

Draft Scope for computer experts.

1. Post Office Ltd. provides multiple retail banking and financial services, government and government-agency document acquisition, benefit delivery, and post and parcel services on behalf of a number and variety of State and private sector clients,¹ to members of the public. These services are provided through over 350 Crown Offices² and some 11,500 sub-post office branches³. The service is delivered through the Horizon Online⁴ accounting system, a point-of-sale and back-office accounting system which records all transactions conducted at every post office counter across the country. Each counter-position in every post office is provided with a Horizon Online terminal and each counter clerk is provided with their own unique password and secret Log-in code.⁵ There are approximately 68,000 Horizon Online users conducting millions of transactions on a daily basis. All transactions conducted through the counter-position or using in-post office interfaced equipment⁶ are processed through Horizon Online. It has been suggested that over 50 billion such transactions have been conducted using Horizon Online and its predecessor system, Horizon.
2. Horizon Online is designed to store all data in an on-line database known as the Branch Database, an Oracle Database implemented using Oracle Real Application Cluster RAC.
3. As the result of increasing concerns raised by Horizon Online, in particular that the system was not functioning as it should and had produced

¹ e.g. Driver & Vehicle Licensing Agency; Passport Office; Benefits Agency; Royal Mail Group; TV Licensing; Santander; Bank of Ireland; Vodafone; EE; etc.

² City and major town 'high street' branches owned and operated by Post Office Ltd.

³ Usually an independent business contracted to Post Office Ltd. to provide Post Office Ltd.'s services.

⁴ Introduced in January 2010 in succession to Horizon.

⁵ Changed monthly by Horizon Online prompt.

⁶ e.g. ATM cash dispensers; 'Post & Go'; PayPoint; etc.

unexplained false balances and other unresolved shortages in post offices,⁷ in 2012⁸ Post Office Ltd. commissioned Second Sight Support Services Ltd.⁹ (“Second Sight”) to enquire into the alleged problems. Second Sight’s interim report was published on the 14th July 2013. They concluded that there were no system-wide problems with the Horizon Online software but, *inter alia*, identified three previously undisclosed defects, or “bugs” which had affected the functionality of Horizon Online.

4. Although these defects were corrected, the disclosure that such defects existed provided those who challenged the integrity of Horizon Online with compelling evidence that the system was not as robust as Post Office Ltd. had claimed.¹⁰ Prior to the publication of the Second Sight Interim Report, Post Office Ltd. had issued statements supporting the integrity and robustness of Horizon Online.¹¹

5. Nevertheless, criticism of Horizon Online persists, and until the position is determined in a robust and authoritative way it is almost impossible to prosecute those alleged to have stolen from or defrauded Post Office Ltd. or to seek the civil recovery of shortages for which sub-postmasters are contractually liable. In every case, those accused of criminal conduct and those from whom Post Office Ltd. seeks to recover shortages through civil

⁷ Often by those alleged to have stolen or defrauded Post Office Ltd. of monies.

⁸ Prior to the commissioning of the Second Sight Report a number of complainants had prevailed upon their Members of Parliament to raise the issue of Horizon Online’s integrity in the House.

⁹ Second Sight describe themselves as “....specialists in the fields of Investigation; Loss Management; Forensic Computer Analysis; Process Analysis and Repair; Problem Identification and Elimination; Engineering and Operations Error-reduction Disciplines....”

¹⁰ Indeed Parliament remains taxed with the issue: both the Second Sight Interim Report and Post Office Ltd.’s response have been discussed in the House and the Parliamentary Under-Secretary for State for Business, Innovation and Skills has made a statement to the House indicating that Horizon Online is fundamentally sound.

¹¹ Often by expert witness statement in criminal proceedings brought by POL against alleged dishonest sub-postmasters. Defendants often asserted that losses were due to the improper and unexplained malfunctioning of Horizon Online rather than to their dishonesty; these expert witness statements were intended to convey to the court that such assertions were incorrect: Horizon Online had functioned as it should.

litigation, require Post Office Ltd. to exclude Horizon Online as being the source of such losses or shortages.¹²

6. Accordingly, Post Office Ltd. intend to commission experts of the highest calibre and reputation to provide a definitive report based upon the following work, to be undertaken by the experts and reported upon:

a. A full analysis of the hardware and software making up the 'global' Horizon Online system, so as to determine whether those elements of the system are appropriate to their function.

b. A consideration of the programming of the system so as to determine:

i. the function each aspect of the programming was intended to accomplish;

ii. whether the programming achieves that functionality; and

iii. and that it does so without defect or error, securely, robustly and with integrity.

c. A consideration of the multiple interfaces through which Horizon Online executes third-party transactions.

¹² In the criminal arena the prosecutor (Post Office Ltd.) has a positive and unavoidable duty to disclose to the defendant any material which may undermine Post Office Ltd.'s case or might assist the defence case – any material which suggests that Horizon Online was not, or may not be, functioning properly meets that duty.

- d. A consideration of the defect history of Horizon Online.
- e. An analysis of the presently-installed defect detection, identification and corrections systems, commenting on whether they are sufficient and appropriate to the task.
- f. Where indicated, provide recommendation as to improvements.
- g. Provide a validated opinion as to the present integrity of the system.

7. It is intended that the report:

- a. will lay to rest the present concerns relating to the integrity of Horizon Online;
- b. provide a platform upon which, on a case by case basis, a separately-instructed forensic analyst may found his opinion in answer to any challenges to the integrity of Horizon Online raised by a defendant in future criminal proceedings;
- c. will be published by Post Office Ltd. to the extent required to achieve the aim set out at 8 below.

8. The ultimate purpose of Post Office Ltd. in commissioning this study is to achieve a position whereby Parliament, the courts, employees and agents of Post Office Ltd. and the general public may have complete faith in the integrity of Horizon Online. To this end it is proposed that the work, findings and conclusions be revisited on a regular (bi-annual or annual) basis so as to achieve this aim on a continuing footing.

Simon Clarke
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17th September