Managing Your Phone Calls in a Help Desk Environment
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Abstract

User Services is a division of Computer Services at the University of Central Florida, who provide help desk support. The help desk is available for all software and hardware problems. The help desk handles over 19,000 calls a year with an average of 74 to 100 calls a day. The phone calls are logged in an on-line system called Phonelog. Level 1 support answers the phone and logs all calls as they come in. If the phone call is more technically involved than Level 1's expertise or is too time consuming then it is passed to Level 2. At this time there are 2 full time staff members at each level.

Our current Phonelog was written in REXX® on an IBM 4381 running under IBM VM/CMS® 3 years ago. The current system accesses an IBM SQL/DS® database with over 10,000 entries. Due to the large volume of calls to the help desk, the database continually grows and expands. Over the last year the volume has grown to the point that the old system requires constant maintenance. The following problems have been encountered.

1. Over 10,000 entries in SQL database caused slow retrieval time.
2. No mechanism for locking a record for multiple access.
3. Not user friendly with menus.
4. No on-line reporting facilities.

After discussion with the Help Desk Coordinator, it was decided that SAS® with it's menu driven capabilities, reporting features, and SAS/SHARE® for multiple access, would be the solution to our problem. Another consideration was our impending conversion to a UNIX® base system within the next two years making it imperative that our code be portable to the new platform.

By using SAS/AF® the front end menus were designed and all screens defined to look like the old system. By redesigning the system from a starting point we were able to change some of the limitations of the old system thus making it more efficient in design. We also used pop-up windows to list all software applications, hardware, and location of faculty and staff.

The next step in our conversion process will be to redo the Property database and link it directly to our Phonelog system. This would provide on-line access to the UCF decal numbers, serial numbers, equipment type and warranty information.

Phonelog

The purpose of Phonelog is to keep track of all the phone calls ranging from hardware, software, to network problems in a standard database where reports can be easily generated and maintained with SAS/SCL®.

Pop up menus are selected throughout the Phonelog system so that the Help Desk Specialist can enter the information quickly from the caller. The data that is used in the pop up menus make it easy to do frequency counts or other statistics since the data is consistent among the selection criteria.

Starting Phonelog

Before starting Phonelog, you must be running at least a 6M virtual machine.

To start the Phonelog system, type in phonelog <enter>. The Help Problem Main Screen will appear. It will take a few seconds to load the Phonelog menus and programs.
Help Problem Main Screen

When the Help Problem Main Screen appears (see next page), you are ready to do your transactions. To select the type of transaction you want to do, cursor to the selection box and press enter. The last selection box Quit, terminates the Phonelog system and returns you to CMS, the operating system.

Open New Problem

When selecting Open New from the Help Problem Main Screen, the following menu will appear. Place your cursor on the selection box that is appropriate and press <enter>.

NOTE: Press the F3 key to quit this menu. If the selection box F3 - Quit is selected, it terminates the Phonelog system and returns you to CMS.

Department Type of Call

By selecting Department from the Type of Call menu, the next screen will appear.

The PROBID is a unique problem identification used for counting the number of problems being logged and a search index for the Search Open, Search Closed, and Search All.

The Open Date, Open Time, Close Date, and Close Time are taken of the CMS system time clock. The Open Initiator and Closed Initiator are taken from the User Id that is currently entering in information about the problem.

The Department is a selection list (at this time), meaning that if you place an 'X' and press <enter> at the beginning of the field, a menu pops up, page forward and backward to find the selection, move the cursor to the item and press <enter> on that selection. The description that is selected in the pop up menu will be displayed in the Department field.

The Hardware section contains: PC, IBM4381, AS400, Terminal, Printer, and LAN. These are all selection lists which work like the Department selection list. By moving the cursor to the type of hardware that has a problem and placing an 'X' and press <enter> in the field, the
pop up menu appears. Make your selection and press <enter>. The Equipment Make/Model will contain the description that is selected from the selection list. The cursor is automatically moved to Estimate (it does not have to be selected). Fill in the rest of the Hardware section as needed.

The Software section contains: Word Processing, Spreadsheets and Other. Word Processing and Spreadsheets (not Other) are selection lists which work like the Department and Hardware sections. The Software field will contain the description that is selected from the selection list.

The Miscellaneous section does not contain any selection lists, just place an 'X' in the field if appropriate.

The next screen, Help Problem Screen 2, shows both the Problem Description that the Help Desk Specialist enters in and the Problem Resolution. Depending on the type of problem, the Help Desk Specialist can close the problem if the problem is referred to the Level 2 person, they can enter the Problem Resolution and the remainder of the screens if necessary. Use the function keys to go forward and backward as necessary.

Press F5 to save the problem entry, Press F3 to quit without saving.

The next screen, Help Problem Screen 3, shows the Hardware/Software Labor Charges that the technician enters in as he completes the problem from the Help Problem Screen 2.

The Help Problem Screen 4 is a continuation of the Help Problem Screen 3 screen. This screen gives the totals for all parts, tax on parts, any departmental credit that may be necessary and the total for all charges including the total labor charges.
Personal or Company Type of Call

By selecting Personal or Company from the Type of Call menu, the next screen will appear.

The Personal/Company Type of Call screen is the only screen that is different from the Help Problem Screens that is used for on campus calls. The Help Problem Screen 2 through Help Problem Screen 4 are identical.

Summarizing Dates

After selecting Search Open, Search Closed, or Search All from the main menu, the following screen appears. Type in the appropriate date in the format specified and press <enter>.

If F3 is pressed, it will not run the summary, instead it will return you to the main menu.

The Search Open selection displays only the open problems for that date. The Help Desk Specialist will see all information that was entered in to the Help Problem Screen 1 through Help Problem Screen 4.

Use F7 and F8 to scroll backward and forward from one problem to the next problem. Note: The data that is displayed is a subset of the master data file, if anything is changed in the screens, it will not effect the master data file.

The Search Closed selection displays only the closed problems for that date. The Help Desk Specialist will see all information that was entered in to the Help Problem Screen 1 through Help Problem Screen 4.

The Search All selection displays all open and closed problems for that date. The Help Desk Specialist will see all information that was entered in to the Help Problem Screen 1 through Help Problem Screen 4.

Closing Problems

To close a problem, you must first do the Search Open selection from the Help Problem Main Screen. Scroll through the data screens until the correct PROSID is found. Write down the PROSID number on a piece of paper.

Next, select Close Problem from the Help Problem Main Screen menu and the following screen will appear. Type in the PROSID and press <enter>.
The problem to be closed will appear on the screen and is ready for editing (see Help Problem Screen 1 to 4). Note: the Close date, Close time, and Close Initiator is already entered in.

Use the function key F8 to scroll forward to the Problem Resolution and enter in any appropriate information. Press F8 to scroll forward to the Hardware/Software Labor Charges. Enter in any appropriate information. The Total is automatically calculated based on hours and rate entered. Cursor down to Description for parts charges. Enter in any appropriate information including the price of the part. Press F8 to scroll to Help Problem Screen 4 to complete the charges. The Parts Subtotal is calculated automatically based on the prices for the parts. The Parts Tax is calculated at 6% of the Total Parts Subtotal. Enter in any credit if needed, otherwise it is assumed to be zero. The Total All Charges is automatically calculated.

Press F5 to save the newly edited problem. If F3 is pressed, no changes will be kept.

Conclusions

Additional features that can be added to the existing Phonelog system are informational tools. These tools can consist of:

1. Frequency counts by serial or property number for a specific piece of equipment. This would include the type of problem encountered, the part(s) needed to fix the problem and the charges encurred.

2. Frequency counts on the actual type of hardware that has a problem.

3. Frequency counts on the actual type of software package.

4. Frequency counts on the Miscellaneous categories that are on the Help Problem Screen 1. This would aid the Help Desk Specialist in determining what area needs clarification, like video classes offered or an Instructor based class that is offered through the Help Desk.

5. Generate reports on daily problem requests to see what types of problems are encountered.

6. The database would also keep a history of each piece of equipment, meaning that if a PC or monitor is failing more frequently than it possibly should be. From this database, you could determine if the piece of equipment should be repaired or replaced.

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