

1359

IN THE GUILDFORD CROWN COURT

T20090070

Regina

-v-

SEEMA MISRA

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Exhibit "SM3"

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*On instruction of Coomber Rich Solicitors*  
*Yard House, Basingstoke, RG21 7NX*

**Re: Seema Misra**

**Technical expert's report to the Court prepared by Charles Alastair  
McLachlan, a Director of Amsphere Consulting Ltd.**

Staple Hall  
87-90 Houndsditch  
London EC3A 7AD  
England

*This report contains 3 pages*

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## 1 Introduction

### 1.1 Instructions

1.1.1 I am Charles Alastair McLachlan, a Director of Amsphere Consulting Limited, London, England specialising in information technology consulting. I have been instructed in this matter by Coomber Rich Solicitor, on behalf of their client, Seema Misra, ("the Defendant") to assist the court in this matter of alleged fraudulent accounting in providing expert evidence on the questions posed at 1.1.3 hereunder.

1.1.2 The allegations arose from the discrepancy between the transactions as recorded in the Horizon system provided by Post Office Counters Ltd through a service agreement with Fujitsu and the cash on hand at the defendant's Post Office branch.

1.1.3 I was instructed to consider:

- a. What evidence would be necessary to investigate the defendant's claim that the discrepancy was due to defects in the Horizon system?

### 1.2 Qualifications

1.2.1 I have been working in the software industry since my first job at the age of 17 writing software analysing the results from a particle accelerator for the UK Atomic Energy Authority

Charles McLachlan

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- 1.2.2 I obtained an M.A in Computer Science from Cambridge University matriculating in 1979.
- 1.2.3 I developed software for environmental control systems for a company on the Cambridge Science Park while at university.
- 1.2.4 I was retained by the Cambridge University to do undergraduate teaching for three years.
- 1.2.5 After University, I worked for the company of the Emeritus Professor of Computer Science at Imperial College (and founder of IBM UK Hursley Laboratories), developing PC multi-tasking office automation software. As the company transitioned to IT consulting, I advised HP on their Unix Strategy and looked at the potential for hosting Inmos parallel processors in PC environments. I also built an extensive financial performance analysis system for the Building Society industry.
- 1.2.6 In 1987, I became the founding partner of CMJP Associates which delivered software development services to a wide range of clients using PC and Client-Server technologies.
- 1.2.7 A number of these projects included the development of accounting modules and work for the Financial Services industry including SG Warburg, GNI (of the London International Financial Futures Exchange LIFFE).
- 1.2.8 In 1991 I established a partnership for CMJP Associates to provide expert advice to the Client Server Centre of Excellence.

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- 1.2.9 In July 1993 I became the founding Technical Director of Infonet Systems. Infonet Systems focused on building leading edge object oriented Client-Server solutions. Its first success was the delivery of a complete front office trading platform of financial derivates (repos and bonds) in four weeks. This was the first NT based client server trading desk in the City of London. While at Infonet, I developed the Object Oriented Just In Time software development methodology.
- 1.2.10 In December 1996, I was recruited by the European headquarters of emerging internet service provider UUNet (shortly to become part of MCI Worldcom), to advise on IP billing and customer provisioning systems. A key element of the assignment was to undertake a critical review of the implementation and customisation of the GEAC Smartstream ERP solution by Arthur Andersen Business Consulting.
- 1.2.11 In August 1997 I was recruited by Arthur Andersen Business Consulting to provide technology leadership for the new Advanced Technology division. Over the next five years, I became the international thought leader in the building of software related services that underpinned the development of Andersen's New Media and eBusiness practice. This was recognised by election to partnership in 2000.
- 1.2.12 Early identification of the crucial role for Java technologies and 'just in time' business and technology development methods, positioned the emerging Business Consulting (BC) division for rapid growth on the Internet wave to become 9th globally by Q3 2001. Achievements during this period cover:

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1.2.13 *Major systems delivery projects* The software development related service revenues were the fastest growing area of the fastest growing global consulting organization between 1997 and 2002. My team delivered marquee projects for key clients including: launch of Sky.com, TimeOut.com, myTravel.com, Cendant's Move.co.uk, pan-European systems for Budget-Rent-a-Car. I was also engaged as a technical delivery expert for major new systems types including on-line trading exchanges, high throughput customer services systems, on-line transaction processing systems and content management systems.

1.2.14 *Solution Development*: I provided technology leadership for the development of key global solutions for BC including: eStrategy, eBusiness, Content Management, Experience Design, Component Based Development, Business Architecture, Enterprise Integration, Datawarehouse, Technical Architecture, Active Intelligence™, Anti-Money Laundering, Telco Fraud Protection.

1.2.15 I was the recognized methodology and risk management expert for software related technology solutions across Andersen.

1.2.16 I worked closely with the Computer Risk Management practice in the Andersen Audit practice to perform technical due diligence, project risk reviews and advise on project recovery.

1.2.17 *Capability Development* One of my key strengths was the recruitment, training, development and motivation of deeply technical teams to perform successfully in a 'Big 4' consulting environment.

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1.2.18 Operating first as the founding director of Andersen's **Global Software Engineering Centre of Excellence** and then as a member of the **Global Advanced Technology Advisory Team**, I became one of a small number of newly appointed partners building the **technology integration** skills at the heart of BC's growth strategy.

1.2.19 I provided technical leadership for the development of the core component based rapid implementation methodology and acted as the expert for methodologies built on this foundation including **eBusiness, eMarketplace, Content Management, Datawarehouse, Business Architecture, Enterprise Integration and Customer Management**.

1.2.20 Other achievements include implementation of the first successful **Knowledge Management Capability Maturity Model** for the UK practice; establishing a global virtual community of 2,000 software developers; developing alliance relationships with BEA, Microsoft, Sun and a variety of specialist technology providers; sponsorship of Computing for Business MSc at Imperial College, development of four technology training courses for global roll-out; delivery of a **technology competency model** for all practitioners globally.

1.2.21 I am currently working as an **IT and Technology Risk consultant** as a Director of Amsphere Consulting Limited.

1.2.22 Recent assignments include:

- Advisor to board of advisor to board of satellite Broadband Interactive start-up

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- Recovery of failing project at Big '4' consulting firm
- Associate editor Butler Group, the IT strategy consulting information service company.
- Design and implementation of delivery risk management system for an off-shore software development company
- Project delivery for an applications management business
- Report on XML related integration and data quality risk for JP Morgan-Chase
- Expert witness including cross examination in an ICC Arbitration between 3 national banks and an international provider of banking accounting software
- Expert witness in a High Court action relating to the quality of software testing between an international mobile telephone operator and an established mobile telephony systems integrator.
- Expert advisor in action between Geographical Information Systems provider and off-shore software development services provider.

1.2.23 I am a former Director of UCL Consultants (founded by University College London) which is responsible for providing professional consulting services from members of UCL.

1.2.24 I am a Partner of the Transformation Development Partnership LLP.

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1.2.25 I was appointed Visiting Professor of Software Enterprise at University College London in 2005.

1.2.26 I have worked with IT organisations of all scales from small businesses to international global organisations.

1.2.27 I mentor small businesses owners through the Academy for Chief Executives.

### 1.3 Confidentiality

1.3.1 This report is strictly private and confidential and has been prepared at the request of Coomber Rich Solicitors on behalf of their client, for the Court.

### 1.4 Legal and factual issues

1.4.1 This report should not be read as expressing any opinion on factual matters which depend on disputed testimony of the witnesses of fact, or legal issues. It, however, inevitably reflects my understanding of the position.

### 1.5 Sources of information

1.5.1 In preparing my report, I have read and considered the following documents:

a. Summary of facts prepared in accordance with Rule 21.3(1)(b) of the Criminal Procedure Rules 2005;

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- b. The Indictment – The Queen v Secma Misra;
- c. Witness statement of Keith Noverre 8<sup>th</sup> January 2009;
- d. Witness statement of Elaine Ridge 9<sup>th</sup> January 2009;
- e. Witness statement of Lisa Jane Allen 12<sup>th</sup> January 2009;
- f. Witness statement of Adrian Morris 6<sup>th</sup> January 2009;
- g. Witness statement of Jon Longman 29<sup>th</sup> May 2009;
- h. Witness statement of Javed Salim Bidiwala 13<sup>th</sup> April 2006
- i. The statement under Section 9 of the Criminal Justice Act 1967 of John Kidd
- j. The Audit of Post Office ® West Byfleet branch, FAD 126023 – Action Plan Appendix A
- k. The Witness statement of Andrew Paul Dunks 24<sup>th</sup> June 2009
- l. The exhibits provided running from pages 1-35 insofar as the copies provided are legible.

#### 1.6 The scope of my work

- 1.6.1 I report as an expert witness, not as a witness of fact. I have reviewed the documentation provided to me. I have not undertaken an operational review of the software solution Horizon system nor have I had access to any documentation or test data relating to the Horizon system.

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1.7 Independence

- 1.7.1 I have prepared an independent and objective report addressed to the Court. I have had no previous involvement with the Defendant. I have no previous involvement with Coomber Rich Solicitors.
- 1.7.2 Amsphere's fees in this case are not dependent on the result of the proceedings in this matter.

1.8 The structure of my report is as follows:

- 1.8.1 At Section 2, I consider "What hypotheses could support the Defendant's claim that the Horizon system was the source of the accounting discrepancies?"
- 1.8.2 At Section 3, I consider "What evidence needs to be provided in order to determine the merits of the Defendant's claim?"
- 1.8.3 At section 4 is recorded my expert's declaration.

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**2 What hypotheses could support the Defendant's claim that the Horizon system was the source of the accounting discrepancies?**

**2.1 Background**

- 2.1.1** Accounting systems are usually designed around a 'double entry' booking keeping principle. The double entry book keeping principle means that for every entry into the system there is an equal and opposite entry that should maintain the 'balance' between the accounts.
- 2.1.2** So, for example, if somebody at the till sells a stamp for £1 paid in cash then the stock account would be reduced by £1 value of stock and the cash on hand account would be increased by £1 – overall the balance between the accounts would be unchanged.
- 2.1.3** As part of the process of financial control, it would be normal for the value of stamps to be physically counted and recorded (stock value) and the value of cash on hand physically counted and recorded (cash value) and these two values compared ('reconciled') to what is recorded in the accounting system.

**2.2 Hypothetical issues with the Horizon system**

- 2.2.1** The User Interface gives rise to incorrect data entry: poor user experience design and inadequately user experience testing can give rise to poor data entry quality. In cases that users are working under pressure, insufficiently trained or are using a system presented in a language different from their first language the problems of data entry can be exacerbated.

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2.2.2 The Horizon system fails to properly process transactions: accounting systems are usually carefully designed to ensure that accounts balance after each "double entry" transaction. In particular, a database technology referred to as 'two-phase' commit is used to ensure that either both entries or neither entry is recorded on the system.

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**3 What evidence needs to be provided in order to determine the merits of the Defendant's claim?**

3.1 The User Interface gives rise to incorrect data entry

- 3.1.1 In order to identify whether this is a possible cause, it would be necessary in the first instance to sit alongside a user operating in normal Post Office conditions that had only recently completed the standard systems training and who represented the kind of user engaged by the Defendant.
- 3.1.2 If there is a pattern of incorrect data entry then it would be necessary to conduct a detailed examination of the kinds of incorrect data entry that occur and the implications for failure of accounting.

3.2 The Horizon system fails to properly process transactions

- 3.2.1 In order to identify whether this is a possible cause, it would be necessary in the first instance examine the operations in normal Post Office conditions where there is an experience by the branch manager of what they believe to be incorrect transaction processing.
- 3.2.2 Further, if there is *prima facie* evidence of incorrect transaction processing, it would be necessary to review the technical documentation of the Horizon system and interview key individuals responsible for the system within the Fujitsu team in order to understand the potential source of the incorrect transaction processing.

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3.2.3 If the potential source of the incorrect transaction processing can be identified then it would be helpful to be able to reproduce the problems under controlled test conditions in a consistent and reproducible manner. This would require the assistance of Fujitsu in providing access to the test environments maintained in support of the Horizon system.

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#### 4 My duties to the Court

- 4.1 I understand that my overriding duty is to the Court, both in preparing reports and in giving oral evidence. I have complied and will continue to comply with that duty.
- 4.2 I have set out in my report what I understand from those instructing me to be the questions in respect of which my opinions as an expert are required.
- 4.3 I have done my best, in preparing this report, to be accurate and complete. I have mentioned all matters that I regard as relevant to the opinions I have expressed. All of the matters on which I have expressed an opinion lie within my field of expertise.
- 4.4 I have drawn to the attention of the Court to all matters, of which I am aware, which might adversely affect my opinion.
- 4.5 Wherever I have no personal knowledge, I have indicated the source of factual information.
- 4.6 I have not included anything in this report that has been suggested to me by anyone, including the lawyers instructing me, without forming my own independent view of the matter.
- 4.7 Where in my view, there is a range of reasonable opinion, I have indicated the extent of that range in the report

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- 4.8 At the time of signing the report I consider it to be complete and accurate. I will notify those instructing me if, for any reason, I subsequently consider that the report requires any correction or qualification.
- 4.9 I understand that this report will be the evidence that I will give under oath, subject to any correction or qualification I may make before swearing to its veracity.
- 4.10 I have included in this report a statement setting out the substance of all facts and instructions given to me, which are material to the opinions expressed in this report or upon which those opinions are based.
- 4.11 I confirm that insofar as the facts stated in my report are within my own knowledge I have made clear which they are, and I believe them to be true, and the opinions that I have expressed represent my true and complete professional opinion.

Charles McLachlan  
Amsphere Consulting Ltd  
Staple Hall  
87-90 Houndsditch  
London, EC3A 3AD  
England  
Monday, 21 September 2009

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