originator of the application and briefly describe the application. The elements of Company Batch Header Record are as follows:

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'5'	1	01-01	5
2	Service Class Code	M	Numeric	3	02-04	220
3	Company Name	M	Alphanumeric	16	05-20	PUBLIC BANK
4	Company Discretionary Data	O	Alphanumeric	20	21-40	DUES
5	Company Identification	M	Alphanumeric	10	41-50	100002335
6	Standard Entry Class Code	M	Alphanumeric	3	51-53	CTX
7	Company Entry Description	M	Alphanumeric	10	54-63	IBG Tran
8	Company Descriptive Date	O	Alphanumeric	6	64-69	091802
9	Effective Entry Date	M	YYMMDD	6	70-75	020918
10	Settlement Date (Julian)	*	Numeric	3	76-78	
11	Originator Status Code	M	Alphanumeric	1	79-79	1
12	Originating FI Identification	M	Alphanumeric	8	80-87	10000227
13	Batch Number	M	Numeric	7	88-94	0000002

Note: * Settlement date will be inserted by MyClear in Julian date.

The key fields or components of the Company / Batch Header Record are briefly describes as follows:

i) Field 1: Record Type Code – Mandatory

As part of MyClear IBG System to identify its message components, the Company / Batch Header Record, record type must always be "5".

ii) Field 2: Service Class Codes – Mandatory

It exists in the Company / Batch Header Record and Company / Batch Control Record. It identifies the general classification of dollar entries to be exchanged.

200 Entries Mixed Debits and Credits
220 Credits Only
225 Debits Only (not in use)

iii) Field 3: Company Name – Mandatory

The value of this field is established by the OFI for the purposes of further identifying the source of the entry and for descriptive purposes for the RFI.

iv) Field 4: Company Discretionary Data – Optional

This field in the Company / Batch Header Record allows the Originators and / or OFI to include codes (one or more), of significance only to them, to enable specialized handling of all subsequent entries interpretation for the value of the field. This field must be returned intact on any entry return by either MyClear or the RFI.

v) Field 5: Company Identification – Mandatory

The Company Identification field is an alphanumeric code used to identify a RFI.

vi) Field 6: Standard Entry Class (SEC) Code – Mandatory

The SEC Code field distinguished the various types of MyClear IBG entries. In our example, the SEC code is "CTX" Corporate Trade Exchange. Use of this code identifies the entries as consumer, corporate or government going to a consumer, corporate or government account. The responsibilities of the RFI also relate to this code. The characteristics of CTX are described below:

CTX – Corporate Trade Exchange

- *Direct Crediting*

  Direct crediting is a credit application that transfers funds into a consumer's account at the Receiving Financial Institution. The funds being deposited can represent a variety of products, such as payroll, interest, pension, dividends, etc.

- *Preauthorized Bill Payment - (not in use)*

  Preauthorized payment is a debit application. Companies with billing operations may participate in the IBG through the electronic transfer (direct debit) of bill payment entries. Through standing instructions, the company's customer grants the company authority to initiate periodic charges to his or her account as bills become due.

vii) Field 7: Company Entry Description – Mandatory

The OFI establishes the value of this field to provide description of the purpose of the entry to be displayed back to the RFI. In MyClear IBG Message Format it is “IBG TRAN”.

viii) Field 8: Company Descriptive Date – Optional

The OFI establishes this field as the date it would like to see displayed to the RFI descriptive purposes only.

ix) Field 9: Effective Entry Date – Mandatory

The Effective Entry Date field is the date specified by the OFI as the date on which settlement for entries in that batch are expected to occur. However, in MyClear IBG System, it must be always current date.

x) Field 10: Settlement Date – Inserted by MyClear

The Settlement Date field will be inserted by MyClear IBG System in the Company / Batch Header Record. It represents the Julian date on which settlement is scheduled to occur for the transactions contained in that batch.

MyClear IBG System will determine the Settlement Date based on the Effective Entry Date and current IBG processing date.

The followings are the settlement date for IBG Credit and Debit:

	Settlement Date
IBG Credit	End of day
IBG Debit	Next business day (not in use)

xi) Field 11: Originator Status Code – Mandatory

This code refers to the OFI initiating the entry.

Codes	Description
'1'	Identifies the Originator as a depository financial institution
'2'	Identifies the Originator as a federal government entity or agency

xii) Field 12: Originating FI Identification – Mandatory

This Originating FI Identification field carries the OFI Routing Number (not including check digit) within a given batch.

xiii) Field 13: Batch Number – Mandatory

This number is assigned in ascending order to each batch by the OFI or by Sending Point in a given file of entries.

(c) Entry Detail Record

Entry Detail Record contains information about the Receiver and the RFI.

The elements of Entry Detail Record are as follows:

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'6'	1	01-01	6
2	Transaction Code	M	Numeric	2	02-03	22
3	Receiving FI Identification	M	Alphanumeric	8	04-11	10000233
4	Check Digit	M	Numeric	1	12-12	5
5	RFI Account Number	R	Numeric	17	13-29	127345678
6	Amount	M	$$$$$$$$cc	10	30-39	0000100000
7	Individual Identification Number	O	Alphanumeric	15	40-54	565656565
8	Number of Addenda Records	M	Numeric	4	55-58	0001
9	Receiving Company Name / Beneficiary Name	R	Alphanumeric	16	59-74	Julie Andrews
10	Reserved	O	Alphanumeric	2	75-76	<blank> 5
11	Discretionary Data	O	Alphanumeric	2	77-78	10
12	Addenda Record Indicator	M	Numeric	1	79-79	1
13	Trace Number	M	Numeric	15	80-94	100002270000034

The key fields or components of the Entry Detail Record are briefly describes as follows:

i) Field 1: Record Type Code – Mandatory

As part of MyClear IBG System to identify its message components, the Entry Detail Record, record type must always be "6".

ii) Field 2: Transaction Code – Mandatory

Transaction Code field is defined to identify various types of debit credit entries. The Transaction Code used to direct the payments are:

21 Credit Return
22 Credit Normal
26 Debit Return } not in use
27 Debit Normal } not in use

iii) Field 3: Receiving FI Identification – Mandatory

A standard Routing Number as assigned by MyClear is used to identify a RFI.

iv) Field 4: Check Digit – Mandatory

The Check Digit field is computed using Modulus 10 as follows:

- Multiply each digit in the Routing Number by a weighting factor. The weighting factor for each digit is:

  Position: 1 2 3 4 5 6 7 8
  Weights: 3 7 1 3 7 1 3 7

- Add the results of the eight multiplications.

- Subtract the sum from the next highest multiple of 10. The result is the Check Digit.

  Example:

  Routing No: 0 6 7 4 0 1 2 5
  Multiply by: 3 7 1 3 7 1 3 7
  Sum: 0 42 7 12 0 1 6 35 = 103

  Check Digit = 7 (110-103)

v) Field 5: RFI Account Number – Required

The RFI Account Number field contains the RFI's customer identification (account number).

Note: Account Number should be left justified. However, this is a special condition, though it is numeric, MyClear IBG System can accept trailing spaces.

vi) Field 6: Amount – Mandatory

The Amount field contains the amount of the entry.

vii) Field 7: Individual Identification Number – Optional

This field contains the accounting number by which the Receiver is known to the Originator. It is included for further identification and for descriptive purposes only.

viii) Field 8 : Number Of Addenda Records – Mandatory

The Number of Addenda Records field defines the number of addenda records in an Entry Detail Record.

ix) Field 9 - Receiving Company Name / Beneficiary Name – Required

The Receiving Company Name / Beneficiary Name field contains the name of the Receiver. This provides additional identification and may be helpful to the Originator in identifying returned entries.

As an OFI it is mandatory to include the Beneficiary Name in an entry detail record. However as a RFI, it is optional to validate (check the content) of the Beneficiary Name.

x) Field 10 – Reserved

This field allows OFI to include codes, of significance only to them, to enable special handling of the entry.

This field used 2 alphanumeric characters. The first position (reserved) is to be left blank for future use.

The second position will identify Processing Code. The Processing Code will indicate if there is a need for the OFI to identify if it is 2nd Validation Transactions.

Position 1. Reserved (O)

To be left blank for future use.

Position 2. Processing Code (O)

- No special handling required (default) - (0)
- 2nd Validation required - (5)

Refer to Appendix C for examples on 2nd Validation Transactions and Appendix E for examples for Non 2nd Validation Transactions.

Note: As Reserved is an Optional field, RFI should not reject if receive other than the above codes.

xi) Field 11: Discretionary Data

1. Optional (O)

This field allows OFI to include codes, of significance only to them, to enable special handling of the entry. There will be no standardised interpretation for the value of this field. It can be either a single two character codes, or two distinct one character codes, according to the needs of the OFI and / or Originator involved. This field must be returned intact for any returned entry.

This field used 2 alphanumeric characters. The first position will identify the segment code while the second character is default to zero.

Segment Code

- Government - (0)
- Private - (1)
- OTC - (2)
- Accountant General - (4)
- e-Share Transaction - (6)
- e-Dividend Transaction - (7)

Element Code

- Resident - (0)
- Non-Resident - (1)

2. Mandatory (R)

However, enhancement of the IBG Operations has been implemented to satisfy the business requirement to address the EPF Direct Crediting, 2nd Validation Services and External Account Reporting Indicator. In line with the above, the below Segment and Element Codes are further added.

Segment Code

- EPF Direct Crediting - (3)

Element Code

- Resident - (0)
- Non-Resident - (1)

Note: The above codes will specify special directives to the RFI, which will further discussed in Section D – Addenda Record.

Note: As Discretionary Data is an Optional field, RFI should not reject if receive other than the above codes.

xii) Field 12: Addenda Record Indicator – Mandatory

This field indicates the existence of an Addenda Record. A value of "1" indicates that one or more addenda records follow the Entry Detail Record, and "0" means no such record is present.

xiii) Field 13: Trace Number – Mandatory

This Trace Number is assigned by the OFI in ascending sequence and uniquely identifies each entry within a batch. Note that the first eight digits of the Trace Number is always the Routing Number (not including check digit) of the OFI. The remaining 7 digits are uniquely sequence number. This sequence number is unique until it reaches 9999999. The sequence of number will be reset to 0000001 when it reaches 9999999. Throughout the entire processing cycle (from OFI to RFI), the Trace Number is critical to be retained with the entry detail record.

Please note that when MyClear send to RFI, MyClear IBG System will store the OFI's trace number to keep its originality and create its own trace number before transmitted to the RFI.

(d) Addenda Record

Addenda records will be used by the originator to supply additional information about Entry Detail Records which will be passed to the RFI. Please note that addenda records associated with the original Entry Detail Record or Corporate Entry Detail WILL NOT be included with any detail entry being returned. Addenda record is mandatory when the indicator in the Addenda Record Indicator in the Entry Detail Record is set 'on'.

The general components of Addenda Record are as follows:

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'7'	1	01-01	7
2	Addenda Type Code	M	'05'	2	02-03	05
3	Payment Related Information	O	Alphanumeric	80	04-83	
4	Addenda Sequence Number	M	Numeric	4	84-87	0001
5	Entry Detail Sequence Number	M	Numeric	7	88-94	0000001

MyClear IBG System has incorporated 3 specific addenda in its message format, namely 1st Addenda, 2nd Addenda and 3rd Addenda.

The number of addenda records will always be dependent to the Discretionary Data and Reserved fields in the Entry Detail record.

The below matrix depicted the addenda record and the number of addenda records in relation to its Segment and Element codes at the Discretionary Data field and Processing Code at the Reserved field in Entry Detail Record :

Processing Code (Position 76)	Segment Code (Position 77)	Element Code (Position 78)	Addenda 1	Addenda 2	Addenda 3
0	0	Either "0" or "1"	R	R	NA
0	1		R	R	NA
0	2		R	R	NA
0	3		R	R	NA
0	4		R	R	NA
0	6		R	R	NA
0	7		R	R	NA
* 5	0		R	R	R
* 5	1		R	R	R
* 5	2		R	R	R
5	3		NA		
* 5	4		R	R	R
* 5	6		R	R	R
* 5	7		R	R	R

Note (*): Applicable for 2nd Validation business rules.

For EPF transaction segment code "3", 2nd Validation processing code "5" is not required.
If Code 3 (segment code) and Code 5 (Processing Code) are both present, the processing rule for Code 3 overrides Code 5. For this case, RFI is to process the transaction according to EPF processing rules, which include validating of ID provided in Addenda 2.There is no need to do another 2nd level processing as specified under Processing Code, Code 5.

1st Addenda

**** Effective 31 Dec 2013, refer to Appendix H for the revised layout of 1st Addenda Record.**

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'7'	1	01-01	7
2	Addenda Type Code	M	'05'	2	02-03	05
3	Applicant / Remitter Name	R	Alphanumeric	80	04-83	Sharon Wee
4	Addenda Sequence Number	M	Numeric	4	84-87	0001
5	Entry Detail Sequence Number	M	Numeric	7	88-94	0000001

The key fields or components of the specific Addenda record are briefly described as follows:

i) Field 1: Record Type Code – Mandatory

As part of MyClear IBG System to identify its message components, the Addenda Record, record type must always be "7".

ii) Field 2: Addenda Type Code – Mandatory

For the Addenda Type Code must always contain "*05".*

iii) Field 3: Applicant / Remitter Name – Required

As an OFI, it is required to incorporate the Applicant / Remitter Name (in full name) in IBG Transaction with Transaction Code 22 – Credit Normal.

As a RFI, it is optional to validate the contents of the field.

iv) Field 4: Addenda Sequence Number – Mandatory

This field determines the sequence of addenda number. The number is consecutively assigned to each Addenda record following an Entry Detail Record. The first Addenda sequence number must always be a "0001".

v) Field 5: Entry Detail Sequence Number – Mandatory

This field contains the ascending sequence number section of the entry detail record's trace number. This number is the same as the last seven digits of the trace number (field 13) of the related Entry Detail Record.

2nd Addenda

**** Effective 30 Jun 2013, refer to Appendix G for the revised layout of 2nd Addenda Record.**
**** Effective 31 Dec 2013, refer to Appendix I for the revised layout of 2nd Addenda Record.**

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'7'	1	01-01	7
2	Addenda Type Code	M	'05'	2	02-03	05
3	Reference Number	O	Alphanumeric	20	04-23	12345677
4	Payment Description	R	Alphanumeric	20	24-44	Loan Payment
5	Addenda Sequence Number	M	Numeric	4	84 - 87	0002
6	Entry Detail Sequence Number	M	Numeric	7	88-94	0000001

The key fields or components of this specific Addenda Record are briefly describes as follows:

i) Field 1: Record Type Code – Mandatory

As part of MyClear IBG System to identify its message components, the Addenda Record, record type must always be "7".

ii) Field 2: Addenda Type Code – Mandatory

For the Addenda Type Code must always contain "*05".*

iii) Field 3: Reference Number – Optional

It is an optional field for payment reference number such as invoice number. For detail, please refer to Payment Related Information.

iv) Field 4: Payment Description – Required

OFI is required to provide Payment Description in all transactions, please refer to Payment Related Information.

v) Field 5: Addenda Sequence Number – Mandatory

This number is consecutively assigned to each Addenda record following an Entry Detail Record. The second Addenda sequence number must always be a "0002".

vi) Field 6: Entry Detail Sequence Number – Mandatory

This field contains the ascending sequence number section of the entry detail record's trace number. This number is the same as the last seven digits of the trace number (field 13) of the related Entry Detail Record.

Payment Related Information

This information has to be carried from OFI to MyClear, then from MyClear to the RFI.

Note: As for EPF Direct Crediting, Accountant General, EFT Payments and other types of payments i.e. Insurance, Unit Trust or Bill Payments, the Reference Number and Payment Description fields have been further define.

To simplify matters, the Reference Number and Payment Description fields are being referred as **Payment Related Information**.

a) EPF Direct Crediting – Applicable for Discretionary Data Segment Code "3"

The FIs who wish to participate in the EPF Direct Crediting, it is mandatory to follow the below format structure. The OFI will put the following data segment in a strictly sequence manner as required by the EPF.

Payment Related Information	Length	Position
New IC Number	12	04 - 15
Old IC Number	8	16 - 23
Batch Date YYYYMMDD	8	24 - 31
EPF member ID	8	32 - 39
4 Leading Spaces _ _ _ _	4	40 - 43
Other ID (Police / Army ID or Passport Number)	20	44 - 63

b) Accountant General – EFT payments – *Applicable for Discretionary Data Segment Code "4"*

Payment Related Information	Length	Position
EFT Number	**20**	**04 - 23**
Description of the Payment	**20**	**24 - 44**

c) Other type of payments, Processing Code "5" and Processing Code "0".

Payment Related Information	Length	Position
Reference Number	**20**	**04 - 23**
Description of the Payment	**20**	**24 - 44**

3rd Addenda

Only applicable if the Processing Code is "5".
Sample file in **Appendix C**.

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'7'	1	01-01	7
2	Addenda Type Code	M	'05'	2	02-03	05
3	New IC No.	R	Numeric	12	04-15	751215105978
4	Old IC No.	R	Alphanumeric	8	16-23	A2342024
5	Business Registration No	R	Alphanumeric	20	24 -43	43456-K
6	Police / Army ID/ Passport No.	R	Alphanumeric	20	44 - 63	Q48574
7	Addenda Sequence Number	M	Numeric	4	84 - 87	0003
8	Entry Detail Sequence Number	M	Numeric	7	88-94	0000001

i) Field 1: Record Type Code – Mandatory

As part of MyClear IBG System to identify its message components, the Addenda Record, record type must always be "7".

ii) Field 2: Addenda Type Code – Mandatory

For the Addenda Type Code must always contain "*05".*

iii) Field 3: New IC No. – Required

Field for New IC No.

iv) Field 4: Old IC No. – Required

Field for Old IC No.

v) Field 5: Business Registration Number – Required

Field for Business Registration Number.

vi) Field 6: Police / Army Id / Passport No. – Required

Field for Police / Army ID / Passport No.

Note : OFI must indicate at minimum one of the fields as stated from field 3 to field 5.

vii) Field 7: Addenda Sequence Number – Mandatory

This number is consecutively assigned to each Addenda record following an Entry Detail Record. The second Addenda sequence number must always be a “0003”.

viii) Field 8: Entry Detail Sequence Number – Mandatory

This field contains the ascending sequence number section of the entry detail record’s trace number. This number is the same as the last seven digits of the trace number (field 13) of the related Entry Detail Record.

(e) Company Batch Trailer / Control Record

The Company / Batch Control record summarizes the information contained in the batch. It contains the counts, hash totals and total controls for the preceding detail entries within the batch.

The components of Company Batch Trailer / Control Record are as follows:

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'8'	1	01-01	8
2	Service Class Code	M	Numeric	3	02-04	220
3	Entry / Addenda Record	M	Numeric	6	05-10	000003
4	Entry Hash	M	Numeric	10	11-20	0055603081
5	Total Debit Entry RM Amount	M	$$$$$$$$$cc	12	21-32	000000000000
6	Total Credit Entry RM Amount	M	$$$$$$$$$cc	12	33-44	000003000000
7	Company Identification	M	Alphanumeric	10	45-54	_111111119
8	Message Authentication	O	Alphanumeric	19	55-73	
9	Reserved	N/A	Blank	6	74-79	
10	Originating FI Identification	M	TTTTAAAA	8	80-87	10000227
11	Batch Number	M	Numeric	7	88-94	0000001

The key fields or components of the Company / Batch Trailer Record are briefly describes as follows:

i) Field 1: Record Type Code – Mandatory

As part of MyClear IBG System to identify its message components, the Company / Batch Trailer Record, record type must always be "8".

ii) Field 2: Service Class Code – Mandatory

The Service Class Code identifies the general classification of dollar entries to be exchanged.

200 Entries Mixed Debits and Credits
220 Credits Only
225 Debits Only (not in use)

iii) Field 3: Entry / Addenda Count – Mandatory

The Entry / Addenda Count field is a tally of each Entry Detail and each Addenda Record processed within the batch.

iv) Field 4: Entry Hash – Mandatory

This field is prepared by hashing the critical fields i.e. Routing Number, Account Number and Amount in each entry. The Entry Hash provides a check against inadvertent alteration of data contents due to hardware or program failure.

1. The requirements of the hashing are as follows:

- Fields to hash are routing number (8 bytes, excluding its check digit), account number and amount;
- A standard weight factor of 3 7 1 5 is to be used by all the participating Financial Institutions and MyClear;
- The result of the hash total will be a part of validation process in the transmittal total.

2. The calculation of the hashing is as follows:

- Get all the fields to hash in a string (routing number – 8 bytes, account number 17 bytes and amount – 10 bytes) and multiply with the weight factor (3 7 1 5) which are repeated in sequence;
- The multiplication of each value for each field should then be added to give a total sum of each detail record;
- The total sum of each detail record is to be multiplied by itself one time, i.e. square the sum;
- The squared sum of each detail record is added to give a total sum of all detail records (Batch Control Sum);
- Then, the last 2 digits of the total sum of all the detail records (Batch Control Sum) should then be deducted by 1000 to give a control value;
- The control value should be stored in each of batch control record under column.

3. The sample of the calculation as per **APPENDIX B**.

v) Field 5: Total Debit Entry Amounts – Mandatory

This field contains accumulated debit entry detail totals within a given batch.

vi) Field 6: Total Credit Entry Amounts – Mandatory

This field contains accumulated credit entry detail totals within a given batch.

vii) Field 7: Company Identification – Mandatory

This field carries the same information that is carried in the Company Identification field of the Company / Batch Header Record.

viii) Field 8: Message Authentication – Optional

The MAC is an eight-character code derived from a special key used conjunction with the DES algorithm. The purpose of the MAC is to validate the authenticity of the ACH entries. The DES algorithm and key message standards must be in accordance with standards adopted by the American National Standards Institute. The remaining eleven characters of this field are blank.

ix) Field 9: Reserved – N/A

The reserved data element is for future use.

x) Field 10: Originating FI Identification – Mandatory

The Originating FI Identification carries the same information that is carried in the Originating FI Identification field of the Company / Batch Header Record.

xi) Field 11: Batch Number – Mandatory

This number is assigned in ascending order to each batch by the OFI or to its Sending Point in a given file of entries.

(f) File Trailer / Control Record

The File Trailer / Control Record summarized the information carried in the Company / Batch Control Records. It contains financial entry and hash total accumulations from the Company / Batch Control Records in the file. This record also contains counts of the number of blocks and the number within the file.

The components of File Trailer / Control Record are as follows:

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'9'	1	01-01	9
2	Batch Count	M	Numeric	6	02-07	000002
3	Block Count	M	Numeric	6	08-13	000002
4	Entry / Addenda Count	M	Numeric	8	14-21	00000006
5	Entry Hash	M	Numeric	10	22-31	0084661617
6	Total Debit Entry RM Amount	M	$$$$$$$$$$cc	12	32-43	000000000000
7	Total Credit Entry RM Amount	M	$$$$$$$$$$cc	12	44-55	000003000000
8	Reserved	N/A	Blank	39	56-94	

The key fields or components of the File Trailer Record are briefly describes as follows:

i) Field 1: Record Type Code – Mandatory

As per listed at the above. As for the File Control Record, it must be always contained as "9".

ii) Field 2: Batch Count – Mandatory

The value of the Batch Count field is equal to the number of Company / Batch Header Records in the file. In this example, the value is 2.

iii) Field 3: Block Count – Mandatory

The Block Count contains the number of physicals blocks (a block is 940 characters) in the file, including both the File Header and File Control Records.

iv) Field 4: Entry / Addenda Count – Mandatory

This count is a tally of each Entry Detail Record and each Addenda Record processed, within either the batch or file, as appropriate.

v) Field 5: Entry Hash – Mandatory

For the File Control, the Entry Hash is the sum of corresponding fields in the Company / Batch Control Records in the file.

- The control value in all batches should then be added and stored in the file trailer / control record under column **Entry Hash**;
- The value should also be stored in the transmittal total file;
- The value in the transmittal total and file trailer record will be checked and validated. The file will be rejected if the value is different;
- IBG files should also be rejected if there is a variation at the following stage:
  - Batch control record;
  - File trailer record.

vi) Field 6: Total Debit Amount in File – Mandatory

This field contains accumulated debit entry detail totals within the file.

vii) Field 7: Total Credit Amounts in File – Mandatory

This field contains accumulated credit entry detail totals within the file.

viii) Field 8: Reserved – N/A

The reserved data element is for future use.

2.2 MyClear IBG Message Components - Automated Return Entries

The Automated Return Entries is looked as at a new entry generated due to the original entries failed to accomplish its intended purposes i.e the RFI fail to credit its customers.

(a) File Header Record

The File Header Record for return entries is similar to the File Header Record of the original entries.

The components of File Header Record for Return entries are as follows:

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'1'	1	01-01	1
2	Priority Code	M	Numeric	2	02-03	01
3	Immediate Destination	M	Alphanumeric	10	04-13	100011119
4	Immediate Origin	M	Alphanumeric	10	14-23	100002335
5	File Creation Date	M	YYMMDD	6	24-29	990628
6	File Creation Time	O	HHMM	4	30-33	2015
7	File ID Modifier	M	Upper Case A-Z Numeric 0-9	1	34-34	A
8	Record Size	M	'094'	3	35-37	094
9	Blocking Factor	M	'10'	2	38-39	10
10	Format Code	M	'1'	1	40-40	1
11	Immediate Destination Name	O	Alphanumeric	23	41-63	MYCLEAR
12	Immediate Origin Name	O	Alphanumeric	23	64-86	PUBLIC BANK
13	Ref Code	O	Alphanumeric	8	87-94	

Note: There is no need of detail explanation on each key field in view that it is of the same definition as referred to in the original entries.

(b) Company / Batch Header Record

The Company / Batch Header Record layout containing the information of the return entry detail together with its addenda associated with it. The RFI must return the said details on a separate Company / Batch Header record for each individual bank.

The components of the Company Batch Header Record for Return entries are as shown below:

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'5'	1	01-01	5
2	Service Class Code	M	Numeric	3	02-04	220
3	Company Name	M	Alphanumeric	16	05-20	Maybank
4	Company Discretionary Data	O	Alphanumeric	20	21-40	Dues
5	Company Identification	M	Alphanumeric	10	41-50	1047777779
6	Std. Entry Class Code	M	Alphanumeric	3	51-53	CTX
7	Company Entry Desc.	M	Alphanumeric	10	54-63	IBG TRAN
8	Co. Desc. Date	O	Alphanumeric	6	64-69	062599
9	Effective Entry Date	M	YYMMDD	6	70-75	990625
10	Settlement Date (Julian)	Insert By MyClear	Numeric	3	76-78	
11	Orig. Stat. Code	M	Alphanumeric	1	79-79	1
12	Originating FI Identification	M	Alphanumeric	8	80-87	10000233
13	Batch No.	M	Numeric	7	88-94	0000001

The key fields or components of the Company / Batch Header Record (Return Entry) are briefly describes as follows. Please note that the key fields number 1 until 10 require no explanation in view that their definition is similar to the Original Entries.

i) Field 11: Originator Status Code – Mandatory

The Originator Status Code refers to the FI initiating the return entry. In this example, the Originator Status Code is "1" is used for the Return Entry. This will be the same if MyClear initiating the return entry.

ii) Field 12: Originating FI Identification – Mandatory

The Originating FI Identification is changed to the Routing Number of the institution initiating the Return Entry (the RFI of the original entry).

iii) Field 13: Batch Number

The Batch Number field carries the number assigned by the institution preparing the Return Entry. The Batch Number in this example is '0000001'.

(c) Entry Detail Record

All fields are the same as they were in Entry Detail Record of the original entry unless noted otherwise.

The components of the Entry Detail Record for Return entries are as shown below:

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'6'	1	01-01	6
2	Transaction Code	M	Numeric	2	02-03	21
3	Receiving FI Identification	M	Alphanumeric	8	04-11	10000227
4	Check Digit	M	Numeric	1	12-12	0
5	FI Account Number	M	Alphanumeric	17	13-29	19650887326
6	Amount	M	$$$$$$$$cc	10	30-39	00002000000
7	Individual Identification Number	O	Alphanumeric	15	40-54	3918
8	Number of Addenda	M	Numeric	4	55-58	0004
9	Beneficiary Name	M	Alphanumeric	16	59-74	GRACE MCGOWAN
10	Reserved	O	Alphanumeric	2	75-76	
11	Discretionary Data	O	Alphanumeric	2	77-78	
12	Addenda Record Indicator	M	Numeric	1	79-79	1
13	Trace Number	M	Numeric	15	80-94	100002330000001

Some of the key fields or components of the Entry Detail Record (Return Entry) are briefly describes as follows:

i) Field 2: Transaction Code – Mandatory

The Transaction Code for Return Entries must be '21' for credit return while '26' is used for debit return.

ii) Field 3: Receiving FI Identification – Mandatory

The Receiving FI Identification field contains '10000227' which is the Routing Number of the institution receiving the returned entry.

iii) Field 4: Check Digit – Mandatory

The Check Digit is calculated based on the Receiving FI Identification based on the Routing Number of 10000227 (the institution receiving the return). In our example, the Check Digit is '0'.

iv) Field 8 : Number Of Addenda Records – Mandatory

As the number of addenda records will need to be changed i.e. from multiple addenda records for 622 transaction to only 1 addenda record for 621 transaction

v) Field 12: Addenda Record Indicator – Mandatory

The Addenda Record indicator is changed to '1' to indicate that an addenda is carried with this entry. Note, this field must be always "1" when an OFI or MyClear populating a return entry.

vi) Field 13: Trace Number – Mandatory

The Trace Number is generated by the institution preparing the return. In our example, the Trace Number is '100002330000001'.

(d) Addenda Record

An Addenda Record is a must for return entries. The Addenda Record carries the original entry trace number and the Routing Number of the RFI (original entry). The definitions of all fields are the same as the original entry unless stated otherwise.

The components of the Addenda Record for Return entries are shown below:

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'7'	1	01-01	7
2	Addenda Type Code	M	'99'	2	02-03	99
3	Return Reason Code	R	Alphanumeric	3	04-06	R01
4	Original Entry Trace Number	M	Numeric	15	07-21	100002270000301
5	Date Of Death	O	YYMMDD	6	22-27	
6	Original Receiving FI Identification.	M	Alphanumeric	8	28-35	10000227
7	Addenda Information	O	Alphanumeric	44	36-79	
8	Trace Number	M	Numeric	15	80-94	100002330000001

Some of the key fields or components of the Addenda Record (Return Entry) are briefly describes as follows:

i) Field 2: Addenda Type Code – Mandatory

For the Addenda Type Code must always contain "99" – Automated return entry addenda record.

ii) Field 3: Return Reason Code – Mandatory

A standard code used by MyClear or RFI to describe the reason for returning an entry.

iii) Field 4: Original Entry Trace Number – Mandatory

The Original Entry Trace Number field contains '100002270000301' which is the Trace Number of the Original Entry in our example.

The RFI can only see MyClear trace number at the original entry. When return occurs, MyClear will reinstate the original trace number of the original entry from the OFI.

iv) Field 5: Date of Death – Optional

The Date of Death is to be supplied on those entries being returned in the automated return item format for reason of death (Return Reason Codes R14 or R15).

v) Field 6: Original Receiving FI Identification – Mandatory

Original Receiving FI Identification must contain the information Field 3: Receiving FI Identification of the Original Entry Detail Record.

vi) Field 7: Addenda Information – Optional

Addenda Information is associated with the immediately preceding Entry Detail Record. It is used by the RFI to relay explanatory information that is required with the return reason code.

vii) Field 8: Trace Number

The Trace Number field is assigned by the FI originating the return. In this example, the trace number is '100002330000001'.

(e) Company / Batch Control Record

The Company / Batch Control Record summaries the information contained in the batch. It contains the counts, hash totals and total dollar controls for the proceeding detail entries in a particular batch.

The components of the Company / Batch Control Record for Return entries are shown below:

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'8'	1	01-01	8
2	Service Class Code	M	Numeric	3	02-04	220
3	Entry / Addenda Record	M	Numeric	6	05-10	000002
4	Entry Hash	M	Numeric	10	11-20	0005999999
5	Total Debit Entry RM Amount	M	$$$$$$$$$$cc	12	21-32	00000000000
6	Total Credit Entry RM Amount	M	$$$$$$$$$$cc	12	33-44	000000030000
7	Company Ident.	M	Alphanumeric	10	45-54	1047777779
8	Message Authentication	O	Alphanumeric	19	55-73	
9	Reserved	N/A	Blank	6	74-79	
10	Orig. FI Ident.	M	Alphanumeric	8	80-87	10000233
11	Batch Number	M	Numeric	7	88-94	0000001

Note: The definitions of all fields are the same as they were in the Company / Batch Control Record of the Original Entries.

(f) File Control Record

The File Control Record summarizes the information carried in the Company / Batch Control Records. It contains amount, entry and hash total accumulations from the Company / Batch Control Records in the file.

The components of the File Control Record for Return entries are shown below:

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'9'	1	01-01	9
2	Batch Count	M	Numeric	6	02-07	000002
3	Block Count	M	Numeric	6	08-13	000001
4	Entry / Addenda Count	M	Numeric	8	14-21	00000004
5	Entry Hash	M	Numeric	10	22-31	0011999998
6	Total Debit Entry RM Amount	M	$$$$$$$$$$cc	12	32-43	000000000000
7	Total Credit Entry RM Amount	M	$$$$$$$$$$cc	12	44-55	000000030000
8	Reserved	M	Blank	39	56-94	

Note: The definitions of all fields are the same as they were in the File Control Record of the Original Entries.

SECTION 3: MYCLEAR IBG RETURN CODES

3.1 Automated Detail Return Entry

MyClear use standard return reason codes to provide exceptions to its IBG process. These error conditions will never cause the entire file to be rejected but will always cause the entry detail record to be returned using an Addenda Record with an Addenda Type Code of "99".

(a) Return Codes to be used by MyClear in Return Entries

R13	***RFI Not Qualified to Participate*** • RFI not qualified to participate or the Transit / Routing Number is not valid.
R18	***Improper Effective Entry Date*** • Batch Date Not Current Date.
R19	***Amount Field Error*** • Amount field is non-numeric. • Amount field is zero in an entry other than Return entry.
R25	***Addenda Error*** • Addenda Record Indicator value is not 0 or 1. • Addenda Type Code is not valid if not equal to "99" on Automated Return.
R27	***Trace Number Error*** • Original Entry Trace Number is not present in the Addenda Record on an automated return.
R28	***Transit / Routing Check Digit Error*** • The Check Digit for a Transit / Routing Number is not valid.
R68	***Untimely Return*** • The return entry has not been sent within the timeframe established by the rules.

(b) Return Codes to be used by RFI in Return Entries

The RFI may return entries for any reasons provided it uses an appropriate Return Reason Code. If no exact Return Reason Code is specified, the RFI may use the code which most closely approximates the reason for return.

R02	***Account Closed*** • A previously active account has been closed by action of the customer or the RFI.
R03	***No Account / Unable to Locate Account*** • The account number structure is valid but the account number does not correspond to the individual identified in the entry, or the account number designated is not an open account.
R04	***Invalid Account Number*** • The account number structure is not valid. The entry may fail the check digit validation or may contain an incorrect number of digits.
R06	***Returned per OFI's Request*** • The OFI has requested that the RFI return the ACH entry.
R07	***Consumer Advises Not Authorised*** • The RFI has been informed by its customer, that the Originator of a given transaction has not been authorised to debit his account.
R10	***Authorisation Revoked by Customer*** • A RFI customer has revoked the authorisation previously provided to the Originator for the particular transaction.
R12	***Branch sold to Another FI*** • A financial institution may continue to receive entries destined for an account at a branch that has been sold to another financial institution. RFI should return the entry to the OFI.

R14	***Account Holder Deceased (Representative Payee Deceased or Unable To Continue in that Capacity)*** • No additional payments should be sent to the deceased account holder. If the account is in the name of a Representative Payee, guardian or trustee, a beneficiary may still be alive and may be entitled to future deposits in another account.
R15	***Beneficiary Deceased (Beneficiary or Account Holder – Other than a Representative Payee - Deceased)*** • The beneficiary entitled to benefits is deceased.
R16	***Account Frozen*** Bankrupt Under Recall Under Legal Action Garnished Frozen Accountee insane
R17	***File Record Edit Criteria*** • Some fields that are not edited by MyClear are edited by the RFI. If the entry cannot be processed by RFI, the field(s) causing the processing error must be identified in the addenda record information field of return.
R20	***Non-Transaction Account / Dormant Account (EPF)*** • The ACH entry destined for a non-transaction account would include either an account against which transactions are prohibited or limited.
R21	***Invalid Company Identification*** • The identification number used in the Company Identification Field is invalid.
R22	***Invalid Individual ID Number*** • The Individual ID Number is used by the Receiver to identify the account. The Receiver has indicated to the RFI that the number with which the Originator was identified is not correct.

R23	***Credit Entry Refused by Receiver*** • A minimum amount required by the Receiver has not been remitted. • The exact amount required has not been remitted • The account is subject to litigation and the Receiver will not accept the transaction. • Acceptance of the transaction results in an overpayment. • The Originator is not known by the Receiver. • The Receiver has not authorised this credit entry to this account.
R24	***Duplicate Entry*** • The RFI has received what appears to be a duplicate entry. This code should be used with extreme care. The RFI should be aware that if a file has been duplicated, the Originator may have already generated a reversal transaction to handle this situation.
R29	***Corporate Customer Advises Not Authorised*** • The RFI has been notified by its customer (receiver) that the Originator of a given transaction has not been authorised to debit the Receiver's account.

3.2 Unresolved Returns

The following reasons will result into unresolved returns:

a) Incorrect Trace Number

The Trace Number found in the addenda record of the return entry is different from the Trace Number of the original entry.

b) Incorrect Dollar Amount

The dollar amount in the Entry Detail Record of the Return Entry is different from the dollar amount of the original entry.

c) Incorrect Account Number

The Account Number in the Entry Detail Record of the Return Entry is different from the Account Number of the original entry.

d) Return Entries Submitted More Than Once

If the FI submits the same return entries more than once.

e) Return Code Other Than Specified Above

If the FI submits the return code other than specified above inclusive of spaces. This condition also applies if the FI submits the return codes that are be used by MyClear in its Return Entries.

Note: The IBG entries will be kept by MyClear IBG System for a period in line with the duration agreed in the IBG System Operating Manual.

SECTION 4: TRANSMITTAL TOTAL / REGISTER

In MyClear IBG system, Transmittal Total / Register is important. It is mandatory for OFI to send transmittal total together with IBG files. Even if, there is no transaction for a particular day, OFI is still required to send a transmittal total and a blank IBG file.

MyClear will validate the transmittal total with the IBG files during processing. The following fields are being validated by the IBG system:

- Transit / Routing Number
- Date
- Window 1 or 2
- Debit Count
- Debit amount
- Credit Count
- Credit Amount
- Total Hashing

If one of the above fields is / are invalid or incorrect, the whole file will be rejected.

Following is the file format for the Transmittal Total / Register for IBG.

Description	**Fixed Value**	**Position**	**Validated**	
			Yes	**No**
Record 1				
Blanks		1 - 57		√
Text	TRANSMITTAL REGISTER	58 - 77		√
Blanks		78 - 133		√
Record 2				
Blanks		1 - 51		√
Text	ORIGINATING BANK:	52 - 68		√
Blanks		69		√
Bank name		70 - 73		√
Bank Transit Routing Number		75 - 83	√	
Blanks		84 - 133		√

Record 3				
Blanks		1		√
Text	DATE	2 - 5		√
Blanks		6 - 13		√
Text	:	14		√
Blanks		15 - 16		√
Current Date (DD/MM/YY)		17 - 26	√	
Blanks		27 - 133		√
Record 4				
Blanks		1		√
Text	TIME	2 - 5		√
Blanks		6 - 13		√
Text	:	14		√
Blanks		15 - 16		√
Time (HHMM)		17 - 20		√
Blanks		21 - 133		√
Record 5				
Blanks		1		√
Text	WINDOW TIME	2 - 12		√
Blanks		13		√
Text	:	14		√
Blanks		15 - 16		√
Window	1 or 2	17	√	
Text	ST or ND	18 - 19		√
Blanks		20		√
Text	WINDOW	21 - 26		√
Blanks		27 - 133		√

Record 6				
Blanks		1 - 25		√
Text	TOTAL DEBITS	26 - 37		√
Blanks		38 - 91		√
Text	TOTAL CREDITS	92 - 104		√
Blanks		105 - 114		√
Text	TOTAL HASHING	115 - 128		√
Blanks		129 - 133		√
Record 7				
Blanks		1 - 25		√
Text	----------	26 - 37		√
Blanks		38 - 91		
Text	----------	92 - 104		√
Blanks		105 - 114		√
Text	----------	115 - 128		√
Blanks		129 - 133		√
Record 8				
Blanks		1 - 8		√
Text	COUNT	9 - 13		√
Blanks		14 - 40		√
Text	AMOUNT	41 - 46		√
Blanks		47 - 65		√
Text	COUNT	66 - 70		√
Blanks		71 - 98		√
Text	AMOUNT	99 - 104		√
Blanks		105 - 133		√

Record 9				
Blanks		1 - 6		√
Debit count (999,999)		7 - 13	√	
Blanks		14 - 32		√
Text	RM	33 - 34		√
Blanks		35		√
Debit Amount (9,999,999,999.99)		36 - 51	√	
Blanks		52 - 63		√
Credit count (999,999)		64 - 70	√	
Blanks		71 - 90		√
Text	RM	91 - 92		√
Blanks		93		√
Credit Amount (9,999,999,999.99)		94 - 109	√	
Blanks		110 - 121		√
Total Hashing (9999999)		122 - 128	√	
Blanks		129 - 133		√

SECTION 5: RECONCILIATION FILE FORMAT

Explanation of each field is listed below. It is actually the NACHA format for the detail entry and addenda records.

	1	2	3	4	5	6	7	8	9	10	11
DATA ELEMENT NAME	REC. TYPE CODE	TRANS. CODE	RECEIVING FI IDENT	FI ACCOUNT NUMBER	AMOUNT	INDIVIDUAL INDENT. NUMBER	NO OF ADDENDA	INDIVIDUAL NAME	RESERVED SPACE	TRACE NUMBER	Addenda Record
Field Inclusion Req'ment	M	M	M	M	M	O	M	O	M	M	R
Content	'6'	Numeric	Alphanumeric	Alphanumeric	$$$$$$$$cc	Alphanumeric	Alphanumeric	Alphanumeric	Numeric	Numeric	All Details That Existed In The 1st Addenda Record
Length	1	2	9	17	10	15	22	2	1	15	94
Position	01-01	02-03	04-12	13-29	30-39	40-54	55-58	59 - 73	74-76	80-94	95-188

Note:

- Banks may use this file to reconcile against their bank's database against MyClear collection and distribution file.
- The length of the file is 188.
- The files will be produced after every window and it will be standard for all the banks.

SECTION 6: APPENDICES

6.1 APPENDIX A – Specifications For Data Acceptance

(a) File Acknowledgement

MyClear IBG System generates an acknowledgement for every file submitted for processing. The acknowledgement is in the form of report transmitted or made available to the OFI electronically. At a minimum, the acknowledgement includes information from the following fields within the RFI File Header and File Control Records:

1. Immediate Origin
2. Immediate Origin Name
3. File Creation Date
4. File Creation Time
5. File ID Modifier
6. File Entry / Addenda Count
7. Total Debit Entry Dollar Amount in File
8. Total Credit Dollar Amount in File
9. File Batch Count

The acknowledgement also contains the date and time the file was processed by MyClear and, if the file was accepted, the reason for the rejection of one or more batches are included. If the file was rejected, but one or more batches were rejected by MyClear, the acknowledgement will also contain the following information about each rejected batch:

1. Originating FI Identification
2. Originating FI Name
3. Company Name
4. Company Identification
5. Batch Number
6. Effective Entry Date
7. Batch Entry / Addenda Count
8. Total Debit Dollar Amount
9. Total Credit Dollar Amount
10. Reason for batch Rejection

(b) Automatic File Rejection

The following error conditions will always cause the entire file to be rejected:

i) The file cannot be successfully read, e.g. data read failures, improper block size, presence of invalid header labels, and hardware / software error checks indicated.

ii) The file contains any "undefined" record type.

iii) The File Header Record does not contain the number of a valid Sending Point or MyClear (a point defined on MyClear routing table file).

iv) The file is "out-of-balance, i.e. one or more of the following conditions exist:

a. The summation of the counts, hash totals and total amount on Company / Batch Control Records does not agree with the File Control Record.

b. The actual number of blocks or batches in the file does not agree with the File Control Record counts.

v) The sequence of records in the file is incorrect.

vi) The Immediate Origin, File Creation Date, File Creation Time and File ID Modifier are equal to that of a previously accepted file.

vii) The Transaction Codes in Entry Detail Records are invalid.

(c) Automatic Batch Rejection

The following conditions will cause a particular batch to be rejected, with but with criteria that constitute to the decision of file rejection is not met.

i) The batch contains invalid characters

ii) The Amount field in an Entry Detail Record is non-numeric.

iii) The sequence of records in the batch is incorrect.

iv) The batch is "out-of-balance," i.e. the counts, hash totals or dollars in the Company / Batch Control Records do not agree with the summation of the entries for the batch.

v) The Company Name is all spaces or all zeros.

vi) The Company Entry Description Entry Description is all spaces or all zeros.

vii) The Company Identification is all spaces or all zeros.

viii) The Standard Entry Class Code in the Company / Batch Header Record is other than a currently valid code.

ix) The first eight positions of the Trace Number in an Entry Detail Record are not the same as the OFI Transit / Routing Number in the corresponding (immediately preceding) Company / Batch Header record.

x) The Transaction Code in an Entry Detail Record is not valid for the service Class Code in the Company / Batch Header Record.

xi) The actual number of addenda records is not equal to the Number of Addenda Records in the Entry Detail Record.

6.2 APPENDIX B – Sample Calculation of Hashing

IBG File Format originated by FI

```
101 10011119 10000XXXY0406281056Q094101Any OFI
5200Any RFI                                  100002270 CTXIBG TRAN          040624000110000XXX0000001
6211000022705554443332220000001001750101060202 TAN PEI LING                010000XXX0248722
99R021000022702481050000010000XXX                                          10000XXX0000026
820000000200000009160000000000000000000001001100000XXXY                   10000XXX0000001
5200Another RFI                              100002335 CTXIBG TRAN          040624000110000XXX0000002
6211000023351530388303290000223582570220-11-5307 AHMAD BIN AWANG           110000XXX0000032
799R231000023301178090000010000XXX                                         10000XXX0000032
820000000200000009040000000000000000022358210000XXXY                      10000XXX0000002
900000100000200000004000000182000000000000000000224583
```

Batch 1
Batch 2

	Routing No								Account No												Amount										
	1	0	0	0	0	2	2	7	5	5	5	4	4	4	3	3	3	2	2	2	0	0	0	0	0	1	0	0	1	
Weight	3	7	1	5	3	7	1	5	3	7	1	5	3	7	1	5	3	7	1	5	3	7	1	5	3	7	1	5	3	7	1
Multiplied	3	0	0	0	0	14	2	35	15	35	5	20	12	28	3	15	9	14	2	10	0	0	0	0	0	0	5	0	0	1	**Sum = 228**

Square Multiplication **= 228x228 = 51984**
Batch control sum = 51984
Last two digits = 84
Control value **(1000 - Last two digits)** = 916

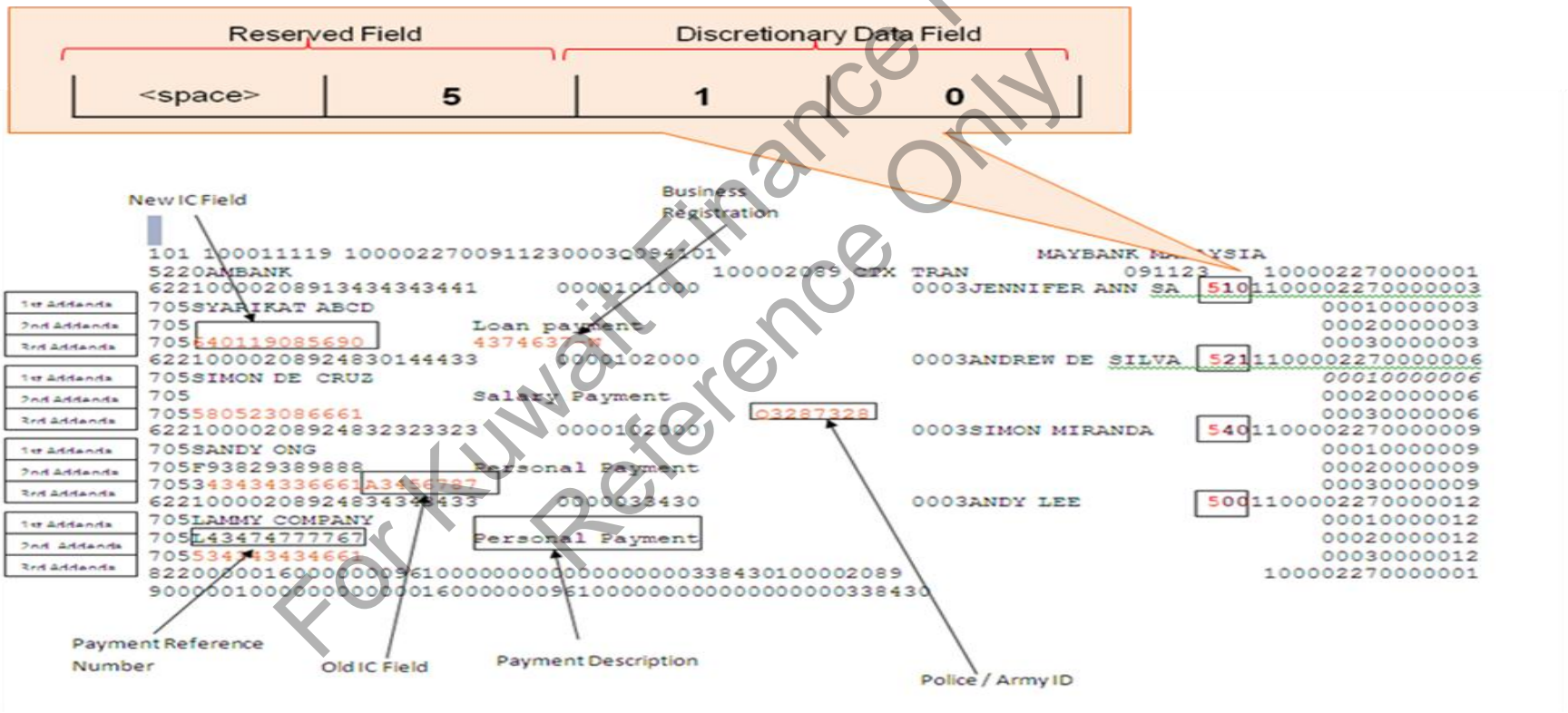
a. Control value of Batch 1 **is** 916**, which should be stored in each of batch control record under column** Entry Hash**.**

b. Control value of Batch 2 **is** 904**.**

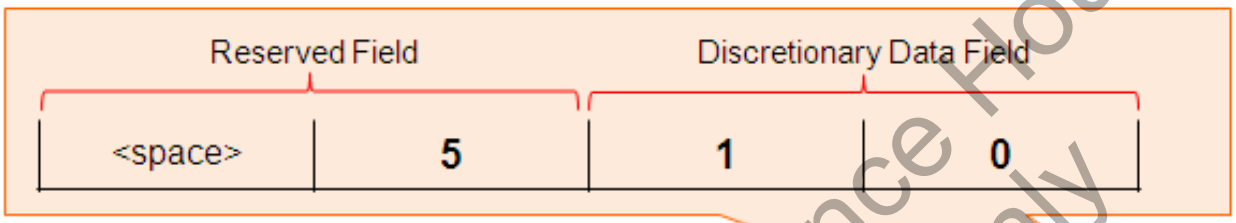
c. Control value in all batches **should then be added (916 + 904 =** 1820**) and stored in the file trailer / control record under column** Entry Hash**.**

6.3 APPENDIX C – Sample File of Normal Credit 2nd Validation Transactions

1st Addenda ► Applicant Name
2nd Addenda ► Payment Reference Number and Description
3rd Addenda ► Identification Numbers



6.4 APPENDIX D – Sample File of Normal Credit 2nd Validation Returns Transaction

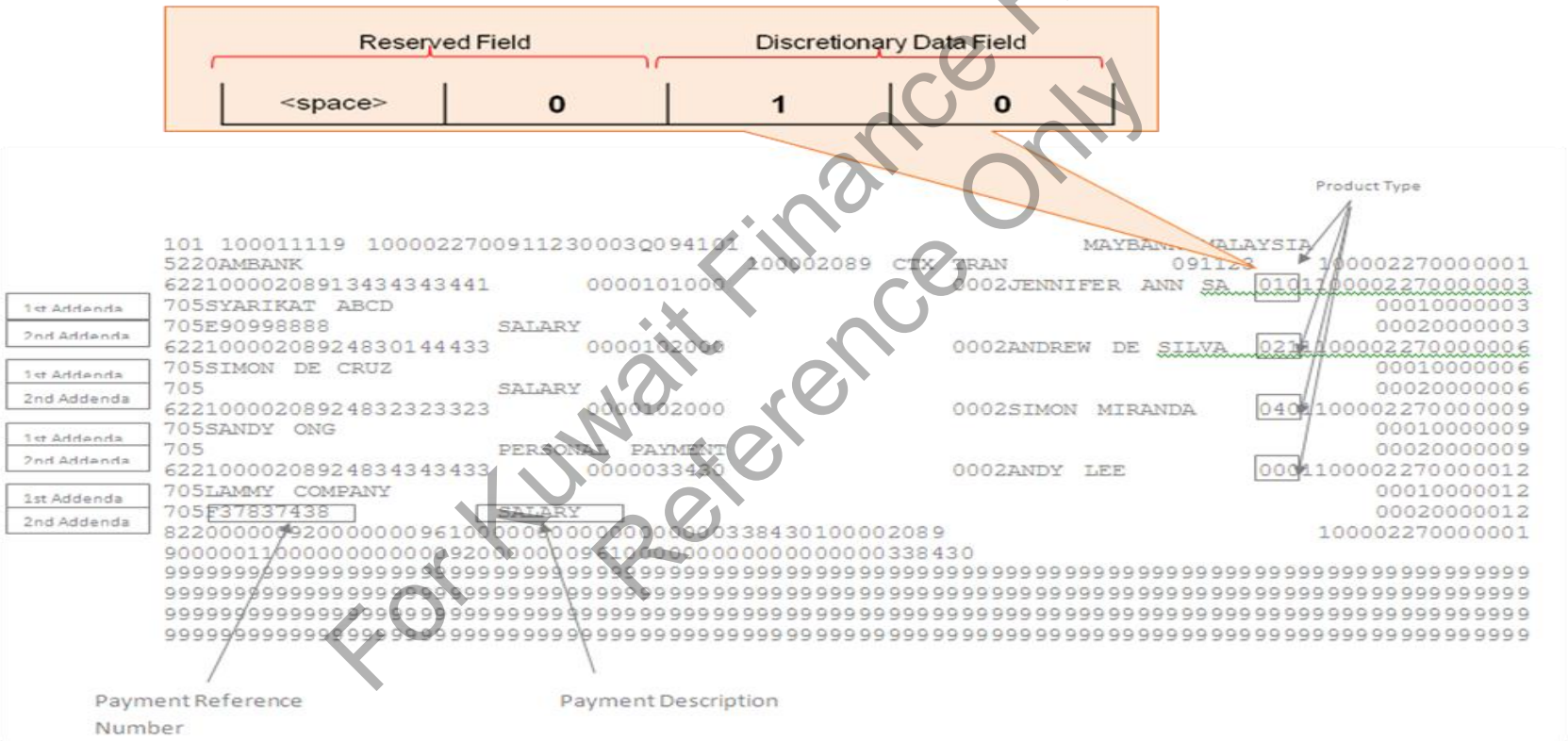


Product Type

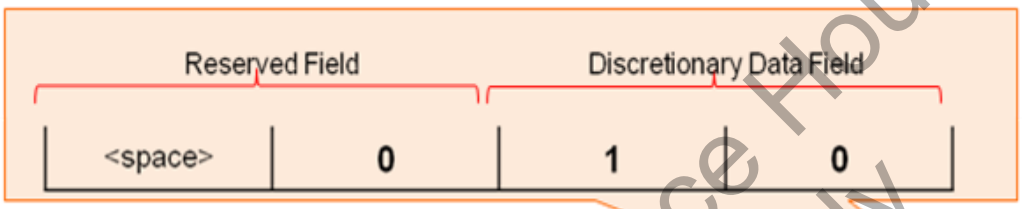
```
101 100011119 1000020891101100003Q094101MEPS                    AMBANK
5220MAYBANK                          100002270 CTX TRAN              110107   100002080000001
6211000022701343434344 41      0000101000                0002JENNIFER ANN      5101100002080000003
799R04100002270000006                 INVALID ACCOUNT NUMBER                        00010000003
6211000022702483014443 3       0000102000                0002ANDREW DE SILVA   5211100002080000006
799R03100002270000010                 ACCOUNT NOT FOUND                             00010000006
822000000400000009710000000000000000020300010000227 0                             100002080000001
900000100000000000004000000097100000000000000000203000
99999999999999999999999999999999999999999999999999999999999999999999999999999999999999999999999999999
99999999999999999999999999999999999999999999999999999999999999999999999999999999999999999999999999999
```

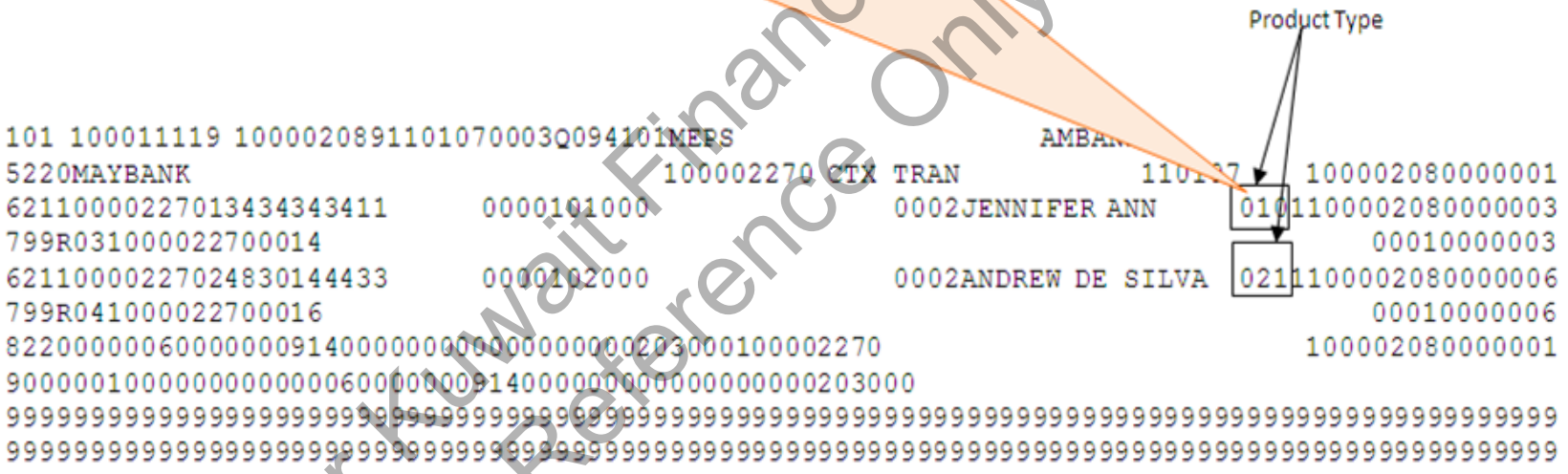
6.5 APPENDIX E – Sample File of Normal Credit Non-2nd Validation Transactions

1st Addenda Record ► Applicant Name
2nd Addenda Record ► Reference No. & Payment Description



6.6 APPENDIX F – Sample File of Normal Credit Non-2nd Validation Return Transactions





6.7 APPENDIX G – Revised 2nd Addenda Record (effective 30 June 2013)

2nd Addenda

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'7'	1	01-01	7
2	Addenda Type Code	M	'05'	2	02-03	05
3	Reference Number	O	Alphanumeric	20	04-23	12345677
4	**Recipient Reference**	**M**	Alphanumeric	20	**24-43**	**12345677**
5	Reserved	O	Alphanumeric	40	44-83	<blank>
6	Addenda Sequence Number	M	Numeric	4	84 - 87	0002
7	Entry Detail Sequence Number	M	Numeric	7	88-94	0000001

Notes on the changes:

- Field 4 is changed to become "Recipient Reference" as a "Mandatory" field.
- Field 5 is added to complete the specification. The field is not used currently.

6.8 APPENDIX H – Revised 1st Addenda Record (effective 31 December 2013)

1st Addenda

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'7'	1	01-01	7
2	Addenda Type Code	M	'05'	2	02-03	05
3	Applicant / Remitter Name	**M**	Alphanumeric	80	04-83	Sharon Wee
4	Addenda Sequence Number	M	Numeric	4	84-87	0001
5	Entry Detail Sequence Number	M	Numeric	7	88-94	0000001

Notes on the changes:

- Field 3 "Applicant / Remitter Name" is changed to a "Mandatory" field.

6.9 APPENDIX I – Revised 2nd Addenda Record (effective 31 December 2013)

2nd Addenda

Field	Data Element Name		Contents	Length	Position	Example
1	Record Type Code	M	'7'	1	01-01	7
2	Addenda Type Code	M	'05'	2	02-03	05
3	**Payment Description**	O	Alphanumeric	20	04-23	Loan Payment
4	**Recipient Reference**	**M**	Alphanumeric	20	**24-43**	**12345677**
5	Reserved	O	Alphanumeric	40	44-83	<blank>
6	Addenda Sequence Number	M	Numeric	4	84 - 87	0002
7	Entry Detail Sequence Number	M	Numeric	7	88-94	0000001

Notes on the changes:

- Field 3 is changed to become "Payment Description".