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Editorial

It's been a long time coming but here, finally, is the second issue of Reporter for 2001. And the great news is **SIR 2002 is available!** See Tony's article for a feast of new features including some late additions like being able to change the dimensions of an array dynamically.

It's been a busy year for everyone connected with SIR – with lots of development, testing and bug-fixing on SIR 2002. The User Group committee has also been busy organising the international SIR users conference in Bath and making plans for the next UK conference in Aberdeen. Lisa Zaninetti has been especially productive - she is expecting her first baby at any moment!

If you missed the Bath conference you can read all about it in this issue – and we hope that it will tempt you to come to the next conference which will be on 19-21 June 2002 in Aberdeen.

Thanks as always go to our diligent contributors – Tony, Mick and Dave in particular.

Finally, on behalf of the UK Users Committee, may I wish you all the very best for the Yuletide season and a very happy and prosperous 2002.

Kathy Brooks
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SIR is at <http://www.sir.com.au>
UK SIR Users Group is at <http://www.soton.ac.uk/~sug>

Note from the Chair

Following the AGM at yet another successful International Conference, I have again been elected Chair by the committee so you will have to put up with my comments for another year at least. Randy Banks continues as treasurer and Mick Staley is secretary.

SIR is going through a period of extreme change (for the better) at the moment. Many of you will have converted to SIR2000 and seen the many benefits it has to offer, well SIR2002 will actually be available for PC by the time you read this. It has some very interesting and useful new features like the dialog painter, secondary indexing and pql forms.

If you want to become more familiar with these new features, make a date in your diaries for the 19th to 21st June 2002 because, as you will see elsewhere in this issue, these are the dates of the next UK Conference to be held in Aberdeen (in the land of the midnight sun - well at that time of the year anyway). There will be plenty of opportunity for training in SIR2002's new features as well as training for beginner users in all aspects of SIR. The training will be followed by a conference of user papers.

Whilst writing may I take the opportunity to wish Mo Reardon (MD of SIR inc) a speedy recovery from a very nasty broken leg, which she hopes will be fully healed by the time of the conference in June.

Dave Doulton

UK Conference 2002 Aberdeen June 19 - 21

Come to Aberdeen and experience Midsummer in the most northerly UK university city. Discover the delights of SIR training and a conference in a place where the sun only sets for a few hours and it barely gets dark. Sample a Scottish welcome second to none at the Atholl hotel, the best traditional hotel in Aberdeen (find out more about it at <http://www.atholl-aberdeen.co.uk/>). There will

be expert training for both beginners and advanced users in SIR2002 as well as an entertaining and highly informative conference. An occasion not to be missed!

Costs have been kept to a minimum and the price is the same as for the very successful Colchester Training and Conference held in June 1999.

Residential: £440
Non-residential: £330

There will be a 10% discount for early booking

Draft programme:

Wednesday 19 th June (pm)	Introductory and Advanced Training
Thursday 20 th June	Introductory and Advanced Training
Friday 21 st June	SIR Users Conference

Latest programme details and a booking form will be available at the User Group website at <http://www.soton.ac.uk/~sug>.

SIR2002

We have finished beta testing, fixed everything and **SIR2002** is now available. This release offers lots of new and interesting features:

- SIR2002 supports **secondary indexes** on database records. These can be on case structured or caseless databases and operate across any case structure. From the user perspective, they work in an identical fashion to tabfile secondary indexes and provide an alternative way for VisualPQL to access database records. An index can use multiple variables as keys, there may be multiple indexes on a record type and indexes can be defined as allowing duplicate values or not. Indexes are maintained automatically and values from any existing records are loaded when an index is initialised.
- SIR2002 offers an alternative to **FORMS** and its old text style screens, with a set of new commands and structures referred to as **PQLForms**. These allow you to create data entry and inquiry dialogs using all the graphical user interface features, which are similar in functionality (though not in appearance) to the old Forms screens. The system creates dialogs with sets of buttons to

allow the user to browse records and to update the database. A new `FORM` program type (instead of `RETRIEVAL` or `PROGRAM`) allows all standard PQL together with new commands specifically to define screens and the various elements, which comprise these. PQLForms can be saved as compiled executables or can be saved as sub-routines and used as components in a large form or other retrieval.

- SIR2002 includes a graphical **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. The painter displays how a dialog will eventually look and lets you select elements or groups of elements and move these around on the screen. The overall size of the dialog is maintained to accommodate all the dialog elements. The elements can also be viewed and manipulated as a list if this is more convenient. The screen painter also lets the user design the new PQLForms specifying the various fields and other graphical elements such as buttons, which make up the form's appearance. The fields on a form can be local, record or row variables and appropriate choices made as to how these are displayed and any logic that is required.
- SIR2002 replaces the SIR2000 third party spreadsheet with a new graphical **Grid** control which is available on all supported platforms. The grid displays very quickly and removes constraints on the size of database or spreadsheet that can be displayed. There is also a new `GRID` VisualPQL command which allows the display of arrays of data and retrieval of any data entered by the user.
- The limitation in a VisualPQL routine on the total size of **constant strings** has been removed. A routine can now have a maximum of 4096 local constants and these can be of any size or type.
- The maximum size for **string variables** in a database record or VisualPQL has been increased from 254 to 4094.
- SIR2002 **compresses database records** as they are written to disk. This is particularly to handle strings more efficiently.
- The new VisualPQL command **REDEFINE ARRAY array_name (dim1,dim2,...)** allows a program/retrieval to alter the number of array dimensions and the size of dimensions dynamically. This might be used if a routine is using arrays to store lists from database or tabfile records for display in the new GRID control or in a dialog list, and the number of records is not known.

- The new **CREATE PROCFILE** command creates a new procedure file without having to create a complete new database.
- In a record schema, a key may be defined as **Auto Increment**. If the key is then not assigned when the record is created, it is automatically assigned a value one greater than the value in the previous record. If it is a case structured database, the increment is from the previous record of that type in that case.
- The new VisualPQL **LOOKUP** command checks the existence of specific database records or table rows and can optionally return data from them.
- There is a new **HELP** message type which provides a floating question mark where the users can click '?' at the top of a dialog box, and then click the item they want information about. This is supported in all dialogs and is used for help in the new PQLForms commands.
- The SIRSQL server in SIR2002 supports **parameterised queries**. This means that the SQL command is sent with '?' in some places and these values are supplied later which is how a number of third party product features operate e.g. linking tables in MS Access.
- There are a very large number of new VisualPQL functions, in particular a complete set of **schema functions for tabfiles**.

Please try SIR2002 for yourselves - you can download it from the SIR web site. All existing maintained SIR2000 licenses will continue to work. Note that you *must* export/import any databases when going between SIR2002 and any other version of SIR. Database compression and other new features mean that the physical database files are not compatible across versions.

Tony Reardon
SIR Pty Ltd

Review of International Conference on June 20-22, 2001 in Bath

Arrived in Bath by train from London, the earlier "Intercity Sizzler" breakfast a fading memory and a dim digestive ache. Taxi to the hotel, strolling around in pursuit of the SIR Conference. Ah, yes. Registration. Another Conference, another piece of cardboard to pin to my jacket, reminding me of who I am. Tea and bickies. Decline lunch – seems blasphemy so soon after the "Intercity Sizzler" sliding down gullet.

The Conference started after lunch on the Wednesday. First off was **John Lemon** with "**From ICE to vPQL**", a review of SIR Conferences of the past to the present day, with particular regard to the mix of papers as revealing the progressive preoccupations of the Users. The mid-1990s, for instance, had seen great expressions of interest in GUI and ODBC.

The next slot was an overview by **Tony Reardon** of the forthcoming release **SIR2002**, which was currently being beta-tested. The new features included secondary indexing, SIR Spreadsheet, new pull-down menus, Dialog Painter, PQLForms, and more. The Dialog Painter, first spoken of at the Conference in Colchester last year, was the item which caught the eye of this reviewer. I have always found building a dialog in SIR2000 to be somewhat awkward, due to having to supply screen co-ordinates; when used to screen painting in Visual Basic, for instance, it seemed long-winded, and thus the provision of a Dialog Painter is particularly welcome. This overview of SIR2002 was extremely interesting. There was so much to be covered that the session was extended beyond the tea-break, pushing the subsequent papers and the end of the first day back by more than an hour. Having started so late in the day, who would have been churlish enough to quibble?

Tom Shriver's presentation, the aptly-named "**Black Box PQL with an End User Front End**", was a method of generating simple but repetitive PQL as routines, enabling the user to generate a simple program with a few parameters. Such generation of simple enquiries, extended perhaps to routine database retrievals, are becoming more commonplace in all packages.

"**The Seven-Minute Solution – Graphics Output from a Text Database**" was presented by **David de Leeuw** from the Ben-Gurion University, Israel. All examinations (in both English and Hebrew) at the University are generated from SIR databases, and this was an account of the development and application of a method of including graphics in the databases. HTML output was produced.

Tom Shriver was back for the final paper of the day: "**Test Driving the 2002 Model of SIR**", a nice complement to Tony Reardon's presentation earlier in the afternoon. Tom gave us an account of his beta-testing experience so far with SIR2002, which of the new features he had used, what he liked the most, and more. His enthusiasm for the new version came over readily.

After dinner there was a tour of Bath. Your reviewer had a touch of the vapours and thus pleaded indisposition. However, all who went on

this walk enjoyed it immensely, though it was agreed that the 'Ghost Walk' wasn't a patch on that of Edinburgh. Astoundingly, the party discovered a ghost pub where, amazingly enough, it was so much like the real thing that only the most discerning of imbibers could see through the spirits. Vapours of a different kind to those that haunted me at the hotel, doubtless.

Thursday was scheduled as a **Training Day**, with sessions covering aspects of SIR2002, as well as Tips & Tricks. Well, the day dawned bright and invigorating – always helpful when planning to tramp up intellectual peaks and along cerebral valleys - and we launched straight into a session on **PQL Forms** given by **Tony Reardon** and **David Baxter**. This is a major new feature of SIR2002. The functionality of the old Forms is retained, and considerably enhanced by allowing the user to view and update records through the use of dialogs. Navigation is facilitated through sets of records, and a simple way is provided to create programs for the inputting of records. This session was aimed at exploring PQLForms from the vantage point of a developer, discussing the new commands themselves in some detail and detailing how standard PQL might be used as part of a form.

This was followed by a **Tips & Tricks** session from **Bernie Enlander**, of Forvus. It is several years since Bernie last gave a paper at a SIR Conference, and his appearance was very well received. Topics covered included increasing the error/warning limit in Session Options, escaping to DOS in SIR2000, Designer Icons on Tool Bar the Menu, general GUI commands, SIR output using HTML, and more. Delivered with flair, this was a lively session.

After a coffee break, we had another Tips & Tricks session, this time from **David Baxter**, concentrating on **Edit Buffers**. We were shown how to use edit buffers for passing information between programs and/or SIR sessions; how to use indexes of them; and how to use buffers as an alternative to arrays. Like all the training sessions at the Conference, this was popular and absorbing. This segued into another training session, this time on "**Using the Painter for Dialog and Forms Development**", given by **Tony** and **David**. The new screen painter is a way of laying out the visual components of the dialog and creating the various logical components. We were shown how to invoke the painter, lay out the dialog, attach code to the appropriate controls, lay each dialog on to the form, and to specify and attach logic to be executed in the course of processing each record.

The **Annual General Meeting** of the SIR UK User Group followed (documented elsewhere in this issue of Reporter), after which we broke for

lunch. The first presentation of the afternoon was from **David de Leeuw**, who had spoken the previous day. This presentation was entitled "**From Item to Information – SIR Databases in the School of Medicine**". David described how SIR has played an active role in the School for over twenty years, uses ranging from examination question repository to statistical analysis of exam results and student achievement. After running in Hebrew for many years, it became necessary to enhance the systems so that there would be parallel running in English. The stability and flexibility of SIR not only across the years, but also in meeting this particular challenge with ease, was described.

Next was another training session, "**Advanced Dialog Design**", given by **Tony** and **David**. Most of us are familiar to some degree with the use of menus and dialogs in SIR2000; indeed, the user interface was constructed using Visual PQL menus and dialogs. This session covered the ground from the developer's point of view, and included the use of multiple dialogs, considerations of dialog design; integration with standard PQL; commonly used dialog functions; and some tips and tricks for communicating between different routines. This was an intensive session, but extremely thought provoking.

Following this was a presentation from **Niels Veldhuijzen**, of CITO, Holland, who preceded it with rather a heart-breaking tale. He had forwarded an abstract to us on using SIR APIs with Fortran, since it had seemed to him promising at first glance. However, subsequent work showed that there was nothing in this idea, and Niels declined to waste our time and his pretending that there was. Instead he had something else. Unfortunately your reviewer was called away on urgent business, so never did get to hear the alternative, which I gather was a treasury of **Tips and Tricks** garnered across the years.

After a tea break, we had another training session from **Dave** and **Tony**, this time "**ODBC and SIRSQL Server**". This gave us an overview of their range and uses, the use of Access to read data from a SIR database; the limitations of ODBC throughout the industry (not as flexible as the original conception); and a question and answer session. The incorporation of ODBC into SIR was a landmark achievement. I had the impression from the question and answer session, though, that not many people present had used the ODBC function in SIR, it being perhaps seen as rather an arcane subject.

A presentation followed from **Dave Doulton**, Chairman of the User Group and denizen of Southampton University, on "**Email Merging Using SIR2000**". Dave demonstrated a system which was a conceptually a recognisable mail merge, but in email terms. Dave showed us how

to use SIR to create messages that were tailored to the recipient and then sent by email to the targets. This was a well-presented session. It was followed by the ubiquitous **Tom Shriver**, who had in fact up to that point been conducting an alternative training session, aimed at a more basic level, in an adjoining room. This time he gave a presentation on "**DVPainter. An Application Tool for SIR Users**". DVPainter is a tool that has been developed by Tom, as an alternative to the new SIR2002 Screen Painter and PQL Forms functions. It is however programmed entirely in PQL and incorporates the SIR2002 screen painting technologies, and thus can be used as an interface to the SIR2002 functions. This was appealing stuff, incorporating full point-and-click, drag-and-drop screen painting and application development, a multitude of PQL triggers for application control, a spoken help utility (no more of that irksome reading), shared screens with other applications, and lots more. This was the last presentation of the day.

In the evening we had a reception hosted by SIR Pty., followed by the Conference dinner (delicious, as ever), and then the Conference Disco. Being traditionalists by name and traditionalists by nature, it had to have a theme and the theme this time was a Roman Toga Party. The usual criminals declined to dress up for the part. This includes your rebarbative reviewer, ever the black sheep of the User Group Committee for clinging obsessively to his civvies, this time turning down umpteen offers from Janet Dyson of a pair of curtains (one I could have lived with; a pair seemed frankly a little too Vivienne Westwood for my liking). The disco covered the usual range. I am constantly hoping to go to one that doesn't include things like "Come on Arlene", "The Dancing Queen", and others whose titles mercifully escape me; dream on. OK for middle-aged groovers, I expect. But for thrusting dynamos like me, who live out there, on the edge, lapping up the cosmic surf as it wells from the pulsing heart of creation, there should frankly be a bit more Garage or Hip-Hop.

Friday morning opened, as ever, with a paper by **John Lemon**, this time with the no-doubt rhetorical title "**Do you want to strangle Microsoft's Wizards**"? Well, we've always wanted to do barbarous things to those bizarre paper-clips/cats/tubes which pop up at odd times in Word, offering their services. Anyway, John had been asked to look at using Access rather than SIR, and had found using the wizard to be not exactly magic. Access has its uses, but simulating a relational database is not one of them. John entertained us with the trail of disaster liable to be sparked off by letting the wizard have its head, which a user with only a vague notion of Access might be inclined to do.

Randy Banks of Essex University was next, giving us a presentation on "**Just Browsing: Generating HTML Documentation from your Database**". Throughout the computing industry, HTML is becoming ever more widespread. SIR Documentation has of course been on-line for some time now. Although it is HTML based with its consequent richness and diversification, the output of schema and similar information is unfortunately still embedded in the era of the 1970s clackety-clack lineprinter and paper with alternate lines in green. Randy discussed an approach he had developed to output SIR schema and general metadata in HTML format, and then went on to give us a practical demonstration. The presentation was lively and delivered with panache.

After coffee, the presentation "**Implementing and Using the SIRWEB Interface**" was to have been presented by **Adam Bauer** of the Indiana Heart Institute; he could not be here however, and thus it was given by the ever-present Tom Shriver. This was all about using the Common Gateway Interface provided with SIR2000 in order to enhance the user interfaces to SIR databases. It included instruction in installing and making initial calls to a SIR database from an internet web browser, creating common PQL programs for use with database connectivity and the creation of dynamic hyperlinks, and how to use HTML to make our SIR databases more user-friendly and attractive.

The final presentation of the Conference was given by **Adrian Hodgson** of ORC International, and was "**Latest Developments in the Employment Services Database**". This database is of a heroic size, with thousands upon thousands of additional records being sent by the client every month. As well as an astonishing large database, this leads to processing demands of great complexity, and Adrian gave us an insight into some of his more recent projects.

The Conference was to have been closed by Mo Reardon. She could not be here, and thus it was closed by **Kathy Brooks** with a summary of the papers and speaker's gift, and special thanks to those members of the Committee who had worked hard in making this the most successful Conference that most of us can remember.

Michael Staley.

Minutes of 2001 Annual General Meeting

Meeting held Thursday 21st June 2001, 12.30pm, Bath Hilton

Apologies for absence

Mo Reardon, Lisa Zaninetti, Charlie Owen.

Minutes of Previous Meeting

Agreed.

Matters Arising

None.

Chair's Report

We had held an International Conference in June 2001 – this one. There had been two issues of Reporter produced – thanks to Kathy and Fran for this. We had created a website, and we had put back issues of Reporter on there. There had been updates to the current release of SIR2000. Beta testing of SIR2002 was well under way.

Treasurer's Report

Randy gave us all a copy of the statement of account. We have as at June 11th this year £17,015.94 across two accounts. We had carried forward from 1999 £3,400.37 in the current account; in 2000 we had made a profit. For 2001 all our expenses have not yet been charged. We have kept fees etc for the present Conference low, and expect to break even. However, in view of the money we have in the accounts, once again we do not anticipate taking up the annual grant of £3,000 from SIR Pty.

Elections

There were no further nominations. Thus the re-elections set out in the Agenda take effect, and Charlie Owen, Kathy Brooks and Fran Williams are elected as members of the Committee.

Any Other Business

Randy complimented Tony Reardon on being so responsive to requests from users. Tony said that he was always happy to take suggestions on board. He asked that users email him where they have requests or suggestions, and he will look into the feasibility of what has been suggested.

Randy asked about ODBC in SIR2002. Tony said that because of technical problems, ODBC is not included in the beta versions – it would overwrite the ODBC drives linked to the live/current release on users' installations.

Patrick Brown said that he was having a problem using SIR2000 under Windows 2000 on Pentium PCs. It is very variable in terms of running speed. He will keep Tony informed about this.

Michael Staley
Secretary

Frequently Asked Questions

The following are taken with permission from Bernie Enlander's presentation at the Conference in June.

1. Filename = CONSOL

For many though not all procedures the 'FILENAME=' is a required clause. For instance:

write schema rectype = 1 output is to scrolled output window by default

sir file list rectype = 1 no default output; error message 'no filename'

A solution is to use the clause FILENAME=CONSOL as a matter of course. This will display the result of the procedure in the scrolled output buffer.

2. Error Messages

There is a limit to the number of error messages displayed, beyond which they are not listed out. This normally gives symptoms such as:

- *Error message limit reached*
- *Errors in program compilation*
- *Program not executed*

The solution is to increase the error and/or warning limit. This is done via *Settings / Session Options*.

3. Escaping to DOS

In SIR, 'ESCAPE' executes an operating system command. In SIR3.2, this was DOS. Since SIR2000 is a Windows application, this will not work. Therefore we need to use the Windows COMMAND to execute DOS commands.

COMMAND: starts a new copy of the Windows Command Interpreter.

```
COMMAND [[drive:]path] [device] [/E:nnnn] [/U:nnn] [/P] [/MSG] [/LOW] [/Y [/[C]K] command]]
```

where

[drive:]path specifies the directory containing COMMAND.COM

device specifies the device to use for command input and output

/P makes the new Command Interpreter permanent (can't exit)

/MSG stores all error messages in memory (requires /P as well)

/C command executes the specified command and returns

/K command executes the specified command and continues running

Example code:

```
program
. cmd = 'c:\command.com /k' | n.b. make sure
  there is space after .com
. EXECUTE DBMS ['escape"' + cmd + '"']
end program
```

Escape to DOS, copy a file and return to SIR:

```
pql escape 'C:\COMMAND.COM /C COPY RESEND.LAB
RESEND.BAK'
```

4. Designer Icons on Tool Bar in Menu

TBARITEM id, bitmap, tip_text, style

Defines an item on the menu toolbar.

Bitmap is the name of the bitmap file (name.BMP) which contains the image to form the toolbar button.

Tip_text is a string variable or constant that is text displayed when the cursor is on the toolbar button.

Style is an integer variable – 0 for not checkable; 1 for checkable. By 'checkable' we mean that a menu item can be toggled between two states (checked and unchecked) by the CHECK ITEM, UNCHECK ITEM commands and tested by function GETMCHK. When an item is checked, it has a visual indication (button depressed).

TBARITEM bitmap files are:

- size 21 x 21 pixels
- must be BMP type files
- must be placed in the TBBB subdirectory of the SIR2000 directory (e.g. c:\sir2000\tbbb)

You can use a package such as Paint Shop Pro (Image/Resize option) to produce them.

```
TBARITEM rabbit, 'rabbit', 'Tory Leader', 0
```

Michael Staley

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