The SAS System for personal computers is ideally suited for providing an easy means of accessing information to end users who are neither familiar with personal computers nor SAS. The Data Base Interrogation System was created to demonstrate how the powerful tools available in PC SAS can be made available to information consumers in a "user friendly" way. WINDOW statements and programmed function keys are used to invoke SAS. This application can become part of a larger information system. The system could point to a printer for hard copy output, a separate program for editing/adding to the data base or a report generator for various types of reports. System expansion can be achieved with more WINDOWs statements and more programmed function keys. Alternatively, the system could be driven under SAS/AF. Users can run the system from the display manager or, for users of PC SAS 6.03, from batch mode.

The Data Base Interrogation System provides users with a friendly means of identifying consultants who have expertise in their area of interest. Data used is the SAS Users Group International (SUGI) Consultants Registry, a file of SAS software consultants and consulting companies who have submitted information regarding their services for display at the SUGI 13 conference. Registry participants were asked to provide an abstract of services provided, significant experience and responses to a checklist of areas of expertise including SAS Institute software, applications and specialties, software interfaces, operating systems and services. Information was entered into a SAS data set via SAS/FSP. The form was reproduced in FSP and all the data was keyed onto the screens. The resultant SAS data set was printed out with FSLETTER.

To find consultants with expertise in base SAS on CMS, users need to select both base SAS in the SAS Institute Software area of expertise and CMS in the Operating System criteria. Direct inquiries of selected experts is required if more than one software product and/or operating system is listed as neither the registry information sheet nor the software correlate expertise in one area with any other area.

Selections are matched via two array statements. One array references the WINDOW input selection criteria and the other the consultant data base. Array items are all possible areas of expertise. Any mark users make by a selection item is matched against the the consultant file. Matches result in the consultant being added to the data base. These matches are then viewed with FSbrowse. The SEND command can then be used to print the data base.

The Data Base Interrogation system is an application of the data step WINDOW statement. The submitted program presents a WINDOW to users listing the five areas of expertise, a HELP screen and DISPLAY SELECTIONS option. An application is selected by holding down the control key and tapping the appropriate function keys. The areas of expertise and help screen are made up of GROUP statements within a second window statement. Selections are made by marking the data input field to the left of the category. More than one category and multiple areas of expertise can be selected for each search. When all selections are completed, DISPLAY SELECTIONS is invoked. Consultants who match the selection criteria are presented to the user with FSbrowse.
This project was partially supported by NIA research grant number AG05681-04 for the Alzheimer's Disease Research Center, Washington University, St. Louis, Missouri, a grant from the Muscular Dystrophy Association and and NIA research grant number AG06815, Hip Fractures--Causes, Risks and Outcomes.

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Print screen of WINDOWS used for selecting search criteria.

REGISTER
Command ==> 

SUGI Consultants Registry
Expertise Selection Criteria
<CTRL> F1 SAS Institute Software
<CTRL> F2 Application/Specialty
<CTRL> F3 Interfaces
<CTRL> F4 Operating Systems
<CTRL> F5 Services
<CTRL> F6 Help
<CTRL> F10 Display Selections

CONSULT
Command ==> 

Select the appropriate category with any character

SAS Institute Software
Base SAS         SAS/OR         SAS/CX
SAS/AF           SAS/QC         SAS/DB2
SAS/DME          SAS/REPLAY-CICS SAS/IML
SAS/ETS           SAS/TERM     SAS/SHARE
SAS/FSP           System 2000 DBMS SAS/SQL-DS
SAS/GRAPH        SAS/STAT      SAS/IMS-DL/I
SAS/C            Other         

You must either enter a value or press ENTER at each field
Select the appropriate category with any character

**Application/Specialty**
- Statistical Quality Control
- Graphics
- Biostatistics
- Applications Development
- Data Base Interfacing
- Macro Facility
- Engineering/Scientific Analysis

You must either enter a value or press ENTER at each field

<table>
<thead>
<tr>
<th>Interfaces</th>
<th>Mark IV</th>
<th>ORACLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS-DL/I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 204</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOCUS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDMS</td>
<td></td>
<td></td>
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<tr>
<td>RAMIS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SQL/DS</td>
<td></td>
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</tr>
<tr>
<td>RS1</td>
<td></td>
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</tr>
<tr>
<td>INQUIRE</td>
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<td></td>
</tr>
<tr>
<td>NOMAD2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DB2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Framework</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DATATRINVE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DATABASE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

You must either enter a value or press ENTER at each field
## Operating Systems

<table>
<thead>
<tr>
<th>OS and VSE</th>
<th>VMS</th>
<th>AOS/VSE</th>
<th>PRIMOS</th>
<th>PC DOS, MS-DOS</th>
<th>Other</th>
</tr>
</thead>
</table>

You must either enter a value or press ENTER at each field.

## Services

- Will install institute software
- Will develop SAS applications
- Contract programming
- Statistical consulting
- Other

You must either enter a value or press ENTER at each field.
Help for using the Data Base Interrogation System

As many items as required can be selected from an area of expertise. More than one area of expertise can be chosen.

Selections can not successfully be made unless the enter key is hit for all items. For example, if there are 15 possible criteria, neither arrow nor tab keys can be used to move to the desired field. The enter key must be hit at each unselected field. Any type of mark is made at the desired item and the enter key is hit. The enter key is again hit for any unselected fields. The WINDOW will then terminate and return users to the Areas of Expertise selection screen.

To halt processing hold down the control key and hit the break key.