Information centers have taken a variety of faces since their creation by IBM in 1976, but services common to most information centers include help-line assistance, training for end users, and responsibility for a variety of special projects. The Upjohn Company, based in Kalamazoo, Michigan, has a number of information centers, each serving a particular user group, often based on division or physical location. Each information center varies in the services offered. The Information Center in the Division of Medical Affairs (DMA) offers a mix of the three services common to most information centers.

Because of the variety of services provided, tracking activity in the DMA Information Center is a formidable task. From the inception of the DMA Information Center four years ago, tracking activity has been viewed as a necessary task, however, in order to provide key people with the information needed to correct problems and, realistically, to justify the existence of the center. This paper will describe the services provided by the DMA Information Center and how the SAS® System is used to track activity in those areas.

**Help-Line Assistance**

Common to most information centers is some central focal point where end users can come for assistance with their computer related problems. The DMA Information Center provides a physical information center where users can call or walk in for assistance or come to use computer equipment or software. Equipment available includes mainframe and minicomputer terminals for the IBM, Hewlett Packard and NBI systems used in the division, as well as personal computers, printers, and plotters. Software, manuals, reference books, and portable computers are also available for users to use in the center or to check out. Most importantly, the DMA Information Center includes a help desk which is manned 10 hours each day, Monday through Friday, by one of the seven computer professionals currently on the staff.

The staff member on duty at the help desk answers calls on the help-line phone and provides assistance to users who walk into the center. As "calls" are received, either over the phone or in person, the staff member on duty fills out a "Help Line Call Form" slip. The staff member puts his or her initials in the space on the call form for receiver, fills in the date and time of the call, the name of the person who called or requested help, the caller's phone number, and a description of the problem.

A copy of the call form follows.

<table>
<thead>
<tr>
<th><strong>Recevier:</strong></th>
<th><strong>Date of Call:</strong></th>
<th><strong>Time of Call:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Who called:</strong></td>
<td><strong>Phone:</strong></td>
<td><strong>System code:</strong></td>
</tr>
<tr>
<td><strong>Request/Problem:</strong></td>
<td><strong>First helper:</strong></td>
<td><strong>Date help started:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Second helper:</strong></td>
<td><strong>Date help started:</strong></td>
</tr>
<tr>
<td><strong>If the problem/request was not resolved immediately after help was started, fill in the date and time of resolution below.</strong></td>
<td><strong>Date of resolution:</strong></td>
<td><strong>Time of resolution:</strong></td>
</tr>
</tbody>
</table>

When the nature of the problem has been determined, a system code letter and application code number are filled in on the call form. The DMA Information Center provides support for virtually all computer related applications used by divisional personnel, and each of the major computer systems used has a code letter designation. The IBM mainframe code is A, the Hewlett Packard minicomputer code is B, the personal computer code is C, and the NBI word processing system code is D. (Codes letters E, F, and Z are used for some other applications not specific to systems A-D.)

Within each system, there are many applications and software packages supported, and each of those is given a number designation. A code sheet is kept at the help desk so that the proper codes can be filled in on the call form. The list of codes is evaluated periodically and revised as needed to reflect current trends and areas of activity.

If the staff member who receives the call is able to answer the question or solve the problem immediately, he or she completes the call form by filling in the spaces for first helper, time
help started, time spent, and action (short description of what was done). Because the DMA Information Center help desk is manned entirely by professionals, questions are answered immediately over 70% of the time.

If a question can't be answered immediately, the call form is held by the receiver of the call or passed on to another person, often another staff member with more expertise in a particular area or a designated support person within the division. Procedures manuals for each of the major systems, coded as above, are kept by the help desk and are often referred to for help in answering a question or to determine the appropriate support person.

If a call requires the help of someone outside of the division, the call form is not forwarded to that person. The call form is kept by the receiver or at the help desk itself until it is determined that the problem is resolved or no longer the concern of the DMA Information Center. For example, when a mainframe printer needs service, the staff member who is first aware of the problem calls IBM, and the call form stays at the help desk until the printer is serviced.

For the times when a second helper is needed, spaces are provided on the call form for recording his or her initials, the date and time help is started, and time spent. If there is a lag between the time that help is started and the time that the problem is actually resolved, there are spaces on the call form for date and time of resolution. If time of resolution is not filled in on the call form, it is assumed that it can be calculated by adding time spent to the last time help was started.

The information contained on the call forms is eventually entered into a mainframe SAS data set using SAS/FSR® PROC FSEDIT with a data entry screen very similar to the call form. When the DMA Information Center was first formed, staff members were responsible for entering the information from their own call forms. Today, a secretary periodically enters the information from the call form into the SAS data set. As a result, staff members are probably better about completing a call form for each call received!

SAS programs are run on the calls data set each month to produce a variety of reports. A graph of help line call totals by system is produced for management. A composite report of all help calls, sorted by system and application, is produced for the staff. Individual listings of problems for various systems and applications are given to the people responsible for the maintenance of those systems. The reports which are produced help staff and divisional personnel to identify recurring problems, to locate reasons for some system problems, and to revise training programs in areas where numerous questions occur.

Ad hoc reports are also produced as needed, Reports on number of calls by unit or by time of day have been useful in the past. Listings of problems for a specific system and application over a given time period are easily produced when needed. The manager of the DMA Information Center recently wrote a program to identify the staff member who took the most help calls and the staff member who "put out the most fires" during the preceding month, and as a result, travelling trophies now move from office to office each month, reminding winning staff members why they felt so tired out the month before! In addition to the standard and ad hoc reports, PROC FSEDIT is used to search the calls data set as needed for information on a particular problem.

Training

In addition to providing help-line assistance, the DMA Information Center has a training room and provides hands-on training for all supported areas in the division where there is no corporate-wide training program to attend. The DMA Training Room has six personal computers and six NBI word processing workstations. All training is task oriented and specific to the needs of DMA personnel.

Every two months, a list of classes being offered is published in the DMA Information Center newsletter. When personnel call the help desk to sign up for the classes they want, their name, phone number, and unit number are added to the appropriate class list or waiting list in a notebook kept at the help desk. When a class is taught, the list of attendees is entered into a SAS data set using PROC FSEDIT. All names are entered in the form of a logonid (first initial, followed by second initial, followed by the first six letters of the last name) for consistency and so that the data set can easily be searched by name. The same convention is used for entering users' names in all other SAS data sets maintained by the DMA Information Center.

The information in the training data set is used in a number of ways. When an individual requests it, a list of all DMA training taken by the individual can be produced. Each month, a report to management includes the total number of classes held that month. At the end of each year, a report is produced showing the total number of users trained in each area.

Special Projects

As pointed out above, each computer system used in the division has a letter designation and each application within a system has a number designation. The DMA Information Center staff provides the expertise for most of the applications used in the division. Outside experts are depended on for help in just a few of the application areas.

Once or twice a year, the staff divides the supported application areas up, assigning a
primary and secondary support person from the DMA Information Center for each. The primary or secondary support person for an area is responsible for handling any questions in that area that cannot be answered by the staff member who receives a help call. The primary support person for an area is also responsible for notifying users of updates, testing new features, developing end user training or revising existing training, investigating new products, and attending corporate or divisional meetings relating to the subject area. Staff members also occasionally take on small programming projects related to their areas of expertise.

The SAS System plays an important part in keeping track of these various special projects which are the responsibility of the DMA Information Center staff. A SAS data set is used to keep track of primary and secondary support assignments for the various application areas; up to date listings are printed periodically and kept in the procedure manuals by the help desk. Another SAS data set is maintained by the manager of the DMA Information Center to record and report all of the staff activity involved in supporting the various areas. Twice a month each staff member meets with the manager to discuss activity and to enter the information (application or project, date of activity, initials of the staff member, time spent, and a brief description) directly into the SAS data set, using PROC FSEDIT. A report of DMA Information Center activity is produced for management each month from this data, and the data can be searched at any time to check on the status of a particular project or activity. Finally, some of the special projects undertaken by staff members involve creating and manipulating SAS data sets for the particular needs of other users in the division.

**Conclusion**

The SAS systems currently in use in the DMA Information Center have been "lifesavers" more than once. They have helped staff members to find the solution to a current problem by searching for a similar problem in the past and to identify trends and causes of system problems. They have helped the center's manager to justify the need for additional manpower, to produce needed reports, and to make upper management aware of the great variety of activity and responsibility undertaken by the DMA Information Center in particular and all information centers in general.

In the future, the DMA Information Center hopes to have a system which combines the data from all of the SAS data sets currently used for tracking calls, training, and staff activity, in order to produce one monthly report for management in one program. Staff members will be devising a way to transfer divisional training data into a corporate-wide training database, and they will continue to help end users to use the SAS system for their needs.

**Acknowledgments**

The systems described above have evolved into their present state over the past four years. In addition to the authors of this paper, credit for some of the ideas and programming is due to past employees of the DMA Information Center: Bill Fitzgerald, Gary Gifford, and Dave Hendrix.

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