The Newsletter for SIR UK Users

SIR REPORTER

Contents

Editorial

It must be nearly six months since the last issue of Reporter was published. In that time we have had a conference in Colchester, a new committee elected, and some important revisions to SIR 2000 – details of all these things are in this issue.

If you haven't yet tried SIR 2000, you really should try to find the time. At Forvus, we have now moved most of our SIR systems to SIR 2000 and can only say that we are very, very pleased with it. We had some specific problems with SIR 3.2 – with SIR Master and with needing too many files open simultaneously – and they are now working beautifully in SIR 2000. And when we do find a bug, SIR are quick to respond and fix it. For users not on SIR's email distribution list, here is an extract of an email from David Baxter dated 30th October:

"There is a new Update to SIR2000 (vs 1.10.17) available for download. The latest versions for Windows, Linux, Solaris, OSF1(alpha) and OpenVMS(alpha) can be downloaded from http://www.sir.com.au/download/index.stm. Details of all the problems fixed by this and earlier updates can be found at http://www.sir.com.au/users/spr2000.htm."

As you can see, SIR Oz are keeping us all informed of changes, and you can download the latest version to test. If you want to receive this kind of news by email, just send a message to david@sir.com.au. Better still, talk to all of us - join the sir-users list by sending a message to mailbase@mailbase.ac.uk which contains the line:

subscribe sir-users *firstname lastname*.

Planning for the next International SIR Users Conference is underway, and there will be more details in the next issue early in the New Year. Until then, on behalf of the UK committee, may I wish you an enjoyable read – and of course our best wishes for the New Year. May the force be with you….

Kathy Brooks
Kathy@forvus.co.uk

Note from the Chair

It appears that I shall be writing this for another year at least, having been re-elected Chair of this august group. The other officers are unchanged too: Randy Banks remains our Treasurer and Lisa Zaninetti is the Secretary. But we have said goodbye to some long-term SIR Users and Committee members: Karen Brannan's role at CES has moved away from day to day use of SIR; Dave Greatorex has left the BBC; Peter Ritchie has bowed to pressure of work at IOM; and Jenny Simpson is now using VB and SQL rather than SIR at the DfEE. We thank them for all the time and effort they put into the SIR User Group and wish them well in future. In their place we welcome some new and some familiar faces: John Lemon of Aberdeen University is back on the committee after several years' absence; Patrick Brown joins us from IOM where he works with Peter Ritchie; and Adrian Hodgson brings us his extensive SIR experience at ORC International. Profiles can be found elsewhere in this issue.

The conference in June in Colchester was a real success drawing delegates from all over the world despite it being a UK conference. See the detailed report elsewhere in this issue. It was such a success that it looks quite possible that the UK will be hosting the next International Conference next year.

We are in the process of setting up a web site with things we hope will be of interest to all SIR users. It can be found at http://www.soton.ac.uk/~sug. I am hoping to keep it up to date with downloads of SIR so that you do not have to download from Australia. There is a form to let us have your details including an option to get Reporter by email should that be more convenient. If there is anything else you would like to see on the site please let me know. There has been a request for downloadable pql to give beginners an idea of what can be done. If you have any useful general purpose pql, please let me have it to put on the site.

The SIR2000 product is coming on in leaps and bounds. For those not at the conference to see some of the new features, take a look at Tony Reardon' s article in this issue. It is worth keeping an eye on the SIR website support area to spot any new problems and get the fixes via the downloads.

Dave Doulton

Events

2001 International Conference	TBA

SIR2000 Development

Since the release of SIR2000, we have seen most users move across to the new version. The feedback we have received has been very positive with very few reported problems. As problems have been identified, we have fixed these and made new versions available across the web, at one point distributing new copies on CD to all users. This process of releasing minor build increments which fix all reported problems on an ongoing basis is new in SIR2000 and seems to have been effective so we plan to continue this as necessary.

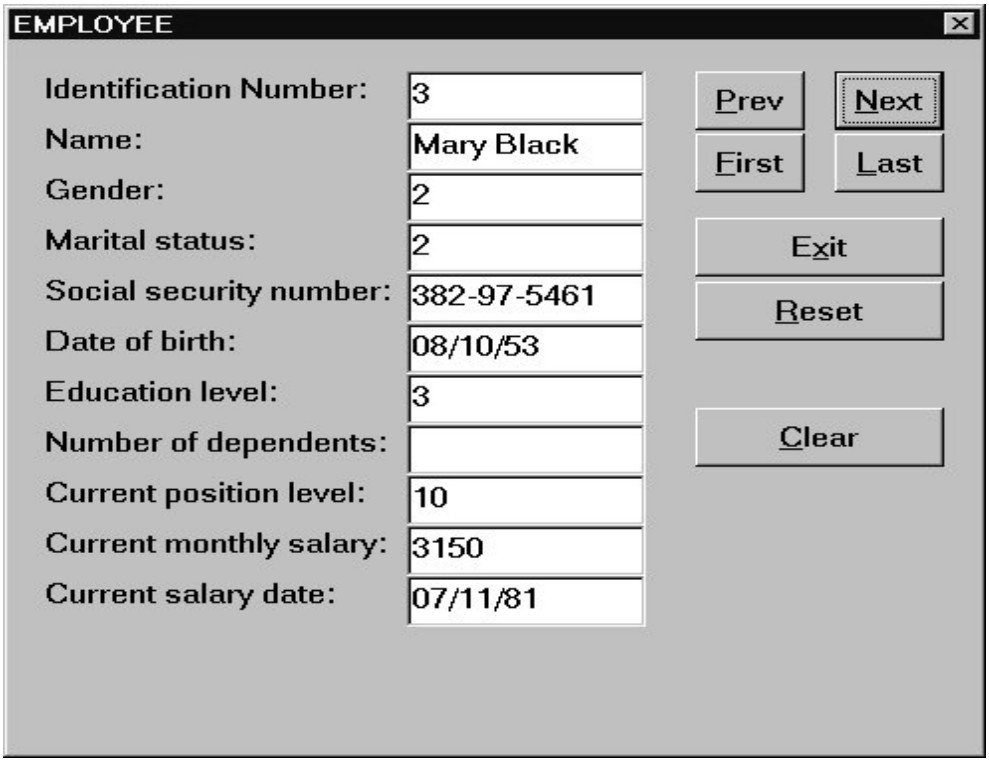
Work continues on the next version of SIR2000. The intention of this release is primarily to build on the new graphical user interface in SIR2000 by making it easier to use and extending its functionality. The current intention is to get a beta version of this release to interested customers round March 2001 but this date is only tentative at this stage in the project.

New Forms

The first major component in the release aims to integrate the functionality of FORMS into VisualPQL. This ' New Forms' is a set of new VisualPQL commands that keep Forms 'style'. There is a new type of VisualPQL routine which is the FORM. This contains a SCREEN command for each record/table which then contain FIELD commands for each data element with edit rules, positioning, etc. The screens have automatic next/previous/first/last/browse record logic. Familiar forms specifications such as AT, AUTO, ERROR, [NO]LABELS, PAD, PAGESIZE can be specified at various levels (FORM SCREEN PAGE GROUP FIELD) and are carried down to lower levels.

The CALL SCREEN command is used to invoke lower level screens and displays a button for users to invoke each lower screen. CALL clauses such as AUTO, IF, FIRST/LAST, USING/VIA are supported.

Other familiar forms style commands such as PAGE, GENERATE and LOOKUP are supported. However, most importantly, standard VisualPQL can be used and intermixed with the new forms



style commands. New clauses have been introduced to allow VisualPQL code to be executed at appropriate points e.g. for editing a field, before a screen is displayed, before a record is written, etc.

Most of the new forms commands are only appropriate within a FORM, however the new LOOKUP command is standard VisualPQL and can be used in programs and retrievals.

A very simple ' New Forms' VisualPQL program which allows the user to browse through employees, would be as follows:

```
form
. screen record EMPLOYEE
.  generate
. end screen
end form
```

Screen Painter

Another major component making VisualPQL easier to use is the new Screen Painter. This is an interactive, visual tool which lets you point and click and drag and drop the various visual elements which make up dialogs. It integrates the design process with the specification of processing logic. It also lets the user create and position forms elements and link those forms elements to database and table variables.

Database Secondary Indexes

The next 'ease of use' feature is built in secondary indexes. From the user perspective, these work in an identical fashion to tabfile secondary indices and provide an alternative way to access database records. There can be multiple variables as keys in index and multiple indexes on a record type. They are created with a single command and maintenance is then automatic.

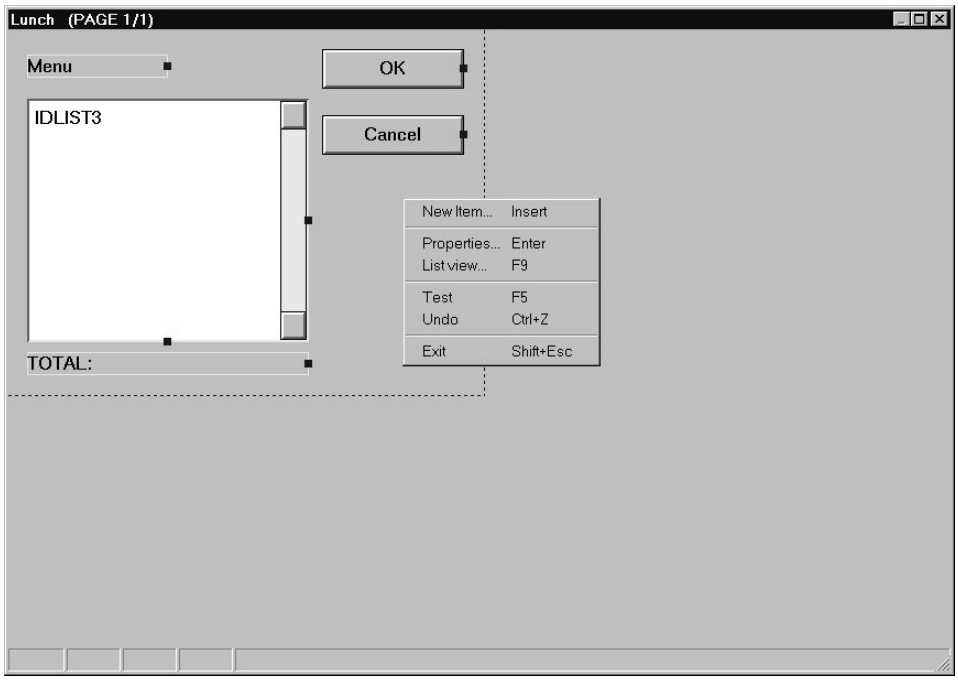
```
CREATE DBINDEX
index_name
      ON
database.recname
      ( col_name [
ASC | DESC ] [ , ...
] )
```

This creates the index structure and creates the actual index from values of any existing records. The index is automatically maintained as records are added, deleted or modified. Indexes are rebuilt if database recovered from Import or Reload. Indexes can be deleted.

```
DROP DBINDEX index_name
           ON   [database.]  recname | ALL
```

This deletes either a specific index or all indexes for a database.

Data is retrieved by a
`PROCESS REC ... INDEXED BY`
command. All existing clauses can be used in conjunction with INDEXED BY i.e. AFTER, FROM, THRU, etc. (RECORD IS constructs do not support the INDEXED BY clause)



There are additional VisualPQL functions to retrieve information about any secondary indexes:

```
n  =  DBINDS(dummy)  Number of indexes on
   default
      database
s  =  DBINDN(index)  Name of index
n  =  DBINDR(index)  Record indexed
n  =  DBINDV(index)  Variables in index
s  =  DBINDT(index,var)  Name of nth variable
   in index
```

Grid Control

There is a new GUI control which allows the display of data in a familiar spreadsheet format. This can be used to display arrays of data and to accept back changes. This runs on all supported platforms. The grid displays very quickly and essentially has no size limitations beyond those imposed by processing very large arrays. The new VisualPQL command is:

```
GRID title list_of_arrays (1 or 2 dimension)
     [HEADERS=list_of_col_headers]
     [RESPONSE =      integer_varname|
                 array_varname]
     [SIZE=rows]
     [DISPLAY=row,width]
     [UPDATE | NOUPDATE]
```

The same control is used internally within the system to replace the existing windows-only spreadsheet i.e. the Spreadsheet command and Spreadsheet procedure both use the new control. This removes constraints on the size of database that can be displayed in this fashion and makes these commands available across all platforms.

ODBC Parameterized Queries

SIR2000 provides ODBC capabilities which means that a VisualPQL program can get data from an ODBC source and a SIR2000 database can be used as an ODBC source. The method of querying databases through ODBC is based on SQL and SIR2000 supports standard SQL queries such as

```
SELECT ID NAME FROM EMPLOYEE WHERE ID GT 5
```

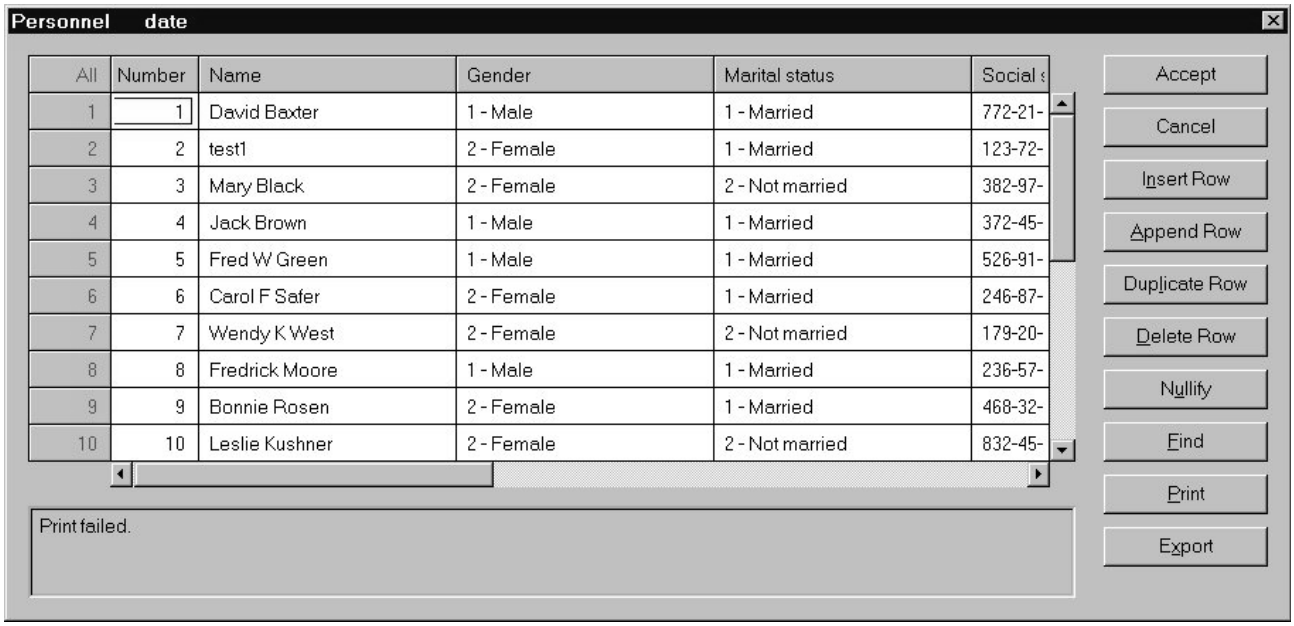
However, a number of packages use parameterized queries where the original query is sent without certain elements e.g.

```
SELECT ID NAME FROM EMPLOYEE WHERE ID GT ?
```

This information is then supplied on a recurring basis as the same query is re-executed for different values.

This is not currently supported but the next release of SIR2000 will include parameterized queries which means that a number of third party features will work with this release e.g. linking tables in MS Access for spreadsheet and data entry.

Tony Reardon
SIR Pty Ltd



Review of June 2000 UK SIR Conference

Colchester was the choice for the location of the SIR Users Conference 2000. A city rich in Roman history and the home of the University of Essex, Colchester proved to be a very hospitable town with a combination of good food, roller-skating rink and historic ruins! The conference was held at the Quality Hotel (formerly known as the Mill Hotel as it is a former flour mill), close to the centre of Colchester and a good base from which to explore 'Constable Country'. Great thanks go out to Fran, Randy and Adrian for arranging such a well-organised event.

The one day conference was preceded by a day and a half of training in SIR2000 with Tony Reardon, held in the well-equipped computer labs at the University. This concentrated on the new features of SIR2000 - including Visual PQL, internet interface, and multiple databases amongst other areas. The training was very successful and I'm sure all the participants will agree when I say that we certainly learned a lot about SIR2000 in a relatively short time, often putting the theory into practice with Tony putting us through our paces with worked examples.

One feature of the training programme which was slightly more hair-raising than others (well, for some of us at least) was the Mystery Event, held on Wednesday evening. This, it transpired, was an evening of speed and danger…….no, not motor racing, but an evening at the roller-skating rink. Participants had a choice of roller skates with four wheels or 'in-line' skates (aka rollerblades). With a mixture of these boots amongst us, those who had not been on this type of wheel since they were seven tentatively made their way onto the wooden rink. The bar around the edge of the rink proved extremely useful and most of us did not immediately make the most of the dance music surrounding us. The evening was great fun, and, as usual, practice made perfect……Well, maybe not quite perfect, but managing to do a circuit of the rink without holding onto the bar felt pretty good. This activity provided an opportunity to work up an appetite for the lovely meal we then sampled at The Rose and Crown Hotel. The next day meant a full day's SIR2000 training followed by the Conference Dinner.

By this time most of the delegates/speakers had joined the party in preparation for the full day conference on Friday. We sat down to dinner at the Mill Hotel and this gave us a chance to reacquaint ourselves with fellow SIR users and catch up with those we had not seen for a while. Dinner was followed by an historical walking tour of Colchester, with those not wishing to exercise their legs, choosing to partake of another type of exercise in the bar area. The walking tour was very interesting, taking in the remains of a Roman amphitheatre, ancient churches and finally, of course, a local hostelry.

Friday morning saw a relaxed start to the Conference with coffee and registration at 10am, then a welcome by Dave Doulton of the University of Southampton. In time-honoured tradition, John Lemon of University of Aberdeen took the first presentation slot telling us about Course Allocation with SIR. John explained that there are a number of speciality attachments which medical students at Aberdeen have during their course, which they have to rank in order of preference, and which have limited available places. With what had formerly been a manual system, the job was to allocate places to students in order of their preference, but on a first come first served basis, this time using SIR. The original choice of tools had included MS Access, Excel and Visual Basic/and or C++. However these had been rejected as inflexible amongst other things. After defining the schemas, and adapting a program to read a CSV file from Excel, John used PQL to read in and combine necessary files and set up the system. The next stage, the user interface, involved Visual PQL and, after some refinement from SIR OZ, the working system was born. Finally, after some training for the user, a task that had previously taken two people at least three and a half days now only took four hours. This, plus increased accuracy and instant feedback, provided a very satisfactory result!

Next up was Chris Cowell from ORC International, who talked about the Employment Service Evaluation Database. This project involved the storage and manipulation of potentially 250 million records, containing details on Clients, Opportunities and Employers throughout England. Every month ORC receive 80Gb worth of data which is read onto Linux, transferred to Windows NT for initial pre-processing involving conversion to fixed column format, then sorted and compared to the previous month's tape. A unique ID (the ORCID) is given to each record of the Employment Service data which is then input to six regional case-structured databases. The same is done with Employer and Vacancy data. A suite of programs has been developed by ORC to deal with this data, using various tools, which include C for processing data, SPSS for sorting, Visual Basic for file comparison and SIR for the database platform. The suite of programs provides look up of the ORCID from the Master Client Index that makes use of SIR/HOST. These programs are launched

from screens developed using Visual PQL functionality of SIR2000.

Kathy Brooks then took the floor to talk to us about the perennial problem of fuzzy matching. Forvus have recently taken on a project to link records from a variety of sources using fuzzy matching techniques. These included standard SIR facilities, such as the soundex subroutine included in the system profile. Other techniques used in this area include Spedis and NYSIIS. The subject can provide for limitless discussion relating to data such as date of birth and the problem of twins who are born on different days. Kathy's presentation was followed by the AGM and then lunch.

After the hotel lunch, Dave Doulton told us about implementing web data access using sirweb.cgi. Dave ran through the installation of SIR2000 and the Personal Web Server (PWS), and the copy of files from SIR2000 to PWS and then demonstrated web access using sirweb.cgi. According to Dave, the most useful option is sysproc.cgi.runfile, which uses the parameter RUNFILE to specify source PQL, which he also demonstrated. In his summary Dave warned that security should be checked and to be careful with sirweb.isa and also check sysproc.cig.runfile for source of files. Dave Greatorex was the penultimate presenter of the afternoon, talking about the BBC's SIR systems past and present, and how things may have been better. Dave took us on a trip through time, looking at how the BBC have used SIR for the Audience Research Systems. This included a system called Questor built in MS Access as a parameter entry interface with a SIR backend. Lionheart, the current system which provides the same functionality as Questor but is written in Visual Basic and SQL 7, with SIR version 3.2 as the backend, has now superceded this.

The day was rounded off with a look Beyond SIR2000 with Tony Reardon. This included the provision of a new spreadsheet control, integrated with the gui which allows VisualPQL interaction with a row/column style display, the GRID command will also provide more speedy results. There will be the ability to integrate Forms style capabilities into VisualPQL, thus extending VisualPQL with new forms style commands and provides a simple way for users to create Forms style dialogs and program logic in VisualPQL. A Create Forms painter will allow users to visually layout fields and relate to database fields and generate new forms PQL programs. With this tool, changes can be made to controls which can be moved around the screen - this generated a series of oohs and aahs around the room. There are new features in report and tabulate to extend the use of html with support for variable fonts, colours, sizes etc. Tony explained that an early release which would include these new features should be available around the end of 2000.

So, that was the end of yet another, I believe, successful conference, the next due is an international conference at some point in the near future, so keep reading your Reporter and look out for those announcements the SIR User Group will be making soon!

Lisa Zaninetti

Committee Profiles

Patrick Brown

I work as an analyst-programmer at the Institute of Occupational Medicine, Edinburgh, where for the last 10 years I have been managing the data for proficiency testing schemes for laboratories measuring asbestos and other airborne fibres. Test results are received from participant laboratories several times a year, and are stored and analysed in SIR databases (version 3.2, hopefully very soon to be upgraded to SIR2000). The databases formerly resided on a Prime minicomputer, being transferred to PC a few years ago.

Outside work, I enjoy cycling and hillwalking.

Adrian Hodgson

I am a Principal Consultant with ORC International and since 1998 I have been responsible for the management of a Team working on Government Database projects, as part of the Survey Computing Division.

During 1998 I had a major involvement in the design and development of the New Deal Evaluation database, which is used by the Employment Service to publish the monthly Statistical First release which summarises New Deal activity on behalf of the Government.

I have also undertaken a number of employee opinion surveys including those for Nationwide, Prospero Direct, Grosvenor Casinos, and Yorkshire Building Society.

I joined ORC International (formerly SIA Ltd) in 1985 and have worked on a range of projects including :- the Training for Work follow up database and other data analysis projects for the DfEE; processing school inspection material on disk and paper for OFSTED; customer research projects for a number of Utilities and other public sector organisations; and on site consultancy for the DSS involving processing Road Accident statistics.

Prior to joining ORC International I worked for the West Midlands Regional Health Authority in the Operational Research Unit. I hold a BSc in Statistics from Newcastle-upon-Tyne University, and an MA in Operational Research from Lancaster University.

In my spare time (when I am not fixing one of the home appliances or fighting to keep the garden under control), I play for a badminton club, support Leeds United, and try to avoid being beaten by my 10 years old son at a range of games (football, snooker, tennis, badminton, scrabble - given this up as a lost cause!)
My pet hate at the moment is Barcelona for scoring an equaliser at Elland Road with 20 seconds left !!

John Lemon

I have been a SIR user since the mid 80's when I also converted SIR for the Honeywell GCOS and CP-6 operating systems. I now support and teach a number of users at Aberdeen University in subjects ranging from pig-breeding to bird migration. One of the major data bases using SIR has been the source of many SIR conference papers and records all deliveries etc. at Aberdeen Maternity Hospital since 1950.

I am returning to the user committee after a number of years.

I'm married to Anne and have two daughters: Hannah, who fund-raises for Aberdeen University and Fiona who is waiting to hear from various medical schools. In my spare time I am one of the Training Officers for the Aberdeen University Royal Naval Unit, which involves such tedious things as 2-3 week training deployments round the UK or to the continent on board our training vessel, while I teach navigation.

Mick's Corner

Anyone else remember those heady days of the early 1990s, when PC processing was coming on-stream? It seemed like a breath of fresh air to those of us who had previously worked on mainframes, where the configuration of the computer was decided by the systems manager and you needed to apply for permission to access your own data. In the company for which I work, we were then setting up Computer Assisted Interviewing on laptops for data collection, with subsequent data processing on PCs. There were certain downsides to this relative freedom on PC, of course. For instance, when a new software package or upgrade arrived, it would often entail the protracted tuning of memory configuration in order to optimise performance, and this could be compellingly wearisome. Again, security of data was something which had to be thought about, rather than left up to a central data manager. Still, all in all the situation was a vast improvement.

As the 1990s progressed, and with it the processing power of PCs, PC networks became increasingly complex until they emerged as quasi-mainframes. With it came of course increasing centralisation, uniform configuration and security arrangements, and the rise once more of the all-powerful system managers. PCs became analogues of the dumb terminal of the 1980s mainframes – much more complex and powerful, of course, but the analogy still holds.

In many ways this is an inevitable and necessary development. It was clear ten years ago that PC processing would become increasingly powerful and would supersede mainframes. It was clear also that in the short term, PC processing would be more fragmented compared to the use of a mainframe, but the extension of PC networking would morph into a quasi-mainframe. With large-scale processing operations there is of course a need for a certain degree of uniformity of configuration and data security, if only because the network of PCs could be at risk from a rogue configuration, corruption, or virus.

Though we can accept the broad thrust of network development as inevitable, some of the recent ideas are questionable. For instance, the increase in PC processing power has led to software being stored on the hard disk of the PC, whilst data is stored on the network. One can appreciate that this takes advantage of the speed of processing on the hard disk. However, there are problems of version control. Whilst we are all accessing the same software on the network, there is no problem. However, where the software is on the hard disk, there is real possibility that some PCs will miss an update. In theory it should be simple enough to update all PCs at the time of logging onto the network; in practice it seems not so straightforward. Well, where would we be without such challenging mysteries to confront, eh?

So, let us remember fondly those halcyon days of PC processing in the early 1990s. We shall not see their like again.

Michael Staley.

Silly Section

Good applied theory?

An American magazine held a competition, inviting its readers to submit new scientific theories on ANY subject. Below is the winner:

Subject: Perpetual Motion

When a cat is dropped, it always lands on its feet, and when toast is dropped, it always lands buttered side down. Therefore, if a slice of buttered toast is strapped to a cat's back, buttered side up, and the animal is then dropped, the two opposing forces will cause it to hover, spinning inches above the ground. If enough toast-laden felines were used, they could form the basis of a high-speed monorail system.

.....and then this mail got the following reply from one of the recipients....

I've been thinking about this cat/toast business for a while. In the buttered toast case, it's the butter that causes it to land buttered side down - it doesn't have to be toast - the theory works equally well with Jacob's crackers. So to save money you just miss out the toast and butter the cats. Also, should there be an imbalance between the effects of cat and butter, there are other substances that have a stronger affinity for carpet. Probability of carpet impact is determined by the following simple formula: $p = s * t(t)/tc$ where p is the probability of carpet impact s is the "stain" value of the toast-covering substance - an indicator of the effectiveness of the toast topping in permanently staining the carpet. Chicken tikka masala, for example, has a very high s value, while the s value of water is zero. tc and $t(t)$ indicate the tone of the carpet and topping - the value of p being strongly related to the relationship between the colour of the carpet and topping, as even chicken tikka masala won't cause a permanent and obvious stain if the carpet is the same colour. So it is obvious that the probability of carpet impact is maximised if you use chicken tikka masala and a white carpet - in fact this combination gives a p value of one, which is the same as the probability of a cat landing on its feet. Therefore a cat with chicken tikka masala on its back will be certain to hover in mid air, while there could be problems with buttered toast as the toast may fall off the cat, causing a terrible monorail crash.

Therefore it is in the interests of public safety that the buttered toast on cats idea is scrapped, to be replaced by a monorail powered by cats smeared with chicken tikka masala floating above a rail made from white shag pile carpet.

Frequently Asked Questions

SIR2000 allows values to be defined for a variable that result in the variable being set to MISSING. How does this work and in particular, how does MISSING VALUE BLANK work?

The following is a brief review of missing values in general.

- If a variable in a record does not have a valid value, it is said to be MISSING. Any calculation (other than the missing value functions) which uses a variable which is missing, sets the end result to missing. Some of the procedures and statistics specifically exclude missing values or give separate counts of records with missing values.
- Any variable can be UNDEFINED. A variable would be set to undefined if a record were created by a retrieval update and the variable was simply not set to any value. Similarly, if a variable were set to a value not allowed by the schema definition, it would be set to undefined. Calculations which result in missing, result in undefined.
- Other missing values are defined with the MISSING VALUES record schema command, VisualPQL command or SQL table definition clause. Normally, missing values match the variable type i.e. numeric values for numeric variables, string values for character variables. However BLANK can be defined as a missing value for any variable, Value labels can be assigned to missing values (including UNDEFINED and BLANK). If a variable is assigned the value specified as missing, it is set to missing with the appropriate code. Undefined is code 0, the first defined missing value is code 1, the second 2 and the third 3.
- The missing value codes can be tested with the following VisualPQL functions:-
  - num = MISNUM(varname) Returns the missing value code. If the variable exists (is not missing), then num is set to missing.
  - str = MISS(rtnum,varname_str,n) Returns the value (as a string) of the first, second or third (n=1,2 or3) missing value for a variable

TIPS & TRICKS

- num = MISSING (varname) / str = MISSING(varname) (Use numeric result variables for numeric variables, string result variables for string variables) Returns the original value of a variable if it is missing, otherwise num or str is set to missing. Note that missing value blank returns missing regardless of variable type.
- num = EXISTS(varname) Returns 1 if the variable is not missing, 0 if it is missing.
- num = CNT(varname1, varname2,....varnamen) Returns count of number of values of variables in list (up to 128) that exist.
- num = CNTR(varname) Returns a count of number of records or rows where the variable value exists (not missing) during a PROCESS block.

Specifically, what about MISSING VALUE BLANK ?

Because the syntax of the MISSING VALUES command allows a variable list in the format VAR1 to VAR99, it is often used to set all variables of all types in the record to missing value blank. The key feature that this applies to is batch data input where data is laid out in fixed columns.

If a record is added through batch data input and the columns for a given field are blank, then:

- If it is a numeric variable which does not have blank as missing value, it defaults to zero.
- If it is a numeric variable which does have blank defined as a missing value, it is set to missing value 1 (assuming no other missing values defined).
- If it is a character variable which does not have blank as missing value, it defaults to a zero length string. Note that VisualPQL can set a variable to all blanks with a non-zero length, so the length of a blank string is not necessarily zero. Blanks can be removed with the TRIM functions.
- If it is a character variable which does have blank as missing value, it is set to missing value 1 (assuming no other missing values defined). Note that in this case the length (LEN) function returns missing rather than zero.

In VisualPQL, you cannot COMPUTE x = BLANK or COMPUTE x = '' if x is a numeric field, so how do you assign the blank missing value?

The SET command allows keywords (BLANK, MISSING, NMISSING, SMISSING) to assign the blank and undefined missing values specifically to variables.

Can you test variables which have a missing value?

Use the EXIST function to test whether a variable is missing. Be very careful when testing the value directly because any logical test which uses a variable which has a missing value, returns false. e.g. (if GENDER is missing)

```
IFTHEN (GENDER EQ 1)
   ...(False)
ELSE
   ...(True)
END IF

IFTHEN (GENDER NE 1)
   ...(False)
ELSE
   ...(True)
END IF
```

Tony Reardon

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