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Offshore outsourcing of help desk device to the Caribbean

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ABSTRACT

The cost of maintaining a domestic help desk facility is quite expensive. Companies may also have to sacrifice the time of valuable software employees to help maintain these services. Qualified software employees represent a scarce resource and, as a result, many domestic help desk operations are understaffed and overworked. By taking advantage of today's improved communication systems and the economic advantages of foreign labor, it can be shown that outsourcing help desk services to English-speaking Caribbean countries can be a customer friendly, efficient, and economical solution.

INTRODUCTION

Outsourcing computer hardware and services is now a well-established corporate strategy. Over 25% of the Fortune 100 companies outsource some or all of their Information Systems functions (Schreider, 1993). A study by Frost & Sullivan, Inc. estimates that outsourcing revenue was only \$4.6 billion in 1989 but will increase to \$38 billion by 1995 (Diamond, 1993). A survey by Deloitte & Touche found that 20% of chief information officers were outsourcing one or more of their IS functions and that 58% had considered such a move (Hayley & Plewa, 1993). Another article predicts a 25% annual growth rate in outsourcing revenues (Rothfeder, 1989).

The usual approach to outsourcing involves competitive bids with the award resulting in company equipment and staff being absorbed by the winner. This paper discusses a different approach which may be applicable to companies with large help desk operations. By moving these operations to an English-speaking Caribbean site, such as Jamaica, a company will obtain a large savings, free up valuable employees for development work, and realize other — unexpected — benefits.

Many companies have to sacrifice a healthy chunk of their software people to the help desk operation. This group of people represents a scarce resource and as a result many help desk operations are understaffed. There have been many articles written about the sad state of affairs that persons calling the 800 lines are faced with (Amirrezvani, 1986; Flynn, 1986; Elmer-DeWitt, 1986). The lines are busy, persons are put on hold for several minutes, the operator does not understand the problem, etc. This situation is exacerbated by the low morale and high turnover among the staff in this environment.

The number of persons on help desks is increasing rapidly and their interests in participating in professional organizations is evidence of this increase. The 1991 conference of the Help Desk Institute (HDI) attracted about 500 professionals, the 1992 conference attracted 1200 professionals, and the 1993 conference attracted almost 2000 professionals. This is an explosive growth rate.

Membership in HDI rose from 1600 to 2700 in the past year. A member survey discovered that 90% of help desks are experiencing growth in call volume, with average staffing to increase by 50% over the next three years. Most help desk operations were less than five years old.

What is fueling this need for help desk staff is the enormous increase in computing in the United States. There are now at least 50 million personal computers in the country and in 1993 at least 5 million additional computers will be installed. Concurrent with this phenomenon is a rapid increase in the quantity and variety of software that is available. A 1993 catalog of software manufacturers lists over 6,800 companies in the business of publishing applications software (Fisher, 1993).

These rapid increases in number of computers and vendors is coupled with dramatic reductions in price. A recent article by Michael Miller presented the problem. Most software packages are dropping down to the \$100 range, making them affordable by almost anyone with a computer (Miller, 1993). But this also means an increase in the number of calls to the help desk. An informal survey by Mr. Miller caused him to make the following conclusion:

Surprisingly, most software executives I talk to can't answer two simple questions: How many support calls do you get for each unit sold? And how much does each call cost you? Those who can answer the questions give very interesting replies. Numbers range from three calls per unit to one call for every five units, costs from \$20 to \$40 per call. The rule of thumb is that a developer can handle one support call and still break even on a \$99 program. But if the company has to take two or more calls, it loses money.

To explore this problem, we gave a graduate student a \$29 software package to use for a semester. This package had a free help-line for software support. The graduate student was instructed to call the company every time he had the slightest question. (In other words, act like a normal user and never read the manual!) After three months of usage he had logged 18 completed calls with an average duration of almost 10 minutes. But there were numerous problems with this help line. He was frequently put on hold for durations ranging from two to eight minutes. He sometimes was faced with talking to an operator unfamiliar with the product. Sometimes (Gochenouer, 1992) the phone was busy. Sometimes the phone rang but no one answered; on one occasion he let the phone ring for 10 minutes without anyone picking up the line on the other end.

Our experiment demonstrated the poor state of telephone support at this vendor's shop. Just as important is the dilemma of the vendor. We paid \$29 for a package at the retail store. The net profit to the vendor was probably in the \$5-\$10 range. Then the vendor was faced with 18 free calls which may have cost as much as \$40 per call. This is an unacceptable situation but one that can be assuaged by a low cost offshore help desk operation.

The possibility of an offshore help desk was first presented in a paper at the Annual Convention of the Jamaica Institute of Management (Gochenouer, 1992). Some of the expected advantages of a Jamaican help desk included:

- Much lower rates
- English language competence
- Lower turnover. Telemarketing and data entry companies in Jamaica had experienced very low turnover compared to the same positions in the U.S.A.
- Same time zone (versus a country like India)
- Proximity to the U.S. - less than two hours from Miami
- Educational infrastructure - University of West Indies and College of Arts, Sciences, and Technology

This presentation led to discussions between the authors and Systems Alliance, Limited (SAL). SAL is a Jamaican vendor of software support services. The discussions covered both technical and human factors and raised a number of questions:

1. Is the telecommunications link adequate?
 - a. clarity - line noise
 - b. reliability - line failures
 - c. availability - traffic on the line
 - d. service - telephone company support in Jamaica
 - e. cost - 800 line expense in a foreign country
2. Are skilled operators available?
 - a. training requirements
 - b. diction and accent
 - c. cultural differences in expression/vocabulary
 - d. availability
 - e. temperament in a stressful environment

It was decided that the commercial feasibility of an offshore help desk needed to be verified by developing a test system. This experiment involved all of the steps which would be necessary if we were implementing a commercial help desk in a foreign country:

1. Negotiations - AT&T, Jamaica Telephone Company (JTC)
2. Procurement - workstations, software, and telephone equipment
3. Hiring - operators and a supervisor
4. Call tracking - writing software to track calls
5. Promotion - create user awareness of the service
6. Quality control - user satisfaction survey

The actual product was to be a help desk which was manned by two persons from 9-5 (Eastern). The desk answered queries about Lotus 1-2-3 and WordPerfect. The community that was to be supported was the Barry University staff (200 PC users) and students (over 1000 PC users).

After Systems Alliance and Barry University agreed on a distribution of responsibilities, a target date of November 1, 1992 was set for initiation of the service. The service was to continue for three months and then conclude on January 31, 1993.

RECRUITMENT AND TRAINING

A small classified ad was placed in the *Gleaner*, a Kingston newspaper. The salary offered was less than one-third the rate for a comparable position in the United States. The response was unexpectedly large. Almost 120 persons contacted Systems Alliance regarding the part-time positions. All of the persons who were granted an interview were expert on at least one of the two packages and all of the persons were somewhat literate on both packages. This recruiting exercise answered the question regarding availability and training requirements.

Five persons were selected for training. One of the authors, Dr. Gochenouer, went to Jamaica to do the training and to provide exercises for individual study. The results were positive with all persons successfully completing the study.

NEGOTIATION

A satellite link between the United States and Jamaica was set up as a joint venture between AT&T, Cable & Wireless, and JTL prior to the beginning of our experiment. This link produced line clarity and availability at least comparable to domestic lines in the U.S.A. The joint venture was called Jamaica Digiport International, Limited and was located in Montego Bay. During a tour of this facility, it was learned that utilization was 10% of available bandwidth. As a result of this overcapacity, both AT&T and JTL were enthusiastic participants in the help desk experiment. The rate for the 800 line was approximately 26 cents per minute which was competitive with domestic rates.

The negotiations confirmed that high service levels, cooperative telephone companies, and low rates could be expected when setting up a commercial help desk in Jamaica. We were also led to believe that line clarity, availability, and reliability were at least equal to domestic U.S.A. lines. This claim would later be verified through our usage.

PROCUREMENT

Two operators would be available at all times during the day. This required the purchase of two computers, the installation of two phone lines, and the acquisition of two headsets. The computers were equipped with software which allowed the operators to use a "hot key" to flip back and forth between the call tracking program and the software package - WordPerfect or 1-2-3. The call tracking program was written by the authors.

PROMOTION

The following steps were implemented in order to assure a volume of calls:

1. Labels with the 800 number were put on every monitor on campus.
2. Flyers were distributed to staff and students.
3. A notice was put into two issues of the student newspaper.
4. Computer course instructors announced the service to their students.

The service began one week early on October 26, 1992. The first call occurred within minutes after the link was made operational. The quality of the line was so good that the user wanted to come over and talk about the problem. She thought she was talking to someone on the other side of campus and was quite surprised to learn she was talking to someone on the other side of Cuba.

The volume of software calls to the data center at Barry University was two to three per day prior to the Jamaica help line. After the initiation of the help line, calls increased to five per day (to the help line). However, many more calls were needed in order to exercise the facility in a way similar to a commercial operation.

Facsimiles were sent to the other universities in South Florida announcing the availability of this service. The local newspapers, the *Sun Sentinel* and *Miami Herald*, included the 800 line service in their business sections, and an advertisement was placed in a local leaflet called the "Flyer" which was distributed free to South Florida homes.

These additional promotional efforts still did not create the desired volume of calls. Each operator needed to take 15 calls daily in order to simulate a commercial help line, which means 30 total calls per day. The actual call volume was now 8-10 per day, still much less than the targeted number. The volume simulation was finally achieved by having a "saturation day." Students in several classes were asked to call the help line on a specific day and at a specific time. The purpose was to test the reliability and availability of the 800 line as well as the capabilities of the operators in a stressful situation. This was completed successfully with the only complaint being an occasional busy signal.

The experiment which began October 26, 1992 was concluded at the end of the year. When students and faculty left for the Christmas break the calls fell precipitously and all of the research objectives had already been met. Therefore, the experiment ran for nine weeks without a single communications or personnel breakdown.

RESULTS

During the period that the help line was operating, graduate students were enlisted to conduct a follow-up telephone survey. This survey used scales to evaluate the help desk service. The averages for the responses are displayed below on the right. (Not every person answered every question.)

1. What was your level of satisfaction with the helpline?

Very satisfied	1	
Satisfied	2	
Neutral	3	Average 1.172
Dissatisfied	4	
Very Dissatisfied	5	

2. How understandable was the operator's voice?

Very understandable	1	
Understandable	2	
Neutral	3	Average 1.241
Hard to understand	4	
Very hard to understand	5	

3. How clear was the telephone line?

Very clear	1	
Clear	2	
Neutral	3	Average 1.69
Not clear	4	
Very bad	5	

4. Was the length of the call:

Excellent	1	
Good	2	
As expected	3	Average 1.679
Too long	4	
Much too long	5	

5. The competence of the operator was:

Excellent	1	
Good	2	
As expected	3	Average 1.50
Poor	4	
Very poor	5	

6. The problem solution was:

Excellent	1	
Good	2	
As expected	3	Average 1.25
Poor	4	
Very poor	5	

7. The operator's attitude was:
- | | | |
|-------------|---|--------------|
| Excellent | 1 | |
| Good | 2 | |
| As expected | 3 | Average 1.00 |
| Poor | 4 | |
| Very poor | 5 | |
8. Would you use this service again?
- | | | |
|-------|---|--------------|
| Yes | 1 | |
| Maybe | 2 | Average 1.08 |
| No | 3 | |
9. What is your level of computer skill?
- | | | |
|---------------|---|--------------|
| Expert | 1 | |
| Above average | 2 | |
| Average | 3 | Average 2.68 |
| Below average | 4 | |
| Poor | 5 | |

While we would have preferred a survey with more rigor, these results were satisfactory for an initial exploration. The survey respondents were a random sample of 30 persons. The survey only included those persons who were at home during the afternoon or early evening hours. Some of the respondents were part of the group of students who were asked to call the help line to increase the number of calls. The help line operators knew they were involved in an experiment and they represented the best of the 120 persons who answered the ad.

CONCLUSIONS

Despite the flaws in the survey design and instrument, most of the information we were seeking was confirmed to a large extent. First, the concern over cultural differences and methods of speech turned out to be a plus instead of a negative. Comments offered by the respondents to the survey included statements such as "I found the accent to be soothing" and "I became intrigued with the operator's voice and wondered where she was from." It seems that not only was it easy to understand the operator but also that the melodic, soft Jamaican accent tended to diffuse the tension in people who were trying to solve computer problems.

We expected the phone lines to receive near perfect ratings so that the 1.69 average was a disappointment. When we discussed this with the operators we found that they sometimes put users on the speaker phone in order to have both operators working on a user problem. The speaker phone degraded the quality of the connection and that was the reason for results less than our expectations.

The perfect rating for attitude (1.00) was a bit of a surprise and may be due to a "Hawthorne Effect." The operators knew they were part of an experiment. It is hard to imagine 5 operators in

a real world situation all receiving perfect scores from a sample of 30 users. However, there were comments that the operators were "very polite." Jamaica is a member of the British Commonwealth and still has an educational environment much like the British. This environment stresses politeness and formality in relationships and appears to have served the operators well during the test period.

The survey also measured the skill level of the caller. The 2.68 rating means that the average user considered himself to be slightly above average in computer skill.

SUMMARY

Virtually all of the issues and questions associated with establishing a computer help line in Kingston, Jamaica were answered. This experiment allowed us to tentatively make the following conclusions:

- Large numbers of computer-literate persons are available and willing to accept a salary less than a third of the U.S.A. rate for the same skill level.
- The promptness and attendance of the five persons helped confirm the low turnover experience of telemarketers and data entry companies which have outsourced to Jamaica.
- The cultural differences were not an obstacle and in fact may be an advantage. The soothing and melodic accent seemed to diffuse the tension in some of the callers.
- The Digiport facility offers excellent line quality and pricing, with availability and reliability as good as expected with domestic lines.

This points to a solution for those software developers who have a shortage of development people due to the demands of the help line service. It may also be a good solution for corporations with large internal help desks which need to reduce costs or improve service. If a Jamaican partner can cut the cost per employee in half, then a company could offer better service by moving to a 24-hour operation or by putting more people on the phone during the day.

The next step in this exploration would be to set up a beta site with a real help desk operation. A corporate partner is being sought for this purpose. This step would eliminate some of the doubts associated with the artificial work environment we created in our experiment. The beta test is needed to confirm our results.

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