The Newsletter for SIR UK Users

SIR REPORTER

Contents

Editorial

Another rainy day in London today – but maybe the sun will be shining when this hits your desk. But if the sun isn't there to put a smile on your face – how about the prospect of a SIR conference in June in sunny Bath? Why not escape your deskbound duties and spend three days in Bath? Join us for the next International SIR Conference which will take place on 20-22 June – perfect for all you druids celebrating the solstice. If you've been reading Reporter or tried SIR2000 you will know how far SIR has come in the last couple of years – well now is your chance to get training in SIR2000, have a preview of the new version which is just about to go into Beta testing, and learn about other users' experiences and tips and tricks. And it won't wreck your budget – if you book and pay by 1st May it will only cost you £395, and that includes all meals and two nights at the Hilton in the centre of Bath.

There's a draft programme and abstracts inside this issue, and a booking form attached. We have the latest details on the new upcoming release, details of a new SIR consultancy, plus some tips on running SIRMaster and SIRSQLserver as an NT service and the usual section on FAQs.

Thanks go as always to our regular contributors, and special thanks to the new contributors in this issue. Thanks too to our readers – why not send in your own tip or pet hate?

Kathy Brooks
kathy@forvus.co.uk

Why not visit:

SIR at http://www.sir.com.au
UK SIR Users at http://www.soton.ac.uk/~sug

Note from the Chair

Welcome to another year of SIR Reporter. It looks like another interesting year for SIR2000 and its users. The UK User group are organising the International Conference again this year, see elsewhere in this issue for full details. We look forward to seeing as many of you as possible from anywhere in the world (last time there were at least 8 different countries represented) in Bath in June. By then the latest version of SIR2000 should be well in to beta test with some very interesting additions which should make all our lives even easier. Please keep you eyes on the User Group website at

http://www.soton.ac.uk/~sug

for more details of the conference and to place your booking. We are hoping to add some sample pql for downloading from the website - if you have any general purpose pql (i.e. not specific to your particular database) which you would like to share please let me know.

Dave Doulton

Events

2001 International Conference	June 20-22, Bath

International Conference Bath 2001 June 20-22

YES! By popular request, we have relocated the conference from SYDNEY, Australia to BATH, England! Most of our usual attendees to the international conferences had indicated they would be unable to attend unless we held it in the UK, Europe or USA. We hope this news is not too disappointing for anyone who was planning to come to Sydney in April, but most potential delegates were unable to persuade their bosses that Sydney again, so soon, was necessary. They think it will be better to wait a few years before we host an International conference in Australia again.

COMPETITION WINNERS from the Edinburgh conference including Dave Doulton, Kathy Brooks, Tom Shriver, Charlie Owen & Andrew Burnham have the option of SIR paying their conference fees for Bath or saving the prize for the next Australian event. Tony Reardon, David Baxter & Mo Reardon are all planning to attend the Bath conference & hope to see you all there.

BOOK NOW! A booking form is enclosed, and the delegate fee is only £395 if you book *(and pay)* by 1st May 2001. You can register by completing the attached form, or register online at:

http://www.soton.ac.uk/~sug/confbook.html

The Hilton Bath City is situated in the centre of the city, just half a mile from the station and 30 minutes from the airport. The hotel has leisure facilities which include a small indoor pool, sauna, steam room and gym. The conference rooms are air-conditioned, and the hotel boasts four stars. Within walking distance are the Roman Baths with Pump Rooms, the Royal Crescent and the Museum of Costume.

As usual, the conference offers a mix of training, user presentations and presentations from the authors of SIR. As well as the formal training sessions, our team of experienced SIR developers and trainers from around the world will be available to answer users' queries and worries – we have a break-out room dedicated to impromptu training.

Draft Programme

Wednesday 20th June

14.00 – 17.30	Keynote and user papers
19.30	Dinner and tour of Bath

Thursday 21st June

09.00 – 17.30	Training and user papers
19.30	Conference dinner and dance

Friday 22nd June

09.00 – 12.30	User papers and tips and tricks
12.30	Lunch and close

So far we have speakers from the UK, Australia, the USA and the Netherlands. At present we have finalised some papers and training sessions, but we would love to hear from any users who are interested in presenting a paper. Phone Kathy Brooks on +44 (0) 7819 1012 or email her at ***kathy@forvus.co.uk*** if you are interested in presenting a paper.

Updates to the programme will be posted on the User Group site at:

http://www.soton.ac.uk/~sug

Programme so far includes the following presentations. Abstracts and outlines for some of these sessions are included below.

Training Sessions

PQLForms	
ODBC/SIRSQLServer	
Dialog Application Design	Tony Reardon and David Baxter, SIR Pty Ltd
Advanced Dialog Application Design	
SIR2000 Tips and Tricks	Bernie Enlander, Forvus

User Papers

Email merging using SIR2000	Dave Doulton, University of Southampton
Using SIR APIs with Fortran	Niels Veldhuijzen, CITO
Conferences and papers over the years	John Lemon, University of Aberdeen
Black Box PQL with an End User Front End	Tom Shriver, Datavisor
Just Browsing: Generating HTML Documentation from your Database	Randy Banks, ISER
Implementing and Using the SIRWEB Interface	Adam Bauer, Indiana Heart Institute
Do you want to strangle Microsft' swizards ?	John Lemon, University of Aberdeen

Training Sessions

Training sessions and tips and tricks will be presented by a team of the most experienced SIR Users and Trainers in the world. They include:

Tony Reardon and **David Baxter** from SIR Australia	SIR Software developers and international SIR trainers
Bernie Enlander from Forvus, UK	UK training and application development (21 years)
Tom Shriver from DataVisor, USA	USA training and application development (17 years)

As well as the formal training sessions, users will have the opportunity to ask questions and bring their own applications and receive one-to-one help.

Training Sessions

PQLForms

- Explanation, demonstration and tips on using the new PQL based forms generator.

ODBC / SirSQLServer

- writing a pql program to explore odbc data sources
- using Access to read from a SIR database
- retrieving the data
- using odbc tracing to debug
- limitations of odbc

Dialog Application Design

- Designing simple dialogs
- Dialog message logic

Advanced Dialog Application Design

- Writing multiple dialog applications (like the schema screens)
- A little bit of dialog design but more normal PQL
- PQL tips/tricks for passing data between routines
- Some of the new functions

Tony Reardon and David Baxter
SIR Pty Ltd

SIR2000 Tips and Tricks

- Escaping to DOS
- Using 'New' GUI Commands eg Display Infobox etc
- Personalising toolbar icons
- Error messages and problems

Bernie Enlander
Forvus

User Papers' Abstracts

Email merging using SIR2000

This paper will demonstrate a system for the equivalent of a mail merge which produces tailored letters to post but in this instance it will create emails which are individually tailored and sent - by email - to the intended recipients.

Dave Doulton

Black Box PQL with an End User Front End

As no other life experience, PQL programming seems well characterised as "Institutionalised *Deja Vu*". We start a project and soon are nagged by the question, "Didn' t I just write this piece last week?" And then we start hunting for code fragments to cut and paste and we begin fitting the square pegs in the round holes. Been there, done that, again (and again).

This presentation first suggests creating a set of "Black Box" routines (subprocedures) that standardise common database retrieval operations. The Black Box routines retrieve commonly used variables, perform standard computations and encode across-record logic in a consistent manner. These routines are in fact virtual tables, available as readily as any database record type. Once these are in place, the PQL programmer concentrates on task specific database navigation and output procedure specification.

After using Black Box routines for a while, a different sort of *Deja Vu* intrudes with the realisation that we tend to navigate the database in just a few fairly standard ways over and over again (and again). At that point, producing a database specific query and reporting front end for end users is a quite manageable project. Such a front end for the HeartBase database, a product from DataVisor called DVQuery, will be demonstrated.

Tom Shriver

Using SIR APIs with Fortran

Having just completed a Fortran90 module which enables Fortran programmers to use the SIR APIs, Niels will demonstrate a Fortran

(prototypical) "run time engine" which uses a SIR database.

Niels Veldhuijzen

Just Browsing: Generating HTML Documentation from your Database

Although SIR documentation is now HTML based and SIR 2000 contains a cgi interface, the output format of schema information is still rooted in the era of the lineprinter. In this presentation I will discuss a general application to output SIR metadata in HTML format.

Randy Banks

From ICE to vPQL

This paper should have something for SIR users and conference attendees old and new. The changes in the SIR interface, the conference content and the subjects of papers, past and present, will be highlighted along with the promises of new features made and kept. SIR, and the conferences, have changed over the years and by examining the changes over the past 15+ years we can look forward to a brighter future.

John Lemon

Implementing and Using the SIRWEB Interface

The ever-growing Internet has provided us with a common ground on which all users can meet and share data. This vast plane we call Cyberspace gives us the ability to present our “wares” in a user-friendly fashion. Using the latest web browsing technology, we can design the most complex user interfaces the world has ever seen. Now, with the use of the CGI interface provided by SIR, we can make our SIR databases look and act like they never have before.

This presentation will show how to get the most from the CGI interface that is provided with a standard SIR2000 installation. It will begin by demonstrating how to install and make initial calls to a SIR database from an Internet web browser, and it will include examples as used in the HeartBase software package. Further detail will involve creating common PQL programs for use with database connectivity and creation of dynamic hyperlinks and table structures.

The possibilities are endless once we tap into the power of the Internet. With the use of a graphical web browser, the SIR user can present their database in a whole new light. The only prerequisites for using SIRWEB are knowledge of HTML and a working web server. Join in and learn how to make your SIR database come to life on the Internet!

Adam Bauer

Do you want to strangle Microsoft's wizards ?

In order to justify the annual expenditure in effort and money to support SiR I was asked to prove why we shouldn't use Access for all the current SiR projects. Not wishing to try converting the 40+ record types and 3 million plus records to satisfy the budget managers I decided to try it on my small teaching data base; three record types and approximately 500 records. The results were not pleasant !

John Lemon

SIR2000 Development

In the November 2000 issue of Reporter, I detailed the major new features of the next release of SIR2000. To re-iterate briefly, these are:

PQLForms This is a set of extensions to VisualPQL giving a very simple way of creating dialogs and retrievals which replace the old text style forms. 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 the new commands which include:

SCREEN	Begins a set of commands for a screen
PAGE	Defines a page of fields within a screen
FIELD	Defines a field with a label and a set of value labels (as a pull down choice control) where present.
GENERATE	Creates a default set of fields from the schema
CALL SCREEN	Passes control to a different screen

These commands have various clauses allowing specification of the position and appearance and allow the inclusion of standard PQL to perform tests, editing, etc.

Screen Painter This is an interactive visual tool to design dialogs and PQLForms. It lets the user point and click to position fields as required.

Grid Control This replaces the Windows only third party spreadsheet. This is available on all platforms, has essentially no size limitations and displays almost instantly regardless as to the size of the database. This is also usable in PQL with the new `GRID` command.

Database Secondary Indexes These are simple to define and are then maintained automatically by the system. A record type can have multiple secondary indexes and an index can have multiple fields.

ODBC Parameterised Queries These extend the functionality of ODBC for third party products such as Microsoft Access™

There is a further set of new features not previously mentioned including the following:

- The limitation on the total size of constant strings has been removed. A routine can have a maximum of 4096 local variables and these can be of any size or type.
- The maximum string size has been increased to 4094 (strings have a two byte length in the front which accounts for the 4094 limit). This applies to local variables and to database variables. This is a major 'across the board' change and applies to all string handling.
- To allow for efficient processing of strings, database records are now compressed when written to disk. The compression applies to all strings i.e. not just long strings.
- A `CREATE PROCFILE` command (self explanatory)
- A new key field type which is Auto Increment. This key field type, if unassigned on record creation, is set to one greater than the value in the previous last record of that type (in that case).
- A new, improved dialog to help finding specific members or text in members.

We are aiming at getting a first beta version out to interested users during the next couple of months and we expect all of the above features to be in that version, perhaps with some limitations e.g. PQLForms for tabfiles may not be available.

As a final note, we need a name for this version. Our current thoughts are that it may be SIR2000 version 2 or just SIR2002 - suggestions welcomed.

Tony Reardon
SIR Pty Ltd

Training and Consultancy from DataVisor

It was pleasant news we received a month ago from Mo Reardon that our old friend Tom Shriver from America had ventured out on his own. Tom has formed a new company called DataVisor, aimed at providing consulting, training and custom programming services to SIR users.

Tom joined the training group at SIR in 1984 after a decade of teaching sociology and running a research laboratory at DePaul University in Chicago. Within a year, he was Manager of Training and the following year was made Director of both Training and Documentation. Over time, Tom took on additional product design responsibilities, eventually programming the first version of SIR/Easy.

After Mo and Tony Reardon moved the international SIR operations to Australia, Tom stayed on with SIR Americas, the American distributorship in Chicago. There he played a large role in developing HeartBase, a commercial coronary health database distributed by SIR Americas. Tom developed a data entry forms screen painter that has allowed HeartBase to run totally in DBMS with the flexibility of PQL at the core of the data entry system.

What started as a two week HeartBase training visit to St. Vincent Hospital in Indianapolis turned into a six month consulting job, then into six years of permanent employment and finally a lifetime commitment to Diane, whom he married just two years ago. "I realised in those first few months at St. Vincent that there was another whole world of fascinating, non-technical people who could use my help in working with and understanding their data." About a third of Tom's time was spent working with cardiac data managers from other hospitals in the Ascension Health System where he learned of the range of data needs of health care professionals.

Y2K proved problematic at St. Vincent's, where they were still using SIR version 3.2. "Converting our screen painter, the HeartBase utilities and working the bugs out of Master on a six month drop-dead deadline was nerve wracking," rues Tom. "Tony Reardon and David Baxter were absolutely wonderful through the whole ordeal. On occasion, I got multiple DBMS revisions in a single day. We went live on December 28th and never looked back."

"From my earliest days at the University right through this latest endeavour with DataVisor, I've always enjoyed making knowledge accessible through the available tools and concepts," says Tom. Moving away from St. Vincent's was not an easy decision, but the allure of working with a larger audience was too strong.

"I'm a tool maker," says Tom. As he steadily builds his clientele, he has used the extra time available to enhance the screen painter and to develop his newest end user query and reporting tool, called DVQuery, the operation of which he will present at our June Conference in Bath.

The educational bent of Tom's business is readily apparent on a visit to the DataVisor website. Several sample "PQL Program Profiles" are presented, each accompanied by five standard buttons that explain different aspects of the program. One displays the PQL program itself, with just about every line documented and another button shows a sample of the output that the program produces. The database structure on which the program works, including descriptions of the record types, key fields, variables as well as the linkages between tables are explained with another button.

"Visitors are immediately drawn to the little white rabbit," which identifies the "Tricks of the Trade" button, reports Tom. Here, the special programming techniques are explained, obviously drawing on Tom's broad knowledge of SIR and PQL.

You can visit the DataVisor website or email Tom. Better yet, visit with him in person at the Conference this June.

DataVisor, 4303 Short Terrace, Carmel, Indiana, USA 46033
Voice: 317-844-5695
EMail: datavisor@home.com
www: http://members.home.net/datavisor/sir (for general SIR Users)
www: http://members.home.net/datavisor (for HeartBase Users)

Running SIRMaster and/or SIRSQLserver as an NT service

What is an NT Service?

- An NT Service is a program that can be started , stopped , or paused by the NT system. Services can be controlled by the Services manager in the Windows NT control panel.
- Master was not specifically designed to run as a windows NT process. It was written using machine independent code so that it could be recompiled on any system.
- Microsoft has a utility called srvany that allows you to run applications as services.
- Because Master relies on other services there are a few tricks to get this going.

Why would you want to?

- You don't have to log on or be logged on to start master or keep it running. It can be setup so that it starts when the machine is booted.
- You don't have to remember to start master.
- You don't have to leave a machine logged on and possibly unattended.

How to set it up…

This procedure assumes SIR2000 is installed in the directory `c:\sir2000`. *Repeat this procedure using SIRSQLs in place of SIRMaster to install SQL Server as a service.*

1) Get a copy of the SRVANY.exe program from Microsoft and install it.

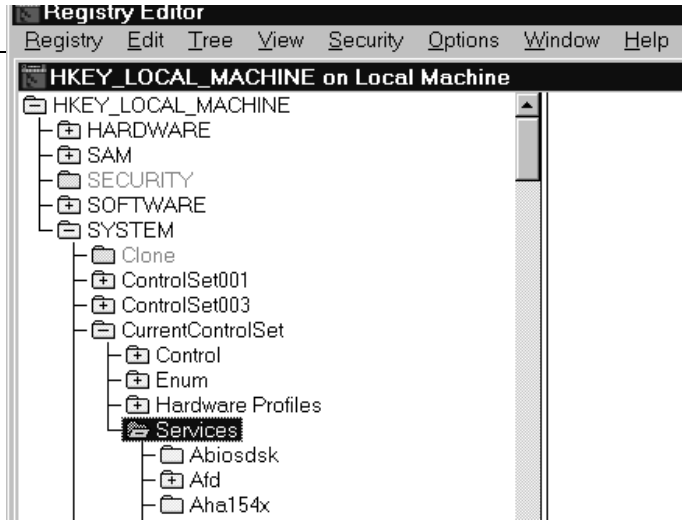
There is a copy of the installation executable here:

`ftp://ftp.microsoft.com/bussys/winnt/winnt-public/reskit/nt40/i386/srvany_x86.exe`

Running this will install the files and documentation.

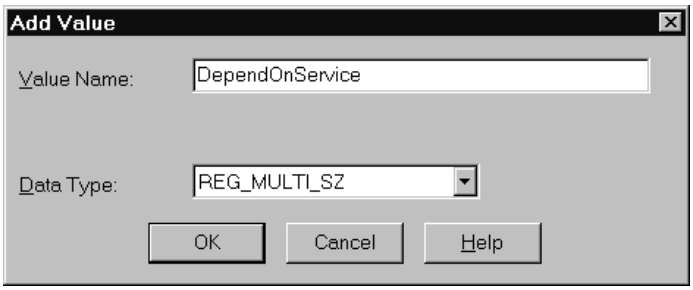
2) Modifying the Registry

- - Run regedt32.exe (from **Start** Run...);
-
- - Under **HKEY_LOCAL_MACHINE on local machine**, go to branch **`System\CurrentControlSet\Services`**

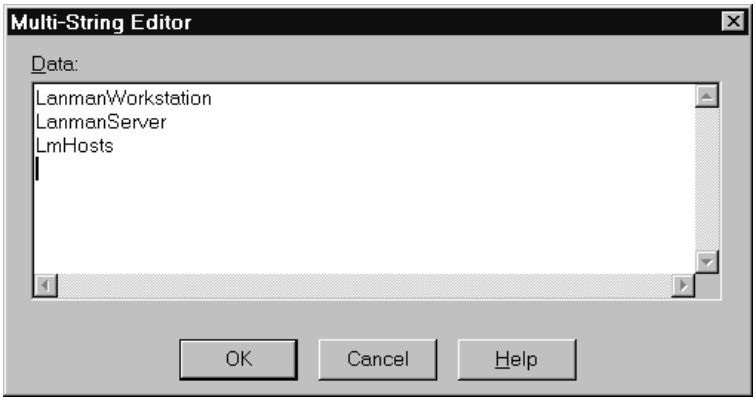


- Use the main menu command Edit / Add Key... to add a key with the name SirMaster (this is just a descriptive name) and ignore class.

- Select SirMaster from the list of folders under services (they're in alphabetic order so you need to scroll down a way) then use the main menu command Edit / Add Value... command to add (note Case is important):
  `Name:` **`DependOnService`**
  `Type:` **`REG_MULTI_SZ`**



- Press OK then and you get another dialog
  `Data:` **`LanmanWorkstation`**
  `LanmanServer`
  `LmHosts`



Note:

If the database and the SIR software are all on this NT machine then you can use:

System Account.

This is a dummy user that has full access to **this** PC but no access to the network.
If the database is not on this PC then you will need log on as the name/password of a user that does have full access to the database files.

- OK this dialog

(this step ensures that the network services are available when master starts)

- Repeat the last step adding:

```
Name: DisplayName
Type: REG_SZ
Data: SirMaster

Name: ImagePath
Type: REG_EXPAND_SZ
Data: c:\winnt\system32\srvany.exe
```

- Use the main menu command Edit / Add Key... to add a key to SirMaster with the name Parameters and ignore class.
- Select Parameters then use the main menu command Edit / Add Value... command to add:

```
Name:  Application
Type:  REG_SZ
Data:  "c:\sir2000\sirmaster.exe"
```

- Exit regedt32 and reboot.

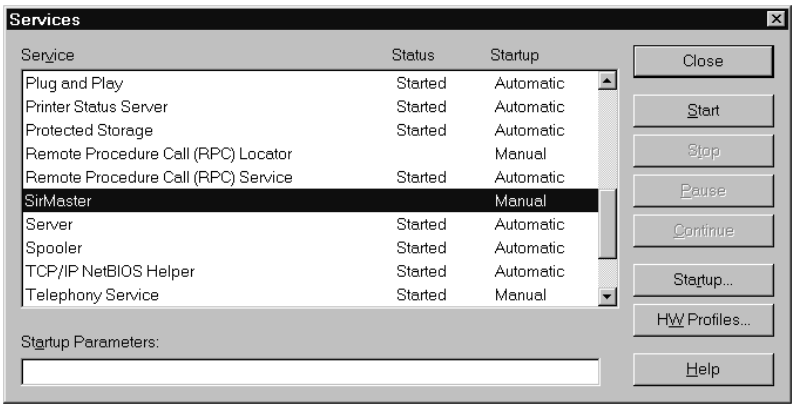
3) Starting the Service.

- Go to Control Panel / Services

Services

- Select SirMaster in the list of Services and press Startup...
- Choose type Automatic if you want master to start when the PC boots (before a user has logged on).

- If you want to test the automatic startup then you will need to reboot (but you don't have to log in - once the log in prompt appears, go to another workstation and try sir mst=...
- If you don't want to test the automatic startup then just press the Start button in the services dialog and master should start.



David Baxter
SIR Pty Ltd

Answer to FAQ

Before reading this see the brain-teaser challenge on page 11.

This is the output produced:

```
Start retrieval translation
Start retrieval execution
e=0
id=3
e=1
id=1
id=1
id=3
e=2
id=2
id=1
id=2
id=3
End retrieval execution
```

Not I expect what you thought - you no doubt expected:

```
Start retrieval translation
Start retrieval execution
e=0
id=1
id=2
id=3
e=1
id=2
id=3
id=4
e=2
id=3
id=4
id=5
End retrieval execution
```

The explanation is that process cases list= only takes constants and variables as list items (not expressions) so the line

```
process cases list=e+1 thru e+3
```

is actually compiled as list = e , +1 thru e , +3 so for example when e =0 we get

```
e=0
```

the list does case 0 - which does not exists so no output; then 1 thru 0 which is backwards loop so no output; then +3 which does exist so we get simply:

```
id=3
```

I believe this is a syntax problem that should not continue as it can give misleading results. Note also that:

```
process case list=1+e thru e+3
```

does not compile as it is parsed as

```
process cases list=1,+e thru e,+3
```

and +e is not a constant or variable. I have suggested to SIR a solution which would also allow expressions to be used in lists. As the current syntax stands expressions are impossible to parse as for example what does:

```
process cases list = x+3 thru y   -7
```

actually mean? (note spaces before -7) As spaces and commas are equivalent is it the same as?

```
process cases list=x+3 thru y-7
```

or

```
process cases list=x+3 thru y,-7
```

or

```
process cases list=x, +3 thru y,-7
```

or

```
process cases list=x, +3 thru y-7
```

The suggestion is to insist on a separator outside [ ] and have expressions in [ ]

so

`list = 1 e -7 thru -10` **is ok**

`list = 1,e,-7 thru -10` **is ok**

`list = 1 e-7 thru -10` **does not compile (no delimiter)**

`list = 1,e-7 thru -10` **does not compile (no delimiter)**

`list = 1 [e-7] thru -10` **is ok**

`list = 1,[e-7] thru -10` **is ok**

`list = 1 [e -7] thru -10` **is ok**

`list = 1,[e,-7] thru -10` **does not compile not valid expression**

If you have any thoughts on this matter please let me or SIR Pty know.

Dave Doulton

Silly Section

History, technology and the way we are.

The US standard railroad gauge (width between the two rails) is 4 feet 8.5 inches. That's an exceedingly odd number. Why was that gauge used? Because that's the way they built them in England, and English expatriates built the US railroads.

Why did the English build them like that? Because the first rail lines were built by the same people who built the pre-railroad tramways, and that's the gauge they used. Why did "they" use that gauge then? Because the people who built the tramways used the same jigs and tools that they used for building wagons, which used that wheel spacing.

Okay! Why did the wagons have that particular odd wheel spacing? Well, if they tried to use any other spacing, the wagon wheels would break on some of the old, long distance roads in England, because that's the spacing of the wheel ruts.

So who built those old rutted roads? The first long distance roads in Europe (and England) were built by Imperial Rome for their legions. The roads have been used ever since. And the ruts in the roads? Roman war chariots first formed the initial ruts, which everyone else had to match for fear of destroying their wagon wheels. Since the chariots were made for (or by) Imperial Rome, they were all alike in the matter of wheel spacing. The United States standard railroad gauge of 4 feet 8.5 inches derives from the original specification for an Imperial Roman war chariot.

Specifications and bureaucracies live forever. So the next time you are handed a specification and wonder what horse's behind came up with it, you may be exactly right, because the Imperial Roman war chariots were made just wide enough to accommodate the back ends of two war horses. Thus, we have the answer to the original question.

Now the twist to the story….

There's an interesting extension to the story about railroad gauges and horses' behinds. When we see a Space Shuttle sitting on its launch pad, there are two big booster rockets attached to the sides of the main fuel tank. These are solid rocket boosters, or SRBs. Thiokol, at their factory in Utah, makes the SRBs. The engineers who designed the SRBs might have preferred to make them a bit fatter, but the SRBs had to be shipped by train from the factory to the launch site. The railroad line from the factory had to run through a tunnel in the mountains. The SRBs had to fit through that tunnel. The tunnel is slightly wider than the railroad track, and the railroad track is about as wide as two horses' behinds.

So, the major design feature of what is arguably the world's most advanced transportation system was determined over two thousand years ago by the width of a Horse's Behind!

Dave Doulton

Frequently Asked Questions

Not so much a FAQ – more of a brain-teaser. Dave Doulton contributed this so think hard…..

If the following pql were run on the company database what output would it produce? (don't run it yet!)

```
retrieval
for e=0,2
write 'e=' e
process cases list=e+1 thru e+3
get vars id
write 'id=' id
end process cases
end for
end retrieval
```

Now run it. Can you explain the results?
(output and explanation on facing page)

TIPS & TRICKS

SIR UK User Group Committee Members 2000/2001

Randy Banks
ISER
University of Essex
Wivenhoe Park
Colchester CO4 3SQ
Tel: 01206 873067
Fax: 01206 873151
email: randy@essex.ac.uk

Kathy Brooks
Forvus
53 Clapham Common
South Side
London SW4 9BX
Tel: 020 7819 1012
Fax: 020 7819 1010
email: kathy@forvus.co.uk

Patrick Brown
Institute of Occupational Medicine
8 Roxburgh Place
Edinburgh EH8 9SU
Tel: 0131 667 5131
Fax: 0131 667 0136
email: Patrick.Brown@iomhq.org.uk

Dave Doulton
University of Southampton
Computing Services
Highfield
Southampton SO17 1BJ
Tel: 023 8059 3541
Fax: 023 8059 3131
email: D.C.Doulton@soton.ac.uk

Adrian Hodgson
ORC International
5th Floor City Point
701 Chester Road
Stretford
Manchester M32 0RW
Tel: 0161 877 6781 (switchboard)
Fax: 0161 872 3997
Email: adrian.hodgson@orc.co.uk

John S. Lemon
Aberdeen University Computing Centre
Edward Wright Building
Dunbar Street
Aberdeen AB24 3QY
Tel: 01224 273350
Fax: 01224 273372
Email: j.s.lemon@abdn.ac.uk

Charlie Owen
Thomas Coram Research Unit
Institute of Education
27 Woburn Square
London WC1H 0AA
Tel: 020 7612 6942
Fax: 020 7612 6927
email: Owen@ioe.ac.uk

Mo Reardon/Tony Reardon
SIR PTY LTD
10 Cliff Street
Milsons Point
NSW 2061,Australia
Tel: wk; 00612 9929 7466 hm 00612 9450 2354
Fax: wk 00612 9929 7498 hm 00612 9475 1430
email: mo@sir.com.au
email: tony@sir.com.au

Michael Staley
Office for National Statistics
1 Drummond Gate
London SW1V 2QQ
Tel: 020 7533 5346
Fax: 020 7533 5300
email: Michael.Staley@ons.gov.uk

Frances Williams
ISER
University of Essex
Wivenhoe Park
Colchester CO4 3SQ
Tel: 01206 873568
Fax: 01206 873151
email: fwill@essex.ac.uk

Lisa Zaninetti
BBC, C307
Woodlands
80 Wood Lane
London W12 0TT
Tel: 020 8743 8000 ext 62871
Fax: 020 8743 0906
email: Lisa.Zaninetti@bbc.co.uk

You can email the whole committee by addressing your message to **sug.comm@essex.ac.uk**