

Analysis of Zero Value Transactions

Ref: d:\profiles\jenkinsgareth\my documents\gij documents\notes\gaerwen.doc

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1. Introduction

This note is provided as input to a Witness Statement regarding Gaerwen.

2. What I've Done

Penny Thomas provided me with extracts from Audited Data for 3 separate periods.

I have taken this Data and extracted details of all Banking Transactions and analysed the zero value transactions. The following table provides a summary of the data that has been analysed:

ARQ	Start Date	End Date	Number of Banking Transactions	Number of Zero Value Banking Transactions
401	14/09/2005	13/10/2005	1166	119
459	18/11/2004	26/11/2004	231	70
460	19/05/2005	27/05/2005	407	47
Totals			1804	236

I have produced a separate spreadsheet for each of the sets of Zero Value Transactions.

Each Spreadsheet has the following Columns:

Heading	Meaning
<Id:	Counter Position that the Transaction took place on
<User:	User logged in at that Counter
<Date:	Transaction Date in GMT
<Time:	Transaction Time in GMT
<SaleValue:	Amount of the transaction (always zero)
<TranType:	Transaction Type (see table below for meanings)
<RespCd:	Result of the Transaction (see table below for meanings)

The "<TranType:" column indicates the Type of Transaction. The following Types are used in the 3 spreadsheets with the meanings shown:

<TranType:	Meaning
01	Balance Enquiry – Mag Stripe
03	Cash Withdrawal – Mag Stripe
04	Cash Withdrawal with Balance – Mag Stripe
06	Change PIN – Mag Stripe
61	Balance Enquiry – Chip and PIN
62	Cash Deposit – Chip and PIN
63	Cash Withdrawal – Chip and PIN
64	Cash Withdrawal with Balance – Chip and PIN
65	Cash Withdraw Limit – Chip and PIN

Similarly, the "<RespCd:" column indicates the Response to the transaction. The following Types are used in the 3 spreadsheets with the meanings shown:

<RespCd:	Meaning
01	Authorised OK
03	Declined - Invalid PIN
04	Declined - Insufficient Funds
06	Declined - Usage Violation (amount)
08	Declined - Other
23	Failed by FI: Unexpected Resp Code
26	Fail by FI: System Unavailable - Return Card
32	Failed by Agent: FI Timeout

In all cases where the Response was "Authorised OK" (152 transactions), the Transaction was either a Balance Enquiry or Change of PIN (Transaction Types 01, 06 or 61), where no Cash is expected to have changed hands.

Response Codes 03, 04, 06 and 08, indicate that the Financial Institution has decline the Transaction, and so no Cash should change hands.

Response Codes 23 and 26 indicate an unusual Response from the Financial Institution and again no Cash should change hands.

Finally, Response Code 32 indicates that Horizon's Central system has received no response from the Financial Institution within a timeout period, and so no Cash should change hands.

All these are perfectly normal occurrences and should result in clear instructions being passed to the Counter Clerk to ensure that no Cash should change hands.