

# The Post Office Horizon system and Seema Misra

By Tim McCormack

## Acknowledgement

As a former subpostmaster I am very grateful to Stephen Mason for publishing the transcript of the Seema Misra Trial. Without this remarkable insight into the way Post Office Limited have brought prosecutions against what appears to me to be completely innocent people, we would be none the wiser. The Post Office could not have known that this transcript would come in to the public domain. As a result, the Post Office is now open to having many of the statements they have made in public in defending the Horizon computer system challenged.

## Background

Seema Misra was accused of theft from her employers Post Office Limited (PO).<sup>1</sup> When auditors arrived at her West Byfleet Post Office, they claimed there was a shortfall in her accounts of some £75,000. Seema Misra was immediately suspended and later sacked. She was accused of theft, and when the case eventually came to trial at Guildford Crown Court in October 2010, she entered a plea of not guilty. Part of her defence was the possibility that the Post Office computer system, known as Horizon, could have been at fault. The defence led this possibility in court with evidence from Professor Charles McLachlan, an expert witness in computer systems who unfortunately had no prior experience of the system in question.

The possibility of Horizon being at fault for many of the losses incurred by subpostmasters has been in the news regularly since Mr Alan Bates set up a group called Justice for Subpostmasters Alliance,<sup>2</sup> which is seeking to prove that hundreds of subpostmasters have suffered financial losses as well as criminal convictions as a result of errors in the Horizon system.

<sup>1</sup> It is a moot point whether or not subpostmasters are employees of Post Office Limited or not. Their contract with the Post Office suggests they are Office Holders. For the purposes of this article, the contractual status of the subpostmaster is not relevant and I will refer to them as employees throughout.

<sup>2</sup> <http://www.jfsa.org.uk/>.

The investigative television reporter, Nick Wallis, presented a report for the BBC Inside Out program, first broadcast on 7 February 2011 that highlighted many of the cases that had come to light and questioned the integrity of the Horizon System.<sup>3</sup> The BBC put their findings to the Post Office for comment and they responded by saying 'The Post Office has complete faith in its Horizon IT system. There is no evidence whatsoever pointing to any fault with its technology'.

In July 2012, the forensic auditors, Second Sight Support Services Limited, were appointed by the Post Office to look into the concerns surrounding the Horizon Computer System. Their final report dated April 2015<sup>4</sup> did little to alleviate these concerns, yet in response the Post Office again stated:

'Investigations over the past three years have confirmed that the Post Office's Horizon computer system is operating as it should. It is used successfully by 78,000 people to process six million transactions every working day in communities throughout the UK.'<sup>5</sup>

What the Post Office could not have known at the time of making these statements was that the transcripts of the Misra trial would come into the public domain. The transcripts contradict many of the statements that the Post Office has made about prosecutions they bring against former subpostmasters.<sup>6</sup>

<sup>3</sup> Available at <https://youtu.be/LQ2FLuFVGMg>.

<sup>4</sup>

[http://www.jfsa.org.uk/uploads/5/4/3/1/54312921/report\\_9th\\_april\\_2015.pdf](http://www.jfsa.org.uk/uploads/5/4/3/1/54312921/report_9th_april_2015.pdf).

<sup>5</sup>

<http://becarefulwhatyouwishfornickwallis.blogspot.co.uk/2015/04/post-office-response-to-final-second.html>.

<sup>6</sup> The legislative framework is well established for the Post Office to investigate and prosecute, for which see para 1.2 in *An Inspection of the Royal Mail Group Crime Investigations Function*, Presented to the Houses of Parliament by the Secretary of State for Northern Ireland under Section 49(2) of the Justice (Northern Ireland) Act 2002 (July 2008), available at <http://www.cjini.org/CJINI/files/22/2214e169-7c09-4ee7-8930-cc831e6e83e4.pdf>.

One of the most damning of these statements appears in the Post Office report on the *Complaint and Mediation Scheme*:<sup>7</sup>

‘11. Secondly, as prosecutor, Post Office has a continuing duty after a prosecution has concluded to disclose immediately any information that subsequently comes to light which might undermine its prosecution case or support the case of the defendant.’

Subsequently to the publication of this report, the final report from Second Sight, dated 9 April 2015, was leaked into the public domain (the Report includes the following text on the front page: ‘This Report is confidential and is not to be disclosed to any person other than a person involved in the processing of Applicants’ claims through the Scheme’).<sup>8</sup> Second Sight had found what appeared to them to be a Minute of a joint Post Office/Fujitsu meeting probably held in August 2010 entitled ‘Receipts/Payments Mismatch issue notes’, regarding a known error in Horizon that had affected the accounts of several branches, and how they would ‘fix’ these accounts and noting the potential impression should details of the error and the fix become public knowledge. The comments are set out at 14.12:

‘Impact

- The branch has appeared to have balanced, whereas in fact they could have a loss or a gain
- Our accounting systems will be out of sync with what is recorded at the branch
- If widely known could cause a loss of confidence in the Horizon System by branches
- Potential impact upon ongoing legal cases where branches are disputing the integrity of Horizon Data
- It could provide branches ammunition to blame Horizon for future discrepancies.’

The Post Office and Fujitsu are quite correct in their risk assessment here. Had Ms Misra’s defence team been made aware of this error and these notes at the

time of her trial, then the defence could have raised questions regarding reasonable doubt in her case. If this was not bad enough for the Post Office, the timing is interesting. The notes from this meeting were dated August 2010 – some two months before Ms Misra’s trial started and at a time when the defence were actively seeking disclosure on other matters from the Post Office. To compound this apparent failure to disclose, the source of these documents was a printout made by the then Head of Post Office’s Prosecution Team in October 2010 – the very month Ms Misra went to trial.

It should be noted that the Post Office responded to the final Second Sight Report by sending Nick Wallis a press statement dated Sunday 19 April 2015, then a longer document entitled the *Complaint Review and Mediation Scheme*, apparently published in March 2015.<sup>9</sup>

### Disclosure

All computer systems have bugs (bugs are errors) in them from time to time. Even the Post Office and Fujitsu will admit to this. However, the stance taken by the Post Office is that when these bugs occur, they are found and fixed, and at least retrospectively the Post Office believes that no subpostmaster has incurred financial loss as a result.

Who finds these bugs? Systems are tested before release, and during that process bugs will be found and fixed. These errors will not affect the user. However, bugs also occur after release, and these will mainly be identified by the user of the software who reports them through the help desk, which will ultimately lead to them being fixed.<sup>10</sup>

The Post Office consistently claims that the system is used by thousands of operators each day to process millions of transactions and must therefore be considered to ‘be in order’ as the law puts it. This, they suggest, proves there are no ‘systemic’ bugs in the system. That really is an intolerable argument. From the moment a single user reports an error in the system to the time that the error is fixed and a new software patch is released, then that error could be

<sup>7</sup>

<http://corporate.postoffice.co.uk/sites/default/files/SCHEME%20REP%20FINAL.PDF>.

<sup>8</sup> Copies can be obtained from <http://becarefulwhatyouwishfornickwallis.blogspot.co.uk/2015/04/exclusive-second-sight-final-report-in.html>.

<sup>9</sup> The press release and the document are available at <http://becarefulwhatyouwishfornickwallis.blogspot.co.uk/2015/04/post-office-response-to-final-second.html>.

<sup>10</sup> For far more detail on this, see Stephen Mason, ed, *Electronic Evidence* (3rd edn, LexisNexis Butterworths), chapter 5 ‘Mechanical instruments: the presumption of being in order’.

described as systemic, because it could affect any user at any time. The only possible way to circumvent such a state of affairs would be for the Post Office to warn the users that the error exists in the system until the time of the fix. As can be appreciated from Second Sight's report, the Post Office does not routinely inform their users of the errors that exist in the system – most notably because of the effect that type of disclosure may have on the confidence that users have in the system.

So here is the Catch 22. In Ms Misra's trial, the barrister for the prosecution, Mr Tatford, stated, on the first day of the trial (11 October 2010) at page 21(D): 'So this problem is something that is obvious to the user of the Horizon equipment' as he suggested that Ms Misra was bright enough and computer literate enough to identify an 'obvious' computer error, and the consequences of the fact that she did not spot one would then be her fault.<sup>11</sup> Why on earth would Ms Misra, or any subpostmaster, bother to look for an 'obvious' computer error when they have been told repeatedly by the Post Office that no errors exist in the system and it is robust and reliable?

The subpostmaster's contract makes no mention of the Horizon computer system and therefore there is no form of contractual warranty as to the reliability of the system within the contract. Arguably, in the absence of such contractual terms then the subpostmaster is entitled to rely on warranty by representation and the statements made, by among others, the senior management of the Post Office with regard the reliability of the Horizon system. In response to the Second Sight Report, the Chief Executive of the Post Office, Paula Vennells is reported to have said:

'We commissioned this independent review to address concerns that have been raised about the Horizon system and we welcome the broad thrust of the interim findings.

The interim review makes clear that the Horizon computer system and its supporting processes function effectively across our network.

As the review notes, it is used by around 68,000 people in more than 11,500 branches, successfully processing more than six million

transactions every day.

The review underlines our cause for confidence in the overall system.'<sup>12</sup>

In cross examination the defence barrister, Mr Hadrill, established with Gareth Clifford Jenkins, a system architect with Fujitsu Services, that there was a Known Errors Log (containing details of all errors in the Horizon system), the contents of which have never been revealed to the subpostmasters network of users.<sup>13</sup> In a Freedom of Information request to the Post Office by a Mr Tony Williams dated 23 November 2015, he wrote in his request the following:

'Fujitsu have stated that they will be releasing a system upgrade to the Horizon system, used in Post Offices, in March 2016 which will include fixes to a list of known bugs in the system.

Could you please provide me with a list of the bugs/errors that they are currently aware of and intend to fix as of 23/11/2015.'<sup>14</sup>

On 21 January 2016, Martin Humphreys from the Information Rights Team for the Post Office responded to the request by refusing to provide the information, but he confirmed '... that Post Office does hold the information you have requested.' This was a significant request, because included in the known list of errors and bugs is a particular bug that is known to be able to generate significant financial losses for the subpostmasters affected by it, details of which are now in the public domain, on a web site run by the author.<sup>15</sup>

In chapter 5, entitled 'Mechanical instruments: the presumption of being in order' of Stephen Mason's book *Electronic Evidence*,<sup>16</sup> Mason challenges the underlying legal presumption that digital systems which are in regular use and perform correctly can be considered to 'be in order'. It is this very presumption that the Post Office rely on, and in doing so, the onus of raising the issue that the system was at fault is for the defence to raise, and it is very difficult for the

<sup>12</sup> Matt Prodder, 'Bug found in Post Office row computer system', *BBC News*, 8 July 2013.

<sup>13</sup> Transcript of the trial, day 4, 14 October 2010, page 96.

<sup>14</sup>

<https://www.whatdotheyknow.com/request/304062/response/757684/attach/4/Tony%20Williams%20FOIA%20Response%2021%2001%2016.pdf>.

<sup>15</sup> <https://problemswithpol.wordpress.com/2015/11/10/the-error-in-horizon/>.

<sup>16</sup> Stephen Mason, ed, *Electronic Evidence* (3rd edn, LexisNexis Butterworths).

<sup>11</sup> The transcript of the trial is published in the *Digital Evidence and Electronic Signature Law Review*, Volume 12, 2015, and is available at <http://journals.sas.ac.uk/deeslr/issue/current/showToc>.

defence to do this unless they are given sufficient disclosure by the Post Office. Mason states, at 153:

‘In broad terms it is not possible to know that a computer is working properly, even for highly skilled professionals – part of the problem is that computers fail in discontinuous ways, unlike most mechanical devices.’

A simple intermittent communication failure can give rise to unexpected results. An unanticipated set of keyboard inputs could cause a system to crash, and it would be harsh to rely on the user to recall exactly what had occurred prior to such an incident in order to replicate the failure which may occur only once in the lifespan of the system.

In the Misra case, Ms Misra’s defence was based on the Horizon system being possibly to blame for the losses, but all the defence knew about was the one and only error that was at that time in the public domain. The Post Office sought to prove that that error had not occurred at Ms Misra’s Post Office, yet made no mention of any other errors that existed at that time or prior to it. How could the defence have known about other errors if the Post Office had chosen not to reveal them to the network?

### Intermittent errors – an explanation

Any digital system may work for years with no apparent fault detected. The underlying software may be as robust and reliable as the team that programmed the system originally intended. Yet there is not a programmer in the world who would categorically state that even with years of error free use, that the system they designed and developed was completely fault tolerant. Programmers are human. Try as they may, they will never be able to imagine and account for a series of unexpected events that will eventually lead to an error being created. Programmers will, of course, try to intercept such unexpected events and create fail safe methods to deal with them, yet even then they are reliant on supporting systems and infrastructure to be as capable as their own system.

A unique and unintended sequence of events that leads to such an error is more likely to be a one off occurrence. It may be because of an event that is not within the control of the programmer, such as a

communication failure or a hardware error in a keyboard for instance. Such an error, or rather the effect of such an error, may be noticed by a user and reported, but it is just as likely not to be noticed at the time that it occurs. The user may then not be in a position to accurately report what actually transpired and thus not be in a position to report back to the system developers with sufficient information for them to identify the source of the error.

And therein lies the most significant problem relating to what I call ‘intermittent errors’. The effect is known but the cause is not, and if the cause is not known then the error cannot be replicated. If the error cannot be replicated then any ‘fix’ cannot be tested. Certainly the effect of such an error can be trapped and corrected if necessary, but the underlying cause will remain in the system and be as likely to cause similar unexplainable effects in other locations.

### Locating errors

To a lay person with experience of working as an IT consultant, it is self evident that when litigation occurs that requires the robustness and reliability of a digital system to be examined in court, it is obvious that there must be the possibility of an error existing within the system that is capable of producing the erroneous result that gave rise to the litigation in the first place. Even the simplest program that could be attested by expert witnesses to contain no flaws in the source code could be compromised by the unlikely failure of the equipment on which it runs, including hardware, firmware and operating system. Software providers are keenly aware that the systems they sell will contain ‘bugs’ that they are not aware of, and they acknowledge this in their sale and licence agreements with the inclusion of warranty and limitation of liability clauses.

Generally speaking, software providers will set up some form of maintenance cycle for their systems, which will include User Error Reporting, Patch Releases and System Upgrades. The most important of these from my perspective is the reporting of errors by the users. If the users did not report the errors to the developers, then they would remain in the system forever. Now here is an obvious but crucial point to make. Once the error has been reported to the developers of the system, in my view they then have a duty of care to the other users of the system to warn them of its existence and the consequences of it. It is possible that they may be protected by the wording of

the licencing agreement, but if they are not, then I think they are at risk from the moment the error was reported until it was fixed. I appreciate that my understanding of this might not be the same as the law provides, but this is my opinion.

Another obvious point to make is the fact that the error existed in the system prior to the user noticing, and the error may have affected other users who did not notice the effects of it at the time.

### The Falkirk incident

Shortly before the trial of Seema Misra, Ms Misra became aware of an error in the Horizon system that had been reported about in another case brought by the Post Office against a former subpostmaster. This error related to an incident in a sub Post Office in Falkirk where a real and substantial loss to the subpostmaster was caused by a system error. At the time of the trial, this was the only error in the Horizon system that had come into the public domain, and the defence placed a great deal of significance on it.

The expert witness for the defence, Professor Charles McLachlan, who had no previous experience of the Horizon system, was invited to examine the details of the error and to see if such an error could have caused the shortfall in cash at Ms Misra's post office branch.

The prosecution provided the defence with log files of the computers at West Byfleet and also some detail as to what caused the error in the first place and the steps that the Post Office and Fujitsu had taken to ensure that the problem did not re-occur at other branches. Professor McLachlan could not have arrived at any other conclusion than that it was unlikely that this one type of error had occurred during Ms Misra's tenure at West Byfleet.

Yet within the evidence adduced in court, there were, in my opinion, several glaring weaknesses with the prosecution's case that were revealed yet were not drawn out by the defence.

First, in order to prove that the Falkirk error had not occurred at West Byfleet, the prosecution expert witness from Fujitsu admitted they had to go to great lengths to extract from the archive the historical log data from that period at West Byfleet. The fact that they had to do this proves that Fujitsu and the Post

Office had, once they became aware of the error at Falkirk, made no earlier attempt to go through the log files of every workstation in every branch in the network to see if the error had occurred elsewhere. That is important, because if they knew that such an error had occurred elsewhere and not been reported, it would have led to the subpostmaster recording losses against his account, while the Post Office benefitted financially from recovering these losses from the subpostmaster.

Secondly, the Falkirk incident came into the public domain purely by chance, and then only years after the event occurred. Testimony<sup>17</sup> at the trial of Seema Misra reveals that from the time the error was reported to the Post Office to the time Fujitsu fixed it, many months elapsed, yet the Post Office made no effort to warn the network the error remained in the system and to watch out for its unwanted effects.

Had Seema Misra known about the computer error that occurred at Falkirk, and had the Post Office alerted subpostmasters to the problems, it is arguable that Ms Misra should have been able to notice this error, and at the very least report it to the Post Office. What is striking, is that a subpostmaster could be held responsible for losses they incurred as a direct result of failing to notice an error in a sophisticated computer system over which they had no control.

### Conclusion

The presumption that a digital system is in order merely because it does what it is told most of the time is no longer a valid starting point – indeed, it has never been a valid starting point. All digital systems have the possibility of latent defects, and these can never be discounted. When the efficacy of digital systems is called into question in legal proceedings, the onus of proof must be placed on the supplier of these systems and not the accuser.

How to prove the efficacy of a digital system is a matter for further debate. As far as the Horizon system goes however there is no debate necessary. The actions (or inaction) of the Post Office to prevent users from becoming aware of errors within the system undermines, in my view, any argument put

<sup>17</sup> Transcript of the trial, day 4, 14 October 2010, pp 74 – 75.  
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forward to suggest that it is a completely reliable and robust system.

Finally, my thanks to Stephen Mason for publishing the transcript of the trial of Seema Misra. I cannot imagine he was aware when doing so that it would have had such an influence not only on my life, but on the lives of so many, and in my view, unjustly prosecuted subpostmasters.

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After working in IT, **Tim McCormack** owned a small and remote Post Office in the Highlands of Scotland between 2004 and 2010. He subsequently bought a bigger Post Office in Duns in the Scottish Borders, which he and his wife ran for four years until leaving under the Network Transformation Program.