Witness Name: Richard William Roll

Statement No: WITN0078 0100

Exhibits: WITN0078_0101

Dated: 02 February 2023

POST OFFICE HORIZON ENQUIRY

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FIRST WITNESS STATEMENT OF RICHARD WILLIAM ROLL

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I, Richard William Roll, will say as follows,

1. I joined the RAF in 1974 as an electronics apprentice and for 13 years I
   worked on numerous aircraft navigation and weapons systems, some
   analogue and some digital. I served in the UK, Europe and the Falkland
   Islands. During this time I was sent on several computing and software
   development courses, however the only qualification I had gained that was
   recognised by civilian employers was a City and Guilds level three certificate
   in electronics so I enrolled as a day-release student at Farnborough College
   of Technology. Over the next four years I studied for a BTEC NC in
   Engineering, followed by an HNC in Computer Studies. Following my
   retirement from the RAF in 1989 I worked for about a year on factory
   automation and robotics equipment, which included the programming of

Programmable Logic Units (PLU's) before leaving to take up a permanent role

as a programmer and developer (using the 'C' language) in 1990. A few

months later **IRRELEVANT**

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IRRELEVANT For the next few years I worked part-time from home as a

programmer and business process analyst for various companies, becoming

proficient in various programming languages including Visual Basic, C/C++,

Awk, Java, Perl, and SQL. After five years **IRRELEVANT**

IRRELEVANT I was able to take on more full time roles starting with hardware

installation and progressing to systems configuration and support; software

analysis, design, and coding; and project management. Immediately prior to

taking up the position at Fujitsu (technically, ICL – the company was

rebranded to Fujitsu in April 2002) I was working as a contractor at Eli Lilly

pharmaceuticals, managing and developing a global sales/CRM database

system.

2. I joined Fujitsu SSC (I can't remember what SSC stood for) around March

2001 as a Product Specialist and held that position for three years, with no

promotion or change to my role, until I left in 2004 to attend university.

3. My role in Fujitsu SSC was to provide third line support on the Horizon

system. The system was hugely complex and included (amongst other

things) Windows NT systems and Unix servers; asymmetric digital subscriber

line (ADSL), microwave and satellite communications systems; and software

written in a variety of languages. Day-to-day tasks were many and varied –

for example, we may have been asked to examine database transactions in

order to identify errors in the accounting system; examine computer programmes to try to identify bugs; investigate communications failures in the system; rectify failures in the overnight processing of the previous days transactions; or liaise with engineers during the installation of new Post Office counters.   We also generated reports for senior management and the Post Office, tested equipment, evaluated new hardware and software etc.

4. When I joined Fujitsu, I received the same basic training on the Horizon system as the SPM's, although as I didn't work in a Post Office I never became truly familiar with the system operation from a SPM's perspective. I don't recall there being any technical training as such – the system was so complex and the role so demanding that you had to be an expert in one or more fields when you started, you then picked it up as you went along. The qualifications I had gained previously, my experience with different systems, languages and in different roles, and my record of continuing professional development – I was a member of the British Computer Society (MBCS), a Certified Lotus/IBM Professional (CLP) and Microsoft Certified Systems Professional (MCSP) – were considered valuable attributes for the department.

5. The department was headed by Mik Peach, with Steve Parker acting as his deputy when required. We were all specialists in various areas – NT, UNIX, accounting, programming – and work would either be picked up by whoever was free or Mik would ask one of us to look at a problem. If one of us was working on a problem outside our particular specialism and we became stuck, then we would ask someone else more familiar with that aspect of the system for assistance.

6. The reporting structure within the department was very simple – we all reported to the manager, Mik Peach.

7. Regarding the design and configuration of the system, my understanding is that it was originally designed as a benefits payment system for the Benefits Agency, but as costs spiralled they pulled out. Fujitsu had invested a huge amount of time and money in developing the system and it would have been a financial disaster if they couldn't recoup some of their money; the Post Office needed to update their counters; so the system was 'sold' to them. There wasn't enough time to redevelop the system properly, instead the Benefits system was modified to try to meet the requirements of the Post Office. I worked on one of the earliest iterations of the system; most of the counters were connected by ADSL lines to the two main server farms in the north of England, I don't remember where exactly; some of the post offices had to use other means of communication due to the limitations of the existing communications infrastructure.

8. SPM's would log in to the system at their post office (PO); there were several different types of configuration, depending on the type of PO (mobile, single counter, multi counter or main PO with a separate gateway computer), but from the SPM's perspective these would have all looked the same. General security protocols were in place at the PO's. Secure passwords were required, which were not supposed to be shared but often were. There was a secure link from the PO counter to Fujitsu's servers – the counters would only respond to requests originating from specific telephone numbers – and all data was encrypted. Additionally, the network was completely (logically) isolated form the internet, it had its own dedicated lines and for resilience

these were duplicated, with one to the east of the country and one to the west, I think (physically, the lines were probably shared with other BT customers). However, due to geographical and financial constraints, these lines merged in London and both were routed along one of the Tube lines; I believe there was a minor train accident one day which unfortunately severed both cables and left the north of the country isolated from the south.

9. We all had at least two PC's at Bracknell; one 'open', which we used for emails, researching the internet etc, and one 'secure' (completely isolated from the 'open' system) for working on the Horizon system. Apart from responding to requests for assistance from second line, for example, looking into issues reported by SPM's regarding accounting, product errors, hardware failures etc, or queries from utility companies regarding payments made at PO's that hadn't gone through, we also monitored the system and ran remote programs we had developed which provided advanced warning of any failures, for example with the overnight batch processing of network banking transactions or benefits payments. This sometimes meant we had to connect remotely to the SPM's Horizon terminals, sometimes without their knowledge or consent, to make changes to the counter configuration or the database system.

10. I think there were several ways to connect to the counters but it was a long time ago and I can't remember exact details. As I recall:

a. we could log into the Horizon servers using our own login details and then use the RIPOSTE system to access the

counters – any changes we made to the counter

database would then have our log in details attached;

b. we could log in through riposte another way, I can't

remember the details, in which case it would be difficult to

see who had made changes;

c. we could go directly through the communications servers

to the PO gateway and then the counter – if the PM

wasn't logged in then there would be no ID attached to

the database entries, which sometimes caused the batch

processing to fail overnight; if the PM was logged on then

any changes we made would have their ID attached - so

as far as the system (and any auditing) was concerned

the SPM would have been responsible for the

transactions.

11. Sometimes we were instructed not to let the SPM know we had altered his

system whilst he was logged in – to my recollection, sometimes POL

requested this, sometimes Fujitsu, and sometimes only our department knew

of it. It would have been possible for someone with the same access and

security privileges that we enjoyed in SSC, to log in to a PO counter and

transfer money to an external bank account without the SPM being aware of

this. I do not know if anyone else in Fujitsu had such privileges.

12. I worked on a very early version of the Horizon system, there was talk of

moving to a web-based version but I don't remember much about this. I

believe that as time went on, the auditing process improved and personnel

could no longer access the counters anonymously, as and when they wanted to.

13. I have been asked by the Inquiry to describe how the Horizon system was used by Sub Postmasters, but I cannot remember any details regarding this, other than that they logged on to the system and keyed all of their transactions through it.

14. I have been asked by the Inquiry to describe how the Horizon system was connected from Fujitsu to Sub Postmasters, I remember it used various communication channels such as ADSL and satellite but I can't remember any other details.

15. The Inquiry has asked about security protocols regarding access to SPM's systems. I don't remember any security protocols; we sometimes connected to PO counters without the postmaster being aware that we were 'looking over their shoulder'. In the early days I frequently logged on to counters to see what was happening; there was no record of my doing so but I think this changed after I had left.

16. The Inquiry has asked about any risks that arose because of any access to individual systems. There are always risks when logging into a live system, there was a mistake made once that had a huge impact on the SPM's accounts/database but I don't remember any specific details.

17. In my opinion the coding and development of the system did not meet my expectations of quality for a major software project; I considered it to be a very poor system that should never have been deployed but I cannot be more specific than this.

18. The Inquiry has asked if I can describe the structure of the communication between Fujitsu and the SPM's but I cannot remember any details.

19. The Inquiry has asked about my understanding of the levels of support offered to SPM's but I can't remember.

20. The Inquiry has asked about how any service level agreements affected my role; there was pressure to fix problems or provide an answer before SLA time ran out, on at least one occasion I was emailed by my manager asking when I could provide an answer/solution because we were nearly out of SLA time, but that is all I remember.

21. The Inquiry has asked how issues made their way to me, how I received the information, who gave me the information and who had dealt with the query before it came to me but I don't remember any details.

22. The Inquiry has asked me to describe the types of defects that I dealt with but this is a hugely complex question and I don't remember any more details than I have previously described. All I can say is that if anything at all went wrong with any of the hardware or software, anywhere in the system, SSC might be asked to look into it. Whatever the problem was, if no-one else could fix it we would be called in.

23. The Inquiry has asked me to describe the steps I would take to investigate an issue but I can't remember any specific details. There were so many types of issue; sometimes I spoke to the SPM, sometimes I connected to their Horizon Terminal, sometimes I had to get the equipment recovered back to Bracknell so I could strip it down and work on it in-house, sometimes I spoke to BT/utility companies regarding the post office, sometimes I spoke to third parties

regarding BACS payments. At times I got called out over night to fix problems with the UNIX servers, or worked with engineers to set up new post offices, or with the testing or development teams to investigate potential programming bugs.

24. The Inquiry has asked about contact with SPM's; I spoke to SPM's every week but I can't remember any of the details.

25. The Inquiry has asked about the information used to review an issue. That depended upon the issue – with a counter, or a server, or with the communications systems. There was a vast array of data available but I can't remember anything more specific than this.

26. The Inquiry has asked how long it would take to find a solution, but that all depended on how difficult the problem was. It could take a few minutes, or it could be that we identified a problem and passed it on to another department for a fix, in which case it could be months before it was resolved.

27. The Inquiry has asked if there were any deadlines for finding a solution, but that depended upon the problem. There were SLA's for some parts of the system but not others, and there was pressure to meet these deadlines, but I don't remember any details.

28. The Inquiry has asked how often I successfully resolved an issue; I should say almost always but I can't remember any details. I'm sure that on occasion I wasn't able to come up with a solution.

29. The Inquiry has asked how long it would take to roll out a solution, again that depends on the problem. Sometimes an error could be corrected in minutes,

other times it could be months before the software could be developed and rolled out, but I can't be more specific because I don't remember.

30. The Inquiry has asked how wide the solution roll out would be; that depended upon the problem, it could have been one transaction on one counter, or a database update to 40,000 counters; or it could have been the servers at the server farms and not on the counters at all.

31. The Inquiry has asked whether there were any difficulties in rolling out a solution; I'm sure at times there were but I can't remember any details other that that on one occasion a software patch was rolled out to fix a bug, but the developers were writing new code and when this was rolled out it undid the fix, so we suddenly started seeing a problem that we thought had been resolved months before; and another time someone released the wrong security key and 25% of the estate went off-line before we could stop it.

32. The Inquiry has asked me to describe the circumstances in which I had contact with SPM's and any difficulties that arose but I can't remember any details, other than that due to cultural differences some SPM's refused to speak to the female members of the team.

33. The Inquiry has asked me what records were kept of the issues that arose and how that information was used but I can't remember any details.

34. The Inquiry has asked me what happened if I was unable to resolve a defect. That depended on the type of defect and I can't remember any details, other than that if it was an accounting problem then if we ran out of SLA time I think we reported that we couldn't find the source of the problem. All hardware

issues were, to the best of my knowledge, resolved speedily; and I think all issues with overnight batch processing were resolved within the SLA periods.

35. The Inquiry has asked if the situation was different if I needed more time to investigate the issue but I can't remember what the process was. If we were stuck we sometimes got more members of the team involved to try to resolve the issue asap, before we ran out of SLA time.

36. When we had finished with a problem, either by providing a solution or by being unable to find or duplicate the reported problem, then I think we informed our manager (Mik Peach) but I can't really remember any more than this.

37. The Inquiry has asked what the SPMs were told but I do not know what information was communicated to SPM's.

38. The Inquiry has asked what involvement the management of my department had in dealing with issues that could not be resolved but I don't know, I was never involved in this.

39. The Inquiry has asked if any records were kept of the issues that could not be resolved but I can't remember.

40. The Inquiry has asked if I can describe any issues that arose as the Horizon IT system was developed to handle more products but I can't remember.

41. The Inquiry has asked me to describe how these issues were handled and whether, in my opinion, this was sufficient but as I can't remember any issues then I can't answer this question.

42. The Inquiry has asked if I can describe any issues with the hardware provided to SPMs to operate the Horizon IT system and how were any such issues dealt with. I only remember one issue with hardware, where an SPM seemed to be switching her laptop off before 6.00pm. Because the power was switched off the Laptop could not generate the end of day financial markers, consequently the accounts were not processed correctly which resulted in transaction data not being sent to the banks and utility companies so Fujitsu missed SLA deadlines. I was asked to investigate; the SPM (a very experienced lady) insisted she was not turning the machine off but the log files on the counter showed that the laptop was being powered down. I arranged for the laptop to be swapped out and returned to Bracknell for testing and found that when the screensaver button was pressed the power to the machine was switched off. When I disassembled the machine I discovered the fault – during the build the wires had been cross connected.

43. I brought this to my manager's attention as I felt it should be investigated further; a few days later he called me over and informed me that the manager of the section that assembled the Laptops knew about the issue already as one of his engineers had told him that he had inadvertently mis-wired several laptops that had been sent out to SPM's. I was told that no further action was to be taken and I was instructed to record the fault as no fault found or something similar – the incident was hushed up without senior management or the Post Office being made aware of it. The faulty laptops remained in general circulation, but as none of the other SPM's used the screensaver button regularly it did not cause a problem.

44. The Inquiry has asked if I consider that the issue described could have been avoided and how. I believe that there were quality control issues within Fujitsu – if the Laptops had been properly tested before being dispatched then this problem would have been avoided. Although the employee concerned alerted his manager to the problem, his manager had no idea what the consequences could or would be so decided to ignore the problem. This particular issue was hushed up by my manager because the other manager was a friend of his.

45. However, this raises questions regarding communication, honesty and transparency within and between departments within Fujitsu. For example, mistakes were made when releasing updates to the software and it is feasible that a programming error could have been rolled out to the estate and a fix rolled out a few days later, without anyone in the wider organisation being informed. In this scenario, if an SPM had problems with their accounts then by the time SSC were asked to investigate the fault would have already been rectified so we would not have been able to duplicate the error. It would have seemed that the only logical explanation was that the SPM was to blame, with potentially catastrophic consequences for that individual.

46. The Inquiry has asked if any improvements were made in relation to the handling of Horizon IT issues; I am sure they were but I can't remember any details.

47. The Inquiry has asked if during my time at Fujitsu, I was concerned about management practices in relation to unresolved defects; to the best of my knowledge I was unaware of any management practices outside of my department other than the examples I have previously described. There were

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rumours of historical instances of intimidation and bullying in some departments but at the time they seemed utterly fantastical and unbelievable, however I have since heard other stories which corroborate the stories I was told by various members of the team.

48. The Inquiry has asked if I can describe any consequences for Fujitsu if defects were not resolved. I believe that there were SLA penalties which could have potentially cost Fujitsu millions of pounds but I can't remember any details.

49. The Inquiry has asked if I was aware of any other wider problems at Fujitsu; I believe that Fujitsu was in a very poor position financially and that the Horizon project was all that was keeping the company afloat at that time (during my time at Fujitsu, there was a pay freeze and numerous cut backs/redundancies) consequently, the system had to be portrayed as working almost perfectly. Incidentally, SSC were awarded the President's Award in 2003 for our contribution to the company.

50. The Inquiry has asked if I was aware of meetings taking place between Post Office Limited and Fujitsu during my time there; I was not. Occasionally visitors would be shown around the SSC but I don't recall being told who the visitors were.

51. The Inquiry has asked if I was aware of meetings taking place between the government and Fujitsu; I was not.

52. The Inquiry has asked if I was aware of meetings taking place between any Members of Parliament and Fujitsu; I was not.

53. The Inquiry has asked me to describe the circumstances in which I became concerned about the issues with the Horizon IT systems but I can't remember. I think I heard something on TV or Radio or read something in a magazine, maybe around 2012, so I contacted someone who had been involved and said I had worked on the system and I was willing to talk about my time there. That is all I remember.

54. The Inquiry has asked if I am in possession of any correspondence or other documentation from my time working on the project; I am not.

55. The Inquiry has asked if I there any other information I am able to provide which is relevant to the Inquiry. I have used PowerPoint to create a basic Schematic Diagram showing how the Horizon System worked, and how SSC could access any part of the system (WITN00780101).

Statement of Truth

I believe the content of this statement to be true.

Signed:

GRO

Dated:

02 February 2023

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Index to First Witness Statement of Richard William Roll

No.	URN	Document Description	Control Number
1	WITN0078 0101	Basic Schematic Diagram showing how the Horizon System worked, and how SSC could access any part of the system	WITN0078 0101