FUJ00002112

Document Title: Horizon to POL MIS AIS

Document Type: Application Interface Specification

Release: INT14

Abstract: AIS for file sent from Horizon to POL containing Transaction Details (including Tender Lines and Events) for use in POL MIS.

Document Status: Approved

Originator & Dept: Roger Barnes SI Design

Contributors: Gareth Jenkins

.

Internal Distribution: See Section 0.2

External Distribution: See Section 0.2

Approval Authorities:

Name	Position	Signature	Date
Gareth Jenkins	TD, RASD, Fujitsu Services		
Ian Trundell	Post Office Ltd.		
Graham Allen	Development		

FUJ00002112

0.0 Document Control

0.1 Document History

Version No.	Date	Reason for Issue	Associated CP/PinICL
0.1	31-03-2004	Initial draft	
0.2	06-05-2004	Draft for review	
0.3	04-06-2004	Further draft following feedback from Post Office Ltd.	
1.0	11-06-2004	Final version for Approval	
1.1	22-10-2004	Draft for CR 272 changes	CP 3843
1.2	20-01-2005	Clarification of how Bureau de Change records and Reversals are handled	
1.3	25-01-2005	Changes to Review list to get it past Document Management	
2.0	23-02-2005	Final version for Approval	
2.1	16-05-2005	Clarification in response to PEAKs	PC115622 PC117848
3.0	03-06-2005	Final version for Approval	
3.1	13-02-2006	Addition of Business Date field to Sub File Header Record	CP4170
3.2	14-03-2006	Changes as a result of review	
4.0	27-03-2006	For Approval	
4.1	11/04/2006	3.2: End of Day is now always 7pm Remove references to OBCS Remove section B2 and B4 relating to OBCS (placeholder paragraphs left) Amended 3.3.6 to include new record type "PDR" Add data for group 10 events to B.7.3 Merged B.7.2 into B.7.1 Added new B.7.2 detailing cut-off events	CP 4061 CP 4173
5.0	09/05/2006	Issued for Approval	
5.1	11/06/2007	Section B6 amended. PAN field changed in order to comply with PCI regulation. Pan now to contain first 6 characters of PAN followed by zeros then the final 4 characters of the PAN.	
5.2	12/06/2007	Updated Reviewers & Approvers – Issued for review	

FUJ00002112

5.3	18/01/2008	Change to forward additional APS data through to POL MIS. In addition provision is made in here to forward further data in anticipation of approval of CP4478 (CP0045) for HNG-X	CP4461
6.0	06/05/2008	Issued for Approval	
6.1	18/11/2008	TRANSACTION_TYPE_FIELD in Section B6 now to be sent for DCS and ETU transactions as well as Network Banking transactions. METHOD_OF_DATA_CAPTURE changed to not exclude fields sent to DCS and ETU BANK_TRANSACTION_ID changed to not exclude fields sent to DCS and ETU Card Impounded changed to not exclude sending to DCS and ETU 6,7,and 8 removed from method of data capture Incorrect record size added to table A3 Statement "Only sent for clients that take additional data" removed	PC0168806
7.0	17/09/2009	For Approval	

0.2 Review Details

Review Comments by :	
Review Comments to :	roger.barnes GRO

Mandatory Review Authority	Name
DU Test Designer	Peter Robinson
CS SSC Manager	Mik Peach*
POL	Torstein Godeseth*, Sally Rush*
TD, RASD, Fujitsu Services	Gareth Jenkins*
Optional Review / Issued for Information	
DU Team Leader	David Harrison
SI Development Manager	Roy Birkinshaw
CS Head of Service Management	Steve Denham
CS Network Service Manager	Alex Kemp
CS Business Continuity Manager	Tony Wicks

FUJ00002112

CS Reference Data Introduction Mgr (RD IFS only)	Kevin McKeown
CS Infrastructure & Availability Manager	Liz Melrose
CS Ops & Data Centre Manager	Peter Thompson
SV&I Manager	Sheila Bamber

(*) = Reviewers that returned comments

0.3 Associated Documents

Ref.	Horizon Reference	Version	Date	Title	Source
CTS AIS	EA/IFS/005			Horizon to POL Client Transmission Summaries AIS	Fujitsu Services
DP	EA/DPR/004			IMPACT Release 3 Design Proposal	Fujitsu Services
TIS	TI/IFS/008			Horizon to Post Office Technical Interface Specification	Fujitsu Services
OLA				Operational Level Agreement	
SFS	RS/FSP/001			Security Functional Specification	Fujitsu Services
TIP AIS	TI/IFS/001	7.0	31 July-02	Pathway to TIP Application Interface Specification	Post Office
RDA IS	BP/IFS/010			Application Interface Specification Reference Data	Post Office
RDR &V				Reference Data Rules and Values [Note this may be release-specific]	Post Office
Doc Flow	NB/IFS/004			Network Banking Message Flows and Interfaces	PVCS

Unless a specific version is referred to above, reference should be made to the current approved versions of the documents.

0.4 Abbreviations/Definitions

Abbreviation	Definition
AIS	Application Interface Specification
Branch	Contractual term for what has previously been known as an Outlet
CR/LF	Carriage Return/Linefeed

FUJ00002112

EoD	End of Day. It is the daily cut off event at each branch which separates one trading day from the next. It is the point at which harvesting (the collection of the day's transaction details from the branch to the central Horizon systems) may start
EPOSS	Electronic Point of Sale Service
FTMS	File Transfer Managed Service
FTP	File Transfer Protocol
MIS	Management Information System
OBCS	Order Book Control Service
OLA	Operational Level Agreement
Outlet	See Branch.
PDR	Postmaster's Dailey Report
POL	Post Office Limited
POL MIS	The system that provides management information reports on transactions carried out at the counters to POL
RASD	Requirements, Architecture, Solutions, Design – a unit within Fujitsu Services, Post Office Account team
TIP	Transaction Information Processing – system within POL. The system being replaced by POL MIS
TIS	Technical Interface Specification

FUJ00002112

0.5 Changes in this Version

Version	Changes
6.1	TRANSACTION_TYPE_FIELD in Section B6 now to be sent for DCS and ETU transactions as well as Network Banking transactions. METHOD_OF_DATA_CAPTURE changed to not exclude fields sent to DCS and ETU BANK_TRANSACTION_ID changed to not exclude fields sent to DCS and ETU Card Impounded changed to not exclude sending to DCS and ETU 6,7,and 8 removed from method of data capture Incorrect record size added to table A3 Statement "Only sent for clients that take additional data" removed
6.0	Issued for Approval
5.3	Addition of APS fields and additional data as specified in CP 4461
5.2	Updated Reviewers & Approvers – Issued for review
5.1	Section B6 amended. PAN field changed in order to comply with PCI regulation. Pan now to contain first 6 characters of PAN followed by zeros then the final 4 characters of the PAN.
5.0	Issued for Approval
4.1	Remove references to OBCS Remove section B2 and B4 relating to OBCS (placeholder paragraphs left) Amended 3.3.6 to include new record type "PDR" Add data for group 10 events to B.7.3 Merged B.7.2 into B.7.1 Added new B.7.2 detailing cut-off events
4.0	Submitted for Approval
3.2	Change to record length in 3.3.4 and changes to review list as result of review.
3.1	Addition of Business Date field to Sub File Header Record
3.0	Status changed to Approved and removal of change markings.
2.1	Clarification of the use of Quantity on Events Clarification of Event Type 916 [DN: There was an interim version (2.1a) which included a proposal for CPs 3926 and 3974. Since those CPs have now been withdrawn, the text associated has been removed and only the PEAK clarifications now remain in this version of the AIS. Changes made in the interim version are in red and in the formal version in violet.]

FUJ00002112

2.0	Status changed to Approved and removal of change markings.
1.3	Changes to distribution list only and are coloured in violet.
1.2	Changes from version 1.1 are in coloured text or strikeout. Changes are as follows: ▪ Neil Fagan replaced by Sally Rush as the POL Reviewer ▪ 3.3.6: Clarification of NB14 regarding inclusion of BDC Existing Reversals ▪ 3.3.6: Addition of NB14 indicating that OBCS existing reversals are provided as OTX records rather than OBP records since OBCS specific attributes are not included in the reversal ▪ App C: Note added stating that the info is for guidance only and is not maintained.

0.6 Changes Expected

Changes
None.

FUJ00002112

0.7 Table of Contents

FUJ00002112

FUJ00002112

1.0 Introduction

This document is intended for Release S80. It is based on the document Pathway to TIP AIS [TIPAIS], modified as follows:

(a) Pathway replaced by Fujitsu Services

(b) The term Remote FTMS server used in place of Gateway

(c) Removal of Cash Account records (since no longer required)

(d) Removal of Client Transmission Summaries (which are included in [CTSAIS])

(e) Updated to reflect additional; transaction details for Bureau de Change, Debit Card and Network Banking

(f) The term Transactions Detail is taken to cover transactions, tender lines and events.

1.1 Purpose

The purpose of this document is to:

- Specify the interface between Horizon and the remote FTMS server at Huthwaite for daily files containing transactions that POL require for management information
- Provide the development teams with sufficient detail to develop this interface between Horizon and the remote FTMS server
- Provide a consistent communications document for use amongst the teams that have the responsibility to develop and support the components comprising the application.

1.2 Scope

This document describes the format of the data files to be passed across the interface between Horizon and the remote FTMS server at Huthwaite and applies to those transactions that have taken place at branch counters, captured by EPOSS, which POL wishes to record in their data warehouse in order to support a management information capability.

It includes any acceptance / rejection rules for the physical transmission of data and gives a brief indication of the operational procedures.

The onward transmission or processing of these transactions beyond the remote FTMS server is outside the scope of this AIS.

Additional data concerning hardware and software is contained within the document Horizon to Post Office Technical Interface Specification [TIS].

1.3 Structure

This document has the following structure.

Section 2.0- gives an overview of the interface and its context

Section 3.0 – gives detailed descriptions of the data in terms of file and record layouts

Section 4.0 – provides estimates of data volumes transmitted across the interface

FUJ00002112

Section 5.0 – sets out rules for acceptance or rejection of the files transmitted from Horizon to the remote FTMS server at Huthwaite

Section 6.0 – describes security measures applicable to the interface

Section 7.0 – gives a brief description of the operational procedures required to support the interface

Appendices

These cover additional data appended to transaction detail records (e.g. reversals, events)

FUJ00002112

2.0 Overview of the Interface

2.1 Objectives

The objectives of the Horizon system transmitting files over this interface to the remote FTMS server at Huthwaite are:

- To provide a reliable transfer service from the Horizon Host to filestore in the remote FTMS server at Huthwaite (main or standby server as required)
- To push the daily transaction files required by POL for MIS from Horizon to the remote FTMS server at Huthwaite and provide feedback on performance in line with service levels
- To provide POL with the transaction data required, to be used by POL to update its data warehouse to be used to provide an in-house MIS service.

This File Transfer Managed Service (FTMS) provides a secure and reliable mechanism for transferring files both between Horizon systems, and between Horizon systems and external systems in a way that meets audit and service level requirements. It is compatible with EDG in that new FTMS channels do not require changes to FTMS functionality. A fuller description of the remote FTMS servers is given in the Horizon to Post Office Technical Interface Specification [TIS].

[DN: The [TIS] needs updating to refer to this interface e.g. OLA, volumetrics, directories]

2.2 Information Flow

The FTMS application is logically composed of two components: the FTMS source (or sending) component and the target (or receiving) component. The FTMS source pulls files from the sending system (shown by the double arrowhead in the diagram), processes them ready for transfer then pushes them to the FTMS target. Operation is automatic - the FTMS target receives the files, logs the delivery, confirms their integrity and delivers them to a location accessible by the receiving system in the required format.

The flow for Daily Transaction files is from the Horizon host system to a remote FTMS server at Huthwaite, for onward delivery within the POL estate. It is the responsibility of the target system (in this case POL MIS) to retrieve the files from the Remote FTMS server and transfer them to any system that it wishes to process them on. Similarly it is the responsibility of the target system to transfer any inbound files to the appropriate place on the Remote FTMS server for transmission to Horizon.

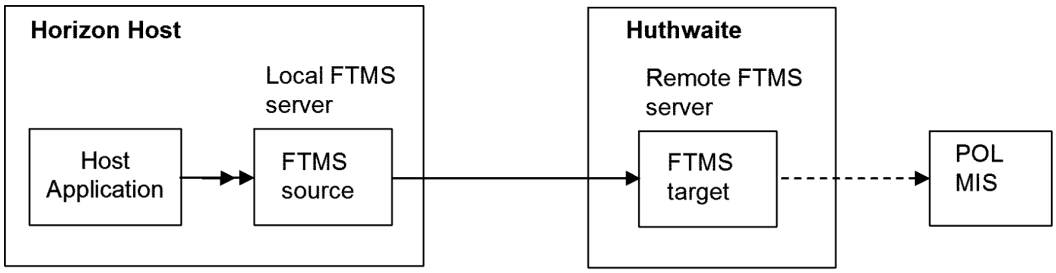


Figure 1 – Logical FTMS Link between Horizon Host and POL System (Huthwaite)

FUJ00002112

The FTMS service supports multiple channels, but the diagram above shows a simple one-way channel for simplicity, sending files from the Horizon host to a remote FTMS server from which a remote POL system can pick up the transferred files (shown as a dotted line to distinguish it as a host controlled activity). There is a flow from POL MIS to Horizon e.g. for error files.

The POL system is to provide an in-house MIS service based on a data warehouse

The transactional data from Horizon to POL MIS is bound by a transmission header record and a transmission trailer record. Between these will be a number of sub files - one per branch per 'trading day', meaning the period between successive Horizon End of Day events. See section 3.1 for more details.

Relevant headers, trailers and event records will be expected when no transactions have taken place at a branch on a trading day. Two or more sub-files would be expected if a previous day's sub-file(s) haven't been received by POL. POL will not expect to receive 'drip-fed' data in small groups of records. If a branch has not been fully harvested (i.e. up to and including Horizon End of Day) for any reason by Fujitsu Services, then POL will not expect a sub file. The exception to this rule is where Horizon detects that records need to be repaired before they will be accepted by POL, these records are held back until the repairs have been made (see section 3.3.2). The repaired records will be sent in a separate sub file in an Exception File for that branch and trading day (see section 3.3.2 NB3).

A sub file will be sent for every day where records are harvested from branches, including "Empty" sub files. An Empty sub file contains ONLY a sub file header, a sub file trailer and a single Transaction Details record (EVT) containing event code ID of 923 – Horizon End of Day, which indicates that no transactions have taken place, but that the branch has carried out the End of Day processing and the record has been harvested.

POL validates the data received and returns error files as appropriate – see section 5.0.

2.3 Derivation and Use of Data

The branch counter transactions data is produced from the Horizon host systems having been collected from all POL branches. The data represents individual transactions, including their settlement, and events (such as the Horizon End of Day).

2.4 Non-Computer Data

The only transactions that pass over the interface between Horizon and POL MIS are those computer-based transactions described in this AIS.

2.5 Technical Impact on Application

A new set of processes is required within Horizon to produce the transactions and to process any error files received back from the remote FTMS server.

This will replace the current feed from Horizon to TIP [TIPAIS].

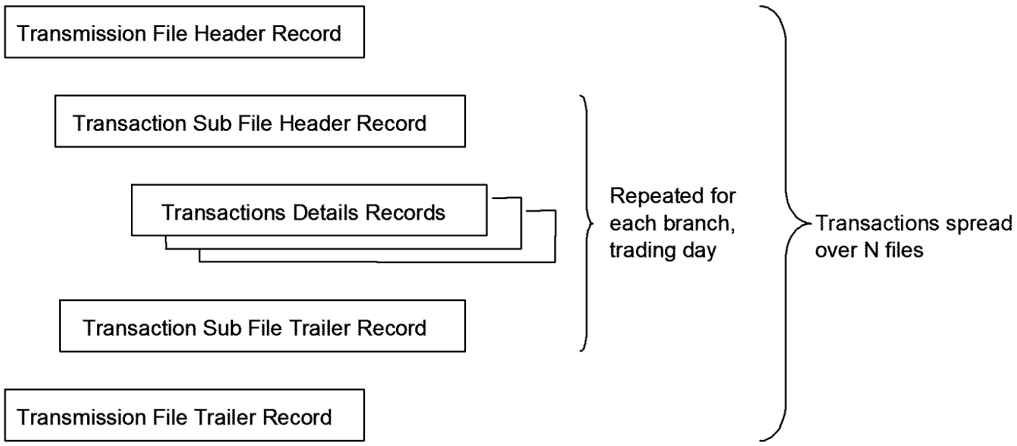
For other technical details see the [TIS].

FUJ00002112

3.0 File Structure and Data Items

3.1 File Structure

The file structure consists of:



The transactions data covers counter transactions, tender lines (how transactions are settled at the counter), and branch events. It is produced by the Horizon host systems from the individual data records collected from all branches for each trading day. The transactions data is the detailed set of all individual transactions carried out in each branch,.

The daily transactions are sent to POL spread over a number of files (currently up to 64 files per day) for load balancing purposes. Exception and re-sent files are sent separately.

Note that by end 2004, the number of branches will have reduced from 19,700 to 14,670 branches, but the number of files sent will not change, however the number of sub-files will reduce to reflect the number of active branches.

3.2 Transmission of File

The transaction files are delivered every calendar day including Sundays and all Bank Holidays, covering all branches.

POL requires transaction information for a full day's work at each branch. Horizon inserts a "Horizon End of Day" event at each branch's default closing time plus ½ hour or 7pm whichever is the earlier. Any transactions captured after this time will be sent in the next day's transmission but will retain the actual date of capture. Note that CP 4061 changed the default closing time of all branches to 7pm, so in practice Horizon End of Day is now always 7pm.

The transaction data received from a branch may not be in chronological sequence.

3.3 Record Details

3.3.1 Format Key

FUJ00002112

The following is the key used for the formats as specified in the file records throughout this section:

9	=	Number
X	=	Alpha Numeric
V	=	Decimal Point - explicit
A	=	Alpha
S	=	Sign (explicit Positive/Negative Indicator)

Data will be passed in ASCII format in fixed length fields. Numeric (number) data will be right adjusted with leading spaces, alpha / alphanumeric data will be left adjusted with following spaces. Where the AIS refers to "Null" values, the fields will be space-filled. Times used across the interface will be local time without exception. The APS "Additional Data" field will be held in a variable length field of maximum length 2000 characters delimited by a CR/LF.

3.3.2 Transmission File Header Record

The Transmission File Header record will contain the following data (all fields are mandatory).

Transmission File Header Record			
Field Name <field-number>	**Description**	**Format**	**Comments**
Record Type Identifier <1>	Unique record type identifier	X(3)	TFH for this record
File Type Identifier <2>	Unique file type identifier	X(5)	TMSTX for this record
Interface Version Identifier <3>	A POL maintained number giving the Interface Version identifier being used by the TMS	9(10)	Fixed value - "50" until otherwise agreed.
Transmission Source <4>	The Fujitsu Services Mainframe where the files originated	X(2)	W_ = Wigan B_ = Bootle Generated by Fujitsu Services
Transmission Day Number <5>	Day number of the last complete POL Trading Day (ending at 19.00 hrs) preceding the harvesting run producing the Transmission Files	9(3)	001 - 366. The 24 hour period spans 2 calendar days - Day 1 = 31st December - 19:00:01hrs to 19:00:00 hrs - 1st January. Generated by Fujitsu Services
Transmission File Number <6>	A Fujitsu Services generated transmission file number which helps to uniquely identify each transmission for each day	9(3)	001 - 999. Combination of source, day number and file number makes each file unique within a year. Generated by Fujitsu Services
Date of File Creation <7>	The date at which time the file was created	9(8)	ccyymmdd. May be different to completion date if creating overnight. Generated by Fujitsu Services
Time of File Creation <8>	Commencement time at which the file was created	9(6)	hhmmss. Generated by Fujitsu Services
Transmission Status <9>	A POL maintained status which will uniquely identify the status of each transmission	X(3)	Agreed look up type values are NOR = Normal and RES = Re-sent.
		43	

NB1: Transmission status can only contain the two values as indicated above. Therefore, when a file has been rejected, it will keep the same number upon re-transmission.

NB2: It is acceptable to POL for Fujitsu Services to extract corrupt sub-files and records from a transmission file after rejection has taken place. The amended transmission file would then be sent again using the same number. The original corrupt sub file and records would be sent to POL when

FUJ00002112

amended. All errors identified by POL and sent to Fujitsu Services require correction by Fujitsu Services before POL will accept transmission records.

If POL does for some unidentified reason accept a transmission file which contains errors, the responsibility for this occurrence will be POLs. (See also section 5.0).

NB3: 'Exception Files' will have a Transmission File Number in the range 800 to 899. 'Exception Files' will have the Transmission Day Number of the normal file which the exception records would have been in had processing proceeded normally and they had not been retained by Fujitsu Services for repair.

'Exception files' are files containing sub-files of transactions or events originally excluded by Fujitsu Services from normal sub-files because they were recognised as containing a data error. These transactions are repaired by Fujitsu Services, usually within 5 days, before subsequent transmission to POL.

NB4: 'Stripped Return Files' will have a Transmission File Number in the range 700 to 799, unless the rejected file was an Exception file, when numbering will be in the range 800 to 899 as specified in NB4. 'Stripped Return Files' are files containing sub-files extracted by Fujitsu Services from rejected transmission files because they were flagged by POL as being in error. These sub-files are repaired by Fujitsu Services before subsequent re-transmission to POL. 'Stripped Return Files' will always have a Transmission Day Number equal to the one of the file from which the constituent sub-files were extracted.

NB5: POL MIS will only validate incoming files in terms of shape, structure and check totals. In particular, POL MIS will not validate records against POL Ref. Data on the basis that this has already been done within Horizon, and the records reflect what has actually been transacted at the branches.

3.3.3 Transmission File Trailer Record

The Transmission File Trailer record will contain the following data (all fields are mandatory).

Transmission File Trailer record			
Field Name **<field-number>**	**Description**	**Format**	**Comments**
Record Type Identifier <1>	Unique record type identifier	X(3)	TFT for this record:
Date of File Completion <2>	The date at which time the file was completed	9(8)	ccyymmdd. May be different to commencement date if creating overnight. Generated by Fujitsu Services
Completion Time of File Creation <3>	The time at which time the file was completed	9(6)	hhmmss. Generated by Fujitsu Services
Total Number of Sub-Files <4>	Total number of sub-files contained within the transmission	9(6)	Calculated by Fujitsu Services
Total Value of Sub-File Trailers <5>	Total value of amounts in all Sub File Trailers contained within the transmission file	S9(10)V 9(2)	Calculated by Fujitsu Services
		37	

NB1: In re-transmission, if one or more Sub Files are deleted, the two total fields are adjusted accordingly.

3.3.4 Transactions Sub File Header

Each Sub File Header will contain the following data records (all mandatory fields):

Transactions Sub File Header record

FUJ00002112

Field Name <field-number>	Description	Format	Comments
Record Type Identifier <1>	Unique record type identifier	X(3)	SFH for Sub File Header:
Organisational Unit Code <2>	Unique identifier for each Org Unit	9(10)	Branch RDS maintained
Version Number of Org Unit <3>	Version identifier for each Org Unit	9(10)	Version number maintained for every Org Unit, incremented individually when changes occur - RDS maintained
Sub-File Type Identifier <4>	Sub-file type identifier	X(5)	Value is OTRAN for Transactions Sub File Header record
Sub-File Sequence Number <5>	A sequence number generated by Fujitsu Services to uniquely identify each sub-file	9(5)	Starts at 1 and incremented for each subfile in the transmission file Generated by Fujitsu Services
Date of Sub-File Creation <6>	The date at which time the sub-file was created	9(8)	ccyymmdd. May be different to completion date if creating overnight Generated by Fujitsu Services
Time of Sub-File Creation <7>	Commencement time at which the sub-file was created	9(6)	hhmmss Generated by Fujitsu Services
Business date <8>	Business date for the transactions in the sub-file	9(8)	yyyymmdd
		55	

NB1: Original Sub-File Sequence Numbers are retained even if Sub-Files are deleted from original Transmission File on re-send.

3.3.5 Transactions Sub File Trailer

The Sub File Trailer record will contain the following data records (all mandatory fields):

Transactions Sub File Trailer record			
Field Name <field-number>	**Description**	**Format**	**Comments**
Record Type Identifier <1>	Unique record type identifier	X(3)	SFT for Sub File Trailer:
Organisational Unit Code <2>	Unique identifier for each POL branch	9(10)	Branch, Client RDS maintained
Version Number of Org Unit <3>	Version identifier for each Org Unit	9(10)	Version number maintained for every Org Unit, incremented individually when changes occur - RDS maintained
Date of Sub-File Completion <4>	The date at which time the sub-file was completed	9(8)	ccyymmdd. May be different to commencement date if creating overnight Generated by Fujitsu Services
Completion Time of Sub-File Creation <5>	The time at which time the sub-file was completed	9(6)	hhmmss Generated by Fujitsu Services
Total Number of Records <6>	Total number of Transaction Detail records (excluding headers/trailers)	9(6)	Generated by Fujitsu Services
Total Amount <7>	Total amounts from Transaction Details records	S9(10)V9(2)	Generated by Fujitsu Services
		57	

3.3.6 Transactions Detail Record

The Transaction Details record exists for capturing all transactional and tender information that has been captured for each Organisational Unit (branch). Note that tender details will appear in the same format as Transaction Details but will be distinguishable by the use of Item identifiers to describe each applicable method of payment.

FUJ00002112

Each Client Product / Stock Item or reversal may have other data items attached to the Branch Transaction Line and Tender Line Details Sub File. These when applicable will follow the Quantity field in the Branch Transaction Line Details record. See Appendix B for details.

The Transactions Detail record will always contain the following data records:

The following fields are mandatory fields in the sense that the records will be rejected if these fields are not populated.

- Record Type Identifier
- Organisational Unit Code
- Version Number of Org. Unit
- Date of Transaction
- Item Id
- Till Identifier
- Session Sequence Number
- Transaction Sequence Number

Note that this doesn't apply to EVT records. The rules for which fields are to be included for these records are defined in B.7 EPOSS Events.

Transaction Details Record			
Field Name <field-number>	**Description**	**Format**	**Comments**
Record Type Identifier <1>	Unique record type identifier	X(3)	See below
Organisational Unit Code <2>	Unique identifier for each POL branch	9(10)	RDS maintained
Version Number of Org Unit <3>	Version identifier for each Org Unit	9(10)	Version number maintained for every Org Unit, incremented individually when changes occur - RDS maintained
Stock Unit Identifier <4>	Unique identifier to distinguish between all stock units within each branch	X(3)	Includes any stock units in use at any back office positions. Maintained by Fujitsu Services
Session Sequence Number <5>	A number which uniquely identifies each session within a Till Identifier	9(6)	Generated by Fujitsu Services
Transaction Sequence Number <6>	A number which uniquely identifies each transaction within a Session	9(4)	Generated by Fujitsu Services
Till Identifier <7>	Unique identifier for each till at each counter position	9(2)	This will include terminals / tills at any back office positions. Maintained by Fujitsu Services
Employee Identifier <8>	Authorised employee identifier that carried out each transaction	X(15)	Maintained by Fujitsu Services
Date of Transaction <9>	The date to which the transaction refers	9(8)	ccyymmdd Generated by Fujitsu Services
Start Time of Transaction <10>	The time at which time the transaction commenced	9(7)	hhmmsss Generated by Fujitsu Services
End Time of Transaction <11>	The time at which time the transaction finished	9(7)	hhmmsss Generated by Fujitsu Services
Method of Data Capture <12>	How each transaction is captured at the point of sale	9(2)	RDS maintained – Values: 0 = Barcode, 1 = Keyboard/Screen (Manual), 2 = Magnetic Card, 3 = Smart Card, 4 Fallback to Mag Swipe, 5 = Scales
Reversal Indicator <13>	To show if reversals have taken place	9(1)	Default '0' ; '1' shows that this is a linked reversed transaction; '2' shows that this is a non linked reversed transaction Generated by Fujitsu Services

FUJ00002112

Refund Flag <14>	To show when refunds have been provided	X(1)	Default 'N'. Refund transactions will not be sent. Generated by Fujitsu Services
Fall Back Mode Flag <15>	To show when transactions have been keyed after the event, i.e. In fall back mode	X(1)	Default 'N'. 'Y' shows that transaction has been keyed in fall back mode Generated by Fujitsu Services
Item Id <16>	A unique identifier that specifies a Product / Stock Item / Tender	9(10)	Defined by RDS – Fujitsu Services select as required
Version Number of Item Transaction Mode <17>	The version number of the Item Transaction Mode	9(10)	Version number for every Item Transaction Mode combination held by individual counters, incremented when changes occur. Default will be Null. Maintained by RDS
Transaction Mode Code <18>	Identifies generic types of transaction	9(10)	E.g.: Rem In, Rem Out, Sell, Stock Adjustment etc.;- RDS maintained – Fujitsu Services select as required
Amount <19>	Amount for this item	S9(7)V9 (2)	Generated by Fujitsu Services
Quantity <20>	Total volume for each item	S9(14)	Defaults to 1. Generated by Fujitsu Services
Additional data for specific transactions - see NB 14 and details contained within Appendix B. No additional data for tenders identified.			
		136*	

* Total does not include any additional data items identified within Appendix B.

NB1: Quantity field increased from 9(5) to 9(14) to hold Turkish Lira.

NB2: POL MIS requires instances of 'events' recorded at branches. These will be captured within the transaction details. See Appendix B for more details.

NB3: POL MIS does not require any transaction level information on modification of transactions before they are committed.

NB4:. Note removed

NB5: Postal Order Fees will have a separate transaction line and will not be linked to the original Postal Order transaction line (other than by being next in sequence within the session).

NB6: Where a transaction has a specific 'partner' which may have a separate sequence number e.g. Travellers Cheques and Traveller's Cheques Commission Fees, the pairing is only determinable from their presence in the same session.

NB7: All Amount and Quantity fields will be passed to POL MIS through using the sign conventions used on Horizon. This can be summarised as follows:

- All In-pay transactions have a positive sign
- All Out-Pay transactions have a negative sign
- Reversals have the opposite sign from the original transaction
- Tender lines have the opposite sign from the corresponding transactions ie MoP tendered by a customer has a negative sign and cash given from a clerk to a customer has a Positive sign.

NB8: A Stock Adjustment (Transaction Mode Codes 16 or 18 - Stock Adjustment - Positive or Stock Adjustment - Negative) can be performed against Item Id - Cash. A balancing entry (tender line) of Item Id - Cash will always be generated against the stock adjustment using the Stock Adjustment Transaction Mode applicable.

NB9: If Transaction Mode Code is 17 or 19 (Declaration Discrepancy - Positive or Declaration Discrepancy - Negative), then the Item will be supported by an item transaction mode code and will also have an accompanying balancing transaction (As defined in POL RDS).

NB10: The quantity field will be zero for revaluation transactions.

FUJ00002112

NB11: If a transaction commences on day A just before midnight and completes on day B just after midnight, the date on the transaction will be day A. The start time will reflect day A, e.g. 23:59:000, and the end time will reflect day B, e.g. 00:01:000.

NB12: If there are Gateway PC problems at a branch which stop the Horizon End of Day being recorded on the actual date, then once the Gateway PC problems are rectified, the Horizon End of Day will be recorded for the previous day(s) and not the actual day of recovery.

NB13: If a Non Gateway PC is down at a branch, the Horizon End of Day marker will be inserted in the appropriate position in the file. However, the OTRAN sub file relating and any subsequent OTRAN sub files will not be sent to POL MIS until such time that the Gateway PC and all other PCs are attached at the point of a subsequent Horizon End of Day.

For both NB12 and NB13 the Horizon End of Day will be inserted into the transaction file at the appropriate point.

NB14: The Record Type Identifiers will be used to indicate the type of data and hence which additional data items may be included. The following table shows the Record Type Identifiers and indicates the relationship to the additional data items to be included:

Record Type Identifier	Meaning	Additional Data
APS	Automated Payments	See B.1 Existing Reversals (only present if Reversal Indicator = 1) and B.3 Automated Payments
NBS	Network Banking	See B.6 Debit Card (DCS) / Network Banking (NBS) / E Top-Ups (ETU)
DCS	Debit Card will also include Credit Card transactions at S90	See B.6 Debit Card (DCS) / Network Banking (NBS) / E Top-Ups (ETU)
ETU	E Top-Up	See B.6 Debit Card (DCS) / Network Banking (NBS) / E Top-Ups (ETU)
BDC	Bureau de Change	See B.1 Existing Reversals (only present if Reversal Indicator = 1) and B.5 Bureau de Change
EVT	Events	See B.7 EPOSS Events
OTX	All other records	See B.1 Existing Reversals (only present if Reversal Indicator = 1)
PDR	Cut-off events	Week Number

NB15: . Refunds will not be sent across this interface.

3.4 Contingency / Failures

An alert will be raised within Horizon in the event that the file transfer fails.

The operations team will be informed and procedures invoked to rectify the problem.

FUJ00002112

Details are given in the Operations Level Agreement [OLA]. Some details of the protection built into the platform and communications components are given in the Horizon to Post Office Technical Interface Specification [TIS].

FUJ00002112

4.0 Data Volumes

Required frequencies and anticipated file sizes are:

FILE TYPE	RECORD TYPE	Estimated No. Of Records Per Day		Characters Per Record	Estimated Megabytes in each Record Per Day	
		Min	Max		[1] Min	[2] Max
Transmission	Transmission File Header	1 [3]	1,000 [4]	43	0.00	0.05
Transaction & Tender Lines:	Sub File Header	14.7k [5]	14.7k	47	0.62	0.76
	Transaction / Tender Line Details	25.2m [6]	75.6m [7]	136	3,268.43	9,805.30
	Sub File Trailer	14.7k	14.7k	57	1.01	1.24
	Sub Total:				3,040.75	11,145.44
Transmission	Transmission File Trailer	1 [8]	1000[9]	37	0.00	0.04
Totals					3,040.75	11,145.53

NB1: The estimated number of transactions per week (77 million) does not include separate tender line records for each transaction / customer session. POL estimates that there are approximately 1.25 transactions per tender line.

NB2: No allowance has been made in the figures quoted above for the additional data items listed within Appendices B.1 Existing Reversals to B.6 Debit Card (DCS) / Network Banking (NBS) / E Top-Ups (ETU).

NB3: No allowance has been made to establish the number of additional characters for those products that may be re-engineered in the future.

NB4: A +/- 15% safety factor should be built into all of the figures.

APS Additional Data Based on current maximum figures for additional data as at January 2008 it is estimated additional 174 Megabytes per day will be added to the above figures. This, however is dependent on client agreements which can and do change. In addition new clients or clients changing to type X or type XO format files can alter this substantially.

[1] Minimum = (Min number of records x Average Characters per record) x 90%. This is to take into account missing records.

[2] Maximum = (Max number of records x Average Characters per record) x 110%. This is to take into account missing records from previous days.

[3] As a minimum, Fujitsu Services could parcel all data from all branches in one transmission file.

[4] As a maximum, TIP have estimated that there could be up to 1000 daily transmission files.

[5] As a minimum, TIP expects a sub-file header from every branch, even if no lower level details are included.

[6] 77M transactions (per week) divided by 5.5 (days per week) gives number of transactions per day, plus 77M/5.5 divided by 1.25 (to represent approximately 1.25 transactions per tender line).

[7] As 6 multiplied by 3 to represent the effects of busy days and catch up of previous transmission failures to TIP.

[8] As per footnote 3 - all data in one Transmission File.

[9] As per footnote 4 - up to 1000 transmissions per day.

FUJ00002112

5.0 Transmission of Data Files – Accept / Reject Rules

5.1 File Transmission and Renaming

Fujitsu Services will send files containing many sub files from branches using the naming convention shown here to the Remote FTMS server at Huthwaite. Files will be transmitted from Horizon data centres, either Wigan or Bootle, the sending location being identifiable from the filename. Filenames will be structured as follows:

X_666999.TP_ (Always in Uppercase)

Where: **X_** = the sender

666 = the transmission day number, 001 - 366 - see section 3.3.2 and **NB1** below

999 = the file number, 001 - 999

TP_ = the file destination

An example being **W_166020.TP_** (used in subsequent examples).

A full list of filenames are shown in Table B.

When Fujitsu Services has finished transmitting a file they will rename the file as shown in Table B. In this way, POL will know that the transmitted file is complete. POL will not be able to access the file until transmission is complete and it has been renamed by Fujitsu Services. The directory structure is described in the [TIS].

When POL MIS has processed the file it will rename the file as shown in Table B indicating whether:

(a) the incoming file from Horizon has been received OK (suffix .TPB)

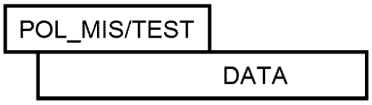
(b) any errors have been detected in the file (suffix .TPX) together with an error file (Suffix (.TPZ))

NB1: The day number represented by 666 above will be determined by a 24 hour period starting at the Horizon End of Day marker of the previous day. In the example of the Horizon End of Day marker being set at 19:00:00, transactions with transaction times falling between 19:00:00 (e.g. 12/2/04) and 18:59:59 the next day (e.g. 13/2/04) will be attributed to the day number equal to the 18:59:59 date (i.e. 13/2/04).

The directory structure on the Remote FTMS server (Gateway) will appear as follows:

(a) Live Directory

(b) Test Directory



POL MIS will have a process running (to an operational timetable to be defined - probably commencing at 20:00 hours each night) that will execute FTP "DIR" to determine when a file

FUJ00002112

is ready for collection. The POL MIS machine will then issue an FTP "GET" to retrieve the Fujitsu Services files from the DATA directory on the Remote FTMS server. The POL MIS machine will then rename the file to **W_166020.TPA** and take a copy of the file to work on. POL MIS will then start to process the file to see if it is in an acceptable state. Normally POL MIS will stop scanning for Transmission Files made available by Fujitsu Services at approximately 03:00 a.m.

No processing or validation checks are undertaken by POL MIS whilst the file is held in the DATA directory on the Remote FTMS server. The original copy remains on the Remote FTMS server and POL MIS performs the necessary validation checks on the copy it has taken to the POL MIS machine. All files held on the Remote FTMS server with an "**A**" extension are copies therefore of files currently being worked on by POL MIS on the POL MIS machine.

Firstly, POL MIS will perform the validation on the transmission file as described in section 5.2.

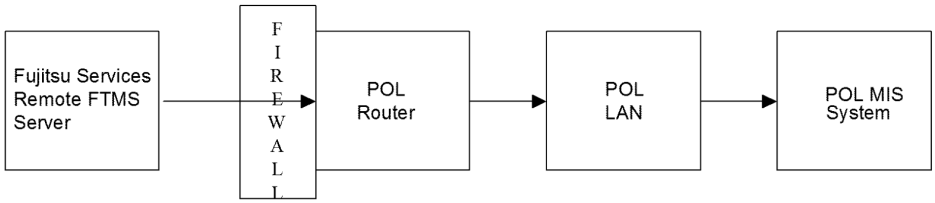
POL MIS will check all sub files even if errors are detected within earlier sub-files. If any of the transmission or sub file data is found to be in error the whole of the file will be rejected. At this point POL MIS will rename both the copy file held on POL MIS and the original held on the Remote FTMS server to **W_166020.TPX**. An Error File with the name of **W_166020.TPZ** stating that POL MIS has found errors is sent to the Remote FTMS server to accompany the file found in error. The error file will consist of the transmission file header, header errors, sub file header, sub file errors, sub file trailers, trailer errors and transmission file trailer.

See Jackson structure at Figure A for more details and Table A for error file report layout, error record type identifiers and error codes and their descriptions.

If the file and sub-files contain no errors, POL MIS will rename both the copy file held on POL MIS and the original held on the Remote FTMS server to **W_166020.TPB**.

Fujitsu Services will collect Error Files (those with a **Z** extension) and note related files with an **X** that have been rejected. When Fujitsu Services have investigated and corrected the records in error a new / corrected file with the same name as the original it is replacing will be passed to the Remote FTMS server. (As POL MIS knows it has produced an Error File for this file, it will also expect to find a subsequent replacement file with the same name).

The following diagram and notes provide a summary of what can happen to a file following receipt (1) and a copy being passed to POL MIS (2). It is either correct (3) or incorrect (4). Appropriate actions and file name changes are undertaken accordingly.



1	W_166020.TP_	(original placed on Remote FTMS server awaiting check)	

FUJ00002112

2	W_166020.TPA	----(copy taken to POL MIS machine and original renamed)-----→	W_166020.TPA
3	W_166020.TPB	← ----(no errors, 'A' extension changed to 'B')---------- →	W_166020.TPB
4a	W_166020.TPX	← ---(errors detected 'A' extension changed to 'X')----------→	W_166020.TPX
4b	W_166020.TPZ	←(error file created by POL MIS providing details of errors detected)--	W_166020.TPZ

NB1: If POL MIS receives a duplicate transmission file and/or sub-file(s), POL MIS will report this error to Fujitsu Services, and will also send these back to Fujitsu Services.

NB2: POL MIS expects all transmission files to remain on the Remote FTMS server for a minimum of 72 hours.

5.2 POL MIS Validation

This section specifies the validation:

- POL MIS will reject a file should any error be found within the file, sub file, or records within the sub file that POL MIS cannot accept. In such a case, POL MIS will create an error file specifying the errors found
- POL MIS will return the error file to the Remote FTMS server, to be picked up by Fujitsu Services, specifying any rejected files that need to be corrected and resubmitted
- Fujitsu Services will return repaired error records in a separate sub file for repaired records
- POL MIS must inform Fujitsu Services of an error within 24 hours. Fujitsu Services must keep source files for 7 calendar days in case POL MIS require a file to be re-sent.

Transmission File Header

1. Ensure file type identifier is valid
2. Ensure record type identifier is valid
3. Ensure interface version number is valid
4. Ensure transmission day number and transmission file number is valid by checking it is not a duplicate
5. Ensure file creation date is valid
6. Ensure time of file creation is valid
7. Ensure transmission status is valid

Transmission File Trailer

8. Ensure record type identifier is valid
9. Ensure date of file completion is valid
10. Ensure time of file completion is valid
11. Checksum the total number sub files
12. Checksum the value of all sub file trailers

Secondly, POL MIS will then perform validation on all sub-files. The validation will consist of:

Sub File Header

1. Ensure sub-file type identifiers are valid

FUJ00002112

2. Ensure record type identifiers are valid
3. Ensure Organisational Unit identifiers are valid (if required)
4. Ensure sub-file sequence numbers are valid by checking it is:
   (a) Not a duplicate
   (b) In sequence
5. Ensure file creation dates are valid
6. Ensure time of file creations are valid

Sub File Details

7. Ensure record type identifiers are valid
8. Ensure all mandatory fields are present
9. Ensure all number fields format are numeric } These validations are only carried
10. Ensure all dates are in date format } out for fields which are not null
11. All flag fields are Y or N }

Sub File Trailer

12. Ensure record type identifier is valid
13. Ensure Organisational Unit identifiers are valid
14. Ensure date of file completion is valid
15. Ensure time of file completion is valid
16. Checksum the total number of records (depending on sub file type)
17. Checksum the value of all sub file trailers (depending on sub file type)

FUJ00002112

Figure: A Error File Jackson Structure

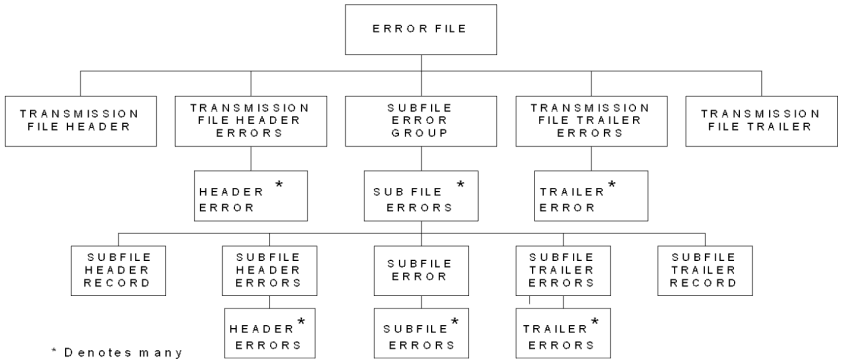


Table A

A.1 Error Record Layout

The Error Record Layout is generic for all headers, details and trailers.

Record: Error Record			
Field Name	**Description**	**Format**	**Comments**
Record Type Identifier	Unique record type identifier for record in error	X(3)	see A.2 for values.
Date Generated	The date the error file was generated	9(8)	ccyymmdd. Generated by MIS
Error Code	Unique Error Code which identifies the type of error	9(3)	see A.3 for values.
Error Description	The error code description	X(30)	The first 30 characters of the description only will be sent. see A.3 for values.
Record Number	The record number in the file in error Starting at 1 and including all record types including File and subfile headers and trailer.	9(7)	Generated by MIS
Field Number	The field number in the file in error As defined in section 3.3	9(2)	Generated by MIS
		53	

A.2 POL MIS Maintained Error Record Type Identifiers and Applicable Error Codes

Error Record Type Identifiers			
Record Type Identifier	**Format**	**Description**	**Applicable Error Codes**
THZ	all X(3)	Transmission File Header Error	001, 002, 003, 004, 005, 006, 016, 019, 021, 023, 026, 031

FUJ00002112

TTZ		Transmission File Trailer Error	002, 004, 005, 016, 019, 030
SHZ		Sub File Header Error	002, 004, 005, 009, 010, 016, 019, 022, 024
STZ		Sub File Trailer Error	002, 004, 005, 007, 008, 012, 013, 016, 019, 028
OXZ		Transaction / Tender Line Details Error	002, 004, 005, 014, 015, 017, 019, 020, 027, 029,

A.3 POL MIS Maintained Error Codes, Descriptions and relevant Validation Descriptions

Error Code	Description	Validation
001	Invalid File Identifier	File Type Identifier must be valid (Section 3.3.2)
002	Invalid Record Type Identifier	Record Type Identifier must be valid (Section 3.3 et seq.)
003	Invalid Interface Version	Interface Version must be as specified in section 3.3.2
004	Invalid Date	File Creation Date must be a valid date (e.g. not 19960231)
005	Invalid Time	Time of File Creation must be a valid time and, in combination with the date, must not be in the future
006	Invalid Transmission Status	Transmission Status must be as specified in section 3.3.2
007	Incorrect Sub File Total	The total number of sub-files within the transmission must be correct
008	Incorrect Sub File Total Value	The total value of all sub file trailers within the transmission must be correct
009	Invalid Sub File Type	Sub File Type Identifier must be valid (Sections 3.3.4and 3.3.5)
010	Invalid Sub File Sequence Number	The Sub File Sequence Number is not a valid number
012	Incorrect Record Total	The total number of records within the sub file must be correct (depending on sub file type -Section 3.3.5)
013	Incorrect Record Total Value	The total value of all records within the sub file must be correct
014	Mandatory Field is Missing	Mandatory fields must not be null
015	Non Numeric Value	Number fields must be numeric
016	Date Out of Range	Date of file completion must not be in the future and must not be more than 1 year old
017	Invalid Flag - Must be Y or N	Flag fields do not contain a Y or N
019	Unexpected End of File Encountered	End of File unexpectedly encountered
020	Duplicate Record	Record must not be a duplicate of a previous record
021	Missing Transmission Header	All transmissions must contain a relevant Header
022	Missing Sub File Header	All sub-files must contain a relevant Header
023	Duplicate Transmission File	Transmission must not be a duplicate of a previous transmission
024	Duplicate Sub File	Sub File must not be a duplicate of a previous Sub File
026	Invalid Transmission Source	Transmission Source must be either W_ or B_ followed by 001-366 for day number
027	Invalid Numeric Value	This numeric values cannot be negative and must be an integer
028	Missing Sub File Trailer	All sub-files must contain a relevant Trailer
029	Field must be non zero	Content of field must not be zero
030	Trailer must be last record	Last record must be trailer record
031	Header must be first record	First record must be header record
032	Incorrect Record Size	

Table B – Filenames at Remote FTMS server

Name	Description
W_166020.TP_	Completed transaction file by Fujitsu Services available for POL MIS to process
W_166020.TPA	Completed transaction file by Fujitsu Services renamed by POL MIS undergoing validation checks
W_166020.TPB	Error free file renamed by POL MIS
W_166020.TPX	File in error renamed by PL MIS
W_166020.TPZ	Error File produced by POL MIS

FUJ00002112

6.0 Security of Transmitted Data

The integrity of the transmitted data will be preserved within secure environments at both the POL data centre (Huthwaite) and the Fujitsu Services data centres (Wigan and Bootle). The security on the links between the POL data centre and the Fujitsu Services data centres is covered in the Security Functional Specification [SFS] and is outside the scope of this document. The file is digitally signed (standard FTMS function).

7.0 Operational Procedures

The Horizon system will push the transaction files to the Remote FTMS server at Huthwaite each calendar day, on a schedule controlled by the Maestro schedule control system.

Operational procedures within the Fujitsu Services area of responsibility will be documented in the Operational Level Agreement [OLA]. This will include the period that Fujitsu Services will need to retain data files in the event of being unable to transmit the data files to POL.

FUJ00002112

Appendix A

POL MIS Transactions

All transaction items which POL MIS will receive from Horizon will be maintained within the POL Reference Data System. These items will be allocated to the relevant Transaction Modes to support each transaction. Refer to the latest version of the document Application Interface Specification Reference Data [RDAIS] to for more structural details and the Reference Data Rules and Values [RDR&V] for the products/items and the transaction modes that this supports.

It is important to note the following:

- For reversal transactions, the original Transaction Mode is shown in the transaction details that are sent to POL MIS. POL MIS will know if a reversal has taken place by referring to the reversal indicator within the transaction line.
- For all "Events", these will have the Transaction Mode of "Event".
- The following transaction modes are not applicable to POL MIS and will be filtered out within Horizon. Also, balancing transactions will be suppressed (e.g. for REMs). Such Balancing transactions will be identified by Reference Data passed to Horizon from RDS.

0	Default
7	Transfer In - Between Stock Units
13	Transfer Out - Between Stock Units
21	Ordered

FUJ00002112

Appendix B

Additional Data Requirements for Branch Transactions

Sections B.1 Existing Reversals to B.3 Automated Payments are the current known products that have additional data captured at the point of sale and which are required to be sent to POL MIS.

Sections B.5 Bureau de Change and B.6 Debit Card (DCS) / Network Banking (NBS) / E Top-Ups (ETU) are on-line transactions for which POL require additional data originating at the counters for MIS.

B.1 Existing Reversals

Generally, note that wherever an Existing Reversal has taken place, the additional data in the transaction record passed to POL MIS must start with the following fields, followed by any item specific fields as shown below. The three fields below are mandatory for Existing Reversals.

Record: Existing Reversals			
Field Name	**Description**	**Format**	**Comments**
Reversed Till Identifier	Original Till Identifier involved with this reversal	9(2)	This will include any Tills in use at any back office positions. Maintained by Fujitsu Services.
Reversed Session Number	Original Session Sequence Number involved with this reversal	9(6)	Generated by Fujitsu Services
Reversed Transaction Number	Original Transaction Sequence Number involved with this reversal	9(4)	Generated by Fujitsu Services
		12	

Where reversal information (as above) is included this should appear immediately after the Transaction / Tender Line Details but before any applicable additional data items listed in the remainder of this appendix.

If New Reversals have taken place, then the additional data information will not be captured.

The details listed within this appendix have been confirmed during Horizon Joint Working Meetings.

NB1: The reversal of settlement transactions will always have a reversal indicator of "2", meaning additional data will not be supplied in these circumstances.

FUJ00002112

B.2 Retained as placeholder only- related to OBCS now not part of the system

B.3 Automated Payments

The following data requirements apply to a number of automated payment products which fall mainly into Electric, Gas, Water and Other groupings. The exact listing is maintained within the POL Reference Data System. Header and Trailer records are as per all transaction files as shown within the Record Structure section. Transaction line details are as follows:

Record: Automated Payments			
Field Name	**Description**	**Format**	**Comments**
Token Identifier	Unique Code to identify token	9(10)	RDS maintained. Mandatory
Version Number	Version number of Token	9(10)	On HNG-X generated transactions this will be set to 1 On Horizon generated Transactions this is RDS maintained. Mandatory
Customer Ref. Number	Identifier relevant to the Customer	X(20)	Non-Mandatory. Generated by Fujitsu Services.
client_account_no	The AP client account code	9(4)	
client_serv_code	The AP client service code	9(4)	
receipt_reference	The APS Receipt Reference	X(5)	Terminal number (node_id), two spaces, equipment indicator (H).
AP_transaction_reference	The last 4 digits of ap_sequence_no	9(4)	
payment_code	Method of payment	9(1)	(1=Cash, 2=Cheque, 3=Savings Stamps, 4=Debit Card/Credit Card
		58	
additional_data	APS XML Additional Data field.	X(2000) (Variable Length)	Variable length XML field, will start with the label <X_DATA> and end with the label </X_DATA> and will be delimited by CR/LF.

B.4 Retained as placeholder only- related to OBCS now not part of the system

FUJ00002112

B.5 Bureau de Change

The additional transaction data required is as follows.

Record: Benefit Payment - Bureau			
Field Name	**Description**	**Format**	**Comments**
BUREAU_REGION	Categorises offices into regions to allow different margins to be applied	9(4)	
COMMISSION	Commission	S9(7)v9(2)	Only charged on sterling traveller's cheques at present.
CURRENCY	Currency	X(16)	
EFFECTIVE_EXCHANGE_RATE	Spot Rate+Margin	S9(10)v9(7)	
EXCHANGE_RATE	Spot Rate	9(10)v9(7)	
MARGIN	Actual margin applied	S9(2)v9(4)	
MARGIN_PRODUCT	Product Id of the margin applied to this transaction	9(10)	
PURCHASED_VALUE	Transaction value (sterling) including the margin, ie what the customer either receives or pays	S9(7)v9(2)	
		97	

B.6 Debit Card (DCS) / Network Banking (NBS) / E Top-Ups (ETU)

The additional transaction data required is as follows.

Field Name	Description	Format	Comments
AMOUNT_REQUESTED	Amount requested by customer, but not necessarily authorised.	9(12)	
AUTHORISATION_CODE	Authorisation code from FI (Merchant Acquirer in case of DCS)	X(6)	DCS: See APACS30 v17 page 84 NBS/ETU: May be present if returned from FI (bitmap ref. 038, Authorisation Identification Response)
BANK_TRANSACTION_ID	Unique transaction id	X(12)	NBS: bitmap ref. 011 (LINK field "Systems Trace Audit Number" (STAN))
CARD_IMPOUNDED	Indicates card has been retained by the clerk.	9	Useful if statistics for impounded cards are needed Value = 1 if impounded
CLIENT_ID	Client Id	9(10)	DCS: Not populated
CURRENCY	Currency	X(3)	
FEE	Fee	9(12)	Fees not currently charged
FINANCIAL_TRANSACTION		9	DCS/ETU: Value = 1 NBS: Determines if it is a financial txn, I.e. withdrawal or deposit (value = 1), other transactions value = 0.
HORIZON_TRANSACTION_ID	Horizon Transaction Id	X(32)	Unique transaction id - could be useful for error resolution.
ISSUER_SCHEME_ID	Issuer Scheme ID	9(10)	Identifies card scheme used e.g. A&L Debit Card, Nationwide Flexaccount, Card Account, Lloyds TSB BBA etc. From POL Ref. Data (matched via PAN)

FUJ00002112

MERCHANT_NUMBER	Merchant ID	9(16)	DCS : Another identifier (MID) for the branch recognised by the Merchant Acquirer NBS/ETU: Not populated
PAN	Primary Account Number	9(19)	The PAN field will contain the leading six digits of the PAN followed by zeros then the final 4 digits of the PAN.
RECEIPT_DATE	Date printed on receipt	9(8)	ccyymmdd. Same as transaction date (date transaction was initiated) (For NBS, same as bitmap ref. 013, Date, Local Transaction) *[DN: is there any point in having this field because the Date of Transaction is in the body of the Transaction Details Record? There is a RECEIPT_TIME, which may differ (by a few seconds) from the Transaction Time]*
RECOVERY_FLAG	Indicates whether transaction has been recovered following a failure.	9	Value = 1 recovery
RESPONSE_CODE	Horizon Response Code	9(2)	See Appendix C (includes a translation of the FI's response code (authorised, decline - insufficient funds etc).
ROUTING_GATEWAY	Represents the FI to which the txn is sent	9(10)	DCS: The Merchant Aquirer - Streamline Merchant Services at present NBS: The system to which the request is routed (A&L, Card Account, LINK) ETU: The FI is e-pay at present
SETTLEMENT_DATE	Date transaction is settled by FI	9(8)	Format ccyymmdd DCS/ETU: Not populated NBS: The settlement day into which the transaction will be placed
TRANSACTION_RESULT_CODE	Transaction outcome	9(2)	See Appendix C Generated at counter – indicates Transaction outcome (completed ok, abandoned by clerk etc)
TRANSACTION_TYPE	Transaction Type	9(2)	Balance Enquiry etc
agent_sla_info	Agent SLA information	9(6)	Only populated at HNG-X, but inserted here to ease change
counter_sla_info	Counter SLA information	9(6)	Only populated at HNG-X, but inserted here to ease change
		179	

FUJ00002112

B.7 EPOSS Events

B.7.1 Existing EPOSS Events

EPOSS events are required to be sent to POL MIS on an individual transaction basis. The events required are as follows:

Event ID	Event Description	Comment	Logical Groups
923	Horizon End of Day (EoD)		Group 1
938	Forced Log Out		Group 1
930	Log On - completion		Group 1
932	Log On - failed wrong password/user name		Group 1
931	Log Out - completion		Group 1
933	Manager Forced Log Out		Group 1
915	Create Stock Unit - completion		Group 4
916	Delete Stock Unit - completion		Group 4
919	Stock Unit Balance - completion		Group 4
917	Attach User to Stock Unit - completion		Group 5
6299	Trading Statement Created		Group 9
6300	Trading Statement Period rolled		Group 9
6301	Trading Statement Period Roll Abandoned		Group 9
6302	Excess Cash Removed	Parameter required indicating amount	*Group 7*
6303	Cash Shortage Made Good	Parameter required indicating amount	*Group 7*
6304	Cash Variance Report Previewed		Group 1
6305	Cash Variance Report Printed		Group 1
6306	Outstanding Transaction Correction Reminder Displayed	Parameter required indicating number of Transaction Corrections Outstanding	*Group 8*

The events have been summarised into a number of logical groups. This grouping helps determine the additional data required for capture for each event. No additional data is passed for group one.

B.7.2 New Cut-Off Events Available for POL MIS (Release T10)

A new set of Cut-Off Events will be generated and will be made available to POL MIS in the form of PDR records.

FUJ00002112

B.7.3 Logical Groupings of Events

See below for further details based around the logical groupings for the events:

		Event	Event	Event	Event	Event	Event	Event	Event
Field Name	**M / N / MA**	**Group 1**	**Group 2**	**Group 4**	**Group 5**	**Group 7**	**Group 8**	**Group 9**	**Group 10**
Record Type Identifier	M	EVT	EVT	EVT	EVT	EVT	EVT	EVT	PDR
Organisational Unit Code	M	9999999999	9999999999	9999999999	9999999999	9999999999	9999999999	9999999999	9999999999
Version Number of Org Unit	M	9999999999	9999999999	9999999999	9999999999	9999999999	9999999999	9999999999	9999999999
Stock Unit Identifier	N	Null	Null	Null	Null	Null	Null	Null	xxx
Session Sequence Number	N	Null	Null	Null	Null	Null	Null	Null	Null
Transaction Sequence Number	N	Null	Null	Null	Null	Null	Null	Null	Null
Till Identifier	M	99	99	99	99	99	99	99	99
Employee Identifier	M*	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
Date of Transaction	M	CCYYMMDD	CCYYMMDD	CCYYMMDD	CCYYMMDD	CCYYMMDD	CCYYMMDD	CCYYMMDD	CCYYMMDD
Start Time of Transaction	N	Null	Null	Null	Null	Null	Null	Null	Null
End Time of Transaction	M	HHMMSSS	HHMMSSS	HHMMSSS	HHMMSSS	HHMMSSS	HHMMSSS	HHMMSSS	HHMMSSS
Method of Data Capture	N	Null	Null	Null	Null	Null	Null	Null	Null
Reversal Indicator	N	Null	Null	Null	Null	Null	Null	Null	Null
Refund Flag	N	Null	Null	Null	Null	Null	Null	Null	Null
Fall Back Mode Flag	N	Null	Null	Null	Null	Null	Null	Null	Null
Item Id	M	9999999999	9999999999	9999999999	9999999999	9999999999	9999999999	9999999999	9999999999
Version Number of Item Trx. Mode	N	Null	Null	Null	Null	Null	Null	Null	Null
Transaction Mode Code	M	20	20	20	20	20	20	20	20
Amount	N	Null	Null	Null	Null	Amount	Null	Null	S9(7)V9(2)
Quantity	N	Null	Null	Null	Null	Null	No of Txn Corrections	Null	S9(14)
Additional Data									
Balance / Create / Delete Stock Unit	MA			XXX	XXX				
Shared / Individual Stock Unit	MA			X~					
New / Delete / Modify System User	MA				XXXXXXXXXX				
Trading Period	MA							999	
Week Number									99

FUJ00002112

M = Mandatory N = Null MA = Mandatory when applies * - Null for Horizon End of Day. $ 999 for 919. Null for 915, 916 & 920. # will be null when the stock units are first being established in a branch. ~ null is acceptable for 919 and 916

Column formats are defined in section 3.3.6.

The event codes are maintained within the POL Reference Data System. Transaction Mode 20 applies to events. The event code ID is compliant with the Item ID format - 9(10). Tender line details would not be expected for any of the events listed above.

NB1: The Events associated with each group described above are defined in the tables in sections B.7.1 Existing EPOSS Events and B.7.2 New Cut-Off Events Available for POL MIS (Release T10) above.

NB2: There are no events for group 3 or Group 6, so they have been deliberately omitted from the table above.

NB3: The additional data fields are only present for events of a given group. There are no "fillers" to be included for additional fields that may apply to other groups. For example an event of type 6299 (Type 9) will have a single additional data field of "Trading Period" of length 3.

FUJ00002112

Appendix C

As stated in previous versions of this document it is not intended to maintain the Response code, Result code and Transaction Type tables in this document. Documentation on these codes will be maintained in the Network Banking Message Flows and Interfaces document ref. NB/IFS/004. Accordingly these sections have been removed from this version of this document.