

Use of CAAT Tools—Idea 2004: Some Advance Features

IDEA—Interactive **D**ata **E**xtraction and **A**nalysis is a data analysis software developed by a team of the Canadian Institute of Chartered Accountants and Auditors General of Canada in the mid eighties.

IDEA has seen several versions since inception – with the DOS version making way for the GUI based Windows technology. The product was also transferred to professionals from “Caseware” whose single focus was to provide cutting edge business intelligence software for accountants and auditors. Using core windows technology, the DOS version was changed into the user friendly Windows platform. IDEA pioneered the use of the intuitive graphical interfaces, wizards, HTML Help and guides to execute tasks in audit tools.

Edge for auditors

Automate Audit Routines

IDEAScript, a Visual BASIC compatible programming language, enriched with IDEA’s functionality, allows the development of almost any type of application.

IDEAScript can be generated by the Record mode or by converting the history (log) into an IDEAScript. You can re-run all the tasks conducted on a file by converting the history into an IDEAScript, and you can run it against another file. You can also customize it in order to interact with the user. Since IDEAScript is compatible with Visual Basic, users can incorporate all of the objects from Visual Basic into their scripts. An example usable in any industry is given in the Exhibit –

IDEAScripts can be compiled and run from Windows Explorer, or put into your Windows Scheduling tasks to run a script on a specific time or run it repetitively at regular intervals.

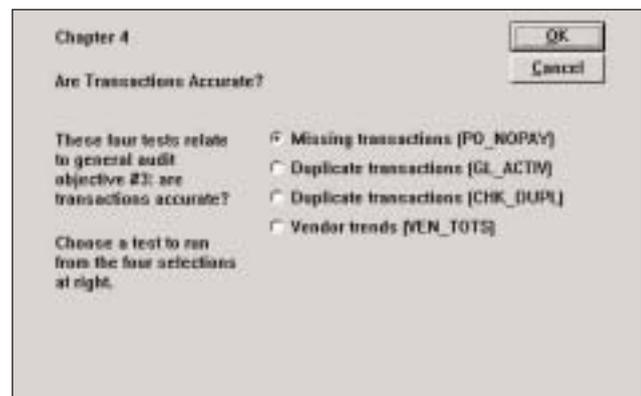
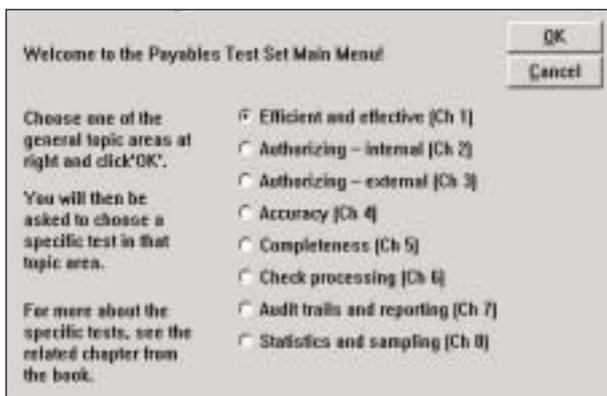
IDEAScript has significantly enhanced features with over 400 methods and tools including a language browser, debug mode and dialog editor, as well as comprehensive context sensitive help.

Number of auditors in Insurance, Banking, Manufacturing and Retail Sector with audit locations spread across the country have used automated audit routines to not only assure standard audit performance but also reduce the travel cost of auditors and improve quality of audit time at locations.

Implement Benford’s Law

Benford’s Law is a method of analysis within “Digital Analysis”. It is a

Exhibit : Screenshots from automated routines



Source: Accounts Payable Test Set for IDEA – EKAROS ANALYTICAL Inc.

procedure, which analyses digits in numerical data. This procedure helps to identify ‘irregularities’ in a data range. In this context, irregularities are defined as numbers, which, for example, may have been created through the (systematic) manipulation of data. An ‘irregularity’ is measured based on the scale of digit distribution in a ‘natural’ population corresponding to the empirical legalities of Benford’s Law. The first digit frequency is given in the table:

Exhibit: 1st digit frequency

First Digit	Frequency %
1	30.1
2	17.6
3	12.5
4	9.7
5	7.9
6	6.7
7	5.8
8	5.1
9	4.6

IDEA allows the user to analyze simultaneously the first, two first, three first, and the second digits. Items that are beyond the bounds established need to be analysed for possible irregularities. An illustrative exhibit as run in a retail supermarket on collections on different cash tills is shown in the graph.

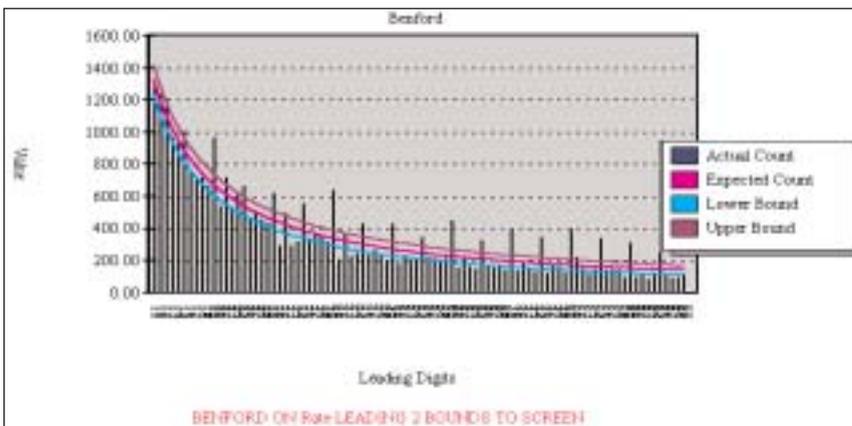


Exhibit : Benford’s Law Test for first two digits – result screenshot

Wide Range of data access

IDEA can natively read time fields from Excel, Access, ODBC, and all other file formats.

IDEA provides Import components in order to import Small and Mid-Size Accounting packages like Simply Accounting, ACC-PAC, Smart Stream, Great Plains, Sage, QuickBooks, and many more. New import components are constantly under development.

IDEA allows the user to import many tables or sheets at a time for Excel files. IDEA will analyze all the fields and will display any inconsistencies in column formatting.

The default length for character fields in Access, Excel and other software is 256 characters, which can create very large databases. IDEA’s intelligent Import wizard will read all records and will optimize the size of character fields by calculating the longest value in each character field.

IDEA reads ASCII Delimited files directly.

Report reader

IDEA’s new Report Reader allows you to import “reports” easily. Reports basically do not have any structural intelligence of its own. Using the Report Reader’s functionality, the report is converted into a database for further analysis.

This new IDEA component offers powerful tools for importing data from complex systems. Rather than attempt to describe the raw data, the auditor creates a report using system tools, saves the report to a file, then uses Report Reader to describe and capture the data in IDEA. You can view the entire report on screen, preview the IDEA database before importing and use simple “point and choose” tools to identify the data you need.

The user has the flexibility to select the data for import. Using the floating fields (fields that are not aligned) feature, some of the most complex reports can also be imported easily. The user can then preview the final result before importing the file. A large number of IDEA users undertake audit in SAP or any other ERP using this feature.

In case table level data is desired, ODBC connectivity link is used for data import.

Greater flexibility in data manipulation – Visual Connector

The Visual Connector allows you to generate a single database from several other databases that share common or “key” fields. To create a visual connection between databases, you select a primary database, and then connect databases that contain matching records. The relationship that the visual connector creates between the databases is one to many, meaning that the primary database can have several matches in connected databases. All records in the connected databases that match records in the primary database as well as all other records in the primary database can be included in the output database. The number of related files in IDEA is unlimited. Any type of fields can be used to connect files. Identifying the data relations in a graphical, drop-and-drop window was introduced in

IDEA 2002 for the first time.

In case of an ERP environment, data is stored in multiple tables. Using Visual Connect, we can download multiple tables and then selecting the desired fields, a single database can be quickly created for further analysis.

Greater analysis capabilities – Search and Action Fields

One can search for text or numeric values across selected fields in multiple databases, using standard search functionality like case sensitivity and whole word plus advanced techniques such as using Boolean expressions, wildcards, multiple characters and proximity. Search is a powerful tool for fraud detection.

Action field type allows you to set up relationships across multiple files; for example, create an action field on “Customer Number” in a customer database to link to related invoices. Action fields can also be used to run IDEAScripts or other applications or go to a URL. It is used in Quick Field Summary, Key Field Summary, File Compare, Bad Data File, Search Results to link

back to source database.

In case of an FMCG manufacturing unit - as per the policy when all payments have to electronically authorized and the need is to identify unauthorized transactions or transactions that exceed the limit of approval, there is also a need for identifying that no suppliers are related to any company employees. Using the Advanced Search, it is possible to extract all names in the Employees database containing “Mehta” or “Waghmare”. It is identified that there is at least one employee (Harinder Mehta) who has received an unauthorized payment.

We can now use the Action Field option to create a link between the Unauthorized Payments file and the Suppliers file and identify the address of each of the suppliers in the unauthorized payments file. Now that we have the address of the suppliers who received unauthorized payments, we can extract all employees that might have similar address (use just one word in the address). Curiously, Jayant G., one employee has the same address as one of the suppliers. Worst, an

unauthorized payment was made to G Stars Pvt Ltd.

Improve sampling capabilities

Monetary Unit Sampling: IDEA offers a state-of-the-art Monetary Unit Sampling (MUS) Module, developed by statistical sampling experts. IDEA has features like High Value handling, combining samples, high error rate and low error rate, choice of Positive, Negative or Absolute values, Suggested conclusion, Aggregate amounts (batches) and much more. IDEA’s MUS Evaluation allows the user to enter the audited value in the database. The number of values that can be entered is also unlimited.

Classical Variable Sampling:

Classical Variables Sampling techniques are appropriate when several errors are expected in the sample database. It can also be used for accounting estimates such as obsolete inventory.

Conclusion

IDEA’s power and ease of use can assist your firm in strengthening you audit delivery and quality of

assurance services within cost and time limitations available. The tests described are only a few that can be used to help identify where fraud might be occurring, whether through misappropriation of assets or in the financial statements. Ultimately, only your imagination will limit you in what you can do with IDEA data analysis software.

(Contributed by Deepjee Singhal and Manish Pipalia) ■

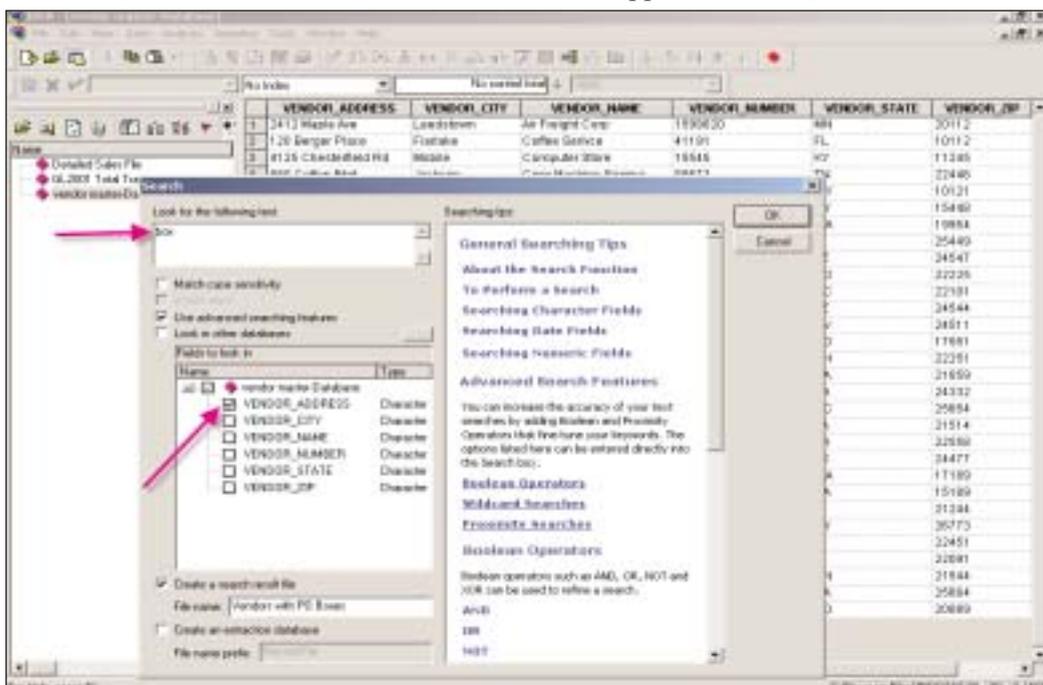


Exhibit : Searching for matching vendors