



**Small and Medium Enterprises at Risk in the United Kingdom
Digital Research Conference Huelva Oct 2004**

**Robert Onions
Researcher - Information Systems Security Research
Group, The University of Salford, England.**

Enron, Xerox, Maxwell, Worldcom, BCCI, Parmalat.
Large Company Frauds Prevalent, Don't Hear from
Small and Medium Companies.

SMEs 3.8 m UK, 30m + USA, 40m EU.
In EU employ circa 156 million people.



**Small and Medium Enterprises at Risk in the United Kingdom
Digital Research Conference Huelva Oct 2004**

European Union Definition of SME:

Small Company if any two of following apply:

Less than 50 employees.

Balance sheet less than £2.8 million.

Turnover less than £5.6 million.



**Small and Medium Enterprises at Risk in the United Kingdom
Digital Research Conference Huelva Oct 2004**

European Union Definition of SME:

Medium Company if any two apply:

Less than 250 employees.

Balance sheet less than £11.2 million.

Turnover less than £23.6 million.



**Small and Medium Enterprises at Risk in the United Kingdom
Digital Research Conference Huelva Oct 2004**

DTI funded research questionnaire:-

- ❖ Control group of 20 SMEs. 4 x A4 Pages.
- ❖ Total of 161 questions.
- ❖ Posted to 2000 random SMEs late 2002.
- ❖ Truly Random = Inference. Census/Sample
- ❖ Letter from DTI/Salford explaining research.
- ❖ Pre-paid return envelope.
- ❖ Response from 107 companies, 5.4%.



Some Pre-Research Hypotheses:

- 1. Most SMEs receive limited systems auditing attention with auditors paying inadequate attention to aspects of Information Technology and Security.**
- 2. Unreported fraud may be widespread within SMEs and may be growing.**
- 3. Directors are keenly interested in reducing fraud if they can.**
- 4. SMEs might favour an alternative, low cost, automated auditing technology such as a Continuous Auditing software package if such a technology was available to them.**



1. Most SMEs receive limited systems auditing attention with auditors paying inadequate attention to aspects of Information Technology and Security.

- ❖ In 2002 80% SMEs not mandated to annual audit.**
- ❖ Using revised £5.6 m threshold in 2004 it's 88%.**
- ❖ 8% Would not undergo voluntary audit.**
- ❖ 24% Would take a voluntary audit.**
- ❖ 68% Undecided**



1. Most SMEs receive limited systems auditing attention with auditors paying inadequate attention to aspects of Information Technology and Security.

- ❖ **64% Auditors do not audit company systems.**
- ❖ **78% Auditors do not bring in specialist technical expertise to audit the systems.**
- ❖ **60% of auditors have no specialist knowledge of the application systems.**
- ❖ **75% do not report on any aspect of Information Technology**
- ❖ **62% Auditors do not use specialised auditing software.**
- ❖ **Only 6% auditors attempt penetration testing.**

✓ Hypothesis 1.



Corollary to Hypothesis 1 analysing all respondents defrauded in last 5 years:

40% did not have an annual audit.

Where audited:

54% did not have any systems auditing.

61% auditors had no specialist IT knowledge.

55% auditors did not report on any aspect IT.



2. Unreported fraud may be widespread within SMEs and may be growing.

Very difficult to measure. How does one measure intangible?

45% respondents had been defrauded last 5 years and they all Completed questionnaire.

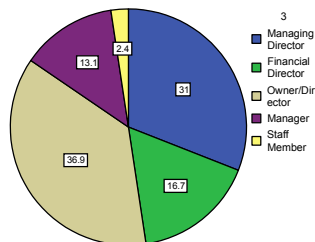
However...only 31% of that 45% gave details of frauds.

Reasons for non reporting?

✓ Hypothesis 2



3. Directors are keenly interested in reducing fraud if they can.



❖ Total of 84% Directors completed arduous questionnaire.

❖ Letter stated 'best practice'

✓ Hypothesis 3.



4. SMEs might favour an alternative, low cost, automated auditing technology such as a Continuous Auditing software package if such a technology was available to them.

55% of respondents thought that there should be a simple methodology for systems auditing

53% favoured some form of automatic auditing.

Rises to 60% in defrauded companies.

Where fraud values given rises to 88%.

15.8% would pay up to £2,000 for package.

14.3% would pay up to £2,500/year to maintain system.

✓ **Hypothesis 4.**



Some examples, if research findings are accepted as inferential, extrapolated across UK SME base (3.8 million companies).

100% of Group companies having their computer networks accessed remotely, had no idea what functions were being carried out by Group. This equates to some 328,000 UK companies.

Around 3.5 million SMEs use anti-virus software; 3.34 million have Internet access and 2.93 million use e-mail. Some 3.68 million companies send data over the Internet without any protection such as encryption.



**Small and Medium Enterprises at Risk in the United Kingdom
Digital Research Conference Huelva Oct 2004**

Some 2.69 million companies are at risk from virus attacks by not updating their virus definition software on a daily basis. Over 543,000 companies *NEVER* update their virus definition software and around 445,000 only update once a year.

Companies where all employees know the system administrator password number some 1.71 million.

Some 1.44 million UK companies, do not screen their new or temporary staff.

1.78 million UK companies have suffered instances of fraud in the last five years! Of this number, 1.44 million were defrauded by employees.



**Small and Medium Enterprises at Risk in the United Kingdom
Digital Research Conference Huelva Oct 2004**

2.28 million companies have auditors who have no specialist knowledge of the company software systems and a staggering 2.85 million companies have auditors who do not report on any aspect of Information Technology.

2.43 million companies have auditors who do not audit the company software systems and 3 million companies have auditors who do not bring in specialist technical expertise to audit systems.

Some 2.1 million companies favour some form of automatic, on-line auditing capability.

In 1.68 million companies staff members know each other's passwords.



Small and Medium Enterprises at Risk in the United Kingdom
Digital Research Conference Huelva Oct 2004

Future

The future is like heaven, everyone exalts it but no one wants to go there right now. Baldin 1961.

Future # 1. Eighth World Continuous Auditing and Reporting Symposium

Web Address: <http://raw.rutgers.edu/8wcas>

Rutgers Business School, 190 University Avenue

Engelhard Hall – Bove Auditorium – 1st floor, Newark, NJ 07102

November 5, 2004 (8:30AM-5:00PM)

November 6, 2004 (8:30AM –4:030PM)

Future # 2. Ninth World Continuous Auditing and Reporting Symposium

The University of Malta. May 20th & 21st 2005.

E-Mail: roberton@maltanet.net