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Filed on behalf of the: Defendant
Witness: Steven Paul Parker
Statement No.: First
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Claim No: HQ16X01238, HQ17X02637 & HQ17X04248

IN THE HIGH COURT OF JUSTICE
QUEEN'S BENCH DIVISION
ROYAL COURTS OF JUSTICE

B E T W E E N:

ALAN BATES & OTHERS

Claimant

AND

POST OFFICE LIMITED

Defendant

WITNESS STATEMENT OF STEPHEN PAUL PARKER

I, STEPHEN PAUL PARKER of Lovelace Road, Bracknell, Berkshire RG12 8SN WILL SAY as follows:

1. I am employed by Fujitsu Services Limited (**Fujitsu**) as **Head of Post Office Application Support**.

2. I am authorised to make this statement on behalf of Post Office Limited (**Post Office**), the Defendant in these proceedings, in relation to the Horizon Issues trial listed for March 2019.

3. The facts set out in this statement are within my own knowledge, or if they are outside my knowledge, I have explained the source of my information or belief.

4. In this statement I refer to copy documents attached and marked Exhibit SPP1.

BACKGROUND

5. I started working on the Royal Mail Group Account, later called the Post Office Account, in July 1997, before the introduction of Horizon. I have continued to provide support to the Post Office Account in my various roles at Fujitsu throughout the whole of Horizon's life.

6. Prior to my work on the Post Office account, I held a number of roles within the IT industry, including an in-house operations and support role for critical online systems, support consultancy services and design and development role in an

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End User Technology group in relation to Microsoft tools for internal and external customers.

7. I began working in July 1997 as a support consultant and deputy manager within the Software Support Centre (SSC) for the Royal Mail Group Account, providing third line application support for the Horizon application. Within this role I was the lead designer and part of development team for the internal website providing support knowledge (KEL) database, technical documentation management and operational change control. I also assisted the SSC manager in the provision of the support service and operational management. Although I did not have the formal title, I acted as the deputy manager to the SSC as a whole.

7.1 Between December 2009 and March 2010 I was a full time Problem Manager / Operational Manager of the SSC, responsible for the management of incidents through the whole support process.

7.2 In March 2010 I became the Manager of the SSC and was responsible for the provision of third line application support to the Post Office Account, including the management of the staff working on the account. The SSC subsequently expanded into a shared service, providing support services to a number of Fujitsu customers, the largest of which is still the Post Office Horizon system. As head of this unit I am currently responsible for strategic support, managing 25 – 40 staff.

RICHARD ROLL'S STATEMENT

8. I have been asked to comment on the witness statement of Mr Roll dated 11 July 2016 put forward by the Claimants in relation to the Horizon Issues trial in March 2019. I worked with Mr Roll while he was employed by Fujitsu in the SSC (I understand from Fujitsu's HR department that this was from 5 March 2001 until 17 September 2004). As explained above, although I did not have the formal title, I acted as deputy manager while Mr Roll was there.

9. The Horizon system was rolled out across the Post Office network between 1999 and 2000. In 2010 there was a migration from the system commonly referred to as "Legacy Horizon" to an online version ("HNG-X" or "Horizon Online"). Therefore, when Mr Roll refers to the Horizon system he is referring to Legacy Horizon and where I respond to an assertion made by Mr Roll I am also referring to Legacy Horizon unless otherwise stated. Much of my statement also applies to Horizon Online, however.

10. I found Mr Roll to be a conscientious worker and provided him with a personal reference for a position that he applied for after leaving Fujitsu (it was a personal

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reference because Fujitsu does not allow staff to provide references on behalf of the company).

11. In his statement Mr Roll suggests that there were frequent instances of software problems in Horizon that had an impact on branch transaction data and which Fujitsu resolved "remotely" (i.e. not in a branch), not merely by changing the software but also by frequently changing branch transaction data (by injecting new transaction data and by editing or deleting existing transaction data), without informing branches that such actions were being taken. As I explain below, those suggestions are incorrect and Mr Roll's account of Fujitsu's actions and powers is inaccurate and misleading.

12. In order to explain why, it is necessary to have a proper understanding of what Fujitsu was able to do, what the effects of its actions were and the extent to which such actions had any effect on transaction data in branches. This is described further below, but I would like to make some general responses immediately.

13. It is correct that the SSC had (and has) the ability to view data in branches and other sources such as data centres remotely (in read-only mode): that is to be expected given their support role which is described in paragraph 26 below.

14. Post Office did (and does) not have the same ability – what it could (and can) do is view copies of transaction data as replicated from Horizon to a variety of Post Office systems. In Horizon Online, facilities have been added which allow Post Office to remotely examine branch data held in the Branch Database (BRDB) in read-only mode for a variety of business reasons, such as monitoring levels of cash that are in branches based on the data entered onto Horizon by branch staff.

15. It is also correct that issues sometimes arose which necessitated changes to the Horizon software. However, this was not something that Mr Roll played any significant part in, as I describe in paragraphs 34 and 35 below.

16. It was (and is) theoretically possible for there to be a software problem which could cause a financial impact in branch accounts, but this was (and is) extremely rare and Horizon's countermeasures were (and are) very likely to pick such matters up. In my experience, these problems have always represented a very small proportion of the issues which led to software changes and a very small proportion of the overall issues dealt with by the SSC.

17. On the very rare occasion that a software problem which could cause a financial impact in branch accounts arose, it would be investigated and resolved and Fujitsu would determine its impact on the Horizon estate and inform Post Office of any financial impact on branches so that they could be resolved.

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18. In Legacy Horizon it was possible for the data in a particular counter in a branch to become inconsistent with replicated copies, and Mr Roll appears to be describing this in paragraph 17 of his statement. In that situation there could be remote management by Fujitsu to correct the problem, but branch transaction data was not changed in any way. As explained in paragraph 55 below, the work-round involved replicating the correct data from another counter in the affected branch or from the data centre copy.

19. The suggestion that Fujitsu edited or deleted transaction data is not correct. In Legacy Horizon it was not possible to delete or edit messages that had been committed to the message store. See the explanation of my colleague Torstein Godeseth in paragraph 37 of his witness statement dated 27 September 2018 which reflects my understanding and experience of Horizon's functionality.

20. In para 18 of his statement, Mr Roll also suggests that in Legacy Horizon he and others in the SSC could "*insert transactions and transfer money without the sub-postmaster knowing*". However:

20.1 No Fujitsu personnel have ever had the ability to "*transfer money*" out of Horizon into, for example, an individual's account.

20.2 Some members of the SSC were (and some remain) able to insert transaction data. SSC access privilege gave the ability to inject transactions, but appropriate change controls were in place and no such insertion would have happened without complying with those controls.

20.3 I should make it clear that, in this witness statement, I am concentrating on what the support process is designed and able to do and not any malicious misuse of these facilities. Malicious misuse makes most things possible, as with any other IT system, however, Horizon had a number of checks and security settings in place that made it very difficult to carry out malicious misuse. In any event such misuse would have been discovered by consistency checks or colleagues (all access was controlled and audited) and would have resulted in instant dismissal. But even a malicious user would not have been able to *"transfer money"*.

21. As there is no way in which money could be taken from a branch and moved anywhere else (for example into the employee's bank account), it follows that there was no motive for anyone to do this. It is not clear to me why anyone at Fujitsu would insert transaction data into a branch's accounts without there being a legitimate reason for doing so. Furthermore:

21.1 Any transaction that was inserted would immediately cause a discrepancy to arise in the branch's accounts. For example, if a transaction were to be inserted

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which stated that £1,000 of stamps had been bought by a customer who paid cash, that would immediately cause a reduction in stock levels of stamps in that branch and the branch would have £1,000 less in cash than Horizon expected it to have.

21.2 In other words, although a transaction could be inserted, it would immediately become apparent that this had been done and ultimately it would not benefit any member of staff to behave in this way.

22. It is correct that the "remote access" described above could have been carried out without the permission of a Subpostmaster. However, any additional transactions inserted remotely would be identifiable as such from the transaction logs that are available to Subpostmasters from Horizon.

23. I will now describe the structure of the Horizon support teams during the period when Mr Roll was employed by Fujitsu before responding to the specific suggestions that Mr Roll makes.

The Horizon Support Teams

24. There were four lines of support for Horizon while Mr Roll was employed by Fujitsu and they are described in paragraph 26 below. There are still four lines of support for Horizon today, albeit that some names have changed and some responsibilities have moved around teams.

25. It is common within the industry to have a multi-level support model. Generally, as you move up through the levels of support the cost of the staff providing the service increases because they are more qualified. Having said that, there is often overlap of skills between adjacent lines of support and while a team may be responsible for a particular level of support, staff within that team can have skills which allow them to perform a role that is more usually performed by the next level of support.

26. The four lines of support for Horizon while Mr Roll was employed were as follows:-

26.1 **1st line**: The 1st line involved several different elements:

26.1.1 the Horizon Service Desk (**HSD**)[1] was a helpdesk operated by Fujitsu that branches could contact with issues relating to the Horizon application or the hardware provided in branch by Fujitsu to run the

[1] The HSD has also been known as the Horizon System Helpdesk and the Horizon Incident Team.

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Horizon application. I estimate that there were around 80 members of the HSD while Mr Roll was employed, who:-

(a) dealt with straightforward enquiries such as password issues and scheduling engineers to attend branches to investigate reports of hardware issues;

(b) monitored the live estate and took corrective actions defined in knowledge documents (this role was fulfilled by two units: the System Management Centre (**SMC**) for data centre events; and the Counter Eventing Team for Post Office counter events. The corrective actions did not involve any changes to any branch transaction data); and

(c) referred other issues to the 2nd line support function.

26.1.2 there was also a 1st line Communications Management Team operated by Fujitsu which specifically focused on communication incidents; and

26.1.3 Post Office also operated a 1st line helpdesk for operational issues called the National Business Support Centre (**NBSC**).

If a branch required assistance to attempt to determine the cause of a discrepancy they would contact NBSC in the first instance. Discrepancies are not unusual in a retail system. They indicate a difference between the operator's declaration of cash and stock on hand and the systems calculation and as such are a business operation issue. However, it was not always possible for NBSC to identify the cause of a discrepancy. For example, a user may enter a deposit of £100 into a customer's bank account on Horizon but rather than taking £100 from the customer, they may make a mistake and give the customer £100 as if it had been a withdrawal. In that scenario, NBSC would not have been be able to identify the cause of a discrepancy. Clearly, NBSC is also unable to assist when losses have been caused by theft.

If NBSC were unable to identify the cause of a discrepancy they would often fall back on a default statement along the lines of "*this looks like a software issue*" so that the SSC would investigate it. However, Mr Roll's statement that "*[i]f an error was referred to us then it was extremely unlikely to be due to a mistake made by a postmaster*" is not correct. The vast majority of discrepancies investigated by the SSC as pseudo "software issues" were (and are) not caused by software issues.

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26.2 **2nd line**: 2nd line support was provided by senior members of the HSD and SMC and junior members of the SSC (as explained below, the SSC also fulfilled a 3rd line support function). The 2nd line support function mainly involved staff searching knowledge articles based on the descriptions of issues reported by branches, gathering evidence and applying simple, well-defined work-arounds (often on the phone). An example of this would be resetting passwords.

26.3 **3rd line**: the SSC also provided 3rd line support. The staff that provided 3rd line support had a detailed knowledge of the Horizon application based on documentation and some inspection of source code. They:-

26.3.1 designed, tested and documented work rounds for the 1st and 2nd lines of support;

26.3.2 applied analytical skills to the symptoms and evidence gathered by the 1st and 2nd line functions and undertook in-depth investigation into incidents (incidents are the basic unit of work for the support team and come from helpdesk calls and other Horizon support teams);

26.3.3 undertook complex configuration (configuration items can be used to alter the behaviour of the application) and data fixes which might have required the generation of special tooling;

26.3.4 designed, wrote and documented new support tools;

26.3.5 undertook source code examination, complex diagnosis and documentation (including methods to recreate faults) of new application problems before sending them to the 4th line support group for root cause software fix; and

26.3.6 provided technical support to other internal Fujitsu teams working on Horizon.[2]

The 3rd line support function used a system called Peak (until 2003 it was called PINICL) to log and manage incidents passed to them which were suspected to be faults. It also maintained a Known Error Log (**KEL**) which describes the symptoms of problems with some analysis of causes, (potential) solutions to the problems and workarounds that might be needed before a permanent solution

[2] An example of this which applies to Horizon Online is support to the Management Support Unit (**MSU**) who are responsible for the Reconciliation Process documented in SVM/SDM/PRO/0020 (Reconciliation and Incident Management Joint Working Document). The reconciliation process also applied to Legacy Horizon.

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can be implemented. The Peak and KEL systems are still in use today and are described further in paragraph 62 onwards below.

26.4 **4th line**: 4th line support staff had an intimate knowledge of narrow areas of the system and were (and are) ultimately responsible for the production of permanent fixes to repair the root cause of an incident or problem in the live application. They had knowledge of computer languages which they used to amend source code to fix problem in the live application code. There was often overlap between 4th line and developers, who added new features into the application.

27. The structure of the support for Horizon is broadly the same today. One of the main changes is that the HSD function is no longer operated by Fujitsu (it has been operated by Atos since June 2014).

Further context – call volumes and transfers

28. Between 1 January 2001 and 31 December 2004 (the years Mr Roll worked for Fujitsu), the SSC received a total of 27,005 calls, meaning that on average 563 calls per month were dealt with over this 4 year period. This is shown by a spreadsheet prepared by a team in the SSC which appears at Exhibit SPP1 (Tab "RRP_Live_Peaks_Into_SSC"). Where (as here) I analyse data in this statement, the analysis is mine.

29. Transferred calls (i.e. those not resolved by the SSC) are of interest. A very small proportion of calls transferred to 4th line support would have concerned software errors requiring resolution, so it would be interesting to know the number of calls transferred to them. However, while the SSC have records of the volume of transferred calls, we do not retain records of where they are transferred to and it is not the case that all of these would have been transferred to 4th line support. For example, incidents would often arrive at SSC from internal teams for routing back to helpdesks.

30. As evidenced by the data in Tab "RRP Live Peaks Out of SSC" of Exhibit SPP1, an average of 78 calls per month (14%) were transferred to teams outside SSC, for example, to 2nd and 4th line support. This indicates that only a small volume of calls received and escalated to the SSC related to software errors requiring resolution.

31. In terms of calls to the HSD, Fujitsu only holds records of the volume of calls made to HSD from December 2008 onwards. I understand from my colleague Sandie Bothick (Fujitsu's Service Delivery Manager) that the HSD received 13,225 calls in December 2008 and 13,005 in January 2009. The witness statement of Angele Van Den Bogerd provides that Post Office's NBSC call

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volume data shows an average of 1,096 calls per day were received in the period 2015 to 2018. While these figures relate to different periods, they indicate that only a tiny proportion of issues reported to 1st line support helplines were escalated to SSC.

32. From the SSC, only a tiny proportion of incidents were escalated to the 4th line support team. It follows that only a tiny fraction of incidents raised actually needed to be looked at by the only team who might potentially effect changes in software.

The SSC and Mr Roll's role within it

33. I agree with Mr Roll's recollection that there were around 30 individuals working on the 6th floor in Bracknell (i.e. in the SSC) at any one time while he was employed.

34. As noted above, the SSC team provided both 2nd and 3rd line support. As with any mix of people, there are (and were) various levels of talent within SSC. Mr Roll was primarily used in Operational Business Change (**OBC**), which involved supporting the engineers who were opening and closing branches and increasing and decreasing the number of counters in branches. Mr Roll would also have been regularly correcting the application environment after engineers had replaced failed counter hardware and clearing temporary files to increase disk space. This could fairly be described as 2nd line work and it was done by the SSC because it required a higher level of access to the system than other support teams had.

35. Some members of the 3rd line support group identified the need for software fixes via source code examination and would pass this on to the 4th line team for a code fix to be written. Mr Roll did not play any significant part in this and was not involved in any extensive source code examination. An application code fix would not be written by anyone in the 3rd line team and he was not involved in the provision of 4th line support

36. I disagree with Mr Roll's suggestion that much of the work being carried out by the SSC while he was employed could be described "*as "fire fighting" coding problems in the Horizon system*." There were times when the SSC was very busy, for example, networking problems causing application issues across the whole estate and data centre outages. But there were only rare circumstances where a coding issue had an estate wide impact and, in those instances, Mr Roll would have been involved executing avoidance actions to mitigate impact to the estate (i.e. following established work-arounds) rather than working on the root cause.

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37. The SSC had (and has) access to view, but not amend, source code. Senior members of the team would have looked at it from time to time to confirm exactly how the Horizon application would process a given input and what the outputs would be when investigating specific issues or general education on how the system works. However, the access was rarely used. Moreover, Mr Roll was not working at a level where he would be required to review code. His role in the SSC was predominantly following work around processes designed by other people and making configuration changes.

38. In support of the statements above relating to SSC workload I have undertaken some analysis of the work carried out by SSC between 1 January 2001 and 31 December 2004 (as stated above Mr Roll was employed from 5 March 2001 until 17 September 2004). My colleague John Simpkins provided the summary data from the Peak system, which I analysed.

39. When an incident is resolved, the SSC team member (or technician as they are sometimes called) types a summary of the incident (known as a Final Response) and allocates a response code to the incident in order to classify it. While guidance is provided on when to use each response code (see paragraph 64.5 below), allocation is the subjective view of the technician closing the incident and there is no re-examination of the response codes later to ensure consistency.

40. With that in mind, the final response codes that were allocated to incidents (i.e. Peaks) reported to SSC between 1 January 2010 and 31 December 2004 were as follows:-

40.1 known issue / work around - 35.3%;

40.2 admin - 27.5%

40.3 reconciliation - 15.7%;

40.4 potential user error - 10.9%;

40.5 potential software error - 8.3%; and

40.6 hardware error - 1.2%.

41. It should be noted that:-

41.1 a major part of 1st line's raison d'être is to deal with user error and therefore the percentage of issues attributable to user error would be much higher at 1st line;

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41.2 very few hardware incidents reached the SSC because they were the preserve of the HSD (i.e. they were relatively easy to spot and therefore filtered out by 1st line support);

41.3 8.3% of calls to the SSC (2252) are attributed to potential software errors over these four years. This includes duplicates and does not provide any clarity on the significance of the error corrected. Many software errors, particularly in a new product, were insignificant, such as correcting capitalisation in printed output. I cannot be more precise without examining each Peak and even then it might not be possible to determine how a Peak should have been properly classified (Peaks are essentially notes made by Fujitsu personnel to chart the progress made in resolving an issue and these notes can vary in fullness and clarity); and

41.4 Classifying an incident as a "*potential*" software error does not necessarily mean that there was a software error and, even if there was, it does not mean that the error was one that could have caused a financial impact in a branch's accounts (a large proportion of these would be errors in numerous data centre resident systems that the Subpostmaster never sees – errors were often as trivial as the use of “Kg” instead of “kg” on receipts). As stated in paragraph 16 above, such errors were extremely rare. They were all resolved (resolutions include a source code fix, a configuration fix or a workaround).

42. Mr Roll's suggestion in paragraph 10 that software issues in Horizon "*routinely*" caused discrepancies in branch accounts is misleading. In the vast majority of cases such an occurrence would cause a receipts and payments (**R&P**) mismatch that would be flagged by the branch system as part of the balancing process (the Horizon system carries out self-consistency checks which generate alerts in the event of a receipts and payments mismatch that are picked up by SMC and incidents raised for the SSC) and appear on MSU reporting. These would then be investigated and resolved by the SSC.

42.1 Since the introduction of Horizon in 1999 there have been 735 live incidents which refer to “Payments and Receipt mismatch” (i.e. incidents recorded against components of the system providing Horizon service to Post office rather than incidents raised against test systems). This figure has been obtained using a textual search across all incidents where the title or one of the incident updates contains all of the words “receipts”, “payments”, “mismatch”. It should be noted that this is not 735 unique incidents; there will be a lot of duplicates with the same root cause. The only way to determine how many unique incidents there were would be to manually review all of the incidents. All of them were resolved.

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42.2 These incidents are reported as a result of self-consistency checks carried out by Horizon. It should be noted that a R&P mismatch is not only caused by a software error. It can also be caused by incorrect product reference (configuration) data

42.3 Receipts and payments mismatches happened more often during the early life of Horizon (see Tab "All RnP by RCode and Date" of Exhibit SPP1). My analysis of that data shows that there were around 8.6 such incidents per month on average between 1 January 2001 and 31 December 2004 (417 out of a total of 27,005 incidents into SSC or 1.5% of SSC incidents during that period).

43. Mr Roll refers to a "*perception…that the Service Level Agreements between Post Office Ltd and Fujitsu involved financial penalties payable by Fujitsu to Post Office*" (paragraph 12). I am aware that there were Service Level Agreements for issues such as stuck transactions (Fujitsu had 10 days to retrieve transactions that had not replicated from a counter). It is quite normal for contracts such as the one between Fujitsu and Post Office relating to Horizon to have such agreements. The same level of diligence was (and is) applied to all incidents, whether an SLA was relevant of not. The possibility of financial penalties was never a factor for the SSC.

44. I do not understand what Mr Roll means when he says that "*any discrepancy in the post office accounts had to be resolved speedily*" (paragraph 12). There was (and is) a process run by the Management Support Unit (**MSU**) which involves examination of various system reporting and may result in Business Incident Management Service (**BIMS**) entries going to Post Office. An incident may also be raised by MSU with the SSC to provide support to the MSU in resolution of the BIMS. These are subject to Service Level Agreements and Mr Roll may be referring to this process. However, if Mr Roll is suggesting that Fujitsu routinely rushed out fixes or workarounds due to SLA time pressure, that is not the case. Fixes would be expedited based on service impact. It would be quite wrong to suggest that they were not done properly because of any SLAs.

45. It is correct that there are a limited number of opportunities to release software updates and that these releases could take 6 weeks or more to be released to the live service (Mr Roll's statement, paragraph 13). These longer timescales would be employed for non-urgent updates wrapped up into a consistent set for deployment. On those rare occasions when a problem has an impact on the financial integrity of the system a "hot fix" would be deployed which involved much shorter timescales. I would expect a timescale measured in days not weeks to deploy a hot-fix. Mr Roll also states that a bug could reappear several weeks

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after a coding fix had been released due to software issues. I am aware of only one or two cases where a fix regressed in my time at Fujitsu.

46. In paragraph 14 Mr Roll states, "*I would reiterate that the main recurring issues were software issues*." It is a symptom of working within a software support team that the majority of issues that come in have been attributed to a software issue by, for example, a lower line of support. This can lead to a mind set of "look at all these Horizon errors", but what this indicates to me is that the previous levels of support are functioning correctly, removing the majority of other causes (user / hardware problems). It does not indicate that the majority of Horizon errors could be attributed to software.

47. Mr Roll states (paragraph 7) that "*[s]oftware programs were written by us to strip-out irrelevant data, to enable us to more easily locate the error*." The support tools are used to filter information and present information to technicians in ways that make the support process easier. I am aware of two support tools (also known as software programs) that were written while Mr Roll was employed by Fujitsu:-

47.1 the Smiley support tool written by my colleague John Simpkins, which amalgamates information from various sources (e.g. databases) into a single view pertinent to a particular support task and provides a unified interface to run various tools to achieve a single support outcome; and

47.2 another tool (I cannot remember its name) written by my colleague Richard Coleman whose function was to retrieve messages (i.e. data) from the correspondence server to local text files for examination and which was eventually subsumed into the Smiley support tool.

47.3 Neither of these tools changed the underlying data in a branch's accounts.

The work carried out by Mr Roll

48. Mr Roll states that he would investigate financial discrepancies that had arisen in branches by "*work[ing] sequentially through all transactions over the relevant period, and also work[ing] through thousands of lines of computer coding*" (paragraph 7).

48.1 It is not the role of the SSC to routinely investigate discrepancies.

48.2 In very rare circumstances a discrepancy could be caused by a software issue and in those circumstances it might be necessary for the 4th line support function to work through thousands of lines of computer coding to determine the root

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cause. However, Mr Roll would not have worked through thousands of lines of computer coding to investigate a discrepancy in a branch: he did not work in the 4th line.

49. Mr Roll further states that if SSC was "*unable to find the cause of the discrepancy then this was reported up the chain and it was assumed that the postmaster was to blame*" (paragraph 10). That is not my experience: it is a simple truth of support that the majority of issues reported in a system are attributable to user action or user misunderstanding of system functionality. Hence, someone working in a support environment analysing a new issue would examine the possibilities of user error as a first hypothesis but any final conclusion is only generated based on the evidence. Where the evidence does not support a conclusion that there is a problem with Horizon, the SSC feeds the existent factual data back to Post Office and might say something along the lines of "*all indications are that the branch has made a mistake*", but Fujitsu neither attributes "*blame*" or agrees the final conclusion with the Postmaster

50. When an incident is resolved, the SSC team member (or technician as they are sometimes called) types a summary of the incident (known as a Final Response) and allocates a response code to the incident in order to classify it. While guidance provided on when to use each response code, allocation is the subjective view of the technician closing the incident and there is no re-examination of the response codes later to ensure consistency.

51. The Peaks that Mr Roll works on while employed by Fujitsu indicate that he dealt with 915 incidents (see Tab "Final Responses" of Exhibit SPP1). To give some clarity on these incidents I have analysed their final response codes that were allocated to them by Mr Roll. He classified them as follows:-

Response code	**% allocated by Mr Roll**
Known issue / work around	61.9
Reconciliation	14.5
Admin	9.3
Potential software error	3.2

52. This supports my recollection that Mr Roll mainly followed work-arounds devised by other people (61.9%) and that he was rarely involved in the detailed examination of potential software errors (3.2%). As explained in paragraph 41.4 above 'potential' software errors do not necessarily mean software errors, let alone software errors resulting in discrepancies to branch accounts.

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Remote access

53. I understand from Post Office's solicitors that the term "remote access" has been used to describe Fujitsu and Post Office carrying out the following actions when not physically present in a branch:-

53.1 accessing branch data in read-only mode;

53.2 inserting new transaction data; and

53.3 editing or deleting existing transaction data.

54. As noted above, it is correct that Fujitsu had (and has) the ability to view data in branches remotely given their support role.

55. Mr Roll claims that "*[d]uring the course of resolving the software issues, we would frequently access a Post Office counter IT system remotely*" (paragraph 15). Mr Roll gives the example of ("*when a binary bit would "flip", thus a "1" became a "0"*"):-

55.1 This probably relates to a condition known as a CRC (Cyclic Redundancy Check) error which would happen when a hard drive became faulty at a branch counter. Although this is a hardware problem, remedial action was needed by the SSC to resolve. To clarify, this process did not involve changing any transaction data.

55.2 As explained by Mr Godeseth in paragraph 35 of his statement, in Legacy Horizon:-

55.2.1 all counter data was held in a bespoke message store in each branch[3] and the data was replicated to all counter positions in the branch and from the branch to the data centres where it was held in correspondence server message stores;

55.2.2 any data inserted into the message store at the data centre (for example reference data or authorisations for banking transactions) would be replicated back to the branch counters; and

55.2.3 selected data was extracted from the correspondence servers to update Post Office's back end systems.

55.3 If one of the sets of data on a branch counter became corrupted it would generate an event that would be picked up by the SMC and/or reported to HSD

[3] A message means data and transaction data is a subset of the data in the message store.

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by the branch (an incident reporting a "CRC Error"). There were a total of 629 CRC errors over the life of Legacy Horizon (see Tab "All CRC by Date" of Exhibit SPP1).

55.4 The issue would be reported to the SSC, who would delete the entire set of data on that counter and replace it with a copy of the data from one of the other sources that had not been corrupted. While this process involves deleting and replacing a set of data, no new data is produced; all that happens is that the replicated data is used to replace the data that has become corrupted from another counter in the branch. It would have been necessary for the SSC to inform a branch before carrying out this task because it is likely that any attempt to use that counter would fail while the process was being carried out. In Mr Roll's capacity as an OBC specialist, he would have been involved in this type of activity.

55.5 Alternatively, Mr Roll's reference to a binary code flipping may relate to a configuration item (an item that can change the behaviour of the application) which can become locked in the wrong binary setting (1, 0). One example of which would be a stock unit lock which, in the wrong state, would prevent updates to stock units within a branch. This issue was corrected by a member of the SSC accessing Horizon remotely, but it did not involve accessing or editing transaction data in any way or re-creating databases.

55.6 I cannot think of any other examples of incidents that Mr Roll may be referring to in paragraph 15.

56. Mr Roll claims that "*some errors were corrected remotely without the sub-postmaster being aware*" (paragraph 16).

56.1 It may be that Mr Roll is referring to issues relating to the end of day concept in Legacy Horizon. Essentially there was a cut-off point for transactions every day at 7:00pm and each counter had to write an end of day message to the branch's master counter to enable the master counter to write a branch end of day message, which would then trigger the data centre to harvest messages (including details of transactions) to Post Office's back end systems. Occasionally a counter in a branch would fail to write an end of day message and there was a process for correcting this. The issue would be reported to SSC by way of an incident (either as a result of a call to HSD or sometimes Fujitsu could spot issues via system events).

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56.2 In lay terms, SSC would force the counter to generate a report based on the data already in the counter. A message injected in this way would go into the audit trail. This would not alter the branch's transaction data.

57. Mr Roll also states that, there were some errors where it was necessary to "*download and correct the data and prepare it for uploading back on to the post office computer, then call the postmaster to inform him that there was problem and that we needed two or three minutes to correct it*" (paragraph 17).

57.1 It is not clear what errors Mr Roll is referring to or how he says they were corrected. The issue referred to could be another instance where the work round of re-creating transaction data from a replicated copy was required as described in paragraphs 55.3 and 55.4 above.

SUMMARY

58. In summary, the suggestion that Fujitsu would manipulate a branch's transaction data in a way which was detrimental to a particular Postmaster and undetectable is wrong.

58.1 All support action taken by Fujitsu is directed to ensuring that legitimate transactions entered by Subpostmasters are correctly processed by the Horizon application and correctly passed to other POL systems as appropriate.

58.2 Any financial corrections required are communicated by Fujitsu to Post Office for execution or approval.

58.3 Any support intervention that requires the insertion of a transaction is identifiable in the audit trail.

58.4 There is no financial incentive for a support technician to circumvent the controls within the system.

58.5 There are strong controls in place to prevent intervention by support staff with malicious intent or misguided attempts at financial gain.

59. The statement that issues with coding in the Horizon system were extensive and impacted branch finances is incorrect for the reasons stated above.

KELS AND PEAKS

60. I have been asked by Post Office's solicitors to provide some more information on the two toolsets used to support the Horizon system, the KEL knowledge base

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(AKA KEL) and the incident management system (PINICL / Peak). This information is applicable to both Legacy Horizon and Horizon Online except where explicitly stated otherwise.

61. Fujitsu use a custom solution, developed and administrated by the SSC, which allows us to record support knowledge into a structure known as a KEL (Known Error Log). KELs record support knowledge which is intended to assist staff in the support and understanding of the Horizon system. KELs do not contain the history of an incident (see my analysis of the Peak system below). KELs are generated for a number of reasons, for example: to explain system behaviour or messages that originate from central and counter systems; to record symptoms and outcomes from incidents referred by help desks or identified as a result of Fujitsu's reconciliation processes; and to record information on issues seen in test environments (resolved before the feature is passed on to users).

61.1 The acronym KEL is a misnomer inherited from a previous system. KEL entries are support knowledge entries and do not have a one to one relationship with errors on the system. There are a lot more general supporting knowledge KELs than KELs relating to specific errors.

61.2 Guidelines for the generation and use of KELs are documented in SVM/SDM/PRO/0875 (End to End Support Strategy) section 11 Knowledge Base Maintenance. Although some aspects of this document need revision due to changes in the support structure for Horizon, Section 11 is still fundamentally correct in relation to Horizon.

61.3 KELs reflect community sourced knowledge to assist staff involved in the support of the Horizon solution. There are no mandated rules for when a KEL should be created other than a desire to make resolving a problem easier for all concerned. Guidelines exist in SVM/SDM/PRO/0875. Any KELs created or updated are referred to the SSC for approval to provide a basic check that the information at the time of the change is valid.

61.4 KELs can be created by the senior people in HSD (2nd line) to supplement their own knowledge base (rather than taking an active role in the KEL process) and the SMC monitoring team. The 1st line helpdesk function do not create KELs (HSD 1st line used their own knowledge base).

61.5 A KEL is a living document that reflects support knowledge at a given point in time. KELs are not designed to provide a history of a particular symptom or support process and a particular KEL cannot be considered the definitive source containing all possible information regarding the problem it addresses. It is up to

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the technician to check other potentially relevant KELs and information sources (e.g. support guides) and use their analytical skills to determine the right course of action to take in a given situation.

61.6 There have been historic requests to remove large numbers of KELs based on date updated to reduce the number of search results that are returned to help desks when naive search terms were used. The dates given in the KELs, while an indicator of potentially irrelevant support information, are not precise. This led to the concept of "deactivated" KELs (deactivated KELs are removed from the default searches support people use although the user interface allows the user to explicitly request a search to include deactivated KELs). At the time of writing, there are 113 deactivated Legacy Horizon KELs and 1024 deactivated Horizon Online KELs.

61.7 For most of its lifetime, there has been no fixed routine for the review of KELs. If a technician recognises an inaccurate KEL as they analyse information they are expected to update in order to improve the knowledge base. Approximately 2 years ago the KEL review forum was introduced. This forum meets weekly to review KELs and update or deactivate as appropriate.

61.8 Before creating a KEL there is an expectation that the creator will search the existing information to ensure that it is not duplicated. Because people express information using different words, it is not possible for the system to perform such a check. Human fallibility and unique expression mean that duplicated information is present in the KEL system.

61.9 Archiving: There is no requirement to keep historic support information. Once an item is no longer relevant to current systems it can be removed without any implications to the support of the system. KELs are deleted when they have no value to the support of the current systems. This can happen at any time and is carried out by the SSC who are the final arbiters of what information is currently relevant. That does not mean that all current KELs are still relevant; it may be that irrelevant KELs have not been deleted yet. At the time of writing there are 1,491 deleted KELs.

61.10 KEL entries have a single field to record an incident (Peak) reference. This is not a record of all incidents the KEL is relevant to. Generally, it is used to record the Peak that was being investigated when the KEL was created or updated. This is a manual entry and is not checked by the system because a KEL may not have an associated incident. There is no requirement to update the KEL when information in it is re-used to provide guidance on a different incident.

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62. Peak (not an acronym) is browser-based software incident and problem management system used by Post Office Account for all development, test and support teams except the 1st line help desk. It enables details of the incident and diagnostic progress to be captured in a searchable format and allows the tracking of problems from detection through to resolution. Peak was developed in-house by the SSC from the PinICL system it replaced in 2003. The system has been customised and enhanced over its 15 years of operation and still continues to be developed to Post Office Account requirements today.

62.1 When Peak was implemented, data from PINICL was migrated to Peak.

62.2 One source of Peak incidents are the 1st line support teams (including the HSD the NBSC helplines). Peak is also used to process incidents generated by other support units, monitoring and testing teams.

62.3 The structure of a Peak enforces a workflow (it gives a process structure leading to a defined outcome). As a result, the Peak system has also been used to record and progress other items loosely associated with incident management. For example, Release management process, reference data delivery process, Post Office Data Gateway route definition process. So the Peak system contains incidents which do not directly impact the Horizon service provided to the Post Office counters (AKA “Live service”). These additional types of “incident” are differentiated by the Peak type: L = Live service, R = Release management etc

62.4 For most of its life cycle a Peak is assigned to a particular support team and a person within that team who is responsible for the next action on the incident. As the incident is progressed by various members of the support community, they add textual comments and supporting evidence to the Peak to document the progress of the incident. These updates are date / time stamped and form a record of the diagnostic and resolution process. Progress updates cannot be deleted / amended by users once committed to Peak. A Peak may also be transferred between teams and people as it progresses to final resolution.

62.5 A final response code (numeric) is applied to an incident when it has reached its conclusion along with text that supports the response code. Response codes are the subjective opinion of the person closing the incident and are not subject to review but they remain the best way to classify the final outcome of an incident. Response codes and their expected usage are documented in SVM/SDM/PRO/0875 (End to End Support Strategy) in Section 9 Incident closure categories. Although some aspects of this document need revision due to changes in the support structure for Horizon, Section 9 is still fundamentally correct and is relevant to Horizon (Legacy and Online).

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62.6 The Peak system has no archiving policy. Effective incident management requires that you can track the current issues and those from the recent past. Data retention on Peak has been impacted by a lack of disk space, the primary cause being large evidence files attached to Peaks. I am told by my colleague who maintains the Peak system that:-

62.6.1 encrypted evidence files are removed one month after the incident is closed; and

62.6.2 due to disk space issues in the past it has been necessary to remove evidence attached to older Peaks.

62.7 KEL references can be added to a Peak entry. There is no system check to ensure a KEL has been added since KELs are not relevant to all incidents being processed.

62.8 Incident priorities and appropriate usage are described in SVM/SDM/PRO/0875 (End to End Support Strategy) in Section 7 and SVM/SDM/PRO/0018 (Incident Management Process). Incidents with a financial impact on branches are treated as high priority.

62.9 Target times to resolve software incidents are described in SVM/SDM/PRO/0875 (End to End Support Strategy) in Section 8.

KEL ANALYSIS

MR COYNE'S KELS

63. I have been shown paragraph 5.114 of Mr Coyne's report, in which he says that he has analysed 5,114 KELs to determine the scope and impact of potential Peaks. Mr Coyne explains that out of these 5,114 KELs, he believes he has found 163 that could be of "*significant interest*" and that he has referred to 76 of these in his report.

64. Post Office's solicitors have reviewed Mr Coyne's report and have provided me with a list of KELs that they have identified as being referred to in the report (**Coyne KELs**). I do not know why there appears to be a difference between this number and the number of 76 quoted by Mr Coyne.

65. It is not clear what Mr Coyne means by "*significant interest*". It may be that he means that a KEL presents evidence of a bug, error or defect in Horizon that has

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caused a financial discrepancy in branch accounts. I refer to this as **"financial impact"** as shorthand in this statement.

66. KELs are written by and for members of Fujitsu's support groups (i.e. all of the teams who support the Horizon solution for Fujitsu) who have a deep knowledge of the design and operation of Horizon, and they are often expressed in a shorthand way. I believe that it would be helpful to explain the significance and implications of the Coyne KELs. Annexed to this statement is a table which contains the initial explanations that have been produced by a team from SSC at my request in the time available.

DR WORDEN'S KELS

67. Dr Worden has selected a sample of 48 KELs. A list of these KELs was passed to Fujitsu by Post Office's solicitors (**the Worden KELs**).

68. A table which explains the Worden KELs is annexed to this statement. As with the Coyne KELs, given the limited time available to prepare this statement, the initial explanations have been produced by the team referred to in paragraph 66 above.

STATEMENT OF TRUTH

I believe that the [redacted] tement are true.

Signed: [redacted]

Date: 19/11/18

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Filed on behalf of the: Defendant
Witness: Steven Paul Parker
Statement No.: First
Exhibits: SPP1
Date Made: 16 November 2018

Claim No: HQ16X01238, HQ17X02637 & HQ17X04248

Appendix 1

	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	**Short-name** (if applicable)	**Paragraph No.**	**Mr Coyne's Summary** (paraphrased)	**Response to Mr Coyne**	**Financial impact on branch accounts**
1.	wrightm 33145J	Payments Mismatch	5.6 - 5.11	This issue is reported as causing discrepancies showing at the Horizon counter which disappeared when branches followed certain process steps. While a workaround was established by KEL wright 33145J, it is not clear how many corrections were required to fix all instances of this or event that all instances were fixed.	This issue, referred to as the 'Payment Mismatch' by Mr Coyne, is dealt with substantively in the second witness statement of Torstein Olav Godeseth.	The issue caused a receipts and payments mismatch in the accounts of affected branches, which was detected by the monitoring of system events by Fujitsu. Post Office were informed and corrected the relevant branch accounts.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	**Short-name** (if applicable)	**Paragraph No.**	**Mr Coyne's Summary** (paraphrased)	**Response to Mr Coyne**	**Financial impact on branch accounts**
2.	acha1233J	Unexplained Discrepancies (cash declarations)	5.21 – 5.23	Discrepancies between the branch cash declarations and the amount received by SAP (the cash management system). The KEL states that this is not a user error or anything that can be corrected at branch level. This is therefore consistent with the problem being due to the existence of a software bug.	The cash planning system calculates the branch's cash levels figures from one day to the next. This was a timing issue due to figures from a previous day being used in association with other figures from the current day. This issue affected the figures being used by the back end cash planning system and did not affect any branch accounts. The KEL exists to deal with further complaints. In the event that there is a discrepancy be tween the amount received by the Post Office cash centre in a cash pouch returned by a branch and the amount the branch entered on Horizon as having been put in, this would be identified by Post Office and a Transaction Correction for the appropriate amount would be issued.	No impact.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	**Short-name** (if applicable)	**Paragraph No.**	**Mr Coyne's Summary** (paraphrased)	**Response to Mr Coyne**	**Financial impact on branch accounts**
3.	acha1717T	Unexplained Discrepancies (cash declarations)	5.22	There is an acknowledgment that cash declaration discrepancies could be due to an "*Unknown System Problem*".	By way of context, this is a generic KEL relating to the handling of calls concerning discrepancies. There are a number of possible causes for unexplained discrepancies between the cash declaration and figures on SAP, including: • Subpostmaster has made an incorrect declaration • Transactions as recorded on the system do not match what actually happened at the branch • Outstanding recovery • Withdrawn products • Known system problem (these should be monitored for or be easy to spot from events etc.) • Unknown system problem This term "unknown system problem" is a term that the KEL creator would have used to indicate that the issue may have been caused by a new (previously undetected) defect, that would follow the normal diagnosis process and will then become a known system problem once fixed. The relevant Peak (PC0202239) relates to an investigation surrounding the possible explanation of a £240 discrepancy. The investigation concluded that the discrepancy was likely to have been caused by human error and it appears that the Postmaster accepted this conclusion.	None.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
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4.	acha621P	Unexplained Discrepancies (duplicate Rem In)	5.23	Evidence of cash declaration discrepancies arising from clerks duplicating Rem In transactions as a result of wrong messages being presented on the Horizon counter screen.	This issue, also referred to as the 'Dalmellington' issue is dealt with substantively in the second witness statement of Torstein Olav Godeseth. Fujitsu identified the branches affected by this issue and gave the information to Post Office to resolve the issue with affected branches.	This issue caused a discrepancy in the Subpostmaster's outreach branch which was easy to identify from the transaction logs available through Horizon and the fact that separate receipts were printed for each transaction. Post Office issued Transaction Corrections or advised Subpostmasters how to take corrective action to remove the discrepancies.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	**Short-name** (if applicable)	**Paragraph No.**	**Mr Coyne's Summary** (paraphrased)	**Response to Mr Coyne**	**Financial impact on branch accounts**
5.	LKiang3014S	Unexplained Discrepancies (multiple cash declarations)	5.24	Issue following multiple cash declarations and trial balance report being inaccurate. On this occasion the support department was unable to identify the root cause of the discrepancy although it was reported that a correction could be made at the Post Office counter level by redoing the cash declaration using the same amount already declared. Within KEL MScardifield 2219S Fujitsu identify the underlying software bug as being caused by 'cached data' not being updated via Riposte.	This KEL relates to the next KEL (MScardifield2219S) as follows: • LKiang3014S describes the symptoms of the issue; and • MScardifield describes the cause of the issue. This was a software/ environmental issue involving the Horizon system struggling to find cash declarations, which would tend to happen if a Subpostmaster was undertaking multiple declarations in a stock unit. This particular instance involved Riposte failing to find one of the Cash Declarations and thus generating a temporary discrepancy. If left unresolved this would result in a loss to the Postmaster f or this period. However, when the Subpostmaster subsequently declared the cash held in branch accurately, this would generate an equal and opposite discrepancy that would cancel out the earlier discrepancy. This issue was not resolved, but further diagno stics were added to enable further investigation should the problem happen again.	This issue may have had a temporary financial impact, but it would have been resolved when the branch next declared the cash held in the branch accurately.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
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6.	MScardifield2219S	Cached Data Delay	5.24	Delay in 'cached data' being updated via Riposte. This resulted in incorrect data being presented in any discrepancy, variance and balance reports. Mr Coyne comments that this is likely to be confusing for the Postmaster and could lead them to making unnecessary modifications if they are unaware that the problem should clear itself overnight.	This KEL relates to the previous KEL (LKiang3014S) as follows: • LKiang3014S describes the symptoms of the issue; and • MScardifield describes the cause of the issue. This is not a 'Live' issue, but something found on a Test rig. Experiments did find that this could occur around once in 100,000 balance calls when the rig was heavily loaded. 13 Live Peaks reference this KEL, each Peak was treated separately and the issue was discussed with the Subpostmasters. The work around of subsequently correctly declaring cash declarations was identified and communicated to Subpostmasters.	As above.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
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7.	DSeddon5426P	Cash Pouch Delivery	5.25	A failure in pouch delivery resulted in a cash gain when the branch declaration was carried out.	The cause of this was that the system was in "Price shopping mode" which can be used to buy, for example, £15 of 1st class stamps. Price shopping is not supported for products like cash, so when the branch attempted to remit the cash deliver in while in Price shopping mode the cash remittance failed. In this particular KEL, the remittance was repeated later and was successful. A fix to ignore "Price shopping mode" for Rems was applied to Live in April 2007.	This had a financial impact, but when the branch investigated the discrepancy the failed remittance would have been identifiable in the logs that are available to users of Horizon. In addition:- • a critical event was written that will have been picked up by Fujitsu's support teams and Fujitsu will have advised Post Office to contact the branch; and • Post Office's own reconciliation procedures would have identified that the remittance in was not completed successfully and contacted the branch and resolved the matter with a Transaction Correction.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	**Short-name** (if applicable)	**Paragraph No.**	**Mr Coyne's Summary** (paraphrased)	**Response to Mr Coyne**	**Financial impact on branch accounts**
8.	acha194L	Automated Cash Declarations	5.26	Problem affecting around 15% of kiosk branches that prevented these branches from being able to automatically make cash declarations.	Automated cash declarations from self service kiosks failed at random. Analysis shows that this was due to rounding errors on the arithmetic carried out due to use of incorrect data types. The lack of cash declarations have no impac t on Branch accounts, but will result in cash planning potentially having incorrect or missing figures and thus failing to calculate accurate amounts of cash to send to the branch. This was a coding error and was fixed in December 2015.	No impact on branch accounts. The business impact of the error is on cash management and the delivery of cash meaning the cash needed at a branch may be incorrectly estimated, leading to late or insufficient cash deliveries. The vast majority of self service kiosks are located in Crown branches and the others are located in large mains branches.
9.	DSeddon314Q	Reference Data	5.30	Examples have been found in KEL/ Peak records that indicate Reference Data has an impact upon daily counter activities.	The particular KEL related to the incorrect maximum values being set up in Reference Data and the counter not handling this error correctly. This was caused by a human error by Post Office in the Reference Data. Specifically, it was not possible to rem in a particular commemorative coin because it did not have the requisite Reference Data. The Reference Data was fixed on 14/3/06 and a code fix to handle the scenario better was applied in June 2006. This did affect a number of branches during the day that the problem was live, but a message was sent out to all branches advising them of the issue and how to correct it.	No impact - it was not possible to rem in the coin and therefore it could not be sold by branches.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	**Short-name** (if applicable)	**Paragraph No.**	**Mr Coyne's Summary** (paraphrased)	**Response to Mr Coyne**	**Financial impact on branch accounts**
10.	johnbascoG5 222H		5.31	An Automated Payment transaction was reported as having failed due to "Unknown Agent Code 3046". Client account code 3046 was found to not exist in Reference Data and the fault was not reproducible when the problem was analysed and tested. It was acknowledged that, due to the business impact, a fix would be provided to check and validate the client account code exists in Reference Data before the transaction is committed.	For some unknown reason, the counter was associating an Automated Payment transaction with an inval id client code. There was no fault in the Reference Data. The fault was impossible to reproduce, and so not understood. Failure to complete a transaction would not produce an error in accounts - a double entry transaction would either all succeed or all fail.	No impact.
11.	acha10L	Reference Data Errors	5.32	KEL documents how branches were unable to accept cards for rent and council tax payments due to incorrect Reference Data.	Incorrect Reference Data was issued, which had the effect that payments of Council Tax to Vale of Glamorgan Council were rejected. The Reference Data was fixed overnight and it all worked the next day. Failure to complete a transaction would not produce an error in accounts - a double entry transaction would either all succeed o r all fail.	No impact.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	**Short-name** (if applicable)	**Paragraph No.**	**Mr Coyne's Summary** (paraphrased)	**Response to Mr Coyne**	**Financial impact on branch accounts**
12.	MWright1458Q	Withdrawn Products	5.33	Issue involving withdrawn products impacting a branch accounting position because the Postmaster will have products that cannot be accounted for as there is no remaining Reference Data for them to later declare that stock item in the accounts.	When products are withdrawn, there is a withdrawal process which requires users to have Remmed Out the relevant products (which involved the stock being returned to the stock centres) or the stock would ne ed to be adjusted. The grace period for the Subpostmaster either Remming Out or adjusting the stock was 6 weeks. After the Reference Data was withdrawn, any unused stock would result in a discrepancy (a change was introduced by Impact in 205 which meant t hat this could no longer occur). The assumption was that the branch had actually sold the missing stock and failed to record it on Horizon so the stock was removed from the system and a cash discrepancy would be generated for its value. In this particular case, the branch failed to Rem Out its unused stock of obsolete products (stamps) within the grace period despite being asked to do so on multiple occasions. This left the Subpostmaster with a problem she could not solve herself, but needed Post Office s upport to do so. To resolve the issue, corrective transactions were added to the Message store in consultation with Post Office at the data centre to reflect the value of the obsolete stock which enabled the branch to roll over correctly.	Temporary financial impact caused by the Subpostmaster's failure to follow the correct procedure in relation to the Remming Out of obsolete stock. Fujitsu was able to resolve the issue by adding a compensating transaction.

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13.	wbra5353J	Reference Data Errors	5.34	The customer was charged twice for the same transaction which was reported to be a side effect of errors within Reference Data.	This was a fault involving a self-service kiosk, which resulted in a customer being debited three times, after which the session was cancelled. This was an issue with how the NCR kiosk interfaced to Horizon, which attempted multiple Debit Card transactions with the same ID. NCR diagnosed this as being due to some invalid Reference Data being sent to the kiosk. The fault appears to result from two causes: i. faulty Reference Data (the result of human error), which was easily corrected ii. a fault in the kiosk software, which came from an external supplier	No impact.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	Short-name (if applicable)	Paragraph No.	Mr Coyne's Summary (paraphrased)	Response to Mr Coyne	Financial impact on branch accounts
14.	GMaxwell3651K	Duplicate Payment Transactions	5.38	Failures or interruptions in service with the harvesting process can cause duplicate payment transactions to be processed.	This was an issue where approximately 835 transactions were sent to Streamline (Post Office's previous payment services provide r) on 2 successive days due to an operational issue in Horizon back end processing. These were identified by Streamline as duplicates and not processed so customers were not charged twice. This also resulted in errors picked up by Fujitsu's Reconciliation service so it was trapped by both ends of the interface. The DRS (Data Reconciliation service) takes inputs from multiple sources (counters, TPS database and FI reports) and compares them and produces reports detailing transactions where they disagree.	No impact.
15.	surs357P		5.38	Failures or interruptions in service with the harvesting process can cause duplicate payment transactions to be processed.	Same type of incident as previous KEL at row 14 - same analysis. This KEL additionally states: as no customer accounts have been debited twice no further reconciliation is needed. By way of further explanation, the reason for there being 2 KELs is that this issue occurred in both December 2004 and again in March 2009. However, in both cases both Streamli ne and Fujitsu picked up the problem.	No impact.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	**Short-name** (if applicable)	**Paragraph No.**	**Mr Coyne's Summary** (paraphrased)	**Response to Mr Coyne**	**Financial impact on branch accounts**
16.	jharr832S	Recoverable Transactions	5.41	Acknowledgment that the recovery process (in relation to recoverable transactions) is a complex area.	This KEL relates to a case where the system was behaving as designed, but the user in branch failed to answer the questions correctly and did not follow the recovery process properly.	There would be no impact if the user followed the recovery process presented by Horizon. If the user failed to do this there could be an impact due to the user's error.
17.	cardc464Q	Failed Recoveries	5.42	Particular difficulty in processing a recoverable transactions. In this instance the settlement of the transaction had not been written into the Branch database so the recovery failure would have had no impact on branch or customer accounts.	This KEL does not indicate any software error. The specific scenario described by this KEL would always appear as a failed transac tion at a Branch, so it is highly unlikely that any cash was exchanged and the branch or customer was out of pocket. All failed recoveries are monitored by Fujitsu and result in the exact circumstances being checked out and a transaction correction issued in the event of a discrepancy. All failed recoveries are automatically identified in a daily report that the security operations team receives (formerly MSU). They review this and raise Peaks for any that require further investigation by the SSC team.	As Mr Coyne acknowledges, in this case there was no impact on the branch account.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
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18.	seng2037L and acha959T		5.43	These KELs describe how various transaction states may also indicate a failed recovery.	These are both generic KELs describing how support should process specific scenarios found on reconciliation reports. These reports are generated daily for banking/debit card/e top up transactions where the counters, agent and financial information (**FI**) feeds differ in some way (for example, the counter timed out a transaction but the FI authorised it and ring fenced the funds). They are sent daily to the security opera tions team. Each transaction is checked and sometimes further investigation is required from the SSC team via a Peak. These KELs describe legitimate states that can occur during reconciliation following a failed transaction which is usually recovered from correctly. There are 23 legitimate (normal process) states and 39 error states that a transaction can enter. Each state has a specific meaning depending upon the responses from the Counter, TPS and FI. A legitimate state would be that the TPS and Counter both know about a transaction but the FI may never send information about it (state 6); this is a legitimate state but it would warrant investigation.	There would be no impact if the user followed the recovery process presented by Horizon. If the user failed to do this there could be an impact due to the user's error.

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19.	dsed4733R (no 20)		5.44	Example where transaction recovery has failed due to a wrongly named recovery script. Jason Coyne refers to a Horizon system error arising because of incorrect Reference Data.	This KEL refers to a failed recovery report (report of failed recoveries) and in particular some unexpected items in it. The existence of the failed recovery report is evidence of routine robustness countermeasures in place to deal with failed recoveries. In this case, the unexpected behaviour seems to have arisen from faulty Reference Data, which was corrected within a couple of days. This KEL refers to problems specifically with an ADCScript -HPBB_REC1 recovery script. HPBB stands for Home Phone Broadband and it appears that the transaction would have been a customer application for a Post Office Home Phone Broadband service where information is collected from the customer but no payment is made.	This was a zero value transaction so there was no impact on branch accounts. If the transactions had a financial value then the issue would have had an effect on the branch. However, it would have been raised on Fujitsu's failed recovery reports, investigated and reported to the POL via a BIMs report.

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20.	PSteed2847N	Incorrect Mathematical Sign	5.51	Software issues resulting in Horizon applying the wrong mathematical sign when reversing transactions (i.e. a plus (+) instead of a minus (-))	A user had Remmed In some cash to the wrong stock unit. When they realised this they carried out a reversal of the Rem In but, due to a software error the value of the Rem In was doubled instead. The reversal receipt would have informed the user that something had gone wr ong and in this case they stated that their Rem In amount had doubled when reporting the issue. Presumably they looked at a remittance report or balance report to see this. A Rem In reversal is not a particularly common transaction and it was prohibited as part of Impact changes in 2004. The user has attempted it for a specific reason so if after performing the reversal it hasn't had the desired effect you would expect the user to clearly notice this and raise a call with the helpdesk to query it. Upon c onfirming the error the NBSC could then issue an 'error notice' to correct any anomaly. It took just 13 days from reporting to active a fast track fix.	Temporary financial impact which was obvious to the Postmaster (who reported the issue) and corrected b y Post Office issuing an error notice.

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21.	cardc5756N	Pouch Rem Out Reversal	5.52	This is an example where the system failed to reverse all items in a multi-line pouch, meaning only the first item was reversed.	This concerned the reversal of a Rem Out of a pouch, a rarely used process, by which when a banch has prepared a pouch returning cash to the cash centre and then realised that they either made a mistake (as happened in this case) or need the money after all. It was not possible to rule out the possibility that this was caused by a software issue, but it was not possible to replicate it so this could not be investigated further. The Rem Out reversal appears to have gone wrong in this case and only part of the pouch contents was reversed, thus leaving some of the value still in suspense.	Temporary financial impact which would be picked up by Post Office's cash centre reconciliation process and corrected by a transaction correction.
22.	GCSimpson1049L	Foreign Currency Discrepancies	5.54	All currencies in branch doubled up following successful balancing eight days previously.	The discrepancy (between the Horizon record and physical cash) was picked up in branch and a call raised. It appears that this particular incident was resolved by the branch upon monthly balancing. Due to the delay in providing the information to the development team, the lack of any record of this incident having happened previously and there being no further reports of similar problems, we are unable to confirm the root cause.	Temporary financial impact which was resolved when the branch carried out the next monthly balance (when it declared the actual value of currencies held in branch).

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23.	MHarvey3527I	Insufficient Diagnostic Data	5.55	Evidences that in certain investigations there was insufficient diagnostic data to be able to fully diagnose an issue.	The KEL says: *'As this is, at the moment a one off event and clearly no further progress can be made at this stage, I have therefore closed PC113202 as "insufficient evidence". However, any further occurrences should be sent to APS Counter Dev for investigation*.' This is an issue in the transferring of copies of transactional data from Horizon to Post Office's back-end systems. The specific data mentioned here is not financial. The underlying issue was that there was unnecessary validation of copies of Reference data being passed back to Post Office and this validation was removed as part of Impact (a joint working body to introduce improvements to the system and processes) in 2005.	No impact.
24.	CObeng1123Q	Stock Gains	5.56	Unexplained discrepancies (gains) for different stock unit types (Cash and Stamps) was reported. The incident remained unexplained and no record of advice having been provided to Postmasters.	This was a complicated memory loss issue in branch. Extensive searches were made for memory loss issues in test at the time and only one was found and explained (which did not relate to this issue). It therefore appears that this was a one off incident. Due to the passing of time, we're unable to identify the cause, but if the counter software was running short of memory we would expect the counter to display a warning to the user which would have been seen.	Not known due to the age of the matter.
25.	DRowe1625K		5.57		This KEL is not available.	

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26.	dsed525Q	PIN pad Failures	5.68	There was a failure in the Postmasters being able to transact various types of transactions including payment transactions using a PIN pad. An error message and code were generated, and a new PIN pad was the recommended solution.	This was a faulty PIN pad. It prevented the Postmaster from carrying out some transactions but this would not affect branch accounts.	No impact.
27.	surs3941P	PIN pad Failures	5.68	There was a failure in the Postmasters being able to transact various types of transactions including payment transactions using a PIN pad. An error message and code were generated, and a new PIN pad was the recommended solution.	This appears to have been an issue with a corrupt customer card. It was set up with no CVM (CVM is someth ing on a card that indicates whether a PIN or a Signature is to be used to authorise a transaction). SSC suggest that this was an attempt to do a Balance Enquiry on a Credit Card (which isn't allowed). Reference Data should have prevented that being attempted and it's not clear why it didn't. It could have been a corrupt card that the customer had.	No impact.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
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28.	BrailsfordS2239K	PIN pad Failures	5.68	There was a failure in the Postmasters being able to transact various types of transactions including payment transactions using a PIN pad. An error message and code were generated, and a new PIN pad was the recommended solution.	This was a faulty PIN pad. It prevented the Postmaster from carrying out some transactions but this would not affect branch acco unts.	No impact.
29.	cardc219R	PIN pad Failures	5.69, 5.135	This KEL indicated that PIN pad related issues would usually result in the recommendation of a new PIN pad, regardless of the error. In this case a transaction had been declined by the PIN pad but did not get reversed	The KEL relates to a specific (one -off) hardware issue with the old Hypercom PIN pad where the transaction was authorised but not confirmed due to the hardware fault. The process is request, authorisation and confirmation, however, the final stage of confirmation did not take place. As per the KEL, this was identified as part of the reconciliation process (i.e. the same DRS reconciliation process referred to above) and passed back to Post Office and a Transaction Correction issued automatically. There was no impact on branch accounts, however, the customer was charged twice and they should have been reimbursed by Post Office's back end processes.	No impact.
30.	dsed4733R		5.92	Identifies multiple failed recoveries occurring because of a wrongly named recovery script.	See analysis at line 19 above.	See analysis at line 19 above.

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31.	obengc5933K		5.93	There was a loss of communications following network banking transactions and the printing of the customer receipts resulting in a message to the data centre timing out. Consequently, the Postmaster was asked to follow recovery but the transaction was only able to recover partially.	This is further evidence of the failed recovery report doing its job and alerting Fujitsu to failed recoveries to enable them to investigate them and make any necessary corrections to accounts by sending a BIMs to Post Office. If this had not happened, a transaction correction would have been issued as a result of Post Office's own reconciliation processes. The incident was caused by a complex 'grey' communications failure (i.e. the network kept switching between good and bad; not solid good or solid bad), which the development team could not reproduce. The KEL gives no reason to suppose that, even if this condition had persisted, the backstop of reconciliation and Transac tion Corrections would not have corrected any resulting errors in accounts. As per KEL, the failed recovery will be centrally reported and investigated via the DRS reconciliation process.	This may have caused a temporary financial discrepancy
32.	wrightm33145J	Payments Mismatch	5.116, 5.118	Non-zero trading position.	This is the same issue as line 1 above. See analysis at item 1 above.	See analysis at item 1 above.

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33.	ArnoldA2153P	Withdrawn Stock	5.117	This generates the same Receipts and Payments Mismatch error message (to KELs in lines 1 and 31) but in fact relates to a mismatch during the balancing of a stock unit that contains withdrawn product.	This issue was found during internal Horizon Online testing and fixed before Horizon Online went live. In 2016, some products were withdrawn during a trading period when they were still being traded. This is contrary to Reference Data procedures and caused an issue in branches that had traded those products. A fix was put in place involving the products being re-instated and the branches affected rolled over successfully.	There may have been an issue if the branch had continued to rollover before the products were reinstated, however, in the 2 cases recorded, the branches were advised to delay the rollover until the products were re-instated so no impact on branch accounts.
34.	ballantj1759Q	Payment Mismatch	5.118	Details 3 conditions that may cause a receipts/ payments mismatch that may impact on branch accounts.	This is a generic KEL ensuring that the event monitoring team raise a call every time a Receipts and Payment mismatch event is seen. It references other KELs that are known issues for specific cases. This is an example of how our monitoring is made to work effectively. All of these call s get investigated and may need manual correction to avoid errors in branch accounts. From a Horizon perspective, none of the calls raised should therefore be left without investigation / resolution.	N/A (this is a generic KEL).

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35.	acha1357Q	Incorrect Declarations	5.120	It is possible for discrepancies to have been accepted by the Postmaster based upon incorrect declarations. The problem could arise due to old stock declarations not being automatically removed from the system. These could only be removed by making zero-value declarations or deleting the stock unit then waiting overnight before balancing.	The issue related to declarations from the same trading period a year ago becoming visible again and thus causing confusion. It only affecte d branches that had done a Stock Declaration the previous year but normally didn't do them. The fix was to change the archiving strategy so that all declarations that had not been updated for 6 months were removed. A check was made at the time for any bran ches that had old discrepancies that might become current again in the next 2 months (to allow for the archiving fix to be made) and these were removed manually by MSC. A The initial call was raised on 11th Feb 2011. A central workaround to avoid further issues was implemented under MSC and the official fix was released in June 2011.	There may have been some financial impact, but there were reports available in branch that could have been used to identify incorrect declared amounts. Further, a corresponding gain / loss would occur in a subsequent trading period so that would resolve the issue.

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36.	acha3145Q		5.121	Provision of a full support solution for incorrect stock declarations and discrepancies.	This KEL is cited in the previous KEL dealt with at line 35 and relates to a stock balancing problem caused by the user doing some uncommon sequence – i.e. not caused by withdrawn products.	There may have been some financial impact is is branch process at this stage, it is effectively as if the SPM had wrongly declared the cash or stock and the system will warn them that this does not match the calculated value. In this case it was an old declaration that got included. Redeclaring the cash/stock will fix the issue. If they do not they will roll with a loss this BP/TP but have a gain next TP/BP.
37.	allend1645p	Horizon Interface Controls	5.129	Provides an example of Horizon's weak interface controls and lack of data entry validation. In a single sales transaction the user was able to select and enter different methods of payment (Debit Card and Fast Cash). Horizon allowed the transaction to be settled via Fast Cash when the Debit Card payment method had already been selected.	Horizon allowed the clerk to select 'Debit card' as a method of payment and later switch to 'fast cash' at the end of the customer session. This was a subsequent user error which involved the user at the branch failing to take payment of £500 for the 540 euros.	This is a case of the Postmaster being responsible for errors made by staff. This would have shown as a discrepancy caused by user error in not taking the payment that was due from the customer and the Postmaster would be liable for this.

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38.	acha621P		5.130	The correct screen to successfully process a cash pouch did not appear resulting in the clerk in an outreach branch inadvertently doubling up the amount of cash recorded. The issue appears to have been caused because of an earlier system logout or inactivity which in turn resulted in incomplete checks being conducted by Horizon post logon.	This issue, also referred to as the 'Dalmellington' issue is dealt with substantively in the second witness statement of Torstein Olav Godeseth.	Temporary financial impact which was rectified by a Transaction Correction being issued.

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39.	EJohnson3937R	Horizon Interface Controls	5.132	This enabled Postmasters to carry out "Rem In" transactions without a value being entered.	Whilst Remming In currency it is possible to create a transaction with a positive quantity and a zero value . This issue was caused by the Reference Data test team (not following the correct process). The functionality was changed the following year so that amounts did not need to be entered. Auto Rems (introduced around 2004) meant that the content of cash and currency pouches was sent to the branch electronically so when a pouch was delivered, the system automatically told the Subpostmaster what the content was and used that value for the Rem in rather than asking the Subpostmaster to key it in.	No impact.

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40.	PSteed145J	Phantom Sales	5.133	Involved 'phantom' sales appearing on the Horizon counter screen but which had not been selected by the user.	These "phantom" sales were caused by hardware problems and fixed by replacing hardware.	No impact If the transaction related to stock, when the branch declared their stock and cash the discrepancy would cancel out (e.g. a sale of stamps would reduce the stock of stamps and increase the cash figure by a corresponding amount; when balancing the correct number of stamps should be declared and this will cancel out the effect of the phantom sale of stamps).
41.	pcarroll1235R	Screen Freezes	5.133	Instructions on how to deal with environmental issues and hardware are contained in this KEL. Jason Coyne says "*it is not known how widely these were distributed to SPMs*", implying that they should have been.	These instructions (which relate to issues that do not concern bugs or errors in Horizon) were distributed to those who called for help via this KEL.	No impact on branch accounts. .

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42.	jharr1323L		5.136	Example of a successfully recorded transaction initiated in a Post Office branch (where a customer receipt was generated) which failed to appear in the Post Office Data Gateway.	This relates to a fishing rod licence request not sent to the Environment Agency and was only detected at a later date. In this particular instance, the transaction had been reversed by a user; this is not a software issue. Once a transaction is reversed, all relevant data is discarded and not sent to the AP Client as its effectively as though the transaction never took place (Fujitsu only keep Post Office Data Gateway records readily available for 30 days) but it is committed to the audit store and therefo re any additional investigation would have needed to be undertaken by audit). It is not known why the reversal took place. This could be due to fraudulent activity or could be that the customer sought a refund and the money was refunded.	No impact.

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43.	MArris3433l (no 46)		5.137	The ability of Horizon to erroneously record the same transaction twice after a session transfer to a different counter. This happened with both NS&I (National Savings & Investments) and Network Banking (NWB) transactions. The KEL was passed to a development team to provide a bug fix as part of the S60 rollout but it is unknown if this was ever resolved.	This was a software bug which allowed a transaction to be recorded twice after a session transfer and was a fairly rare circ umstance. This issue was picked up during internal testing and despite numerous attempts development were unable to recreate the scenario. There are no Peaks which refer to this KEL.	No impact (fixed in testing).

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44.	CharltonJ2752T	Previous Key Software Error	5.139	Counter level corrections made via the “Previous” key led to both the old value and amended value being stored and used in error in the transaction. A fix was released in the Live environment eight days after the issue was first raised.	A software error in a PDL file meant that when a user used the "Previous" key for a transaction that used an ADC Script, old and amended values were stored and used. This resulted in an incorrect transaction for the sum amount of both the old and amended values being added to the sales basket. As the user has used the "Previous" key to go back and amend a value, it should have been obvious to the user if then a completely different value item is added to the sales basket. If, for whatever reason, this was not noticed then the the customer will end up being overcharged as the system will ask the user to take a larger payment. Assuming the user does what the system says there will be no impact to the branch accounts. This issue affected 3 products and only occu rred when "Previous" key was used to correct the amount entered. It was fixed 8 days after it was spotted. A search was made for all branches that had used those products twice within a session and the results were sent to Post Office.	No impact. .

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45.	SSur343P		5.141	Example of a declined network banking transaction that resulted in money being taken from the customer's account.	An error in network banking caused the customer's account to be debited although the transaction failed at the branch and th e Postmaster was told at the counter that the transaction failed. Banking transactions with a response code of 26 (FI Unavailable, Try again later) would be recorded as zero value transactions at the branch, a DECLINED receipt would have been produced and so no money should have been handed over to the customer. Therefore no impact on branch accounts. On rare occasions the financial institution may have debited or credited the customer bank account despite us not receiving the authorisation. In these instan ces, if the automatic reversals fail to resolve matters then the issue would be picked up as part of the DRS reconciliation process meaning Fujitsu would inform Post Office of what has happened at the counter so that they can liaise with the financial inst itution to ensure their systems match so customer is not out of pocket. The root cause was between the NBE and the FI, which is outside of Horizon.	No impact.

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46.	LKiang3526R		5.142	Examples of E-Pay transactions crediting the customer account twice although only one payment has been taken.	This was caused by two authorisation agents being active at once, when only one should have been, resulting in the phone being credited with £10 twice and ePay charging Post Office or the phone provider (depending on the arrangement between the two) being charged twice, meaning the customer would have got two sets of top up for the price of one. This is a back end system problem which would be picked up by cou nter measures, causing a BIMs to be raised.	No impact.
47.	SSur5310P		5.142	Examples of E-Pay transactions crediting the customer account twice although only one payment has been taken.	Similar to the KEL above at line 46. This is a back end system problem which would have had no impact on the branch accounts. Despite a phone being topped up twice at the branch only a single top up would have been recorded in branch along with the required payment for it. Again, this is a back end system problem and would need to be resolved by Post Office centrally and would not impact branch accounts.	No impact.

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48.	pothapragada c4359R		5.165	Jason Coyne says "*it is acknowledged that simple fixes ought and were implemented to either fix bugs or provide additional data validation checks*".	The issue was the ability to declare stock that could not then be transacted (due to Reference Data rules). The only impact on a branch's account were if the branch were to actually declare that it held an item of such stock. This is unlikely as the item had been withdrawn and should be returned to the stock centre. It should also be noted that most branches do not undertake stock declarations as stock is normally manged using stock adjustments (which didn't have this issue). Should the stock be declared by mistake by user -error, then a further declaration of the correct (i.e. zero) holdings would resolve the issue.	This may have had a financial impact but if so it would be due to human error (i.e. declaring that it held an item of stock that it couldn't transact). This discrepancy would be removed if the branch accurately declared that it had no such stock.
49.	Marris4123N		5.165	Jason Coyne says "*it is acknowledged that simple fixes ought and were implemented to either fix bugs or provide additional data validation checks*".	This was a problem observed during test in Disaster Recovery for DVLA transactions - a very rare circumstance, which should be handled correctly, but would have no impact on bran ch accounts in the unlikely case that a branch encountered the issue When recovering a failed counter, the user is asked to input data from a receipt. To handle poor typing there is a check sum which should ensure that it has not been altered. This bug re lates to the fact that not all the data entered is controlled by the check sum. Therefore, when a tester deliberately input incorrect data, the system did not detect it. NB this did not include financial data.	No impact.

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50.	acha2230K	Additional Checks	5.186	Jason Coyne highlights a problem with additional checks which were implemented to identify system errors/ inconsistencies when balancing during branch and references a note within the KEL as follows: "*This should never happen - something has gone horribly wrong. Or possibly the checks haven't been implemented as intended.*"	This issue, also referred to as the 'Local Suspense Account' issue is dealt with substantively in the second witness statement of Torstein Olav Godeseth.	This issue had a financial impact which was resolved by Post Office writing off discrepancies.

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51.	dsed2049S		5.187	Jason Coyne suggests that this KEL highlights the lack of system communication and/or support communication in respect of certain system features which could subsequently result in errors.	This KEL relates to withdrawn products that were converted to cash on rollover but the losses are carried forward into the next period instead of being dealt with there and then. Withdrawn products should be sent back by the Postmaster to Post Office so the branch is not holding stock that cannot be sold. If this process is not followed, the branch will be left with a loss at the next trading period and could be corrected by a Transaction Correction. The stock will also be converted to cash if the Postmaster has purchased it personally, for example. The fix was made t o make this clear to the Postmasters. Jason Coyne implies this was a bug which took 6 months to fix. There was a minor bug in that the cash value of the withdrawn stock was not included in the current rollover, but delayed until the next rollover. However there was no specific loss to the branch (other than the value of the withdrawn stock which they were responsible for as described).	No impact if the correct process is followed for returning the withdrawn products to Post Office. In the event that the process is not properly followed, a Transaction Correction can be issued to correct any impact on branch accounts.

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	**Short-name** (if applicable)	**Paragraph No.**	**Mr Coyne's Summary** (paraphrased)	**Response to Mr Coyne**	**Financial impact on branch accounts**
52.	acha3250R		5.189	The reconciliation process used by Post Office to assist with identifying any accounting differences is not able to easily identify genuine differences and/or differences resulting from external APS transactions from old trading dates.	This was an issue with Post Office's back end reports, caused by timing issues (APS transactions arriving a day late) which were outside of Po st Office or Fujitsu's control. This caused discrepancies in certain back -end reports, which could however be understood by cross checking other reports. This is a "false error" being reported by reconciliation relating to transactions occurring around the end of day, being 7pm. There is nothing wrong in the actual transactions – just an error in the way that reconciliation totals are calculated.	No impact.
53.	acha1941L		7.6	During the recovery process (when some transactions recover but others fail to recover) it is only the recovered transactions printed on the receipt. The disconnected session receipt should also identify those transactions not recovered. These are printed for the Postmaster to retain.	The KEL says: *"This is not really a problem, it is just confusing when investigating a state 4 call. The Disconnected Session receipts will show all the transactions in the session. The successfully recovered transaction needs no reconciliation."* This shows that any incomplete information went not to the branch, but to someone in Post Office or Fujitsu investigating a state 4 call.	As there is no reconciliation needed, there is no impact on branch accounts

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	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	**Short-name** (if applicable)	**Paragraph No.**	**Mr Coyne's Summary** (paraphrased)	**Response to Mr Coyne**	**Financial impact on branch accounts**
54.	surs1147Q	Failed Recovery	7.7	This relates to the solution to a failed recovery requesting the user to log onto the relevant counter and start the recovery process, but leave the counter displaying the system error message.	While the advice to the user in the KEL is somewhat counter -intuitive and indicates that nothing should be done and the user should wait for the counter to time out, leaving the system error, there is nothing to suggest the recovery was not resolved. The root cause of this issue was an error in Post Office's script relating to the Dangerous Goods products, that resulted in recovery failing. We're unable to tell whether or not the script was corrected. This would have no direct impact on branch accounts, but clearly would be very inconvenient as the counter is out of action.	No impact.
55.	wrightm33145j	Payment Mismatch	7.9, 7.41	Cited by Coyne.	This issue, also referred to as the 'Payment Mismatch' issue is dealt with substantively in the second witness statement of Torstein Olav Godeseth.	See item 1 above.
56.	boismaisons1328M	Disc Space Sizes	9.12	This KEL describes the running commands on counters to assess disk space sizes.	This is an issue with hard disks. Disc space sizes have nothing to do with branch transaction data which in any case at the time (2012) was not stored in the branch.	No impact.

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Claim No: HQ16X01238, HQ17X02637 & HQ17X04248

	KEL		Mr Coyne's Report		Fujitsu's Comments	
	ID	Short-name (if applicable)	Paragraph No.	Mr Coyne's Summary (paraphrased)	Response to Mr Coyne	Financial impact on branch accounts
57.	SeemungalG 519Q	Transaction Amendments	9.49	Records an instance where transaction amendments carried out are causing exceptions.	This was an issue when posting transactions from old Horizon to BRDB prior to a branch migrating from old horizon to Horizon Online. In some cases, such transactions fell foul of validation in TPS and needed to be amended before being sent to Post Office' s backend systems. Such amended transactions were also posted to BRDB. Any amendments were related to the trading period they related to and not any financial values. They were only in BRDB to be used if the branch migrated during the current trading period from Old Horizon to Horizon Online. Tip Repair is a back end process to make sure all required transactions get sent to the relevant external systems. There is no effect on the branch accounts.	No impact.
58.	MHarvey2255 P (no 64)	Corrective Balancing Transactions	9.50	Records the manual addition of corrective balancing transactions inserted by SSC affecting the TPS system.	This is a back-end balancing issue caused by missing or invalid Reference Data. The insertion of correction r ecords is done into the TPS database to allow the branch data to be forwarded to POLSAP. There is no effect on the Branch Database therefore no effect on the Branch Accounts. It is not understood why this is marked as remote access as the work is done within the Data Centre.	No impact.

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APPENDIX 2

	KEL		Fujitsu's analysis		
	ID	**Nickname**	**Summary of the KEL**	**Analysis**	**Impact on branch accounts**
1.	acha423K	Cash Button	The Cash button on the settlement screen can be used for either a receipt in or a payment out of cash. Horizon decides on the context depending on whether the stack total button says TAKE or PAY.	This is not a bug, rather it is a feature of how the system operates.	No impact unless the system is misused by branch staff.
2.	acha488S	Large Transactions	This involved both transactions being completed in a single session.	Although the clerk took the money from the customer, the session wasn't settled because £1m is too large for FastCash. The settlement should instead be entered as two £500,000 cash payments. This is an issue with hitting system limits with very large transactions over £1M. This would be very noticeable and there is an avoidance action to take two smaller payments. Looking at the Peak, the Transactions were actually recovered automatically by the system (AP Txns were recoverable in old Horizon) so no impact on branch accounts once recovery was carried out.	No impact.
3.	acha508S		Postmaster reports problems with remming out, in particular differences between the two receipts which are	This was a bug in the handling of multiple bags of coins when being Remmed Out. It was fixed by a code fix issued in April 2007 and fully rolled out by June 2007.	Temporary impact that would have been identifiable from the reports available to Subpostmasters. The KEL description states

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			printed after the pouch barcode is scanned.	The original problem was found on 12th Feb 2007 and was presumably due to a software update rolled out at that time. Investigations were carried out and a list of affected branches was generated (this is no longer available) and provided to Post Office. NBSC was informed about a workaround to the issue.	that "differences between the two receipts which are printed after the pouch barcode is scanned… The second receipt (Office Copy) only shows one bag of each". It would have been rectified by a transaction correction.
4.	acha522T	Cash Withdrawal	This involved two separate cash transactions most likely by two separate customers as follows: ▪ customer 1: given £200 in cash ▪ customer 2: given £320.90 in cash (being the total value of the stack) The loss was caused by the user not settling stack in between banking transactions.	This is not a bug, rather the incident appears to be caused by human error of the user not reading the screen carefully when doing a withdraw limit CAPO transaction after failing to settle an earlier customer basket.	Impact caused by human error.
5.	acha2140S	£1m Cheques	If the branch holds cheques to a value of more than £1M, then the value of cheques cannot be adjusted using the normal Stock Adjustment mechanisms.	This will be rare and if encountered it will be highly visible by the Postmaster. The best thing to do would be to rem out the Cheque for £1M and then any further adjustments can be handled as normal.	No impact.
6.	acha3347Q		If a stock unit carried forward from Horizon is deleted before the first trading period rollover on Horizon Online, the	This was an issue for a branch following migration from old Horizon to Horizon Online and only affected a branch if it had deleted a Stock Unit after migration and before the first rollover.	No impact.

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			check for 'last stock unit' may not be applied properly, and all the stock units can roll over without Local Suspense being cleared. Local Suspense for a particular trading period has to be zero before the branch can be rolled over. Once a stock unit is in the new trading period, it can put gains/losses into Local Suspense and clear them, but this has no effect on Local Suspense for the old trading period - think of them as two separate containers.	The issue would be clearly visible as the Branch would be unable to rollover without following a complex work around.	
7.	acha3610P	Advantageous Exchange Rates	There are advantageous exchange rates for transactions over certain limits (shown on Foreign Currency report as DDE for Euros, DDU for US dollars). In this case the limit was £500. The user pressed 'Buy Euros' and entered 600. The exchange rate shown was the standard exchange rate, not the rate for transactions over the 500 limit, the reason being the £500 limit had not been reached.	This appears to be a misunderstanding of what exchange rates to use. The "over 500" rate applies to when the sterling value is over £500 (not the Euro value).	No impact.
8.	acha4221Q		The clerk went into the 'Delivery' menu and scanned two pouches (one of	This was a bug in the early days of Horizon Online following an unusual (but valid) sequence of events. It was fixed on 19th	Financial impact would have been clear to the branch because a duplicate receipt was

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			currency and one of coins). The second pouch was recorded twice on the system, resulting in a loss of £80. Two Remittance In slips relating to the second pouch were output, both identical, as well as one for the first barcode.	April 2010.	printed. It would have also been identifiable from the reports available from Horizon. It was resolved by a transaction correction being issued.
9.	acha4353P		The counter froze while cashing a Postal Order and now recovery won't complete so the counter could not be used The counter was rebooted, but when they logged back in they got a Postal Order encashment transaction recovery message for a negative amount, followed by the Invalid Value message again.	This was due to an invalid Postal Order with a negative value being set up by an external system which resulted in a counter being frozen. A fix was applied to check the value of Postal Orders coming from external systems as being positive and this was applied on 15/8/2011. A system fix was made to allow recovery to be bypassed on this counter to make it useable again.	No impact.
10.	acha5226J		When a branch puts through a bureau transaction in excess of £5,000 a message should appear on the screen to remind the user to ask the customer to take two forms of ID from the customer to conform with Anti Money Laundering regulations. This reminder prompt is not appearing on the Horizon Online counters.	This issue was fixed in October 2010	No impact.
11.	acha5259Q		The Postmaster wrote a discrepancy of £167.17 to Local Suspense, then this was cleared from Local Suspense as	It appeared to only affect branches balancing in April 2010 and 33 branches were identified as being impacted. Details of these branches were passed to Post Office.	Temporary financial impact which would have been cancelled out in the following period by a corresponding discrepancy.

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			normal and the Postmaster selected to make good the losses. At this point the system printed out a final balance report for the trading period with the cash figure amended and nil discrepancy. Normally the system would then come up with a message to confirm rollover but instead went back to the screen asking how the discrepancy was going to be made good.	This was an issue found in the early days of Horizon Online and was resolved in July 2010.	
12.	AChambers1833	Report Issues	A transaction for £6.67 was done at 17:23 and was settled at 17:25. The daily APS transaction report was done on a different counter at 17:25 and did not include the APS transaction.	A timing issue to do with printing reports at a counter. There was no impact on the branch accounts – just confusion due to a transaction being missed from a report and the report not being re-printed when it appeared.	No impact.
13.	AChambers2252R		Postmaster sold some foreign currency (1000 euros, sale value: £750). The Postmaster realised the transaction had been settled to the wrong product in this case being cash instead of debit card. Existing Reversal was used to reverse the transaction, and th en re-run correctly. When it came to balance at the end of the trading period, the currency stock holding on the system was too high by 1000 Euros. When corrected, this gave a gain on currency of £720 and a cash loss	This was not a bug, rather an issue in how a Currency transaction was incorrectly reversed on old Horizon. Foreign currency transactions consist of two parts: the currency itself, which has a value based on the exchange rate, and margin, which is added to cover the cost of the transaction. When the transaction was reversed, the Postmaster entered the transaction for the cash settlement part of the transaction. While the Postmaster believed the whole transaction had been reversed, it had not as the margin had not been reversed. When the stock unit was balanced, the wrong number of Euros became apparent. The stock holding was corrected by the	Impact, but guidance on how to correctly perform an existing reversal was all that was needed to rectify it.

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			of £750, being a net loss to the branch of £30	declaration of the actual number held. Again, this did not correct the margin, which is generated as part of the currency sale and is not directly linked to the stock. The way Reversals are handled on Horizon Online means that this sort of issue can no longer happen.	
14.	AChambers4134R		Multiple quantity for stamps/postage label affects cash settlement or subsequent transactions.	When a quantity greater than 1 is entered for a Smartpost transaction, the Quantity is not reset to 1 when the user moves on to the settlement screen. If the transaction is settled to Fast Cash / Fast Cheque or Debit Card, this doesn't matter, but some users habitually use the Cash (F2) button to enter the cash presented by the customer, then give the customer change as indicated by the new stack total. If this is done, the cash amount entered is multiplied by the Quantity and hence the new stack total is wrong. This was fixed in December 2005 (Reference Data fixed).	This may have had an impact but a user should have been able to spot it and the sums involved are likely to be small due to the issue affecting mails products.
15.	AChambers4413Q	Receipts and Payments Mismatch	This appears to have been an issue with doing a Transfer Out which was not picked up correctly when balancing.	This was picked up by Reconciliation Reports(looking for receipts and payments mismatches) and investigated.	Temporary financial impact which would have been cancelled out in the following period by a corresponding discrepancy
16.	AChambers5711K		Postmaster balancing on counter 1, then completing on counter 2 due to counter 1 timing out, causing a discrepancy between reports.	This occurred due to a counter failure around the time EOD activities were happening and thus resulted in a mismatch in Reconciliation reports.	No impact.
17.	Agnihotriv245L	Horizon Online	The last digit of the exchange rate is occasionally being displayed incorrectly	No Financial impact. It was fixed in September 2010.	No impact.

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		Exchange Rate	on the rates board. The system does use the correct values to calculate the rates -the issue here is with the display only. However, because the display is on the Customer facing rates board there is potential for annoying Customers as they may get a slightly different rate to th at advertised on the board.		
18.	AOConnor158l	Transaction Limits	Failed to Harvest a quantity of 11743997 pennies as being too large.	This is another problem with limits. The branch tried to declare a cash holding of over £100,000 in 1p and this hit a limit in Reference Data. The fix was to police the system limit on declarations.	No impact.
19.	AOConnor5257l		The Postmaster remmed in a cheque for £3,200, however, it did not show up on his balance snapshot or adjust stock, but it is showing in his Suspense Account.	This is a user error in how Post Office cheques were handled. Following advice and Guidance the problem was resolved.	Temporary impact caused by user error.
20.	arnolda229R		An Open Value Encashment for £5.00 was performed, the transaction was authorised and added to the Basket but the counter crashed before the Basket could be settled. On Login Recovery was invoked and a 'Recovery Failure' receipt was printed for £0.00.	There was a typographical error in the script causing the issue. This issue was found during testing of Horizon Online and fixed before the first counter went live.	No impact (resolved before Horizon Online went live).
21.	ArnoldA2341L	Currency	All currency codes, in terms of "IMoney"	This was an issue identified by developers regarding the way	No impact.

		Code Validation	objects should be ISO-compliant, or verified by £-sign However, we do not validate this at all anymore, in order to support future currency codes. This means that junk codes are accepted.	currency was handled within the counter code. It had no impact in the real world it was closed.	
22.	ballantj020J		Postmaster states that she has sold a Lyca top up for £10, the message appear unable to connect to the data centre then logs Postmasters out. The transaction request has been authorised and the reversal may not be effective which will cause an 'E21' reconciliation error.	There were 2 issues here: 1.There was an issue with how Reference Data was generated which resulted in some counter scripts failing. This was fixed on 20/08/2010 (2 days after this problem occurred); 2. The Ref data issue caused an e-pay transaction to fail and the Postmaster didn't handle the recovery correctly The failure to handle recovery correctly may have resulted in a loss of £10.	This may have resulted in a small impact due to a failure to follow the correct procedure.
23.	ballantj2547K		The Transaction Processing System Total and Counter total values for the Number and Absolute Quantity columns are the same but the Absolute Value for Counter Total is greater than the corresponding Transaction Processing System Total by £14.80. If the session nets to zero (add up all the SaleValues for the same SessionId) no reconciliation is needed. If it doesn't, a correction must be made to send the data to POLFS (see <a	This is a problem with Smart Post which seemed to write slightly corrupt transactions in that there were missing attributes required by back end systems and reconciliation systems, but are complete as far as the branch accounting is concerned. This therefore has no impact on branch accounts, but does result in reconciliation errors which are fixed by amending the transaction copies in the backend systems. The fixes are always to dates and not to values. This KEL refers to amount mismatches, but the amounts used by the reconciliation are different from those used by accounting. They should be identical, but in this case are not.	No impact.

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			href=kel_view_kel.jsp?KELRef=MaxwellG460L>MaxwellG460L) and the PM may need to be told about a possible receipts and payments mismatch, or at least watch out in case one is raised.	The accounting values are the correct amounts.	
24.	ballantj3342L		Reconciliation picked up a scenario associated with a failed banking transaction. Specifically, the request from the counter never reached the Branch Access Layer. The application event log shows AdminCfg receiving data and causing a VPNKeyChange In this case the request never reached the Authorising Agent and therefore no money was requested, the C0 did reach the Authorising Agent but was unexpected and has caused this reconciliation incident. Instruct MSU that no reconciliation required.	As the transaction failed there was no impact on the branch accounts. This did identify some issues in the way that failed transactions were handled and why they resulted in reconciliation errors and these were fixed in April 2010	No impact.
25.	bambers3553L symbol	Currency Specification	A MoneyGram Send transaction was initiated. There are 3 options to define the amount being sent: i. £ including fee ii. £ not including fee	This was an issue found during testing of Horizon Online and relates to a "£" sign being displayed when the user is being asked to input an amount in another currency to a MoneyGram transaction. It was agreed not to fix this until a later time (not clear if it ever	No impact.

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			iii. Receive Amount excluding fee. The 3rd option allows a customer to specify an amount to be sent in local currency, such as $300, in which case the receiver will get $300 and the send amount is calculated in sterling. However, at the input of the receive amount, the prompt appears (corre ctly) as 'Amount in USD' but the input box (which is a currency datatype) has a '£' symbol present. This leads the user to think that they have selected the wrong option and would lead to incorrect amounts being entered here. Please see the attached screen shot for evidence.	was fixed, however, the MoneyGram product was re -engineered in 2015 so it would have behaved differently after that time anyway). This would have no impact on branch accounts, but may have caused some mild confusion to the Subpostmaster.	
26.	bambers4236K .	Electronic Top Ups ("**ETU**")	ETU E-voucher for £10.00 is erroneously declined as a New Reversal. The basic problem is that, to support ETU Reversals, we rely on the Authorising Agent remembering details of the original ETU transaction. In a CTO we only have an Agent Simulator and it is not configured to handle ETU Reversals. Given the simplicity of the Simulator it would be very difficult to support ETU Reversals.	This is an issue in the Counter Training service in that it doesn't support reversals of E Top ups. It was discovered during testing and was agreed that this would be a restriction on the functionality supported for Counter Training. As this only impacted counter training then there is no impact on any Live Branch accounts.	No impact.

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			This as a restriction for CTOs but is not documented in DES/GEN/REP/0006 nor REQ/CUS/STG/0004		
27.	BluerP5546R	Upside Down Pound Sign	For PING transactions (Transaction Acknowledgments) £ signs will appear as upside down question marks in the training counters.	This was a cosmetic issue when processing Transaction Acknowledgments on a Training Counter in that the "£" sign was displayed incorrectly. This has no Financial Impact as it was only affecting training counters. This issue was spotted in internal testing and we had no reports of this issue from Live Counter Training Offices. A fix went live in January 2011.	No impact.
28.	cardc235Q	Drop and Go	The user initiated a Drop and Go transaction for £100 which failed due to timeouts. Following the failure, a success message was displayed. The user settled the transaction and the customer handed over £100. The customer checked the balance and stated that the top up had not gone through so the clerk performed another Drop and Go transaction which was successful. The customer has paid in £100 but the branch account has been debited by £200. Accenture verified that only the second Drop and Go top up was successful.	This was a problem in handling errors correctly in a Drop and Go script provided by Post Office. This was passed to Post Office to fix the scripts.	This would have caused a loss in the branch accounts, although the issue was identified by the Subpostmaster and it would have been resolved by a transaction correction.
29.	cardc339P	Receipt	A Transfer Out of £511 cash was done	The system is behaving correctly and there would be no	No impact - the Transfer Reports and the

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		Printing	on counter 14, session id 14-2966714-1. A corresponding Transfer In was done immediately afterwards on counter 2, session id 2-2046304-1. Before the Transfer In had completed, a receipt with the wrong session id (14-2966714-1) was printed. After the Transfer In had completed, the correct receipt was printed. The extra receipt, which is almost identical to the actual Transfer In receipt, is quite confusing. It may lead the Postmaster to suspect that the transfer has been carried out twice, when in fact it has not. Advise the Postmaster to use the 'Preview' rather than the Print button if they wish to view the individual products being transferred.	financial impact on the branch account, but the Postmaster may be confused as to what exactly has happened.	Transaction log will show exactly what has actually happened.
30.	cardc427T		The transaction appeared as a state E26 on the NB102 Section 2 Link report. This issue has also resulted in a transaction being reported as both a State 4 and State 6 - see PCPC0244934 PC0197368 was fixed and released as part of release	This was an issue with failed banking transactions and then recovery from a subsequent counter failure using the same identifiers. Some of these appeared in reconciliation reports when they shouldn't be and so causing additional work to Support teams. However as these are all failed transactions they are all for zero amounts and so have no impact on branch accounts.	No impact. Following a failed banking transaction the next banking transaction may reuse the same unique reference. This will cause that transaction to fail also as the authorisation software knows the transaction previously failed and will not pass it on to the FI."

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			CTR01_22_01_00_RELEASE (June 2010). Unfortunately the change was regressed as part of a BAL change in February 2015 - see peaks PCPC0243030 and PCPC0241771. Another fix is in progress.		
31.	cardc2326R End-of-session sales prompts - usability issues		The user will usually count out the cash to be paid before pressing Fast Cash, because once they have pressed Fast Cash then the amount to be paid out is reset to zero and the stack disappears. However, if the transaction results in a sales prompt then the stack is not cleared and the amount payable remains on the screen. If the user selects the sales prompt and transacts another product, this is added to the stack and the 'Total Due To Customer' is updated by the relevant amount. If the user is distracted or busy then they potentially pay out the new amount in addition to the original amount. The system is working as designed and Postmasters should be referred to the	The system is operating as designed and no change was requested by Post Office. There may be confusion in relation to the way Sales Prompts are handled at the end of a session.	If the correct procedures were followed there would be no impact.

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			NBSC.		
32.	cardc3335R Vodafone Text Pack Vouchers being declined		A call was raised with e-pay to determine why requests were being declined. This is e-pay's response: The reason for the Vodafone £10, £15 and £20 Text Pack vouchers being declined by e-pay is because they were deactivated on request by Vodafone. We sent out a Product Configuration document in May detailing this change. This document was sent to Dave Cooke at Fujitsu as well as Clare Tetley and Iain Gilbert at Royal Mail. The deactivation was rolled out on June 1st.	Not a bug. Certain E Top Up products had been withdrawn but the Reference Data had not been updated to remove them from the counter. This meant that e-pay declined the requests. Following the investigation, then the Reference Data was updated to remove the products from the counter the following weekend.	No impact.
33.	cardc3415N		When a branch migrated from Horizon to Horizon Online, differences were reported between the 'Pre Quantity Move' and 'Post Quantity Move' figures.	This was a problem in the migration of a branch from old Horizon to Horizon Online. The report produced pre-migration on the old Horizon didn't take into account a Transaction Correction carried out in the last trading period so adjust stock levels. The report produced post migration was correct. .	No impact - the figures post migration were correct and the issue down to an inaccurate pre-migration report.
34.	cardc5946P		Halifax / Bank of Scotland bank cards declined with response 05 - 'do not honour'.	Branches with an "&" in their name were resulting in Banking transactions being declined by Halifax / Bank of Scotland. No information was given by Halifax / Bank of Scotland regarding why they are declining the cards. This was fixed by May 2011.	No financial impact on branch accounts.

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35.	CCard1223Q		Counter hangs when attempting to clear local suspense during stock unit rollover.	It would appear that an Invalid option was presented on the menu of options available when settling local suspense. This seems to have been fixed shortly afterwards.	No impact.
36.	CCard4658N		The stock unit balance report only includes figures for Add or Remove Cash transactions done in the current balancing period. It should however show the cumulative total since the start of the trading period.	Buttons were introduced to record when cash w as added and removed due to variances being spotted. However the behaviour of these was not carried forward from one balancing period to the next and so caused confusion. When the problem was identified, the buttons were “padlocked” and a fix was issued in March 2006.	No impact.
37.	CharltonJ222L		Log on event timestamp can be after the log off and other associated events when looking at rep events for the HBS Kiosks	The log on event appears to be recorded at the time the log on is processed by the HBS server, but the other rep events are recorded against the "DateTime" field in the incoming message .	No impact.
38.	CharltonJ2752T		See item 24 of Appendix 1.	See item 24 of Appendix 1.	See item 24 of Appendix 1.
39.	CObeng1123Q		See item 44 of Appendix 1.	See item 44 of Appendix 1.	See item 44 of Appendix 1.
40.	acha4349K		Reconciliation reports relating to declined e-pay transactions are not clearing down correctly. The affected transactions are zero value, and have been declined by e-pay.	This has no impact on the branch but caused unnecessary work for the Fujitsu and Post Office's reconciliation teams. Issue was fixed on 11/10/2010.	Zero value transactions have no financial impact on branch accounts.
41.	acha4745R		This was an issue relating to back end reconciliation where there was a £20 difference between 2 totals relating to millions of pound worth of LINK transactions.	KEL suggests issue was with reconciliation reports not being (manually) processed correctly. Peak PC0219762 applies. This is due to a recovery performed at the branch on the following day which reversed the transaction. IT caused confusion in the reports. This was raised by POL's reporting systems.	Not known.

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42.	acha5650L		A user logged into a counter where there was an unsettled banking transaction requiring recovery, which had been done in stock unit AA. Stock unit AA was still in TP 12 BP 4. Stock unit BB was already in TP1 BP 1. Recovery completed successfully, correctly writing the transaction and its settlement into stock unit AA, but for TP 1 BP 1. The stock unit was short by the amount of the banking transaction in TP 12 BP 4, but then had a matching gain in the following period. If the TP/BP is incorrect, but the stock unit will roll into that period in the future, then this problem will cause a discrepancy in the current period, but it will be balanced by an equal and opposite discrepancy in the future. Advise the PM of this.	Bug in the recovery process that could post transactio ns to the wrong TP / BP. This would result in 2 discrepancies in 2 separate periods which would cancel out, so no long term impact on Branches. Fix issued in June 2010, but in theory could impact counter that migrated and hit this problem on the day of migration to Horizon Online until September 2010 (when migration completed)	No impact.
43.	acha633R		The Settle Gain/Loss Centrally products have a minimum transaction value of £150 and should not be available if the	This is an issue identified by Post Office rather than a branch in that branches were being allowed to Settle Centrally small losses (limit should be £150 or more). This was identified on	No impact.

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			discrepancy to be cleared from Local Suspense is less than £150. Horizon Online does not appear to check the minimum value when building the pick list and so branches can choose settle Centrally for any value.	15th May 2010 and the fix rolled out to all branches by 5th July 2010	
44.	AChambers253L		This was an issue picked up by the reconciliation checks due to smart Post not correctly checking that the pre-paid amount for postage was less than the actual amount and then attempting to generate a postage label for a negative amount	Unclear what branches would have done at the time, however the impact is likely to have been very small (pence rather than pounds). This was fixed in 2005.	Any impact would have been very minimal, pence rather than pounds.
45.	AllenD2519J		POLSAP report that a particular TC or TA is missing from the expected BLE file. The TC / TA entry is actually present in the BLE file, but it lacks the TC / TA Reference value which allows POLSAP to identify the item.	Back end problem, involving data sent to POL from a PO client. This is an issue caused by incorrect Reference Data with passing data to POL's Back end systems (POL SAP) and may delay the processing of a TA / TC.	No impact.
46.	AllenD429U		One of the central systems failed during the evening and when it restarted it picked up the wrong time, which meant that when it was trying to decide whether a Txn happened before or after 7pm (the EOD cut off) if got the answer wrong and this meant that some data was associated with the wrong day in back end systems.	Looks like a back end problem, with no impact on branches This is a problem in the data Centre which delays passing data to Post Office's back end systems. However, it has no impact on Branch Accounts.	No impact.

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47.	cardc4027Q		This was a problem in incorrectly handling a transaction which had been rejected by the PIN PAD resulting in a spurious reconciliation error on a report.	The issue first occurred in 2011 and another similar issue occurred in 2013. It appears to be related to the old Hypercom PIN Pads which were replaced after the second occurrence of this issue so no further action was taken As the transaction had been clearly declined, then there would be no financial impact at the Branch.	No impact.
48.	cardc5444K		The Postmaster received a Planned Order as follows: Based on the last declared Cash on Hand figure of £97,875.00 notes + £9,156.29 coins on 13.07.2010 you will need to remit to the Cash Centre £85,000.00 in notes on your next scheduled collection day. The PM had declared cash for all his stock units on that day, however his actual Cash Declaration value was much lower than the Planned Order cash declaration value. The Planned Order asked him to remit too much cash. The PM normally used Till Id 1 for his shared stock unit, but had accidentally done a declaration with Till Id 16 during the previous week. He was unaware that the Till 16 declaration was being added	In a Shared SU, then it is possible to make multiple Cash Declarations from different tills which are added together. In this case a Cash Declaration had been made accidently for Till 16 (instead of Till 1) which resulted in the value of cash being doubled. This should have been spotted when the branch balanced. However, before then the Cash Planning identified that the Branch had too much cash and asked for some to be returned. This is a case of branch user error and there was no actual impact on the accounts, once the spurious Cash Declaration was identified and removed.	Temporary impact due to human error.

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			to every overnight cash declaration sent to the cash centre.		