COMPUTER ASSISTED AUDIT TECHNIQUES (CAAT)

Point to note: computer information system is NOT equal to computer assisted audit techniques

CAAT’s are computer programs and data that the auditor uses as part of the audit procedures to process data of audit significance contained in a client computer information system (CIS)

Types of CAAT

1. Audit software: comprises computer programs used for audit purposes to process data audit significance from the client accounting system.

It is used by the auditor to examine the entity computer files and may be used during both test of control and substantive testing of transactions and balances as the program can scrutinize large volume of data and extract information, leaving skilled manual resources to concentrate upon the investigation of the results.

1.1 Types of audit programs are:
- Generalized packaged programs: however they need to be tailored to each specific case by defining the format of the files to be interrogated by specifying the parameters required and the form of that output.
- Purpose written programs: these are specially written programs where it is not possible to adapt a package program because of the type of machine, processing or file organization used.
- Utility programs used by the client: used by the entity to perform data processing functions such as sorting and printing of files e.g. excel.

1.2 The uses of audit software are:
- Calculation checks: e.g. program gives the total amount of individual entries in purchases day book in a particular period. Auditor then agree this total amount to the amount posted in purchases ledger control a/c.
- Detecting system violation rule: e.g. program checks that no customer has balance above specified credit limit.
- Detecting unreasonable items: programs checks that no customer has discount of 50% or sales ledger balance (i.e. debtors balance) is more than the amount of sales made to that customer.
- New calculation and analysis: e.g. statistical analysis of inventory movements to identify slow moving items.
- Selecting items for audit testing: e.g. obtaining a stratified sample of sales ledger balances to be used as a basis for a circularization of debtors.
• **Completeness checks:** e.g. checking continuity of sales invoices to ensure that they are all accounted for.

### 1.3 difficulties in using audit software

- **Set up cost is high:** set up cost is high as initially client procedures need to be investigated and understood thoroughly prior to the audit software can be used to access and interrogate those files.
- **Changes are costly:** if there are changes to client system, this will require costly alterations to the audit softwares.
- **Not suitable for small installations:** there may be no suitable audit software for use on mini or micro computer installations. Client accounting system documentation may be incomplete so that it is difficult to identify all procedures. The cost of writing specific audit software to test those systems may be difficult to justify against the possible benefit on the audit or possibility of recovering the cost of the software.
- **Over elaboration:** tendency to produce over elaborate enquiry programs which are expensive to develop, time consuming in processing and reviewing. Hence audit cost goes up and its difficult to justify its use.
- **Quantities of output:** it may arise that output is too large either due to poor design of the software or using inappropriate parameters on a test. Hence overdetailed output hardly serve any purpose apart from wasting auditor time in trying to figure out what is important and what is not.
- **Live database:** the audit program need to be run on the live database (i.e. actual files) of the client because the auditor is testing the actual system of the client. Some clients may be unwilling to let auditors run the audit program on the live/actual files as this need to be fully tested that it won’t corrupt the actual database files. Alternative solution is to run the audit software on backup copies of the live database. But the problem is of ensuring that the copied files are true replicate of the live files.

### 2. Test data

Audit test data is data submitted by the auditor for processing by the clients computer based accounting system in order to test the operation of the enterprise’s computer programs.

It may be processed during a normal production run (running test data live) or during a special run at a point in time outside the normal cycle (running the test data dead).

Test data could be held in the form of a batch of documents that is captured into the system to test both the manual and computer controls (applications and programmed controls).
2.2 There are 3 main approaches to the use of test data:

- **Using live data**: process client real live data and then check that the controls and processing are OK.
- **Dummy data in a normal production run**: however output of dummy data processing should not be released in the live database general ledger.
- **Dummy data in a special run**: dummy data is run back up/image copy of database.

2.3 Difficulties in using audit test data:

- **Cost**: for constructing test data, predetermine the results manually and ascertaining which controls to be tested.
- **Confined to test of control only**.
- **Live testing is dangerous** as it may affect live database is used for special run.
- **No visible evidence of audit work performed**: need to record in the working papers of work done.

Advantages of CAAT to the auditor

- **Test programmed controls**: in a computer based accounting system, there are large volume of transactions which the auditor will have to audit. The auditor will have to check if the programmed controls are functioning correctly. The only effective way of testing programmed controls is through CAAT.
- **Test on large volume of data**: CAAT enable auditors to test large amount of data quickly and accurately and therefore increase the confidence they have in their opinion.
- **Test on source location of data**: CAAT enables auditors to test the accounting systems and its records (e.g. disk files) at its source location rather than testing the printouts of what they believe to be a copy of those records.
- **Cost effective**: once set up CAAT are likely to be cost effective way of obtaining audit evidence year after year provided that the client does not change the accounting system regularly.
- **Comparison**: allows results from using CAAT to be compared to traditional testing. Where the two results agree this increase the overall audit confidence.
6 (a) Computer-Assisted Audit Techniques (CAATs) are used to assist an auditor in the collection of audit evidence from computerized systems.

**Required:**

**List and briefly explain four advantages of CAATs. (4 marks)**

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(b) Porthos, a limited liability company, is a reseller of sports equipment, specializing in racquet sports such as tennis, squash, and badminton. The company purchases equipment from a variety of different suppliers and then resells this using the Internet as the only selling media. The company has over 150 different types of racquets available in inventory, each identified via a unique product code.

Customers place their orders directly on the Internet site. Most orders are for one or two racquets only. The ordering/sales software automatically verifies the order details, customer address, and credit card information prior to orders being verified and goods being despatched. The integrity of the ordering system is checked regularly by ArcherWeb, an independent Internet service company.

You are the audit manager working for the external auditors of Porthos, and you have just started planning the audit of the sales system of the company. You have decided to use test data to check the input of details into the sales system. This will involve entering dummy orders into the Porthos system from an online terminal.

**Required:**

**List the test data you will use in your audit of the financial statements of Porthos to confirm the completeness and accuracy of input into the sales system, clearly explaining the reason for each item of data. (6 marks)**
Test Data
- Input of an order for a negative number of tennis racquets.

Reason for test
- Ensures that only positive quantities are accepted – although the company cannot despatch negative quantities anyway

Test Data
- Input of an order for ten tennis racquets

Reason for test
- There are reasonableness checks in the system to identify possible input errors. A warning message should appear on screen asking the customer to confirm any order for more than say two racquets.

Test Data
- Input of an order without payment.

Reason for test
- Ensures that orders are paid for prior to despatch – this also limits the number of bad debts.

Test Data
- Input of invalid inventory code

Reason for test
- Ensures that the computer detects the invalid code and presents an error message rather than taking the nearest code and accepting that.

Test Data
- Input of invalid customer credit card details

Reason for test
- Online checking of credit card details to the credit card company ensures that goods cannot be despatched without payment. This will also limit the number of bad debts.

Test Data
- Input of invalid address

Reason for test
- Ensures that the address and valid zip code is valid, possibly by accessing a database of valid codes. If the code is not valid an error message should be displayed. This ensures that goods are only despatched to valid addresses.
(c) You are also considering using audit software as part of your substantive testing of the data files in the sales and inventory systems of Porthos.

(i) List and briefly explain some of the difficulties of using audit software; (4 marks)

- **Set up cost is high:** set up cost is high as initially client procedures need to be investigated and understood thoroughly prior to the audit software can be used to access and interrogate those files.
- **Changes are costly:** if there are changes to client system, this will require costly alterations to the audit softwares.
- **Not suitable for small installations:** there may be no suitable audit software for use on mini or micro computer installations. Client accounting system documentation may be incomplete so that it is difficult to identify all procedures. The cost of writing specific audit software to test those systems may be difficult to justify against the possible benefit on the audit or possibility of recovering the cost of the software.
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(ii) List the audit tests that you can program into your audit software for the sales and inventory system in Porthos, explaining the reason for each test. (6 marks)

### Audit tests

**Audit software**

- Calculation check of the sales day book.
Reason for test

- Ensures that the computerised sales day book has been cast correctly and helps to verify the sales balance in the financial statements.

Audit software

- Analysis of the ageing of items in the inventory ledger.

Reason for test

- Detect old items that need to be written down to net realisable value rather than cost.

Audit software

- Selecting a sample of inventory at year end as part of the physical verification.

Reason for test

- Removes bias from sample selection+enable user to select items rapidly compared to manual selection.

Audit software

- Selecting a sample of sales invoices for checking to dispatch documentation.

Reason for test

- Removes bias from sample selection+enable user to select items rapidly compared to manual selection.

Audit software

- Checking completeness of sales invoice numbers.

Reason for test

- Ensures that all sales invoices are recorded in the sales day book.

Audit software

- Checking that all sales invoices have been paid for.

Reason for test

- All sales are paid on ordering, unpaid sales would be a violation of system rules and would need to be investigated by the auditor.

Audit software

- List large credit notes for investigation by the auditor.

Reason for test

- Need to find reason for which there has been returns. This may also be a check on ordering system. As returns may be caused by errors in ordering with the result that customers have to return goods later.