

Rapid Help Desk Revitalization

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ABSTRACT

Like many similar institutions, Brown University initially developed its Help Desk using a student staff. As technology became an integral part of the university, the expected level of desktop computing support began to rise. Because these expectations were not met, users became dissatisfied with support services. The number of support calls dropped and many departments began to hire staff to provide desktop computing support.

In July 2002, under new leadership, we began the rapid Help Desk revitalization process, establishing a plan to improve the level of desktop computing support. Our immediate goals were to clarify the means of accessing computer help by making the Help Desk the clearing house for all computing questions, to ensure that 85% of the calls would have a wait time of one minute or less, to escalate fewer problems to level 2, and to provide support to our customers with as little interruption as possible.

With these goals in hand, Brown made a rapid transition from a student staffed Help Desk to a professionally staffed Help Desk, implementing new tools for call-handling and remote assistance and started providing Service on Site (SOS) for faculty, staff and students – all in two months time.

At the nine-month mark, the effect on our campus has been dramatic. We are receiving high praise from our customers. Letters and phone calls let us know the positive impact we are having not just on campus technology but also on the whole campus community. It is still too soon to label our work a success, but we are definitely headed in that direction.

This paper will cover these customer service based improvements:

- The Roll of the Professional Help Desk Specialist
- Change in our hours of operations
- Automatic Call Distribution system
- Remote Desktop access
- Implementing SOS

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1. INTRODUCTION

For years, the Brown Help Desk was run and managed by students. The summer of 2002 saw a change as the Brown Help Desk announced our aggressive move toward a Help Desk that has a professional, full-time staff managing it and providing service during the day. Ellen Waite-Franzen, our Vice President in Computing and Information Services, stated her position in the *George Street Journal*, “as information technology becomes more integral to how people work, professionally-staffed help desks are increasingly common at universities and corporations.” (*George Street Journal* article, Aug 30-Sep 5, 2002, p. 2.)

We put in place a set of ambitious goals. The first was to increase our ability to solve our customers’ computing problems on the first interaction, whether that interaction is a phone call, email to Help@brown.edu, or a walk-in to our HD Front Desk. The second was that our customers who called 863-HELP would wait less than one minute before speaking to a Help Desk Specialist. This would assure that our customers would not get tired of waiting on hold and disconnect. We wanted to capture at least 85% of their calls helping us to realize our third goal, which was to have the Call Abandon Rate less than 15%.

As we moved forward, we evaluated our current Help Desk to determine the strength of our foundation. We identified the three broad areas for improvement, personnel qualifications and training, computer applications, and internal support systems. Specifically, we reviewed our hours of operation, the responsibilities of the professional Help Desk Specialists, our Automatic Call Distribution (ACD) software, and how we supported our customers who did not get first call resolution.

2. PHYSICAL CHANGES

Hours of Operation

To help us meet the goal of providing our customers with the best possible service while striving to make all of our customers satisfied through prompt, courteous, and professional service with as little

interruption as possible, we expanded our service hours to the community.

Our working hours increased to 7:30am to midnight Monday through Thursday, 7:30am to 10:00pm on Friday, noon to 6:00pm on Saturday, and noon to midnight on Sunday. Our professional staff works from 7:30am to 6:30pm Monday through Friday and our student staff work the evening hours Monday through Friday and weekend hours.

Office layout

The Help Desk area was dramatically altered and a new Call Center with six workstations and a bank of computers used in trouble shooting our customers was added. We also added eight cubed work areas for our professional staff members, a new Front Desk to handle walk-in customers, and a two-computer station for helping our customers with network registration and password changes.

3. HELP DESK SPECIALISTS

Staff

We knew that the Help Desk staff would be the key to our success in creating a responsive “world class” Help Desk. No matter how many “State of the Market” tools we provide, we knew it would all come down to the Help Desk Specialist’s ability to correctly use these tools and communicate solutions to the customer. We knew this would require our Help Desk Specialists to have a very specific skill set.

We determined that our professional Help Desk Specialist’s skill set should facilitate their effort to resolve customer issues during the first contact by providing high-level technical assistance and problem solving on a wide variety of computing systems and services via phone, email, web-chat, and personal contact.

We also wanted the Help Desk Specialists to have the ability to diagnose and triage customers computing problems and report these problems through a ticket tracking system. After several extensive and intense searches, we were able to identify and hire HD specialists who possessed a minimum of one year of Help Desk experience and were certified in at least one of the following areas: A+, Certified Netware Engineer (CNE), Microsoft Certified System Engineer (MCSE), and Cisco Certified Network Associate (CCNA).

By having Help Desk Specialists with experience and training, we have greatly increased our ability to resolve our customers issue on the first call. We also have seen a dramatic drop in the time spent in a call with our customers along with a significant decrease in the escalation of trouble tickets to level 2 technicians. Having a high level of expertise in the Call Center and on the phone with our customers has reduced our customers frustration by providing almost immediate resolution, reduced the time per call and reduced the amount of work being forwarded to the next level freeing the second level up to work on the implementation of new systems and products.

Students

The Student Consulting Program (SCP) at Brown University provides computer support for the Brown community. Student responsibilities include the staffing of the Help Desk Call Center, as

well as conducting Service-On-Site appointments with student users. We significantly changed our student’s role in the Brown Help Desk when we decided that our student staff would support our students during the evenings and weekend hours. Initially, it took some of the students some time to adjust. There were fewer hours to work and the hours that were available were only at night and on weekends. Several students left the program because of scheduling conflicts, and needed to be replaced. We integrated our Student Consultant Programs (SPC) with our Lab Consultant Program (LCP) to allow students, increased scheduling flexibility, and several areas to work and gain experience.

The student Lab Consultant Program (LCP) was devised to provide technical support within the computing cluster labs across the Brown campus. The LCP is made up of one professional staff member, three student managers and up to thirty-five student consultants. The purpose of the LCP is two-fold: to monitor computer cluster activity and to provide first-level technical support in three computer cluster areas located in the Rockefeller Library, Sciences Library and CIT.

Even though many students have computers in their dorm rooms, each cluster sees constant traffic throughout the school year. Therefore, our presence in each cluster is essential to computer user support at Brown. While Lab Consultants (LCs) provide basic support and troubleshooting, they may need to refer Help Desk Staff or online documentation. The LCP is the means by which cluster problems are directed in an orderly fashion from cluster users to Brown’s Professional Help Desk.

The Effects on our Community

Jessica Lopez, a veteran of the Brown SCP program, made the transition to a professional staff member and she said, “I have seen some positive changes. The implementation of the Service on Site program has definitely increased customer satisfaction because we can go directly to the user’s office or dorm room. In the past, users had to carry their machines around campus, which put us at a disadvantage in terms of the problems that we could solve (for example, network printing or departmental server issues). Phone hours of availability have also increased to allow community members to call from 7:30 AM through midnight. Though we do not receive many calls in the 7:30 – 8:30 A.M. period, it is comforting for our users to know that they can get help 16.5 hours a day. Finally, I believe that the users are more comfortable knowing that their suggestions are coming from professional staff members. More inquiries are answered on the first phone call and our success rate has greatly improved.”

4. HELP DESK SYSTEMS

Interactive Intelligence

We also decided to upgrade our computer systems to better support our customers. After reviewing our current phone systems and potential help desk systems, we decided to purchase Interactive Intelligence I3 software to fill the requirements of Automatic Call Distribution (ACD), specific workgroup creation, and ongoing meaningful metrics.

We needed to meet certain time constraints, so we contracted with an outside vendor for the installation of the I3 telephone management software. This package runs on a Windows server, and

distributes calls and email to multiple help desk representatives across a number of queues. The previous phone system at the Brown Help Desk had consisted of two queues (Help Desk and Passwords), with a maximum of three simultaneous representatives on the phone. With the I3 Software allowing for 12 simultaneous phone calls to be active, the I3 Software was critical in allowing for expansion of the Help Desk services for the Brown Campus.

In order to access the system, Help Desk representatives run an I3 client at their desktop computer, which interacts with their telephone, allowing for phone pickup from the computer screen. The software allows calls to be placed on hold or transferred to others, and allows others to listen to the call for training purposes.

Customers are routed to the correct queue through a touch-tone telephone menu. Queues are configurable on-the-fly through a management interface. Individual Help Desk representatives can be configured to only take calls in certain queues, even though all customers call the same incoming phone number. On an ongoing basis, the Help Desk uses separate workgroup queues for General Support, Business Applications, and Passwords. Other queues have been set up for special events, such as the support of Brown applicants during admission decisions period.

All email to our help@brown.edu account is routed through the I3 software, allowing Help Desk representatives to read and answer email in real-time along with phone calls. By treating mail equally with phone calls, we avoid the pitfall of waiting for a break in the phone queue to respond, which reduces the likelihood of a timely or adequate response. The email utility also integrates with I3's EFAQ software, a configurable knowledgebase of custom FAQs and documents. By utilizing EFAQ, help desk representatives can query the knowledgebase and obtain pre-written responses to mail, as well as find out answers to problems for which they might not have known the answer.

The I3 software also contains a utility, which allows for the preparation of custom user-configured reports. Useful information available from the software includes data on incoming calls, abandoned calls, incoming mail, average wait, and average call duration. Reports can be generated separately or together by representative or by queue, and at time increments as small as one-half hour. We have placed daily statistical reports on the web to allow the user community to see graphic representations of answered calls, abandoned calls, and average wait to answer. These statistics have allowed the community to see that the newly configured Help Desk is serving them in a timely manner, and encourages users across campus to contact us whenever necessary.

DesktopStreaming

We needed a product that would enable the Brown Help Desk to better support the user community by allowing the Help Desk Specialist to remotely view and control our customer's computer. We found DesktopStreaming to be a secure Web-based screen-sharing application that connects through the Internet. Our Help Desk Specialists use the chat feature in real time with our customers and can quickly escalate to desktop sharing, which features mutual mouse and keyboard control and whiteboard capability.

At any time during a session, the customer can retake control of their computer just by moving the mouse or pausing the session. In other words, our Help Desk Specialist can solve a problem while

our customer watches, or the Help Desk Specialists can offer systematic instructions. This functionality significantly reduces call time by enabling representatives to resolve calls the first time using the hands-on approach.

The technology is application independent and completely web-based, so there is no software to install on end-user machines.

TC1

This past year, student employees working in the Professional Help Desk area started using TC1, a time and attendance software program. In previous years, students were required to inform us of hours worked after the shift. Prior to the implementation of TC1, there was no foolproof way to verify that shifts were worked. The current process, which requires that students 'clock in and out' from their computers at work, prevents erroneous time records from being submitted, resulting in more accuracy within our payroll processing. The student workers find using TC1 easy and informative. The software lets them view hours already worked which enables them to monitor their time and request adjustments be made prior to the payroll deadline dates. In the past, errors were regularly found after paychecks were received. This resulted in many requests to our payroll offices for additional paychecks to compensate for incorrect hours being submitted on payroll reports.

Another feature of TC1 that is used by our area is the scheduling piece of the software. We are able to run reports that alert us to any deviations that may happen in the workweek. This allows us to track shift abuse as well as reward those who sub for others who cannot work a normal shift. TC1 has saved us time and money this year and has improved our ability to provide consistent coverage in the student worked areas.

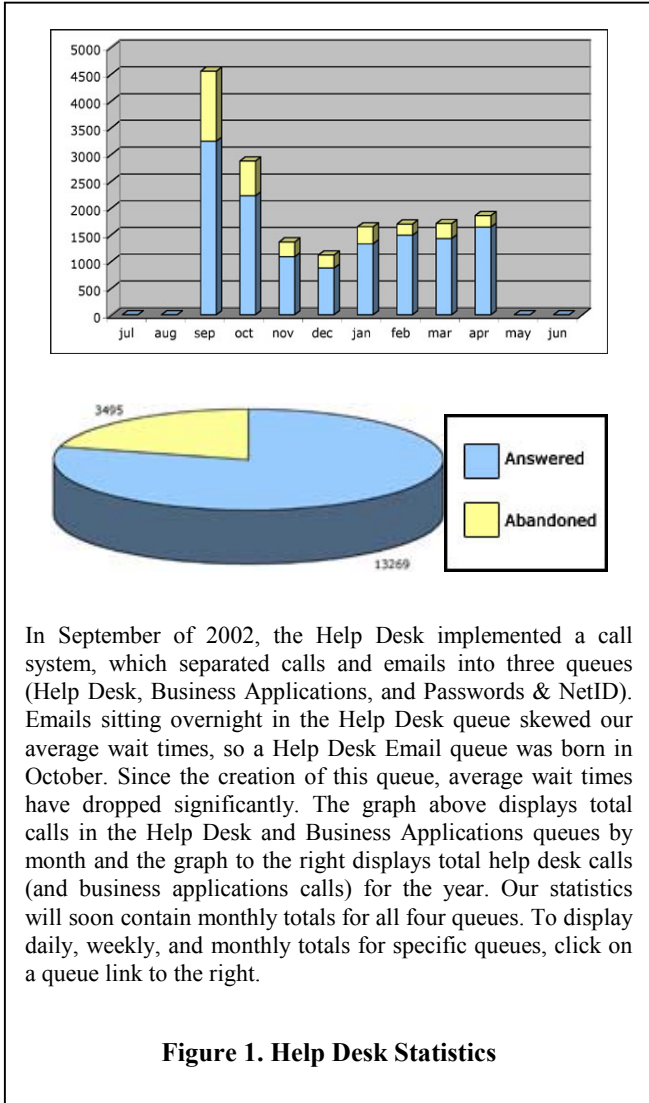
5. SERVICE ON SITE

Beginning last Fall, we also proudly announced a new initiative at Brown called Service on Site or SOS for short. The SOS program provides a high level of technical on-site support to our customers.

SOS is an extension of the Brown Help Desk that sends a technical consultant to our customer if we are unable to resolve the problem over the phone or through a remote access interaction. Our goal was to improve the level of confidence by providing timely technical on-site support enabling our customers to make effective and efficient use of information technologies. During our regular working hours, our professional staff provides support to faculty and staff and during the evening and weekends our student staff provides support to students in their dorms.

Our community is made up of two types departments, those with Departmental Computing Coordinators (DCC) and those without DCCs. DCCs provide various levels of computing support to their home department from desktop help for department specific applications to full-blown system administrators. In these instances, our SOS program works in conjunction and as back up for the DCC.

In the case of our departments without DCCs, our SOS program provided on site desktop support as needed and, as this program grew, we provided help in department moves, which included the packing and setup of their computing environment.



6. WEB STATISTICS

We gathered statistics from our Help Desk software, Interactive Intelligence (I3), and compiled graphs by day, week and month and made them available from our website at www.brown.edu/helpdesk. See figure 1.

Having the Help Desk statistics online has several benefits from both a managerial and public relations standpoint. This tool allows us to track the efficiency and success rate of Help Desk staff and to evaluate the areas of improvement. For example, if the average wait time of the Help Desk queue is consistently over one minute, it might make sense to have more staff members answering the phones during these peak times.

The web project also puts a wealth of information at our fingertips. Not only can we view actual figures for the day, week or month, we can also view graphs for a specific period (daily, weekly, monthly).

The statistics provide a way for the University, its departments, and other information technology institutions to have a visual representation of the Brown Help Desk.

7. CONCLUSION

The rapid transition of the Help Desk was accomplished by having a well-developed plan, internal cooperation, accurate execution, and focused teamwork. By correctly assigning and applying our plan, we were able to create both a sense of urgency and ownership. We modified our physical layout, redefined the Brown Help Desk Specialist, implemented "State of the Market" Help Desk Systems, introduced the Service on Site program, and used Web Stats to track our progress. We all came together to create a very successful transition to a revitalized Help Desk at Brown University.

We now have a method of tracking our busy times and look forward to comparing our statistics from year to year. Having good tools in place and a staff that is enthusiastic and flexible greatly accelerated our progress. At the end of the Fall semester, we were meeting our goals of less than one minute of wait time with less than a 15% abandon rate, and now we are focused on reaching a first call resolution rate of 80%.

One of the most difficult standards to put in place was the one call one ticket procedure. This methodology required our Help Desk Specialists to open a trouble ticket for each interaction. However, the trouble ticket form was not conducive to this method because the majority of the fields were required and we were seldom able to input all the required fields during a call and in the cases of email, the required information was not present. As a result, this procedure was in conflict with our first call resolution effort and therefore not followed. Once this became known, we went through a complete revamping of the Help Desk trouble ticket and produced a new and greatly streamlined trouble ticket that required only the basic information that pertained to our customer's particular problem. Our user's name, and email address, remained required fields, while other fields like phone number, Brown affiliation, system type, RAM, OS, hard drive size, and application name became optional.

With this new trouble ticket and procedure in place, we have started to get statistics that are more complete. We have a long way to go to attain our goals, but now we can measure and focus our efforts in the right areas.

Our rapid Help Desk revitalization has been very successful in terms of convenience to our customers and raising their awareness of our commitment to providing them with excellent service. There is always room to improve and we will always be in the cycle of continuous improvement.

8. ACKNOWLEDGMENTS

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