

The use of IDEA at the Swedish National Audit Office

Many SAls use IDEA - a popular file interrogation software package. Nándor Hargitai and Ann Härelind detail its use in the Swedish Audit Office.



The Swedish National Audit Office (RRV) is the central state agency for accounting and auditing in the Swedish government administration. The RRV reports to the government and/or the agencies concerned. Its primary task is to promote effectiveness and efficiency in government administration.

IDEA at the Swedish National Audit Office

The Financial Audit Department at RRV has used IDEA since 1988. We have acquired a national licence for IDEA. This means that the number of users can be unlimited. All those wishing to have access to the application can have it installed in their PC. The version we use today is IDEA 4.1.

IDEA is also used on portable PCs for file analysis at the offices of clients. The client's bookkeeping records are loaded from the auditor's own PC, or from a server on our network, onto the portable PC. The advantage of this facility is that, when the auditor is visiting the client, he can quickly obtain information about different situations of which he was unaware when planning the audit. The audit might show, for example, that a payment has been made to a person or company that was not entitled to the payment. A check can then easily be made in IDEA if any other payments have been made incorrectly to the recipient in question.

Many of our auditors are also engaged in programmes of international cooperation and training in Central Europe and Africa. In these programmes they have often had the opportunity to show how we use IDEA in the auditing process.

The IT environment

All auditors have their own PC which is linked to a local area network in a client/server environment. All have the capability to work under Windows. At present we only have access to the DOS version of IDEA. However this can be installed and run under Windows, and the mouse can be used instead of the function keys.

Among the most important general applications software we use at present are Excel 4.0 and WordPerfect 5.1 for Windows. Even though IDEA is a popular and much used auditing tool, there is other software which can be used for file analysis, for example ACL and dBase.

Every year some 400 ministries, agencies and other organizations are audited. The majority of these organizations, some 80 per cent, are linked to a central accounting system which is run on an IBM mainframe computer. We have access to the accounting system and its databases via our local area network. Two of the system's databases are used - the transactions register and the payments register.

With the aid of a search routine specially developed for auditing purposes, the relevant databases can be read. The routine is available on-line. The result of every search is a file in ASCII format. After the file has been produced, the auditor can check the result partly by looking at the log file and partly by looking at the data file.

The next step is for the auditor to transfer the raw data to his own PC or to a server on the network. This step is performed by a program which is resident on a network server. The transfer process can take from

several minutes to several hours depending on the size of the file which can vary between a few hundred Kb to 30-40 Mb. Each record is 315 bytes and consists of 38 fields.

IDEA in auditing work

IDEA is used, for example, for substantive auditing and for preparations prior to a visit to a client. To be able to do this work the auditor must have access to registers which are stored in the central accounting system. Data from these registers are obtained by using the methods described above.

We need to convert our ASCII files, which have variable record length, to a file with fixed record length. For this purpose we use IDEA's own CHKRECL. To facilitate this frequently recurring step we have made a BAT file which executes CHKRECL. We only need to give the names of the input and output files. Predefined records which follow the record specification of the original files are used. Each auditor can also define his own records.

Before the analysis of the registers begins, a directory is created in IDEA for the subject of the audit. For this purpose so-called Agency (Client) Directories are used. In this way the auditor orders the files he has created in well structured directories. IDEA can then be run directly against the unit in the organization which the auditor wishes to examine.

IDEA is resident on the user's PC. However this does not prevent the auditor working with a file which is on a network server since the client/server facilities can be used, ie we can link a file into the program even if it is not on the local area network.

After the conversion of the files has been completed and the directory has been created and selected, the link to IDEA can be made.

Some of the most important fields we work with are: the five different account fields - accounting date, voucher number, amount, transaction code, and the recipient of the payment and his postal giro account number.

Preparatory auditing

Creating a general ledger

The first step in the processing work is to check that the data which has been transferred is correct. This is done by creating a general ledger with the aid of the function Key Field Summarization. The result is a file which shows the total amount

and the number of transactions for each index field.

If, for example, we want a total for every account, we go into the general ledger account and add the amount field. The results file will then consist of a total (balance) for each account and information on the number of transactions in each account. The file which is created corresponds to the agency's general ledger and can therefore be compared with this ledger.

Creating totals for departments, sections, etc

Materiality and risk are key concepts in auditing. In order to take materiality into account in the planning work, the material is processed with the aid of a totalling function. We total files by departments, sections, functions etc. The files are indexed at the organisational level, for example files connected to a specific section in the organization, and are then totalled by amount.

The result obtained is a file in which the number of transactions and the total balance obtained relates to a specific organization or part of an organization. In this way, in combination with the risk analysis the auditor has prepared, those parts of the organization which handle large numbers of transactions or large amounts are found. The audit can then concentrate on relevant areas from the point of view of materiality and risk.

Substantive auditing

Selection

At this point we know the areas which are relevant from the point of view of materiality and risk and should therefore be audited. To analyse the material further, interesting areas are selected from the original files with the aid of Extraction Functions. These areas can be whole departments, sections, functions, sectors etc. They can also be certain balance sheet items or profit and loss account items (types of revenues or costs).

If an audit needs to be undertaken of a certain type of action, a selection of transactions of that type is made. It can also be of interest to audit a certain type of transaction, for example payments received, payments made, or transfers.

Selection of amounts

The selection of material for an audit must be realistic. If the data selected is too extensive, further limitations must be

applied, for example transactions which exceed a certain amount.

The monetary limit chosen depends on the size of the material, the client's turnover, the period of time the auditor has at his disposal and so on. Sometimes we proceed by trial and error until a suitable limit has been reached.

It is important that the selection made is representative of the material as a whole. In order to find out the monetary limit to choose in order to cover a certain proportion of the material, we stratify on the amount field, by using the function "Stratify".

Virtual fields

To check deducted value added tax, for example, we use virtual fields. First all transactions which contain value added tax are selected, and then all transactions on a cost basis. The files are matched and a calculation is made of value added tax deducted in relation to the total invoiced amount. The result is a virtual field which contains the percentage deducted.

IDEA and reporting to Excel

One great advantage with IDEA is that it is easy to export to other tools. One tool which is often used is Excel. IDEA together with Excel is used, for example, in analytical audit work.

The auditor may wish, for example, to compare different periods (months, years)

of a single client or to compare similar clients or organizations in the same group. Then the processing, selecting, indexing, sorting etc is done in IDEA. When the basic material has been prepared, the files are exported to Excel. In Excel, for example, key ratios can be calculated. Furthermore different values, periods, or agencies in the audit can be compared with each other.

Another example is that output files are exported from IDEA to Excel in order to produce more attractive audit programs. Predefined macros in Excel add a field for comments to the IDEA data. Columns for audit stages, reference numbers for annual files etc can also be added.

Final remarks

The purpose of IDEA and other similar EDP based auditing tools is that they should improve our audit work in one respect or another, either through better quality or improved efficiency. In the RRV, IDEA and other audit tools are used for both these purposes.

A concrete example of savings which can be gained by efficiency in the substantive auditing work is that by collecting data from the payments register the auditor can quickly find out whether taxes etc are paid at certain points in time. Using this method the auditor is spared having to examine invoices, which can be very time consuming.



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Nándor Hargitai has been working at the Swedish National Audit Bureau since 1990. His main responsibilities involve giving IT and EDP support to the approximately 140 auditors and other staff members of the department. He is also involved with developing auditing techniques for both mainframe and PC environments.



Ann Härelind

Ann Härelind has worked as an auditor at the Swedish National Audit Bureau since 1988. She has used IDEA extensively in her work. She has also been involved in teaching the use of IDEA both at the RRV, and abroad as part of the Bureau's international training programme.