

Fujitsu Services

Major Incident Report

Ref: CS/REP/182

Version: 0.2

Commercial-in-Confidence

Date: 01-MAR-2004

Document Title: Major Incident Report for Debit Card Transaction Failures on Saturday 14th February 2004**Document Type:** Report**Release:****Abstract:** Report on the Debit Card Service Failures on Saturday 14th of February**Document Status:** Draft**Originator & Dept:** Tony Wicks - POA Customer Service**Contributors:****Internal Distribution:** Distribution for draft - as per section 0.2

Distribution for Approved version - as above plus Pete Jeram, Liam Foley, Colin Lenton-Smith, Ian Lamb, Richard Brunskill, Reg Barton, Bill Mitchell

External Distribution: Dave Hulbert**Approval Authorities:** *(see PA/PRO/010 for Approval roles)*

Name	Position	Signature	Date
Martin Riddell	FS POA Service Director		

Fujitsu Services

Major Incident Report

Ref: CS/REP/182

Version: 0.2

Commercial-in-Confidence

Date: 01-MAR-2004

0.0 Document Control

0.1 Document History

Version No.	Date	Reason for Issue	Associated CP/Pin/CL
0.1	18/2/2004	Initial Draft	
0.2	01/03/04	Includes comments from Peter Burden on the initial draft.	

0.2 Review Details

Review Comments by :	03/03/04
Review Comments to :	Tony Wicks

Mandatory Review Authority	Name
<i>See Review Role Matrix in PA/PRO/010</i>	
Fujitsu Services Post Office Account	Mik Peach
Fujitsu Services Post Office Account	Martin Riddell
Fujitsu Services Post Office Account	Peter Burden
Fujitsu Services Post Office Account	Reg Barton
Fujitsu Services Post Office Account	Mike Stewart
Fujitsu Services Post Office Account	Simon Fawkes
Fujitsu Services Post Office Account	Dave Tanner
Fujitsu Services Post Office Account	Richard Brunskill
Fujitsu Services Post Office Account	Dave Law
Fujitsu Services Networks	Colin Johnson
Fujitsu Services System Management Centre	Ian Cooley
Optional Review / Issued for Information	

(*) = Reviewers that returned comments

Fujitsu Services

Major Incident Report

Ref: CS/REP/182

Version: 0.2

Commercial-in-Confidence

Date: 01-MAR-2004

0.3 Associated Documents

Reference	Version	Date	Title	Source

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
BCM	Business Continuity Manager
CS	Customer Service (in POA)
DCS	Debit Card Service
DM	Duty Manager
FAD	Financial Accounts Division (Post Office)
HSH	Horizon System Helpdesk
IVR	Interactive Voice Response
NB	Network Banking
PM	Problem Manager
PMDB	Problem Management Database
PO	Post Office
POA	Post Office Account
POL	Post Office Limited
SSC	System Support Centre
TNS	Transaction Network Services
TSD	Technical Services Desk

0.5 Changes in this Version

Version	Changes
0.1	This is the first draft
0.2	Includes comments from Peter Burden on the initial draft.

Fujitsu Services

Major Incident Report

Ref: CS/REP/182

Version: 0.2

Commercial-in-Confidence

Date: 01-MAR-2004

0.6 Changes Expected

Changes

Fujitsu Services

Major Incident Report

Ref: CS/REP/182

Version: 0.2

Commercial-in-Confidence

Date: 01-MAR-2004

0.7 Table of Contents

1.0 INTRODUCTION.....	6
2.0 SCOPE.....	6
3.0 MANAGEMENT SUMMARY.....	6
4.0 DESCRIPTION OF THE FAULT AND SERVICE FAILURE.....	7
4.1 SYMPTOMS AND BUSINESS IMPACT.....	7
4.1.1 Symptoms as seen by Branches.....	7
4.1.2 Symptoms as seen by Fujitsu Services.....	7
4.2 DETAILED EXPLANATION OF THE INCIDENT.....	7
5.0 INCIDENT MANAGEMENT.....	8
6.0 PROBLEM MANAGEMENT.....	10
7.0 CORRECTIVE ACTIONS.....	11

1.0 Introduction

This document reports on the issues that arose from a major incident which affected debit card transactions on Saturday 14th of February 2004.

This report covers:

- How the problem came to light
- The impact on the branch service
- The investigation
- The resolution
- The suspected network and related infrastructure
- Actions to prevent recurrence

2.0 Scope

The scope of this report is the major incident that occurred on Saturday February 14th that affected Debit Card transactions at some 1271 Branches.

3.0 Management Summary

On Saturday 14th February some Branches were experiencing intermittent service on performing online debit card transactions. Evidence from the HSH indicated that the nature of the fault was such that a subsequent attempt (i.e. retry) generally would have been successful. The underlying cause of the problem has not been established but it is known that the failures occurred in the infrastructure between the Wigan X25 router and Streamline, via the TNS X25 network.

The HSH took 28 calls from Branches experiencing difficulties with debit card transactions.

Analysis of the Debit Card MIS Data indicates that the peak of failures occurred between approximately 11.45 and 13.00. 1271 Branches experienced debit card failures on Saturday and failures were experienced with 3016 individual debit cards.

At 12.06 Powerhelp incident E-0402140283 was raised at 'A' priority when the SMC received a top level monitoring alert informing them of the timeout situation.

This incident was reported to the TSD, who, at 12.30, raised Powerhelp incident E-0402140303 and informed Dave Hulbert Post Office Limited at approximately 12.35 and Streamline at approximately 12.38.

After being advised, during the Saturday afternoon, that TNS were unable to see network traffic on logical access ports 1024 to 1047 on the Wigan X25 router, Fujitsu Services Networks decided to close the X25 interface at Wigan in order to force the virtual circuits to operate from the Bootle to circumvent the failure.

4.0 Description of the fault and service failure

4.1 Symptoms and Business Impact

4.1.1 Symptoms as seen by Branches

1271 branches experienced failures when attempting to take payments for transactions using debit cards. Evidence, from the handling of the calls to the HSH, indicates that subsequent attempts to perform the financial transaction using the debit card would have been successful on one or more retries.

4.1.2 Symptoms as seen by Fujitsu Services

The following top level monitoring alert was received by the SMC at 12:02 informing them of the timeout situation.

@12:02 A bad alert was at the top level of DCA01, DCA02, DCA03 & DCA3 based on the DCA0_1.SSE_TIMEOUT. With text: Debit Card Authorisation Agent had n(number) timeouts in the last reporting period which exceeds the limit of 5.

Core Services Networks did not receive any events or warning for the failures on the X25 routers or network connections to TNS.

4.2 Detailed explanation of the incident

The underlying cause of the problem has not been established but it is known that the failures occurred in the infrastructure between the Wigan X25 router and Streamline, via the TNS X25 network.

Core Services Networks were initially called, at about 12.22, by the SMC who asked verbally if Networks could see anything wrong with the debit card infrastructure.

Networks initial investigation showed that the X25 routers appeared to be functioning normally and that all X25 interfaces were available.

There are two X25 routers, Wigan_DCS_1 and Bootle_DCS_1, which are used to connect to Streamline. The service is configured to use 16 X25 virtual circuits to pass transaction traffic. The routers are configured to use a range of logical access ports as follows,

Bootle 1024-1053 (30 ports)

Wigan 1024-1063 (40 ports)

At approximately 16.50 Fujitsu Services were advised by TNS that they had been able to see network traffic on logical access ports 1048 to 1063 but saw no traffic on logical access ports 1024 to 1047.

Fault Circumvention.

Fujitsu Services

Major Incident Report

Ref: CS/REP/182

Version: 0.2

Commercial-in-Confidence

Date: 01-MAR-2004

Core Services Networks' investigations showed that all 16 virtual circuits were active on the Wigan DCS router. At 17:15 Networks decided to close the X25 interface at Wigan in order to force the virtual circuits to operate from the Bootle.

The virtual circuits duly moved onto Bootle X25 router and TNS confirmed that 16 virtual circuits were established and appeared okay. TNS were unable to monitor for network traffic on the logical access ports as live DCS transactions were no longer being passed to Streamline as it was outside trading hours.

High level checks were conducted by the SSC on-call and Networks on the circuits.

The SSC and Networks undertook pro-active monitoring of the debit card service from 08.00 on the Monday morning.

On Saturday 21st of February at 07.00 the X25 link from Wigan to TNS was reactivated. The SSC and TNS monitored the reintroduction of this circuit and no operational issues were identified or experienced. The Wigan X25 link has remained in operation since the 21st of February.

5.0 Incident Management

<i>Date & time</i>	<i>Avoidance, mitigation and resolution activities</i>	<i>Communication and escalation activities</i>	<i>Business Impact</i>
14/2/04			
12.06		SMC raise Powerhelp call E-0402140283 for the DCA timeout alert.	Branches experienced failures when attempting to take payments for transactions using debit cards.
By 12.22		The SMC checked with Fujitsu Services Networks	
By 12.30		The SMC also informed the TSD	
At 12.30		The TSD raised incident E-0402140303	
By 12.35		The TSD paged the Post Office Limited Duty Manager (Dave Hulbert)	
By 12.36		The SMC spoke with SSC on-call, and transferred the incident into PinICL by 12.43	
At 12.38		The TSD informed Streamline. Streamline reported they were unaware of a problem but agreed their Network team would investigate.	
On-going		The TSD undertook their scheduled phone calls to	

Commercial-in-Confidence

Page: 8 of 11

Fujitsu Services

Major Incident Report

Ref: CS/REP/182

Version: 0.2

Commercial-in-Confidence

Date: 01-MAR-2004

		Streamline.	
At 14.26		The SMC advised the SMC Duty Manager of the incident	
At 14.55		The SMC advised the POA Duty Manager (Tony Wicks) of the incident.	
At 15.00		The POA Duty Manager (Tony Wicks) attempted to phone Dave Hulbert	
At 15.05		The POA Duty Manager (Tony Wicks) used the paging service to attempt to contact Dave Hulbert on the POL BCM pager.	
15.00 Onwards		The POA Duty Manager (Tony Wicks) became the problem owner and liased between the SSC on-call, Fujitsu Services Networks and the SMC.	
At 16.50		Fujitsu Services Networks contacted Streamline who advise that incoming channels to Streamline on logical access numbers 1066 to 1048 appeared to be okay but nothing appeared to becoming through on channels 1047 and below.	
At 17:15	Network's decided to close the X25 interface at Wigan in order to force the virtual circuits to operate from the Bootle.		
At 20.20		After various discussion with the SSC and Networks Tony Wicks reported the afternoon events to the CS Operations and Support Manager (Peter Burden). The CS Operations and Support Manager advised the CS Director of the incident.	
Sunday 15/02/04 AM		Tony Wicks paged Dave Hulbert and gave an overview of the events after 15.00.	
Sunday PM		Tony Wicks arranged with the SSC and Networks to undertake pro-active monitoring of the debit card service from 08.00 on the Monday morning when Branches would start to use	

Commercial-in-Confidence

Page: 9 of 11

Fujitsu Services

Major Incident Report

Ref: CS/REP/182

Version: 0.2

Commercial-in-Confidence

Date: 01-MAR-2004

		the service.	
--	--	--------------	--

6.0 Problem Management

The failure was detected and reported via the Horizon System Management tools, i.e. from the 12:02 bad alert regarding debit card Authorisation Agent timeouts.

The SMC checked with Networks by 12.22 and spoke with SSC on-call by 12.36. The SMC also informed the TSD by 12.30. However Incident E-0402140283, which was raised as a 'A' priority confirms that the SMC did not contact the POA Duty Manager (Tony Wicks) until 14.55 and indicates that the SMC Duty Manager was also unaware of this incident until 14.26.

The TSD raised incident E-0402140303 at 12.30 and paged the Post Office Limited Duty Manager (Dave Hulbert) at 12:35. At 12.38 the TSD informed Streamline. Streamline reported they were unaware of a problem but agreed their Network team would investigate.

The SMC continued to receive alerts from the top level monitor.

The TSD either spoke with or attempted to contact Streamline at the predefined scheduled intervals. At 14.30 Streamline reported that they could see no issues with their network or servers. At 14.50 Streamline contacted the TSD to report that one of their boxes was not receiving transactions and that Streamline officially rejected ownership of the incident. At this stage Streamline had been investigating for 2hours and 10 minutes before reporting seeing an issue on one machine.

At 16.30 the SSC on-call confirmed, by analysing counters at failed outlets, that the problem appears to have started around 12:00 where Agents were timing out because they had exceeded the waiting for A2s from the MA.

The SSC on-call advised the SMC to contact Networks and also Streamline.

At 16.50 Fujitsu Services Networks contacted Streamline who advise that incoming channels to Streamline on logical access numbers 1066 to 1048 appeared to be okay but nothing appeared to becoming through on channels 1047 and below.

At 17:15 Network's decided to close the X25 interface at Wigan in order to force the virtual circuits to operate from the Bootle.

Problem 456 has been logged on the Problem Management database for this incident.

7.0 Corrective Actions

<i>Incident/problem Issue</i>	<i>Action to be taken</i>	<i>By Whom</i>	<i>By When</i>	<i>Progress made</i>
<i>This incident highlighted limitations on identifying where within the DCS</i>	<i>Investigate if process improvements or monitoring tools can be implemented to assist in identifying</i>	<i>Tony Wicks/ Fujitsu Services</i>	<i>22/03/04</i>	

Commercial-in-Confidence

Page: 10 of 11

Fujitsu Services

Major Incident Report

Ref: CS/REP/182

Version: 0.2

Commercial-in-Confidence

Date: 01-MAR-2004

<i>comms 'supply chain' failures were occurring.</i>	<i>where, in the comms 'supply chain', failures are occurring in a timely manner.</i>			
<i>Streamline took two hours to detect that transaction traffic was not getting through to one of its machines</i>	<i>Review with Streamline the System Management detection and report tools.</i>	<i>Tony Wicks</i>	<i>05/03/04</i>	
<i>The SMC did not escalate the incident to the SMC or POA Duty Managers in a timely manner.</i>	<i>SMC staff to be reminded that 'A' priority incidents are to be escalated as per predefined process.</i>	<i>Ian Cooley</i>	<i>Completed</i>	<i>Completed</i>