Boffin/Open

Frequently Asked Questions (FAQs)

Introduction Boffin/Open is a large and expanding computer application. The system covers all aspects of the Freight Industry and includes ALL of the infrastructure software that would be needed for any H24/7 continuous running application. Everyone who comes into contact has some questions that they would wish to have answered, even though they have not even had the application explained to them yet. This datasheet contains a very brief summary of system aspects that can be quickly answered in a manner that will provide a good general overview. The reader should be aware that in this datasheet, if Bishopsgate say that something is included within Boffin/Open or it works within the system; then it DOES. If any qualification is required, it will be included here.

The approach we have taken here is that one should assume that the reader is not a Boffin/Open user (yet), but is contemplating taking the system for his/her business, so there is a thread to the questions, starting with obtaining the system, asking what it can do and then how does it work.

When was Boffin software started There have been three versions of the Boffin product. The first version was started in 1975 using the Wang BASIC-2 language. The second version was started in late 1978 using Wang VS ANSI COBOL programming language. The third version – Boffin/Open – was started in June 1988 and is written in Oracle Forms and Reports. Fulltime employees of the company wrote all of these three versions of the Boffin product, providing a clear Copyright trail.

What is Boffin/Open Boffin/Open is a computer system aimed at providing all sorts of freight companies with the application software that they will need to do their work. The types of companies that will wish to install the software system would be Freight-Forwarders, Transport companies, Customs Brokers, Ports, Customs & Excise. The application is the third rewrite of the product, which was initially written in 1975; rewritten in 1979 and then again in 1988. Each rewrite, has involved a complete rewrite and so the opportunity was taken to make sure all of the long-term wishlist items were included. There is a separate data-sheet dedicated to '**What is Boffin/Open'** which you can see by clicking **here** and another '**What is Boffin2/Open'**, which you can see by clicking **here**.

What is Boffin2/Open – **The Next Generation** – In early 2005, Laptop manufacturers started supplying Laptop screens that could run at more improved screen resolutions. Bishopsgate purchased one of the SONY Laptops that had this ability and set it up to run at 1600x1200 Pixels resolution. The outcome of testing on this new capability caused Bishopsgate to realize that a few things that they had always wished to be able to do were now possible. A couple of the important things that have become possible are (1) Cargo booking a whole shipment on a single screen image instead of having to complete six or seven screen image designs and (2) the ability to have a main Window running Boffin/Open and then have smaller sub-windows appear automatically with information that is useful for the human operator at that stage of her work. Boffin2/Open includes, by definition, all of Boffin/Open. Where Boffin/Open senses that the Client-PC is running at 1600x1200 pixel resolution, and a Boffin2/Open module is available then the Boffin2/Open module is called in place of the traditional Boffin/Open equivalent.

Who owns the Boffin/Open software All of the Boffin/Open and Boffin2/Open application software is owned by Derek May, the owner of Bishopsgate Computer Services Ltd and Bishopstrade Limited. Derek May is the 100% beneficial owner of these two United Kingdom companies. So as to be able to trade locally within South Africa, a local South African company named Bishopsgate Computers CC has been setup in September 2005; Derek also owns this company.

Are Boffin/Open & Boffin2/Open protected by copyright Yes, United Kingdom and International Copyright, under the Berne Convention, covers all of the application software that comprises the two applications. As of writing this datasheet, there is a clear copyright audit trail on all of the Boffin/Open and Boffin2/Open software including all Variations and Derivatives, and all sundry items such as but not limited to documentation, screen designs, formulae and processes. The Copyright holder reserves all Intellectual Property Rights.

What computer language is used All of the Boffin/Open application software is written in Oracle Forms and Reports 6i, for Client/Server architecture. The software can be supplied in Oracle Forms and Reports 9i, where required; for web-based installations. There is a small amount of J2EE JAVA code that has been used to program some of the 'trickier' corners. Although Bishopsgate have not yet tried out the following idea, it is possible to convert all of the Boffin/Open Forms and Reports to J2EE JAVA; which would give incredible runtime processing speed (over the Internet) but would be a nightmare to maintain (unless the Forms and Reports were to be considered the Master Copy in which case the J2EE JAVA version could be re-produced from time-to-time; allowing software support and maintenance to be applied to the higher-level software language.

Is there any 3GL software in the application No, none. One of the first 'rules' for the rewriting of the Boffin/VS application into Boffin/Open was that there would be no 3GL; which would jeopardize the 'machine independence' attribute. The recent way to overcome software components that are difficult or impossible in Oracle Forms, is to use J2EE JAVA catalogued Procedures, which are stored in the Oracle database and made available to all users.

How many programs in Boffin/Open There are about 2,000 Oracle Forms, about 800 Oracle Reports and 30 J2EE JAVA programs in the current version of Boffin/Open. Click **here** to view an Excel spreadsheet in which all of the Boffin/Open programs and reports are shown in the form of a catalogue.

Is the Boffin/Open Source code available Yes, Bishopsgate are prepared to enter into Source Code Licenses with end-users; although this would be a relatively expensive license. Bishopsgate did once issue a source license to Boffin/VS Norwegian Inland System to a Norwegian company (Blomquist Transport A/S bought-out by ASG Norway, now part of Deutsche Post) who wished to continue the development of the application, but did not wish to share that development with Bishopsgate. Click **here** to view a draft of the Boffin/Open Source Code License.

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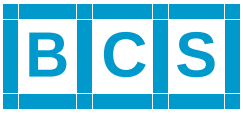

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Will Boffin/Open run on my existing computer The application has been developed to be machine and operating system independent. Bishopsgate supply all new sales, where hardware is to be obtained, for use with the Intel 32 bit Chipset, but the comparable AMD 32-bit chipset would be equally acceptable. The Oracle database software is 32-bit based but a 64-bit version is also available. Boffin/Open requires an Application Server and a number of Client-PCs that can be setup as either/or Thin-Client-PCs or Rich-Client-PCs. Such Client-PCs should be Intel P4 based and have about 1 Gigabyte of free disk space; they will probably be running one of the Microsoft Windows operating system (Windows 95/98/NT/Me/XP/Vista. Boffin/Open runs on Client-PCs setup with 800x600 pixel screen resolution; Boffin2/Open runs on the same Client-PCs but running the screen at 1600x1200 Pixel resolution. A desktop screen capable of running 1600x1200 pixel resolution costs about UK£200 and the Graphics controller about UK£30. Client-PCs built on Intel P4 will all support the 1600x1200 resolution without a new graphics controller. The future is the 1600x1200 resolution screens. When asked such a question in a meeting, Bishopsgate's response is that Boffin/Open will probably run on existing equipment, but the user might need to obtain additional disk capacity and perhaps some Random Access Memory. In terms of printers, there is no practical limit to the number that can be attached to a single Boffin/Open installation. The printers must be Hewlett Packard PCL5e (or later) compliant and have at least two hoppers; one for Company Headed A4 stationery and one for plain A4 80 gms/m2 'photocopy' paper. Printers should all be connected to the Local Area network, from where all Client-PCs will be able to use them. If such a PCL5e compliant printer is connected to the LPT1 port of a Client-PC, EITHER all OTHER Client-PCs will be able to access it or ONLY the one into which it is connected; this is caused by a 'clash' in the addressing of the printer as being LPT1 and the way the printer is addressed as a network component.

In the beginning In the beginning there was no software and no Boffin system. Then there was some quite good proprietary software and no documentation. Then there was a lot more hardware and operating system independent or open software written in a 4GL and running on a powerful Oracle database. Then there was a steady stream of documentation that 'no one' reads, which costs a fortune to write and can only really be written by the most qualified members of the design team.

Competitive advantage, not an overhead All export shippers have to have at least a sales ledger account; a place where important information is stored in a formal manner to be available when required; get the coding right first time and then use it to death. If there is important information, such as but not limited to the customer's Value Added Tax Registration Number that is not known, 'Make the phone call' and get it then it will be used throughout the system life. All Importers have to have at least a sales ledger account; same arguments as for the export shippers. All extensions of cargo booking data up to and including the calculation of sales charges are or can be automatic; all currency conversions are automatic; less mistakes means more efficiency and less 'work making work'. All cargo movements require that cargo shipments must be booked into the system; the system exerts a lot of control, but in a manner where the human operator is still mostly in control. The system ensures that cargo bookings are fully processed in a given sensible sequence; all exports are manifested, all bookings are invoiced etc. Boffin/Open should not be considered a cost, it will actually earn moeny for the user's company by correctly assessing sals charges, correctly effecting exchange conversions, making sure all bookings are sales invoiced. One customer in Johannesburg ships overnight to Swaziland for 10:00 latest deliveries. Five nights a week, perhaps 350 bookings are processed; all surface export bookings that leave each day - the sales invoices are all done before the truck leaves (so that they can be used as Proofs-of-Delivery (PODs)) and are automatically posted to the ledgers. Thuis user has an accounts department of two (1) One debt collector who is incorrectly called a Credit Controller and (2) one lady straight from school who handles all of the cash and queries. Night after night this user 'leans on Boffin/Open' and depends on a tight 'production line like business system'. The Boffin/Open system is not an overhead it is a Profit Centre!

The base application - Boffin/Open This is the third iteration of the Boffin software. The application provides the Freight Forwarder and/or Transport Company (and others) with fully integrated systems covering all aspects of operations, accounting and management accounting. It is a valuable attribute of the application that ensures that any action in one part of the system which should cause one or more actions in other parts of the system are effected automatically, without human intervention and without the possible interference of any human operator. As an example, raising a sales invoice within any of the operational modules, automatically updates the sales ledger, general ledger 'before the last line of the sales invoice is printed'. The system is capable of producing all operational and accounting documents 'on demand' and 'as required'; automatically archiving each printed document (or set) on the fly. The system includes all of the usual accounting reports; all of which are re-runnable in retrospect. Detailed job costing reports are available, on demand which agree with the users Profit/Loss reports. Two types of operational Accrual Accounting are supported. No limit to the number or location of the users. No limit to the number or location or mix of printers; which will mainly be HP PCL5e compatible printers. Master Airway Bills (MAWBs) and House Airway Bills (HAWBs) can be printed as double 6 part sets on matrix printers; Neutral MAWBs are supported. All modes or shipping are supported.

Sales lead comments It is interesting for the Boffin/Open developers. One struggles to build the software application, maintaining a balance between development costs and company profits; thinking that the software product is never quite good enough to actual market. Once in a while a few 'test' cold calls are made and comments like those listed below are received:-

> Where were you a year ago, we struggled to get our Unix based system working?
> Why didn't I know about this before I bought our new system?
> There is nothing like Boffin/Open in Southern Africa, tell everyone about it.
>
> Sorry, too busy to actually try and sell/license the stuff, having too much fun programming it.

Boffin/Open lineage The first product was simply named Boffin but more correctly should have been named Boffin/MVP. The whole suite of computer programs was written in Wang Interpretive BASIC-2 language and (the final version) was made available to run only on Wang 2200 MVP hardware. The software development was started in 1975 and continued until about 1979. The last release of this product was used on multiplexed Wang 2200MVP machines with electronically multiplexed printers and was the cause for the designers to make the operational data (ISAM files) shared so that theoretically any number of Rich Clients (Wang PCs) could use the application, simultaneously. It follows that some freight forwarding and transport facilities would have required software changes and/or upgrades too radical to add to the live application and so had to await the next iteration.

The second product was named Boffin/VS, the whole suite being written in Wang VS ANSI COBOL; programming started with the introduction into the United Kingdom of the Wang VS in about 1979 and ended in about 1988 with the commercial availability of the Oracle RDBMS. In general terms, each program in the Boffin/VS suite was a re-written program using the Boffin/MVP equivalent as a specification. All then-known wish list items were added into this 're-write' and all of the functionality of the Boffin/MVP product was carried forward into Boffin/VS. The software was designed to run on Wang VS servers with Wang PCs acting as Thin-Client-PCs. The largest installation of this product was in the United Kingdom, where a large and well respected general freight forwarder installed a network of six application servers supporting 54 offices throughout the United Kingdom using British Telecom Kilostream as the communications link. With such a large customer, there were large resources available to expand and refine the system over a ten year period. With such a large *general* forwarder, there was a reason to expand and refine all of the operational and accounting modules that comprised the system. The large customer undoubtedly 'thrashed' the software and the designers were intelligent enough to 'take notice of the users' in refining and improving the system.

The third and hopefully final iteration of the software product is Boffin/Open. In June 1988 Bishopsgate (a fully owned subsidiary of Bishopstrade Limited) became an Oracle Partner. The Bishopsgate software team were given the task 'Rewrite the Boffin/VS COBOL product into Boffin/Open using Oracle Forms and Reports (they had different names then), in a one-for-one program manner, carrying forward all of the functionality (and wish list items) and taking any benefits that the 4GL and Relational Database technology offered; and do it quickly'. The driving force behind this rewrite was the fact that the designers were increasingly being told that the product was super, but the prospective customer already owned major proprietary hardware and could not think of throwing away such hardware and installing Wang VS machine(s). Bishopsgate's drive at the time was for Unix based open-hardware. In the search for a dialect of ANSI COBOL that could run under Unix but was also as close in syntax to the Wang VS offering. One of the Bishopsgate directors attended an Oracle Inc seminar in the Mayfair Hotel in West London, UK. The guest speaker said the magic words (for a software house); 'If you are willing and able to rewrite your application in Oracle SQL, then you will be 100% compatible with all of the (hardware and operating system) environments on which Oracle is being made available'; with which the speaker pulled out several (three?) Sheets of A4 on which were written the list of 'supported environments'. This is the statement that started a revolution for Bishopsgate, although, had the Boffin owners known the future costs involved they probably would not have started the Boffin/Open development. The main attributes that an application written for the Oracle RDBMS environment could have would be (1) Machine independence, (2) Operating System independence, (3) Use of a 'state-of-the art Relational Database and (4) Use of an Enquiry Language, (5) Access to Oracle Inc future products. So, since June 1988, Bishopsgate have re-written the ANSI COBOL Boffin/VS to the Oracle Forms and Reports Boffin/Open; in a single programming standard and to a single set of standards for the human users; so that once you can run a few Boffin/Open programs, you can probably run them all. At the time of writing, Boffin/Open contains more than 2,000 Oracle Forms (programs) and 800 Reports and is live in several countries.

Boffin/MVP and Boffin/VS development The Boffin/MVP development in Basic-2 language has ceased; Bishopsgate have the computer disks on which the final version of the interpretive software resides; mainly as the authors have a sense of history. It might be quite difficult to locate a Phoenix top-loading 90 Megabyte disk drive on which to read these historically important removable hard drives. The drives could also be useful in any future Copyright dispute; as they provide proof of the very origins of Boffin/Open software. There are no known current users of the application. One company illegally took a full copy of these interpretive Basic-2 language software and continued their own development. Another company took a copy of the software, changed it's name and built a business on the design for a few years.

The Boffin/VS development ceased in 1995, although there are still some users running the application without support from Bishopsgate. The Kenya Revenue Authority - Customs & Excise (KRA) runs a Boffin/VS derivative application that was installed in 1989 and continues into 2005; with Bishopstrade providing annual software support and maintenance. Bishopsgate still have the source code backups of both the Boffin/VS application and the KRA derivative.

Availability of a Demo CD-ROM or DVD Boffin/Open is a large and reasonably complex system, covering all aspects of the users accounting, management accounting and operational systems. Due to the size and complexity, no CD-ROM or DVD demo systems are available. Bishopsgate have developed a Laptop Boffin/Open server, which they are willing to bring to any serious potential users premises and then demonstrate the software, on site. In such demonstrations, it would be useful if the potential user could have an HP PCL5e compliant printer available with some plain 80 gm/M2 paper (examples HP1100, HP1150, HP4000). Bishopsgate have a complete copy of a real users database on these demo laptops, with permission to use the data to demonstrate the system.

Continuous development and versions Boffin/Open is the only version still in development and offered as a supported product; all of the functionality of the previous systems is included and many more functions have been added; the application is only offered on Oracle based installations. Bishopsgate release a new version about four times per year. As an important component of each release is an SQL*script that is run BEFORE the new release is installed and while the regular application users continue with their use of the application. The script updates those Oracle database tables that have changed and/or expanded since the last release and make any other critical adjustments to the Boffin/Open environment. The script takes only a few seconds to execute and no damage would ensue if the script is run more than once.

Continuous running H24/7 Boffin/Open is designed for continuous running; there is no reason why the user should closedown the application from the designers perspective; not even accounting or operational month-ends, year-ends, software upgrades, authorising new users, adding new Client-PCs, Printers etc.

Computer hardware The Boffin/Open application is essentially hardware independent; it will run on any computer chipset for which Oracle offer their product. The main chipset that is in use in live sites is the Intel family(s); but others are undoubtedly available.

There are two main architectures that are supported (1) Client-Server using Oracle Forms and Reports 6i and (2) Application server with local and remote Thin-Clients; where the application is run from within a Web-Browser.

In the case of Client-Server, Oracle are discontinuing their support for this architecture from 01-JAN-2005, but it works well and Bishopsgate have customers who will continue to use it for some considerable time. Oracle Forms and Reports 6i is Oracle's last version that will support the architecture; what a pity - they just get it really working well and then drop it!

In the case of the Oracle Application Server and Thin-Client method; we are effectively back to Dumb Terminal Emulation; which is a pity - as we all worked hard to get away from these and get to a system that had application 'intelligence' in the terminal(s). Under this methodology, any local or remote (using the Internet as the communications facility) PC equipped with a web browser and access to the Internet can run the Boffin/Open application. The Thin-Client-PCs only require a single 'program' named (jinit.exe) which provides all of the technology at the Client end of the setup. Such Thin Client-PCs will be running under any current version of Microsoft Windows and are still able to use all of the usual facilities. All of the commercial data built up and stored by the Boffin/Open application is stored on the Boffin/Open application server.

Boffin/Open computer language(s) All Boffin/Open database tables are created using specialist SQL*scripts; one per table, within the script all of the content and attributes of the table are setup. These SQL scripts are not supplied to customers who have only runtime licenses; they are supplied to customers who take source-license(s). **Warning**, running a Boffin/Open table creation script after an installation has gone live will destroy the data contained within the applicable table; and so the scripts are not left on customer's machines. Bishopsgate have a confidential manual, within which each Boffin/Open table creation script is transcribed and explained.

The whole of Boffin/Open is written in Oracle Forms and Reports; using Forms and Reports 6i for Client/Server and Forms and Reports 9i for Application Server (Oracle 9iAS and later). All Boffin/Open Development work is effected under Oracle Forms and Reports 6i first and then the completed software 'migrated' to the Oracle 9i environment. Bishopsgate have a 'compile all' procedure under which the whole of the Boffin/Open product can be 'regenerated' in any supported Oracle environment. This very quick process allows the software team to determine - with little effort - which 'programs' are incompatible with the intended environment.

Query language All Boffin/Open installations are equipped with Oracle's SQL software. A little training and some practice and the user is able to write and execute SQL Queries that are very fast in operation and powerful in their capabilities. Oracle does have other offerings such as but not limited to Oracle Discovery that can also be supplied as inexpensive 'optional extras'.

Boffin/Open operating in a LAN environment For the uninitiated LAN means Local Area Network. Typically, in such a network, there will be one machine (but there could be any number) acting as the data and possible the runtime application software server and any reasonable number of Client-PCs. There can also be any number of other devices, such as but not limited to printers attached directly to the LAN. There are two main architectures that can be adopted, Rich or Thick Client-PCs or Thin Client-PCs or any mix of the two. Boffin/Open can be run in both architectures and it can also support a mix of the two architectures. Because of the fact that Microsoft Corp have been so successful in training most of the world in the 'use of Windows' and the fact that server computers have become smaller, cheaper and more powerful and that installation maintenance is important, Bishopsgate have favored using Microsoft Windows 2000/2003 as the server operating system. In installations, where there are more computer skills, the latest United Linux can provide more power-resources and this should not be forgotten (Boffin/Open can already run in this Linux environment).

Under the Rich/Thick Client-PC method, all of the application data is usually retained on the server system and a complete copy of the runtime application software is retained and used on each of the Rich Client-PCs using the data from the Oracle database of the server The Boffin/Open application programs run inside the Rich Client; thus freeing up the resources of the server computer so that it can provide a better response service to the whole LAN community. Bishopsgate like this architecture; it has served Boffin/Open very well, especially as Boffin/Open is such a large application.

Under the Thin Client-PC LAN setup, typically the ONLY full set of the Application runtime software (Boffin/Open) resides on the LAN application server. None of the Thin Client-PCs has any of the application programs stored on it's hard disk, but uses the single copy from the server. In this setup, the actual application programs are run in the server. It follows that it is easier for the technical staff to maintain and develop the application software if there is only a single copy to keep up-to-date. It follows that in such a setup, the power (processor speed and amount of memory) of the Client-PCs can be less and the power (again, processor speed and amount of memory) of the server becomes more critical, as it is effecting all of the data processing.

Boffin/Open LANs supporting Uniform Naming Convention (UNC) Where Boffin/Open is being run in a LAN environment, it will usually be with a single physical server computer, a number of Client-PCs and a number of Printers. If EDIFACT is being used, it will be run, using an EDIFACT engine running on the server and available for all authorised LAN users to use. If cellphone access is being used, then this too will be run, using a LAN server engine and made available to all authorised LAN users. In this Microsoft LAN environment, it is possible to 'map' the various resources in a manner named UNC; where each resource on the LAN can be addressed and/or accessed using the UNC naming convention. Boffin/Open supports this convention, the syntax and an example of which would be:-

\\server-name\shared-resource-pathname

\\sosjhb\bmsprint\test.bms

It is also worth highlighting that this UNC convention allows other LAN resources to be addressed by all participating Client-PCs.

Printers and Printing Amongst other things, Boffin/Open is a document production application and being able to print in a powerful and flexible manner is an important aspect of the application. There is no application software limit to the number, mix or location of physical printers; the application does not need to be closed down to add one or more additional printers. Boffin/Open includes a single database table within which an index of the authorised printers and their attributes is recorded. Once established, it is usual that a human operator will not have to monitor or manage his/her 'print queue'. Most printing is effected on A4 80gms/m2 plain stationary in portrait or landscape, as required per document type; the weight and 'rag' quality of the A4 paper is important. Duplex printing (printing on both sides of a sheet of paper in a single pass through the printer) is supported. Printing to multi-part sets for MAWBs and HAWBs is supported. Printing self-adhesive labels for identification of parcels and Customer Christmas cards is supported. Most documents that are printed by the application are automatically 'archived' so that *perfect* copies can be printed locally or remotely and/or attached to emails (as PDFs on the fly) and sent anywhere. All documents created by the application can be archived, automatically. Any document produced by the application can be printed anywhere in the world as a perfect copy of the original. The system is very clever in the way in which it is able to combine (bit map) a nominated PCL5e form design and the data that the Boffin/Open data-processing system to produce a 'form' that can be (a) viewed on any calling-terminal screen (using a free copy of Adobe Acrobat Reader 5 or later) and/or sent anywhere for remote printing. The user does not need to obtain any knowledge on, or license(s) for Hewlett Packard PCL5e (or later) printer control software. It is a fact that HP PCL6, which is a later version of PCL5e, contains the whole of PCL5e; currently Bishopsgate do not use any of the additional facilities that HP have added to PCL5e to make PCL6. Bishopsgate create a set of PCL5e printer macros for use in each Boffin/Open installation as part of the price of the Boffin/Open application.

Client PCs There is no application software limit to the number, mix or location of Client-PCs. There is no limitation on what aspect of the Boffin/Open application that any authorised user is running; it is all irrespective of what the other authorised users are doing The 'standard' Boffin/Open Client-PC will have a True Colour video and be set to 600x800 pixels. A Boffin2/Open (more later) 'standard' Boffin/Open Client-PC will have a True Colour video and be set to 1200x1600 pixels. Typically Client-PCs will be running as Thin Clients equipped with any one of the Microsoft Windows operating systems (95/98/XP/2000/2003 etc). The Thin Clients will be equipped with a single Oracle 'program' (jinit.exe), which controls logon sessions. The Boffin/Open application is run by a Thin Client-PC accessing a pre-nominated program stored in the single runtime Boffin/Open application software library stored on the Server from within a Web Browser.

Boffin/Open use of colour in application screen designs Boffin/Open uses a common GREY-16 background colour in all screen designs with black print. Colours are steadily being introduced into the application; generally the following convention is being adopted.

Red	-	Stop and/or something is not available to be displayed
	-	In accounting money fields, indicates a credit value
Green	-	Okay and/or something is available for display
Black	-	In accounting money-fields, indicates a debit value
Blue	-	Used to highlight important comments on the screens

These colours are hard coded into the application software and are not available for users to change.

Boffin/Open application using colour printing Colours are not used in any printing aspects of the application for the time being, but there is a wish-list item that suggests that a marker be added to the Boffin/Open printer definitions table-entries that would indicate colour printing is or is not possible. This would allow the Boffin/Open application to print the user's company Logo in colour as part of printing operational documents and sales invoices etc. At present, users who wish for a 'splash of colour' on their (say) sales invoices would have the logo preprinted in colour and the Terms and Conditions of Trade printed on the reverse side of A4 stationery; Boffin/Open would then complete the front face with all of the graphical boxes and 'static' print.

Boffin/Open has a catalogue of user-company logos The availability of the user-company logo is quite valuable. Bishopsgate have included an Oracle database table where several (sizes!) Versions of the authorised user-company's logos can be stored. Theses logos are increasingly being included on the screen designs of all Boffin/Open application programs for two reasons, they are attractive and make the installations more customer-friendly. Boffin/Open is a multi-company application, where there is no limit to the number of user-companies that can be supported in any given Oracle database. Inclusion of the applicable user-company logo is a pleasant way to remind the human-operator of the user-company selection she is currently running under.

Multiple Oracle databases on a single physical application server The normal setup is that, in both local Client/Sever architecture (Oracle 6i Forms/Reports and Oracle 9i database) and in Internet hosted Application Servers (Oracle 9i Standard Edition with Oracle 9iAS and later); there will be a single computer server located somewhere and a number of Client-PCs. On the server will be a single Oracle database within which all of the Boffin/Open data will be stored; each database has a unique name (e.g. SOSJHB - which can be read as Speedy Over-border Services (Pty) Limited, Johannesburg server). There is no technical reason, except the available hard disk capacity and the amount of server Random Access Memory (RAM), why more than one Oracle database cannot be supported; although there is an Oracle Licensing issue. There are three obvious main reasons why a user might wish to have more than one Oracle database available. Firstly, a second database might be needed if the Oracle Replication (database mirroring) is to be implemented. Secondly, it might be useful to have a completely separate Training Database available that could be 'truncated (emptied) occasionally and then loaded with a complete copy of the live Boffin/Open application; this would be useful in testing, development and training new staff. Thirdly, the user might like to have a 'secret' copy of Boffin/Open that only a few people had knowledge of and access to. Bishopsgate have already been asked to setup a multiple Oracle database server and this runs to-day without problems. From the Oracle licensing standpoint, Oracle Inc consider each database as a separate installation and so require the user to pay a license fee per named user for those users who will be using each subsequent database instance. Then there would be a setup charge for creating each new database and an additional charge for Boffin/Open application use.

What is Boffin2/Open Boffin2/Open is the same as Boffin/Open, but as used from very modern Client-PCs that are capable of and setup with 1200 x 1600 Pixel screens. In non-technical talk it is roughly possible to display twice and much data on a screen setup for 1200x1600 as it is one setup for operations at 600x800. The Boffin/Open designers have taken the opportunity, especially within the cargo booking programs of each operational suite, to reduce the number of screen changes it takes to complete a Boffin/Open task. For example, in the Surface Export cargo booking program the following happens. The human operator calls in the program from the menu system, the program senses whether the calling terminal is setup for 600x800 or 1200x1600 and then - and without human intervention or interference - calls in the 'classic' edition of the cargo booking or the 'Boffin2/Open' version. Over time, many more the Boffin/Open 'Classic' edition programs will be upgraded to utilise the improved screen definition screens.

Boffin/Open data Boffin/Open data is totally stored within a single Oracle 9i Release 2 (or later) Relational Database. There is no multiple keying of commercial data. Maximum use is made of standing tables of 'static' or semi-static' data contained within the database. Keyed data is heavily validated and extended before it is allowed into the database; the policy is that if data cannot pass the validation checks effected on data-input; then it cannot be stored within the database. There is no limit to the number of sources of data entering the application; whether automatic or manually keyed; all of it is validated to the same standard. Data accepted, extended and validated is never summarised in any way; the full details are retained for future usage - hard disk capacity is getting cheaper and more available. Data is never discarded without human involvement and any such removal of 'old' data can be effected whilst the regular users continue their use of the Boffin/Open application. Technically speaking all data is available to all authorised system users, no matter where they are located and irrespective of what other authorised system users are doing.

No Limitations on Oracle products including Oracle 'Financials' Nothing contained within the Boffin/Open application and methodology will stop or hinder the user making use of any facility offered by Oracle in their products. Boffin/Open has a complete set of 'Financials' and so Bishopsgate do not offer or promote the Oracle 'Financials'. Bishopsgate have no experience of 'interfacing' with the Oracle Financials but no doubt could write such an interface.

Boffin/Open and Excel spreadsheets It is technically possible for any/all Boffin/Open Forms (programs) to output data directly to Excel Spreadsheet(s); although this is a chargeable programming activity. It is Bishopsgate policy that 'normally' reports will be printed by the application, which means that no one is able to 'doctor' any reports before they are presented to management. Where the user has a real need for automated Excel spreadsheet generation; this can be effected.

Automatic SMS support Boffin/Open is capable of generating automatic SMS messages, sending these to any mobile phone number in the world. Such SMSs can be built automatically by any of the Boffin/Open application programs and sent to one of three SMS telephone numbers stored against each customer and supplier master file record (sales and bought ledgers accounts). There is a facility of storing three SMS telephone numbers per account so that SMSs of (1) an operational nature can go to one recipient, (2) of an accounting nature can go to the recipient for accounting issues and (3) of a management nature can go to an applicable recipient. All outgoing SMSs are archived and each SMS sent causes a tracking record to be added to the tracking log of the sales/bought ledger account in question.

Automatic email support Boffin/Open is capable of generating automatic emails (with or without attachments) and sending these to any email address in the world. Such emails can be built automatically by any of the Boffin/Open application programs and sent to one of three email addresses stored against each customer and supplier master file record (sales and bought ledgers accounts). There is a facility of storing three email addresses per account so that emails of (1) an operational nature can go to one recipient, (2) of an accounting nature can go to the recipient for accounting issues and (3) of a management nature can go to an applicable recipient. All outgoing emails are archived and each email sent causes a tracking record to be added to the tracking log of the sales/bought ledger account in question.

Automatic facsimile support Boffin/Open is capable of generating automatic facsimiles and sending these to any facsimile address in the world. Such facsimiles can be built automatically by any of the Boffin/Open application programs and sent to one of three facsimile addresses stored against each customer and supplier master file record. There is a facility of storing three facsimile addresses per account so that facsimiles of (1) an operational nature can go to one recipient, (2) of an accounting nature can go to the recipient for accounting issues and (3) of a management nature can go to an applicable recipient. All outgoing facsimiles are archived and each facsimile sent causes a tracking record to be added to the tracking log of the sales/bought ledger account in question.

EDIFACT support Boffin/Open supports the use of UN EDIFACT for both incoming and outgoing messaging, in turn supporting B2B communications. Boffin/Open uses this facility for submitting and processing Customs Declarations (e.g. CUSDEC, CUSRES etc). Boffin/Open optionally includes a J2EE JAVA EDIFACT engine that runs in the background of the Boffin/open server. The engine handles all of the complex telecommunications and EDIFACT message packing and unpacking, placing all incoming and outgoing messages in Oracle tables within the Boffin/Open envelope. From these Oracle tables, Boffin/Open is able to effect fairly standard data processing to complete the EDIFACT support. For those users who want to use EDIFACT, there is a separate small license fee for parts of the EDIFACT engine. There is no practical limit to the number of incoming and outgoing messages and/or authorised users wishing to process EDIFACT messages. There is no limit to the number and/or mix of EDIFACT message types that can be supported on any given Boffin/Open installation.

Cellphone access to the Boffin/Open database Where the user is running Boffin/Open using Oracle 9iAS to make the application accessible over the Internet, it is possible to setup a facility with the cellphone operators (e.g. Vodacom in South Africa) where modern cellphones are able to access the Boffin/Open database, obtain results and have these results transmitted immediately back to the calling cellphone. Bishopsgate have this running in their Development Center. Bishopsgate use J2ME JAVA to create cellphone compatible programs that are compliant with the Boffin/Open Oracle database table designs. These JAVA programs are able to cause SQL scripts to be run against any part of the Boffin/Open database to retrieve and/or deposit information. It is true to say that *any* data in the user's Boffin/Open database can be retrieved to the calling cellphone; it is a very fast operation. The Boffin/Open designers have to be quite careful where data is to be submitted to the Boffin/Open database from a cellphone source. Tracking and Tracing data can be submitted, as it is not financial and so cannot corrupt the more important aspects of the Boffin/Open data. Bishopsgate are willing to write bespoke cellphone software for Boffin/Open users who have a requirement; see the Price book for more details. Bishopsgate see a need for two types of cellphone program classes. The first class would be a group (up to 32,000 queries in a JAVA Class), designed to be used by the Boffin/Open licensee. The second JAVA class, of similar size would be designed for use by the customers of the Boffin/Open Licensee; by which he/she would be able to interrogate the status of their sales and /or bought ledger (agents might have one/more sales ledger and bought ledger accounts) accounts and any cargo bookings within which their company was involved (Agent, shipper, consignee).

Recursive program calling In modern applications, it is common that application programs call one another to allow fairly complex actions to be performed with having to complete and exit the first program. Recursive program calling is the name given to the situation where a program calls itself to perform a similar operation on other data than is currently being used. It could be the case that the original calling program calls several other programs before one of those calls the original program once more. Boffin/Open includes a great deal of recursive program calling; using the technique to make it possible for an operator to 'drill-down' into the data architecture for more detailed information without exiting the original application program he/she was using; all Boffin/Open application software is re-entrant. This feature makes the Boffin/Open application very rich in available searching facilities.

Drilling down through the commercial data layers Boffin/Open is the third iteration of the software and each time the system has been re-written, the opportunity has been taken to take advantage of all of the new techniques that have become available. This iteration is designed to run with the powerful Oracle Relational Database. The Boffin/Open data structure has been heavily normalised; any given piece of the user's data is only stored in a single location and then made available to all qualified operators. The Boffin/Open designers have taken notice of the users likely wishes in that when any data is displayed to the user, the opportunity is also included to provide links usually to greater detail on the data that is already being displayed. This technique of digging deeper into the data architecture is now commonly known as 'burrowing down' or drilling down into the data.

Multiple user-companies, Sister and Daughter companies Boffin/Open is designed so that the user is able to support the data from a large number of user-companies; which can be any mixture of 'sister' and/or 'daughter' companies. It is possible to setup the system so that the application programs will function for each authorised user-company in the same manner. It is worth highlighting that for each authorised user-company there is a 'shadow' marketing company where details of potential future customers can be stored in the format in which it will be needed when the potential customer ships the first real consignment. There is also a single training company where the user-staff can use the application software without the worry of damaging the user-company's live data. In terms of integrated accounting, the system supports sales, bought and general (nominal) ledgers; where a financial posting to any account is, by definition, a posting to the whole integrated accounting system. There is no double or multiple keying of data. Each financial posting is COMPLETELY processed at the time of initial data-entry. There is no practical limit to the number or selection of currencies that can be used simultaneously; all currency conversions are automatic, but with manual override where this is desirable. There is never a requirement for the application to be vacated for accounting month and year-ends; it is designed from the outset for continuous running. Financial data, entered into the system is heavily validated at data-entry time. All data extending is effected at data-entry time and financial detail is never lost or summarised.

Extensive normalisation of data-elements Boffin/Open is the third iteration of the application; on each re-write, the opportunity has been taken to examine the level of normalisation that has been attained and decide if further refining can be accomplished. It is accepted that where data is stored in more than a single data-processing location, the various copies of the data in question will get out of synch. Consequently, Boffin/Open application data is heavily normalised, but no doubt a few occurrences of multiple storage of data-elements still exist. The general feeling in the software team is that this subject is not a 'big deal' and that 'one day' an exercise will be effected to complete the normalisation task.

For the more technically minded, Bishopsgate have developed a 'compile-all' process; which is designed to compile all of the Oracle Forms that comprise the application at that time; it runs very quickly on a modern serve; perhaps 20 minutes for more than 2,000 Forms. At any given time, running the 'compile all' process would create a clean run; no errors would be reported. Temporarily changing the name of a data-element that the designers think has a duplicate location and then re-running the 'compile-all' process will provide a list on which all occurrences of the 'suspicious' data-element name will be listed. Investigating the listed items allows the software team to correct the 'erroneous' normalisation issue. Sounds complicated, but it is not. It is not expected that there are large numbers of such 'duplicate names'.

Personal accounts and creating new ones on the fly The design of the system includes full open-item, multi-currency, multi-company personal accounting. There is no practical limit to the number of personal accounts that can be supported simultaneously; the largest installation that Boffin has been used for, contained about 150,000 personal accounts of which about 54,000 had active balances at any one time. Creating a new personal account causes the application to compute and allocate the next check-digit account number, automatically. Personal accounts, both sales and bought ledger, can be opened at anytime the application is available; new personal accounts are immediately usable. The system includes facilities for allocating unique Short Names (nicknames) and/or sort codes to all personal accounts to facilitate alphabetic searching. When searching to determine if an outside party has an account; seeing that he does not means that a new account can be created from within the search software, immediately. There is no requirement to have list(s) of customers and suppliers and their account numbers; powerful, standardised, quick methods of 'account lookup' exist. Accounts can be logically 'linked' together into families so that an overall balance of the family can be readily seen; very useful with agents accounts! The system supports Alternate Accounts, where financial postings to a given account can be immediately and automatically redirected to another account. All new personal accounts are automatically annotated with details of where, when and who they were created by. The system design includes extensive facilities to help monitor and manage partner or agents accounts.

Powerful, Automatic sales charge calculations On all traffic, but especially where the user operates groupage traffic, Boffin/Open has a very interesting facility, which the designers call Sales SuperRates. Under this scheme it is possible to setup a system where the user's sales charges can be computed automatically and in a very powerful manner. Sales charges can be computed by any combination of all of the parameters that are part of a shipment booking; e.g. Gross weight, Gross Cube, Volumetric Kilos, Number of Pieces, Chargeable weight, Loading Meters, Kilometers traveled, freight surcharges etc). Two Boffin users have 'gone the whole hog' an introduced automatic sales charge assessment. In each case, and taking surface exports for the example, the user has effected the following. All export shippers must have at least one sales ledger account, even if the traffic is always shipped ex-works. The user has populated the Boffin/Open Consignee directory. The user sets up the sales tariffs for the Shipper/Consignee/Route combinations. The user switches on the software switch. All of this, and there is a lot more to tell, causes the sales charges to be computed automatically in the cargo booking process and does not allow the cargo booking clerk to change the recommended sales values. If there is an error, then the nominated person who SOLELY looks after the SuperRates will respond to the mistake by issuing a credit note and amending the applicable sales tariff(s) to correct the error. All cargo booking priced by SuperRates are annotated with the unique SuperRate Key that was used 'to price the booking'; so that an audit trail exists to prove the correct SuperRate was used and to provide the basis for a 'Job Costing by SuperRate' that can show the success or otherwise of the SuperRate that was setup for the traffic. There is no practical limit to the number of Rate-Rows that can be catalogued in any part of a SuperRate; one Boffin/Open user located in Germany setup the German National Freight Tariff in the SuperRates where there were 1502 rows (rates) in the SuperRate! There is much more to tell on this subject; so interested parties should make contact with Bishopsgate, initially on email btlsa@global.co.za.

Accommodating very large financial values Boffin/Open has run in Mozambique; where and at the time, the exchange rate was 2200 Metical to one United States Dollar. Before making Boffin/Open available in that country, an exercise was effected to increase the maximum internal size of each 'money field' from an Oracle definition of (13,2) to (16,2). The term (13,2) is read as thirteen digit value of which two digits are the decimal values (e.g. 13.2 gives 99,999,999,999.99 debit and credit); sounds a lot but at 2,200:1 exchange rate it only allows the equivalent (of 99,999,999,999.99 / 2,200) or US$45,454,545 - US$45 million and some change. Increasing this definition allows for single financial posting values of about US$45 billion. That takes care of all countries such Italy (admittedly now Euro based) and Japan etc. The exercise takes off of the Bishopsgate long-term wish list the issue of being able to process large values.

Boffin/Open support for Tracking & Tracing Boffin/Open supports tracking and tracing throughout the whole application. Tracking records can be and already are injected automatically from application programs and/or manually inspired entries and/or any other source of valuable information (Such as but not limited to bar-code reading and temperature measuring etc). There is no limit to the number and type of sources of information from which Tracking records can be built and stored. The Boffin/Open application is very powerful in this area, as the designers can see that the availability of tracking information will become a valuable source of information that can be used to keep freight customers up-to-date. Although not available at present, Tracking records could be passed automatically to 'interested parties' to avoid those parties contacting the Boffin/Open user, manually.

Does Boffin/Open interrupt Oracle RDBMS Not that you would know it, if it did? There are ways and means of application software communicating with Oracle RDBMS, all of which are approved and supported by Oracle. Bishopsgate have not experienced any occasions where what is being run in a Boffin application session interferes with Oracle or other Oracle users. Remember, that this Boffin/Open, which is only available for use with Oracle RDBMS, is the third rewrite and so Bishopsgate have experienced most of these multi-tasking issues in the past and programmed so that the issues are 'programmed out of the application.

Are ALL Oracle features available in a Boffin/Open installation? As far as we know the answer is yes. There is no reason that Bishopsgate know of, that any or all features that the Oracle Corporation offer for use with their Standard Edition that cannot be fully used in a Boffin/Open installation. It should be remembered that the Oracle License(s) that Bishopsgate supply for Boffin/Open installations are supplied under the Oracle ASFU (Application Specific Full Use) Contract Terms; so, if additional Oracle features were required, the ASFU aspect would have to be checked-out.

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