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## **2001 Annual Evaluation Report**

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**April 16, 2001**

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## **I. Introduction**

This report provides ORC Macro's evaluation of the Vermont Telecom Advancement Center's (VTAC) Outreach Project.

Businesses with under twenty employees represent approximately 60% of all registered businesses in Vermont. The primary goal of the VTAC Outreach Project is to build relationships among this small business community, and to serve as an education resource on a broad range of telecommunications issues to small business owners, individual entrepreneurs, educators and non-profit organizations.

The anticipated outcome of VTAC's efforts is stronger viability and increased growth among businesses that have received education in telecommunications technologies and applications through VTAC. It is anticipated that the project will have a positive economic effect on rural areas, creating new employment spawned by the growth and attraction of new small business.

VTAC seeks to accomplish its goals through community meetings and focus groups held in all geographic locations; through its Web site; through Vermont Interactive Television presentations; and through staff interactions with the general public at VTAC's headquarters, located in Champlain College's Information Commons. VTAC also seeks to provide government and legislative officials with a neutral source of information about telecommunications.

This Annual Evaluation Report presents the results of several studies used to evaluate the impact of VTAC programs in the larger community. The studies' methodologies include a comparison of the results from the 1999 and 2001 Awareness Surveys; an analysis of the statistics yielded by automated measures taken on the VTAC Web site; and an analysis of evaluation surveys completed by participants at VTAC's events.

## **A. Overview**

Following is an overview of the organizational structure of the 2001 Annual Report:

The remainder of **Chapter I** provides an executive summary and highlights from the individual sections.

**Chapter II** contains conclusions from the Second Annual Report and provides recommendations for action in the remaining portion of the third year.

**Chapter III** looks at the statistics available on VTAC's Web site. Through this analysis, ORC Macro seeks to inform VTAC about traffic patterns and areas of interest to VTAC's users.

**Chapter IV** contains an analysis of the Program Evaluation surveys filled out by participants in the VTAC VIT presentations. These forms are designed to evaluate participants' satisfaction with the programs and speakers.

**Chapter V** provides an in-depth comparison between the 1999 and 2001 Awareness Surveys. The 2001 Awareness survey was a telephone survey of 400 Vermont small business owners, conducted in February and March of 2001. The intention of the comparison is to measure the growth in awareness of VTAC's programs between 1999 and 2001, as well as presenting the results of a new set of questions added to the 2001 survey.

**Appendix A** provides examples of data collection instruments used in the study, including the Program Evaluation form and the 2001 Awareness Survey instrument.

## **B. Executive Summary**

### **Web Site Analysis**

VTAC's Web Site experienced continued healthy growth during 2000. Over the last two years, there has been an encouraging trend of increasing home page hits. The yearly average of home page hits has increased from 487 during VTAC's inaugural 1998 season to 1,403 in 2000. Overall, home page hits have increased by 77% from 1999.

User sessions have exploded since VTAC's debut in 1998. Today, VTAC averages over 3,700 unique visitors a month compared to 731 in 1999. On average, each visitor views 1.8 pages while on VTAC's site, spending a median of 11 minutes on the site during each visit. Heaviest usage of VTAC's site falls on Tuesdays and Thursdays, indicating that a majority of VTAC's users are business-oriented, rather than casual-weekend Web surfers. VTAC is also attracting a larger number of repeat visitors, although one-time visitors still comprise the lion's share of VTAC's clientele.

Keyword searches are often the prime vehicle for getting visitors to VTAC's Web site. "Vermont," "digital," "analog" and "VTAC" have all been key words for users in locating VTAC's Web site with Google, Yahoo, AltaVista, Lycos, and Microsoft Network. Overall, VTAC's users spent the majority of their time exploring the Home Page, Tutorials, Questions, and Services and Suppliers directories searching for information ranging from "what is VTAC?" to what telecommunication resources are available in Vermont.

Over the last year and a half, increasing numbers of one-time visitors and repeat visitors have accessed the VTAC Web site. The average number of one-time visitors increased 55% from 1999 to 2000. The average number of repeat visitors increased 51% from 1999 to 2000. The bulk of traffic on VTAC's Web site in both 1999 and 2000 was composed of one-time visitors.

## Program Evaluation

Two-thirds of VIT event attendees had never before attended an e-business event (66%). The most successful solicitation method for the seminar was via direct mail pamphlet (38%).

More than half of VTAC seminar attendees are employed full-time (56%). Few attendees indicated that they worked part time (6%). Only 4% were not working at all. Over one-fourth of participants identified themselves as self-employed. When asked what kind of work they did, the largest percentage (42%) classified themselves as owners of the business they were representing. The remaining participants classified themselves as the following: managers (18%), clerical staff (3%), laborers (6%), and other (13%).

Almost two-thirds of program attendees represented corporate or for-profit businesses (63%). The remaining attendees represent the following types of business: "other" (13%), non-profit (13%), government (6%), and educational institute (5%). The most common lines of business for attendees were manufacturing (19%), retail (15%), and "other" (20%). The remaining 54% of attendees identified themselves with "other services" (15%), communications (10%), Internet service (8%), Financial, insurance, real estate (6%), wholesale (4%), commercial service-based businesses (2%), and transportation and constructions businesses (1%).

About three-fourths of participants worked for a small business (a businesses with 100 employees or fewer). Nearly two-thirds of all participants represented businesses that have been in existence for more than six years (61%) while only 12% were affiliated with businesses that could be considered new.

Overall, participants were pleased with VTAC's seminars. Over 90% of participants strongly agreed or agreed with the following statements: *the event was well organized, the speaker was informative, the information was practical*, and the technical information presentation's level was appropriate. Over 70% stated they *strongly agree or agree* that the VIT format allows for effective communication with all who were involved. Participants also seemed satisfied with the value of the VTAC programs. Over 80% of participants strongly agreed or agreed with the following statements: The program was worth their time, provided a good working knowledge of the subject matter, and the information was presented effectively. Sixty-six percent of participants strongly agreed or agreed that the program allowed them to acquire practical skills and knowledge to manage their business affectively and efficiently.

The most common reason participants gave for attending VTAC's seminars was that they want to add or expand an e-business component to their current business (34.1%) or improve their skills (34%). The remaining reasons included a general interest in the topic (14%), preparing to start a business (10%), recommended by their supervisor (5%), or "other reasons" (4%). When asked which potential seminar topics would be interested in attending in the future, respondents chose *using technology effectively in business, advertising on the internet, business-to business e-commerce, and using the internet for e-commerce*. Over 70% of participants stated that it is *extremely likely or very likely* that they would attend another event. The same percentage said they were *extremely likely or very likely* that they would recommend an e-business event to someone else.

Over 90% of the seminar participants found that the speaker's communication skills were *good*, *very good*, or *excellent*. Almost all (97%) attendees found the speakers were knowledgeable about the topic. Most respondents agreed that the presentations held their interest (91%), and that the presentations were well organized (90%). However, of those who expressed an opinion regarding visual aids, only 32% agreed that they were effectively used. Most respondents rated the degree to which the presentation level met the audience needs as *good*, *very good*, or *excellent* (94%).

## **Second Awareness Study Executive Summary**

ORC Macro surveyed 400 small businesses in February and March 2001. The respondents represented a wide-range of industries. Over two-thirds of the respondents represented small businesses with five or fewer employees.

Three out of four small businesses reported Internet access. Most businesses used the Internet for research purposes; only 31% bought merchandise over the Internet, and 23% sold goods or services over the Internet. Less than half of Vermont small businesses had Web sites in 2001 (39%), although they were ahead of the national average (23%). The service industry had the highest Web presence (24%), with the retail industry trailing it at 15%. The primary focus of most Vermont small business Web sites was to provide information (81%). An additional 17% expected to add e-commerce services in the next year.

Two-thirds of Vermont small businesses used e-mail as a part of their everyday business communications (66%). Analog modems were still most popular data transmission vehicles (44%).

Local telephone companies still served as the dominant information source when evaluating telecommunication needs (54%). However, in contrast, only 36% of respondents found them to be a useful resource. No single resource jumped out to respondents as more valuable than another; a quarter of respondents were unable to identify a truly valuable resource (25%).

The SBA/SBDC was the small business assistance agency with the greatest name recognition among Vermont small businesses (69%). VTAC's name recognition held stationary at second place with 16%. A little over half of all respondents had used the SBA/SBDC (52%) since the 1999 Awareness survey, while only 3% had utilized VTAC during the same period. The same percentage had used VTAC's Web site (3%).

Of the 400 respondents that ORC Macro surveyed, only 4% had attended a VTAC-sponsored VIT program. Two percent indicated that they had contacted VTAC in the last year. Neither figure increased since the 1999 study.

## II. Recommendations

After reviewing the 2000 data for VTAC's Outreach Project, ORC Macro sees some positive growth trends for VTAC, such as the growth of VTAC's Web site and success of its VIT programs, and some areas for concern that were identified by the Awareness Survey.

As data from the 2001 Awareness Survey demonstrated, small businesses in Vermont are faced with a wide range of often confusing and conflicting information choices. Respondents had a hard time singling out one information choice that was the most valuable. VTAC has an enormous opportunity to become a "top-of-mind" telecommunication information resource for Vermont's small businesses; when small businesses think "telecommunications resource", VTAC could become the first organization of which they think.

VTAC has struggled in this area. After its 1999 Awareness survey debut with 16% name recognition, VTAC did not improve its name recognition with the 2001 survey. Only 3% of those who recognized VTAC's name had used its services. ORC Macro finds this result troubling. A contributing factor to the lack of growth in name recognition is the alphabet soup of small business organizations in Vermont (VITC, VMEC, SBA, VTAC). VTAC must find some way to distinguish itself from competing organizations.

Based on the success of VTAC's direct mailing campaign for its VIT programs (38% of attendees received notification of the program by direct mail), ORC Macro recommends that VTAC implement a direct-mail marketing campaign to improve small business awareness of VTAC's services. The materials should publicize its Web site in addition to offering respondents the opportunity to be placed on a direct-mail mailing list for program notifications as well as an e-mail list. Sign-ups for the mailing list should be available via phone, traditional mail, and the Web site. This mailing campaign will serve two purposes: improving awareness of VTAC itself and increasing the number of attendees at its programs. Only when Vermont's small business community becomes aware of VTAC will the organization be able to extend its outreach.

Despite the stagnant growth of awareness levels of VTAC as a resource for small businesses in Vermont, VTAC's Web site experienced continued growth in 2000. VTAC redesigned its site in late 2000, making it better-organized and more attractive. Home page hits increased by 77% since 1999. VTAC has continued to attract a larger number of repeat visitors this year; repeat visitors have increased 55% since its inception. Despite this success, VTAC still does not have a good idea of who is actually using this site. Based on information from the 2000 Awareness study, only 3% of Vermont small businesses are accessing the site. ORC Macro recommends that VTAC implement a site registration process in order to obtain a better understanding of who is visiting their site. Also, implementing a site registration would allow VTAC to offer its visitors a personalized experience, targeting the information that is most useful to its visitors. The more thoroughly VTAC can identify its users' needs, the more likely first time visitors are to become regular users.

ORC Macro also recommends that VTAC implement an online newsletter, using an opt-in strategy for those who register for the site; the newsletter could alert users to new features and

special events that might take place on VTAC's Web site, increasing the number of visitors, improving VTAC's Web site brand loyalty. When site visitors are offered a benefit, such as a newsletter, they tend to perceive it as a reward for relinquishing some of their privacy when they furnish site registration information.

The programs that VTAC offered via the VIT format were a resounding success. VTAC participants found the programs to be useful, well-organized and informative. Over 70% of participants indicated that they were likely to attend another event. ORC Macro recommends that VTAC offer future programs in the areas of business-to-business e-commerce techniques, advertising on the Internet, how to use technology more effectively in small businesses and business-to-consumer e-commerce techniques. This is one area in which ORC Macro is pleased to recommend that VTAC continue to follow its present strategies.

ORC Macro realizes that VTAC sponsored more programs than ORC Macro evaluated this year. ORC Macro would like to request that VTAC put ORC Macro on its program mailing list so that project staff can be better informed of the programs that VTAC will be offering in the coming year. By being better informed, ORC Macro can assist VTAC in better evaluating its programs.

### **III. Web Site Analysis Report**

#### **A. Overview**

This report details the results of ORC Macro's evaluation of the Vermont Telecommunications Applications Center's (VTAC) Web site analysis. Web sites commonly use a number of statistical measures to provide a picture of usage. Do the visitors come back after their initial visit? Is the Web site losing traffic because the pages take too long to load? Once a visitor gets to the Web site, how long do they stay and what parts of the site do they access? This type of periodic analysis proves can indicate the health of the Web site, as well as identifying areas for improvement.

ORC Macro conducted its evaluation by analyzing reports provided by Web Trends for VTAC's Web site. Web Trends is a software application that scours the log files maintained on VTAC's Web server for statistical nuggets of information that users provide when they type in VTAC's Web address or click on a hypertext link on a page that links to VTAC. The user's computer automatically sends a message to VTAC's server, requesting information on a particular file. As the server returns the information that the user requested, it also makes a note in the log file, tracking which information was sent, where it was sent, or whether it failed to return the information.

This analysis of VTAC's Web site encompasses three main areas: statistical highlights, traffic and content. The Statistical Highlights section provide a broad overview of activity by looking at number of hits, page views, and user sessions. Traffic analysis examines the flow of visitors, analyzing how long they stay at VTAC's site, whether they are one-time visitors or return frequently, looking for updated content. Content analysis evaluates the type of information for which VTAC's visitors are searching during their visits.

It is important to note that VTAC completed a site redesign in November 2000. In addition, VTAC began running dual domains, VTAC.com and VTAC.org, at approximately the same time. The use of the dual domain system had a minor impact in the site statistics for the last couple of months. Web Trends identified and reported the two domain names as separate Web pages, even though they contained identical information. Because the two Web pages are identical, ORC Macro combined the data. This has a minor effect on the reporting of statistics. For example, if Web Trends reports the top 15 directories and the top two directories are VTAC.com and VTAC.org, they would be combined. This results in Web Trends not reporting the actual 15<sup>th</sup> top directory.

## **B. Average Internet User**

In order to place VTAC's site statistics into perspective, it is helpful to first look at the behavior of the average user. According to Nielsen/NetRatings February 2001 Internet Usage Statistics, the average Internet user completes 30 Internet sessions per month.<sup>1</sup> The average user visits 19 unique sites a month, viewing each page an average of 55 sections per page view. The average Internet user spends approximately one and a half minutes on each site.

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<sup>1</sup> Michael Pastore, [CyberAtlas](http://CyberAtlas), "February 2001 Internet Usage Statistics," downloaded on April 12, 2001 from the Internet at [Cyberatlas.internet.com/big\\_picture/traffic\\_patterns](http://Cyberatlas.internet.com/big_picture/traffic_patterns)

## C. Statistical Highlights

This section provides a broad overview of the activity taking place on VTAC's Web site. ORC Macro sketches this picture by looking at the number of total successful hits, home page hits, number of page views, average number of page views per day, average number of pages viewed per visit and number of user sessions per month.

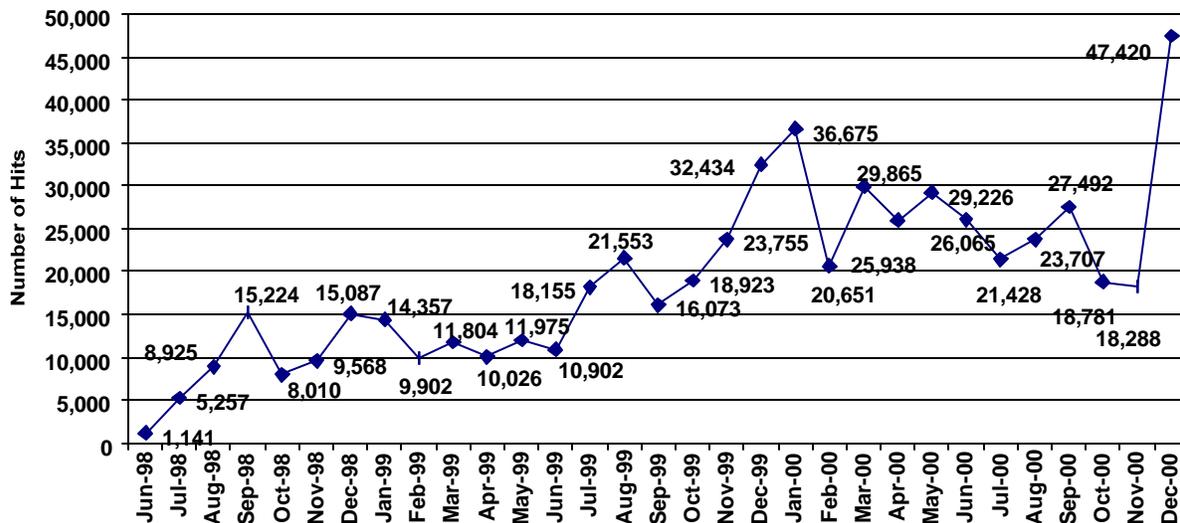
Two of the most common measures of a Web site's effectiveness are "total successful hits" and "home page hits." Total successful hits is the total number of files requested from the server, including graphics, audio/video files, and other supporting files as well as actual HTML pages. Each element of the page, such as a picture or graph, is counted as a "hit." The number of total hits is not indicative of whether the request was successful. Only the number of total *successful* hits will give this information; therefore, we have used total successful hits for this analysis. "Homepage hits" is the number of page views or downloads of the entire VTAC home page.

In 2000, VTAC's visitors requested more information from VTAC's Web server than ever before. In 2000, VTAC's visitors successfully retrieved an average of 27,128 items from VTAC's Web server. This represents a 63% increase over last year's traffic levels. Activity ranged from a low of 18,228 in November 2000 to a high the following month, December 2000, of 47,420.

Figure 1 illustrates the increasing demand for information from VTAC's Web site since VTAC's debut in June of 1998.

Figure 1

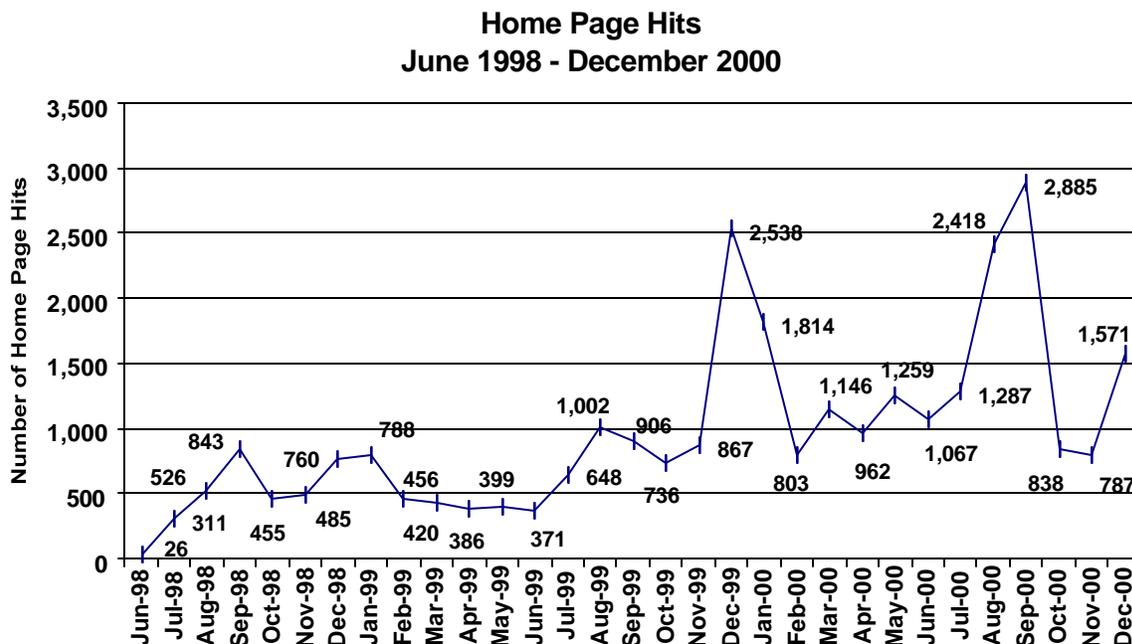
**Total Successful Hits For VTAC Web Site  
June 1998-December 2000**



While the total number of successful hits serves as a good indicator of the general activity on the site, the number of home page hits begins to provide a clear picture of specific areas where the activity is directed. The home page hits represent the total number of page views of the entire home page as a unit. This includes text, graphics, links, etc.

The last two years have seen an encouraging trend of increasing home page hits. The yearly average of home page hits has increased from 487 in the last half of 1998 to 1,403 at the end of 2000. Figure 2 shows that the number of home page hits varied greatly in 2000 from a high of 2,885 in September to a low of 787 in November. Historically, peaks in home page hits have occurred in August and December. These peaks coincide with the start and end of many college semesters and could represent an increased number of students seeking information. Increased August home page hits could also be tied with the promotion of a particular VTAC event taking place during this time period.

Figure 2

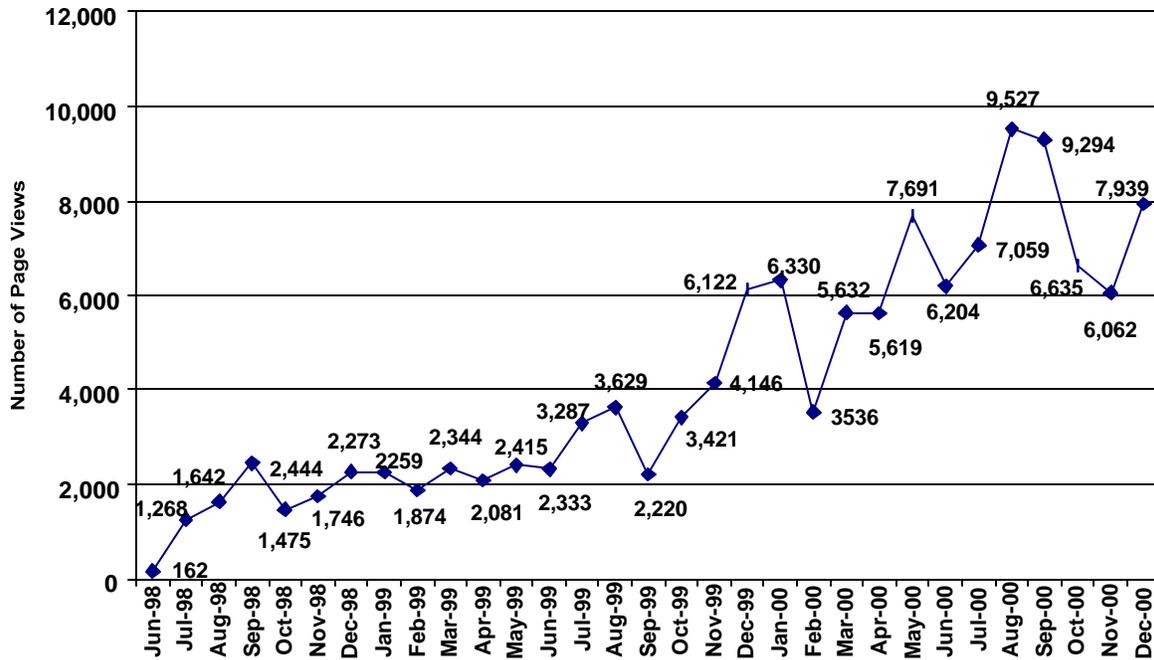


Other statistics used to provide an overall picture of VTAC’s Web site include the number of page views, number of user sessions, the average number of pages viewed per visit and the average number of user sessions per day.

Unlike the number of total hits, page views do not examine text files and images individually; page views count the actual number of whole pages viewed per month. The number of hits is significantly higher than the number of page views, and generally acts as a better indicator of what visitors are actually seeing when they enter the site. In August 2000, VTAC’s Web site reached its highest number of page views to date (9,527). Page views have increased dramatically from VTAC’s first month on the Web, when VTAC recorded only 162 page views. For the year 2000, the median number of page views was 6,482. This number represents a 185% increase over the previous 19-month period combined (see Figure 3).

Figure 3

**Number of Page Views  
June 1998-December 2000**



User sessions indicate the number of unique users who visited the site during a certain time period. This number is generally less than the number of page views. By comparing the number of user sessions to the total number of page views, one can deduce the number of average pages viewed per visit.

VTAC has come a long way since its site rollout in June 1998, when it had a total of seven visitors for the entire month. In 2000, VTAC average 3,748 unique visitors per month. In November 2000, VTAC had its highest number of visitors to date (5,665). November's high was a 64% increase over the previous year's high of 3,458 visitors (see Figure 4).

Examined as a trend over time, the average number of pages viewed per visit has proved inconsistent (see Figure 5). The median number of pages viewed per visit in 2000 (1.8) remained unchanged from 1999; however, it was down slightly from the previous 19-month median of 1.9.<sup>2</sup>

<sup>2</sup> The median figure is used for this set of statistics due to the abnormally high number of pages viewed per session in June 1998 (23.1). Because this was VTAC's Web site's first month in operation, the abnormally high number of page views compared to the low number of unique visitors for that same period (seven) can likely be attributed to VTAC's staff exploring the site to see that all of the links were in place, or checking the site as a quality control measure.

Figure 4

### Number of User Sessions Per Month June 1998-December 2000

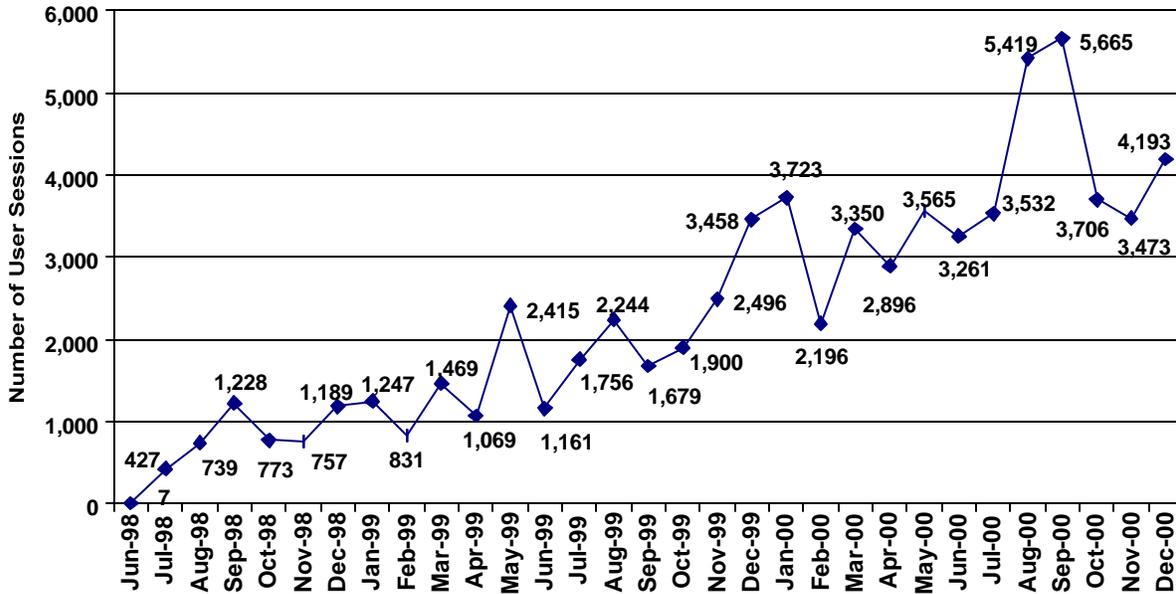
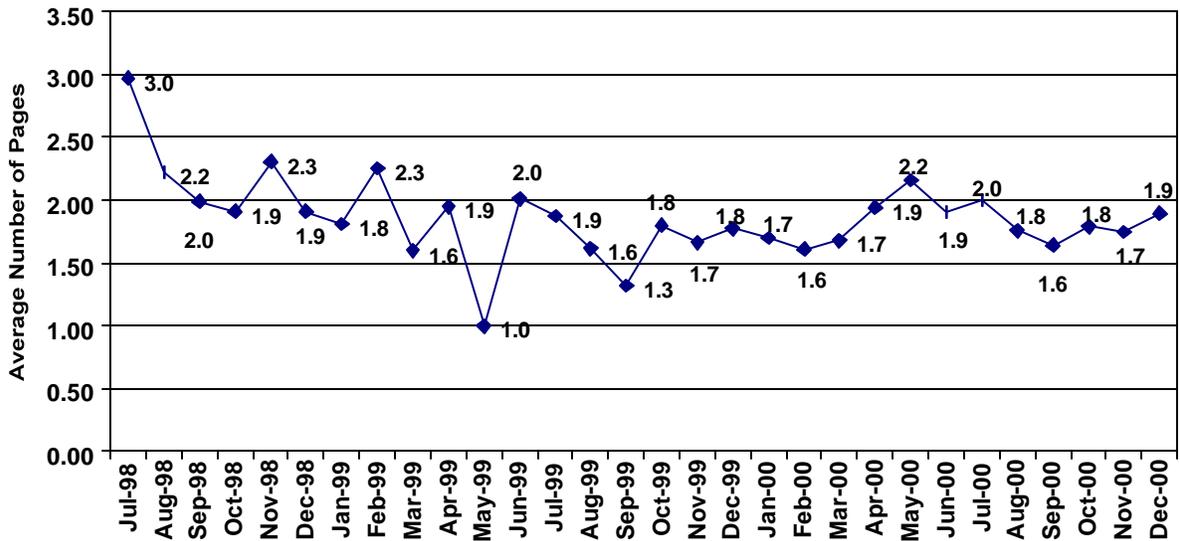


Figure 5

### Average Number of Pages Viewed Per Visit June 1998-December 2000



\*The June 98 data was removed from the graph for display purposes due to the extreme difference between its value and the rest of the data in the chart.

## D. Traffic Analysis

This section analyzes how visitors are using the site based on three areas of analysis: average user session length, number of single-visit users versus return visitors, and an activity summary.

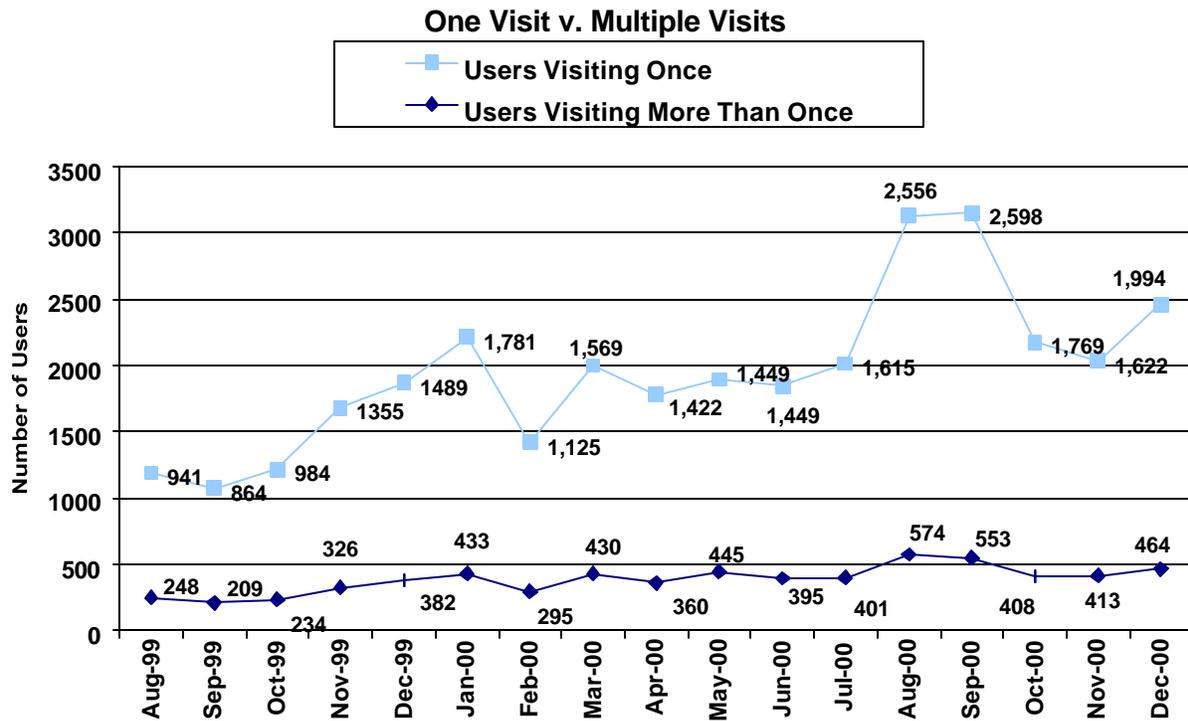
### Single vs. Repeat Visitors

Attracting return visitors is important to a Website's health and longevity. Often, Web site visitors will visit a site only once. A low number of return visitors can be indicative of a number of issues, including stale information, poor design, technical difficulties in accessing the site, lengthy page loading times, poor site organization, and a mismatch between the site contents and the user's search (that is, the site wasn't what they were looking for).

Over the last year and a half, increasing numbers of one-time visitors have accessed the VTAC Web site. In 2000, VTAC averaged 1,746 one-time visitors. This represents a 55% increase over the five-month period between August and December 1999 when Webtrends first began monitoring this statistic. In the last six months of 2000, the average number of one-time users increased 54% from 1,312 to 2,026 users. The number of one-time visitors peaked in August (2,556 one-time visitors) and September (2,598 one-time visitors), before falling to 1,449 in May and June 2000.

Repeat visitor traffic has gradually increased since WebTrends began monitoring this statistic. In August 1999, VTAC recorded 248 repeat visitors. Since that time, VTAC's repeat visitors peaked in August 2000 (574). Repeat visitors began dropping in September but have steadily rebounded since the new site rolled out in November. The traffic flow of repeat visitors has been erratic, cycling between increases and decreases over the last nine months. The August 2000 peak of repeat visitors coincided with an overall increase in site activity. The year 2000 saw an increase of 55% over the previous year. In the last six months of 2000, repeat visitor traffic increased 37% from an average of 342 users in the first six months to 469 in the last six months. The bulk of traffic on VTAC's Web site in both 1999 and 2000 was composed of one-time visitors.

Figure 6



The amount of time VTAC’s visitors spent on the site has steadily increased over the last two years. Visitors spent a median<sup>3</sup> of 11 minutes on VTAC’s Web site in 2000. Visitors spent 57% more time on VTAC’s Web site in 2000 compared to when the site debuted in June 1998. This increase can be attributed to the greater depth in information that is currently available on VTAC’s Web site compared to its offerings of two years ago.

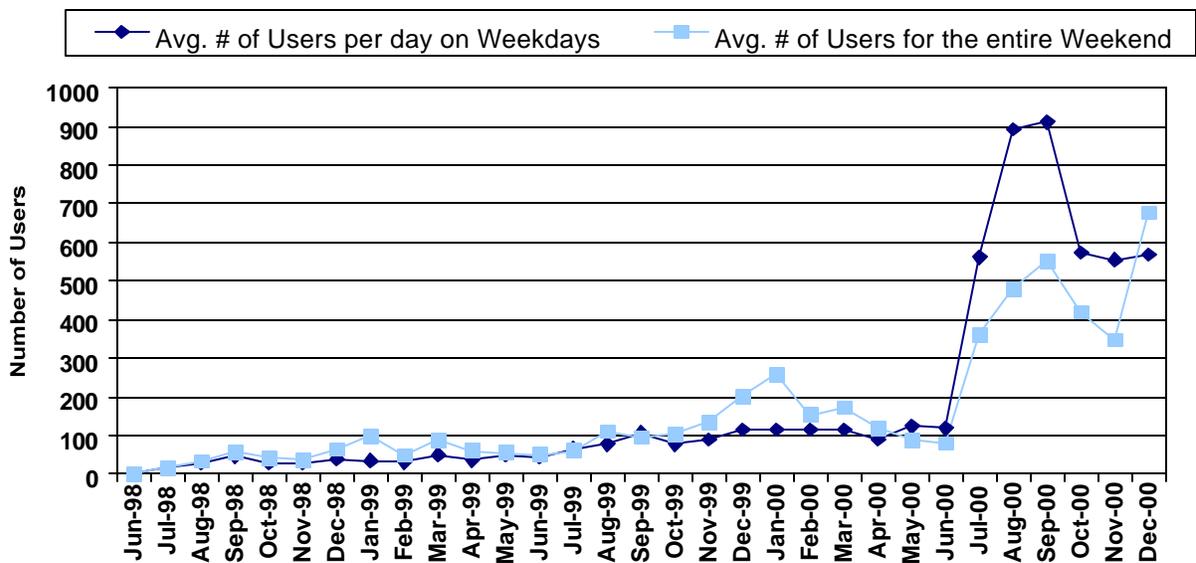
<sup>3</sup> The median is used here for analysis due to the abnormally large value for December 1999 of 30:16.

## User Activity

Monitoring user activity is important for two reasons. First, the results of monitoring user activity help VTAC analyze and predict the amount of traffic and stress on its servers. Second, they can help target the important days to update VTAC's site content. Both weekday and weekend user activity increased in 2000, with the most dramatic increase in the last six months of 2000. Weekday and weekend users peaked in August 2000. In 2000, the average number of users per day on weekdays (395) was about 28% higher than the average number of users for the entire weekend (309). The opposite was true in 1998 and 1999. In 1999, the average number of users per day on weekdays was 115, 75% lower than the average number of users for the entire weekend (201). The increase in weekday users in 2000 is an indication that VTAC has a growing business-user population, as opposed to a casual Web-surfer audience.

Figure 7

### Weekday Users v. Weekend Users January-December 2000



VTAC's most active days of the week in 2000 were Tuesday, Wednesday, and Thursday. Statistics from June 1998 to December 2000 show that Tuesdays and Thursdays were the most active days. Activity peaked on Tuesday 10 out of the last 31 months, with Thursday a close second, peaking in seven months as the most active day. The least active days were Saturdays (19 out of 31 months) and Sundays (10 out of 31 months).

## E. Content Analysis

While there is no sure way to know what users are looking for when they access VTAC's Web site, a variety of statistical measures can provide clues. By analyzing search engine patterns and keyword search topics, VTAC gains an understanding of the types of information for which users are searching for and the type of content that they need to provide on their site in order to attract larger numbers of users. Additionally, by analyzing content indicators such as top directories, top requested pages, top exit pages and single-access pages, VTAC increases its understanding of the issues that are important to users, as well as obtaining an index of search words to update the organization's listings with the various search engines.

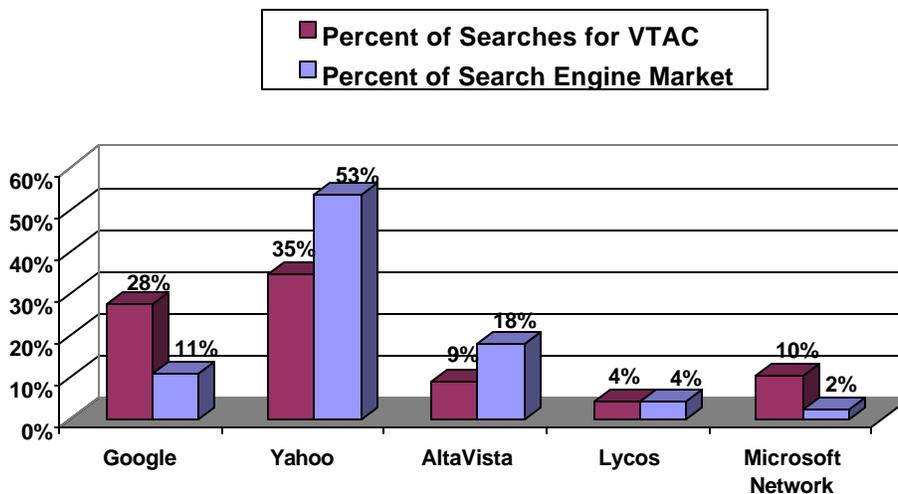
### Top Search Engines

Ten major search engines dominate the search engine landscape. According to the most recent statistics published by StatsMarket, the top 10 search engines are as follows.<sup>4</sup>

1. Yahoo
2. Altavista
3. Excite
4. Go (Infoseek)
5. Lycos
6. Snap
7. GoTo
8. MSN
9. WebCrawler
10. AskJeeves

Figure 8

### Percent of Searches for VTAC VS. Percent of Search Engine Market

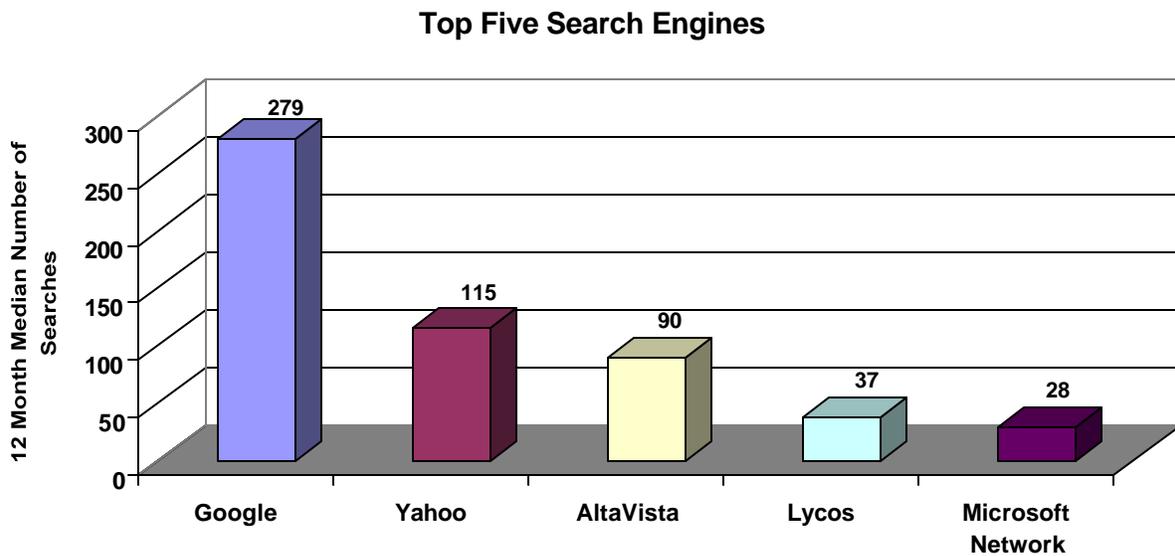


<sup>4</sup> Danny Sullivan, Search Engine Watch, "Media Metrix Search Engine Ratings," downloaded from the Internet on May 12, 2001 from [searcingenewatch.com/reports/media metrix.html](http://searcingenewatch.com/reports/media%20metrix.html)

This section analyzes the most common search engines used to access the VTAC Web site. This data will show the search patterns of users and their preferences for certain search engines. This information may help VTAC to target certain search engines to get the most coverage possible.

The search engines used most often to find VTAC over the past six months were Google and Yahoo. Yahoo and Google were also the search engines most often used by the general population for the entire year of 2000.

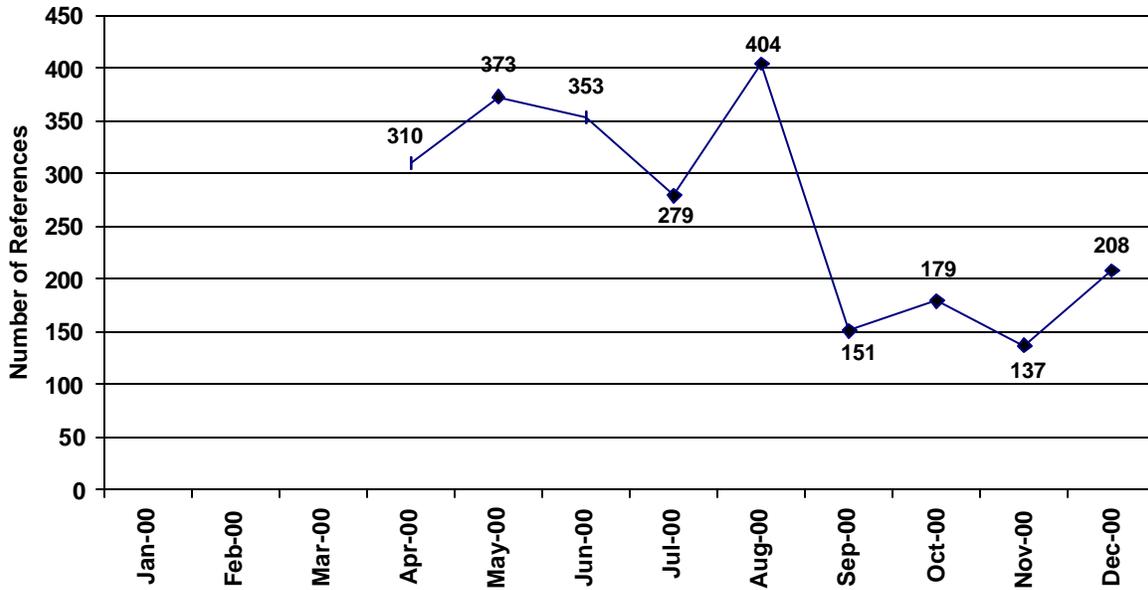
Figure 9



Although the search engine Google has the highest number of searches when looking at the entire 12-month period, it has seen a gradual decrease in use over the 10 months it has been tracked.

Figure 10

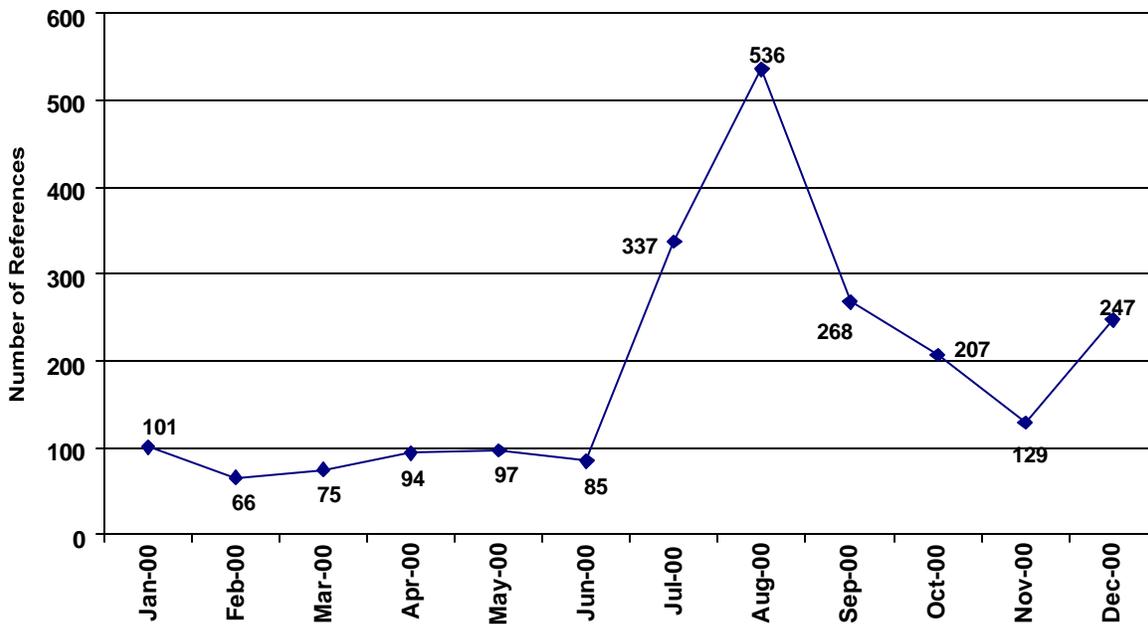
### Top Search Engine: Google



The search engine Yahoo had an average of 115 monthly searches for VTAC in 2000. August 2000 saw a peak of 536.

Figure 11

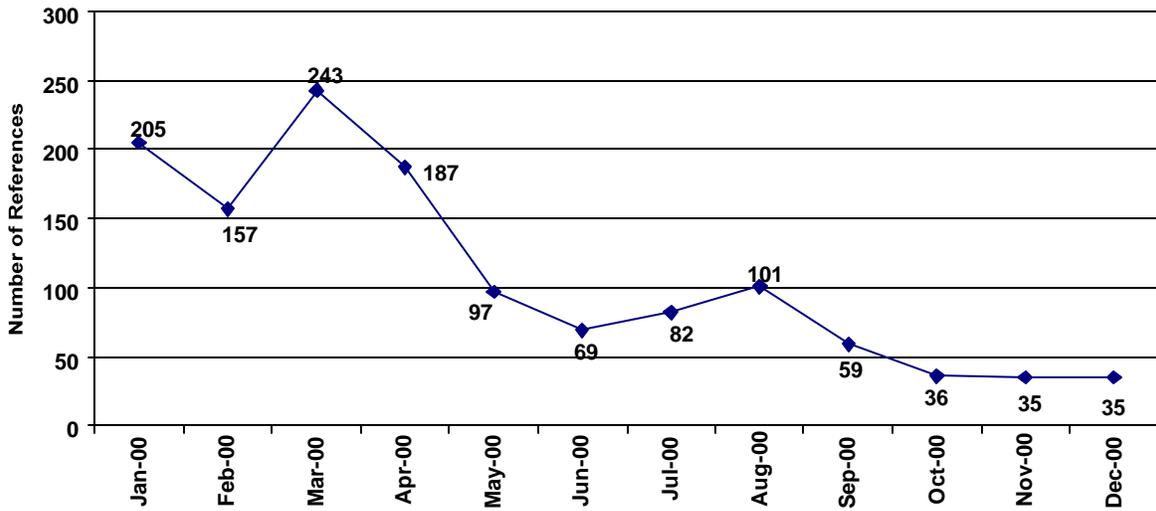
### Top Search Engine: Yahoo



The search engine Alta Vista has seen a decrease in use over the last 12 months. The average number of VTAC searches for the year was 50.

Figure 12

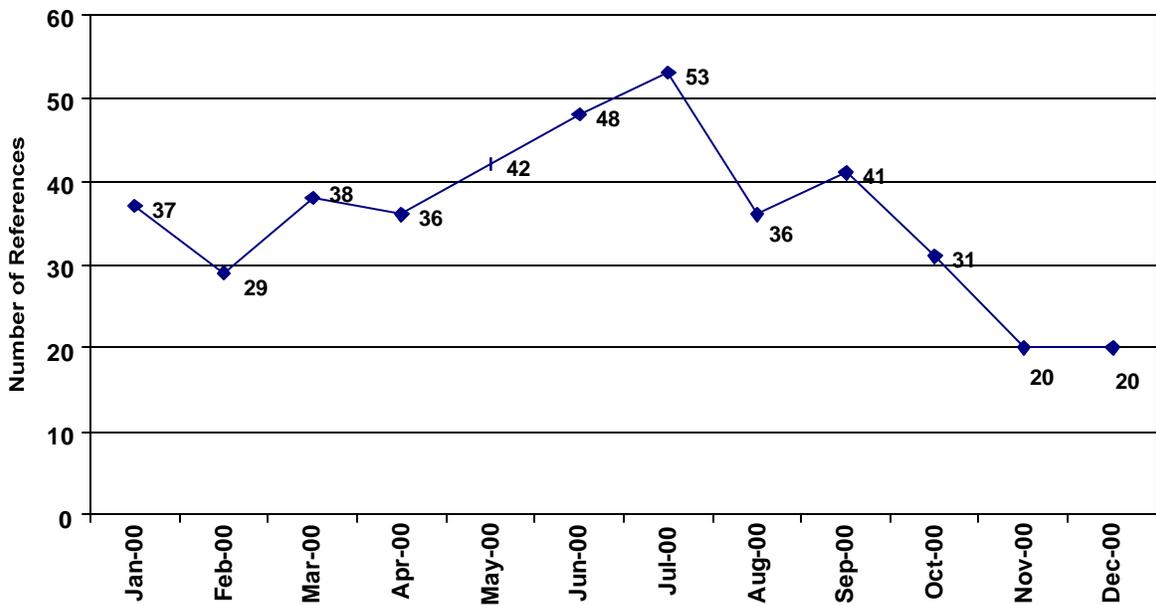
### Top Search Engine Alta Vista



The number of monthly searches using Lycos has fluctuated from a high of 53 to a low of 20 searches. The average number of VTAC searches for the year was 37.

Figure 13

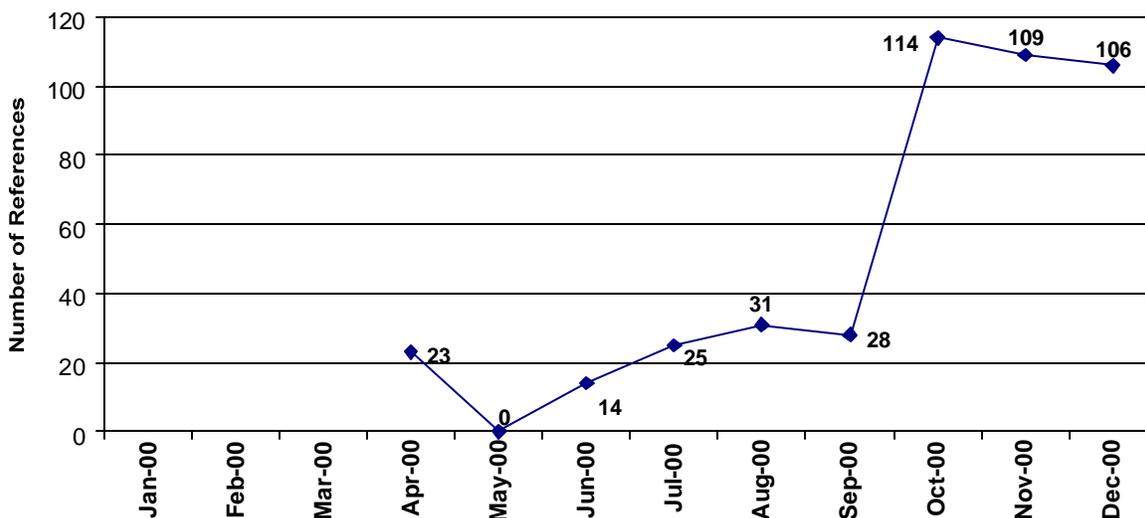
### Top Search Engine Lycos



Of the top five search engines, Microsoft Network saw the lowest average number of searches (28) for 2000. MSN saw a drastic increase in use in the last three months of 2000, peaking at 114 searches.

Figure 14

### Top Search Engine: Microsoft Network



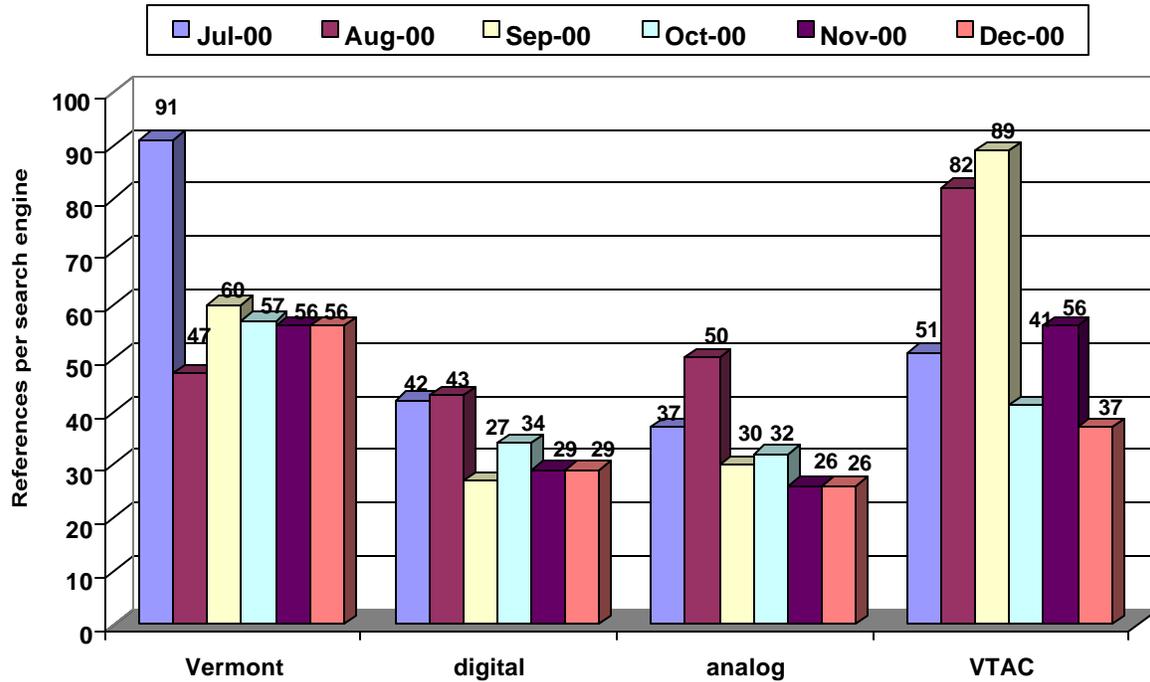
### Top Keywords

Keywords are essential links that help a user access the VTAC Web site. By analyzing key word search patterns, VTAC learns two things. First, it learns the topics in which its users are most interested. Second, keyword analysis offers insight into the groups of words that currently exist in VTAC’s search engine coverage. VTAC should review the keywords that are listed with each search engine, and add the appropriate topics that bring users to VTAC’s site. Although numerous keywords can access the VTAC Web site, here we will only concentrate on a selection of the most frequently used.

The most common keywords seen over the last six months included “Vermont,” “digital,” “analog,” and “VTAC.” All of these keywords appeared in the data for all 6 months. The data further indicates that “Vermont,” “digital,” and “analog” decreased steadily as keywords in the past six months. “Vermont” decreased from 91 uses in July to 56 uses in December. “Digital” decreased from 42 uses in July to 29 uses in December. “Analog” decreased from 37 in July to 26 in December. The keyword “Telecommunications” varied greatly in use from July to December with a high of 89 uses in September and a low of 37 in December.

Figure 15

### Top Keywords



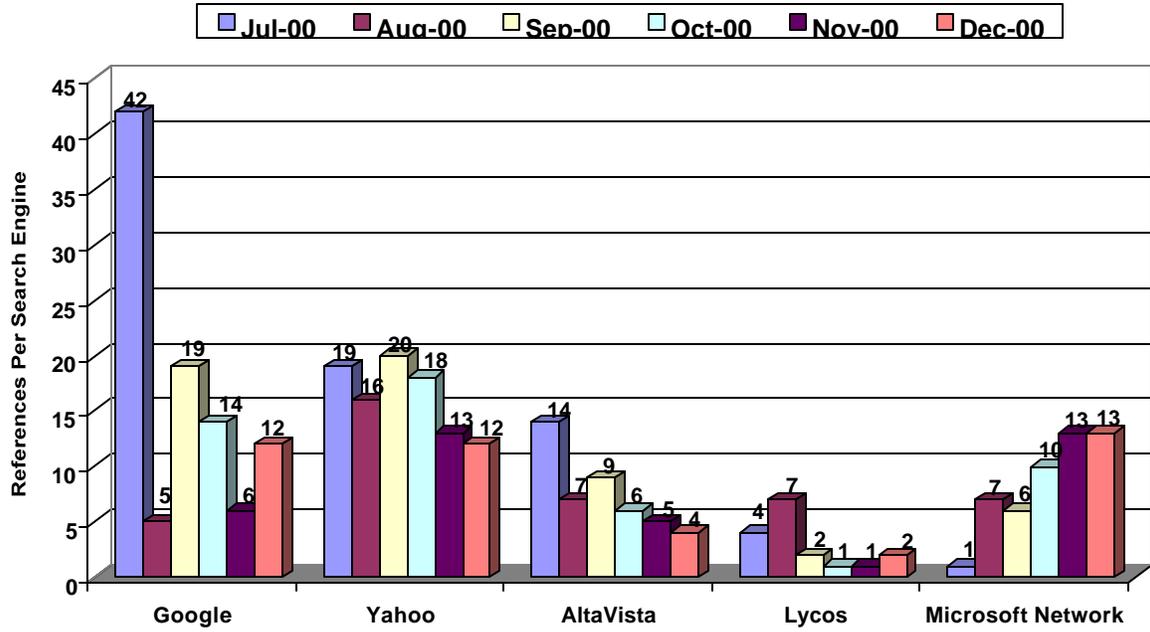
### Top Keywords with Engine Detail

This section combines the two previous sections and rates keywords based on search engine detail. As mentioned earlier, keywords are essential in determining a Web site's effectiveness. Cross-referencing keywords and search engines can develop an overall picture of VTAC's Web site. This data will allow VTAC to determine which keywords based on search engine are most effective for the user. Google and Yahoo ranked as the most consistent search engines for all keywords.

For the keyword "Vermont," Google and Yahoo had the highest average number of hits (16) in 2000. Yahoo and Microsoft Network came in second place, with an average of 8 hits. Lycos had an average of 3 hits in 2000.

Figure 16

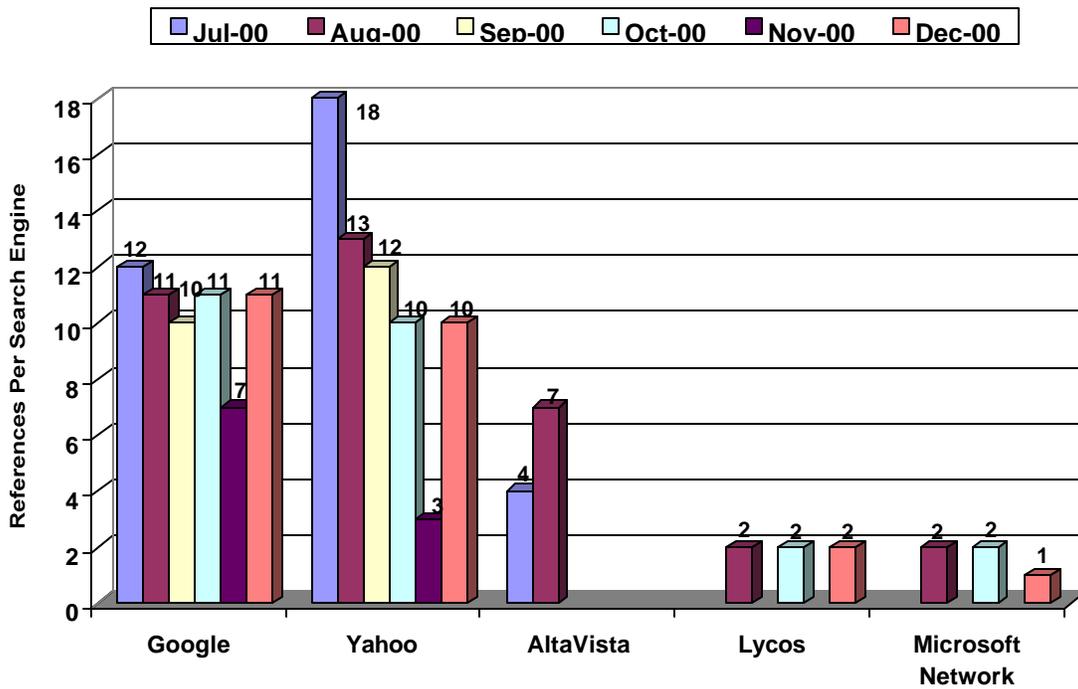
"Vermont"



Yahoo had the highest average number of hits (11) for the keyword “digital, followed by Google (10) and Alta Vista (6).

Figure 17

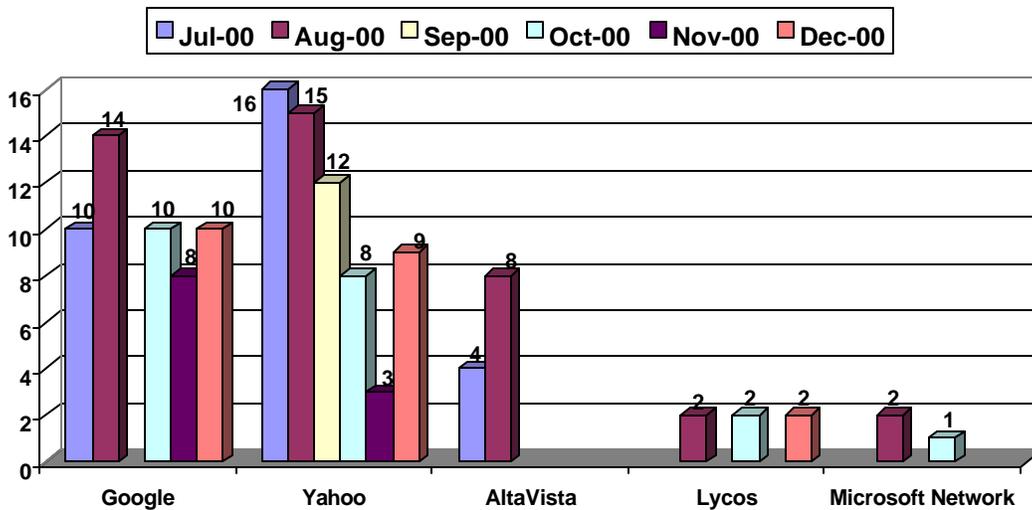
"digital"



The search engine Yahoo had the highest average number of hits (11), followed by Google (10), and Alta Vista (6) for the keyword "Analog."

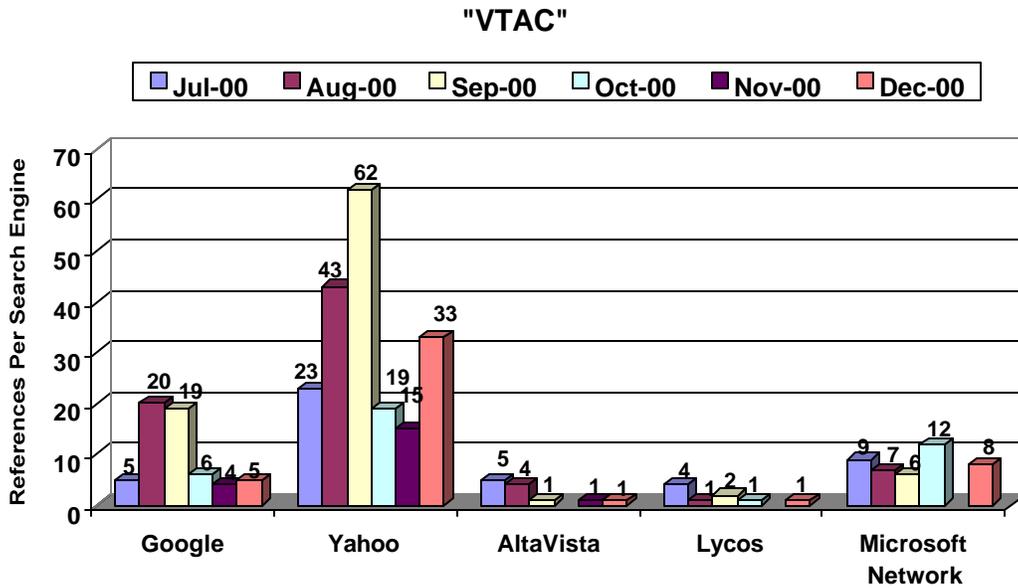
Figure 18

"analog"



The search engine Yahoo had the highest number of hits (33) for the keyword “VTAC,” followed by Google (10), and Microsoft Network (8).

Figure 19

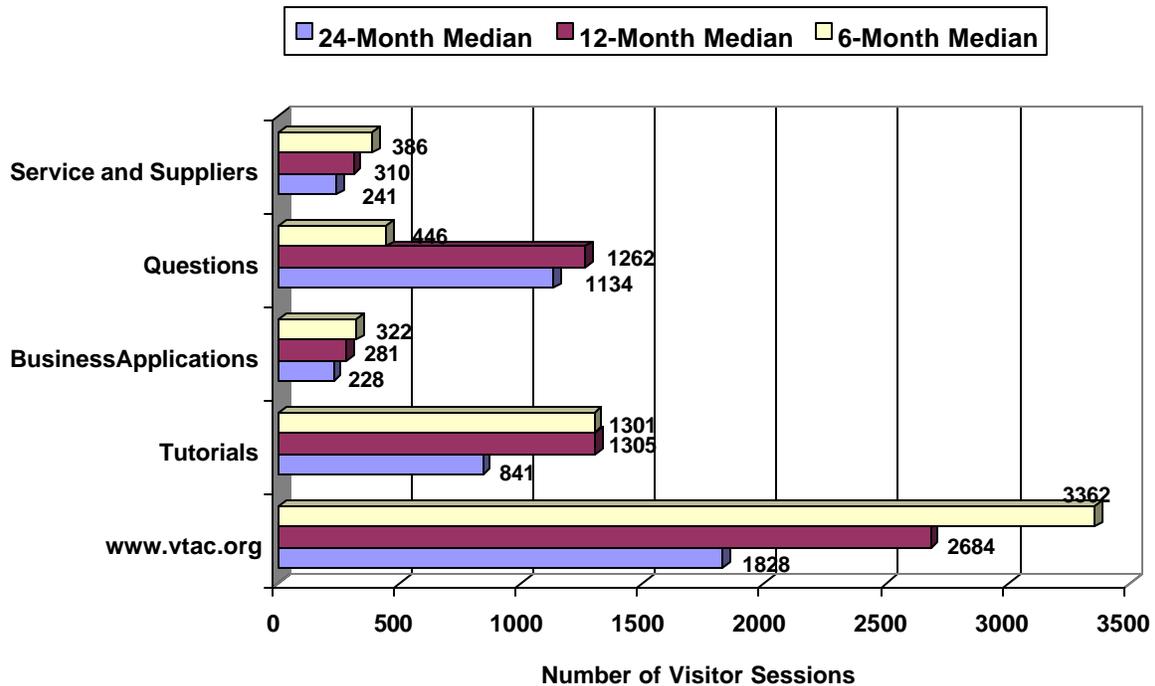


## Top Directories

By analyzing the top directories that visitors access, VTAC will be better able to predict what is of interest to users. This data, collected for the past 24 months, provides VTAC with an opportunity to identify trends and make data predictions. VTAC will now be able to find patterns in user behavior, and determine which directories are performing well and which are not. When looking at the data for the total number of user sessions for each directory, it is important to note that users may visit each directory more than once during the same visit to the site in order to examine multiple subdirectories within the main directory.

Figure 20

### Top Directories



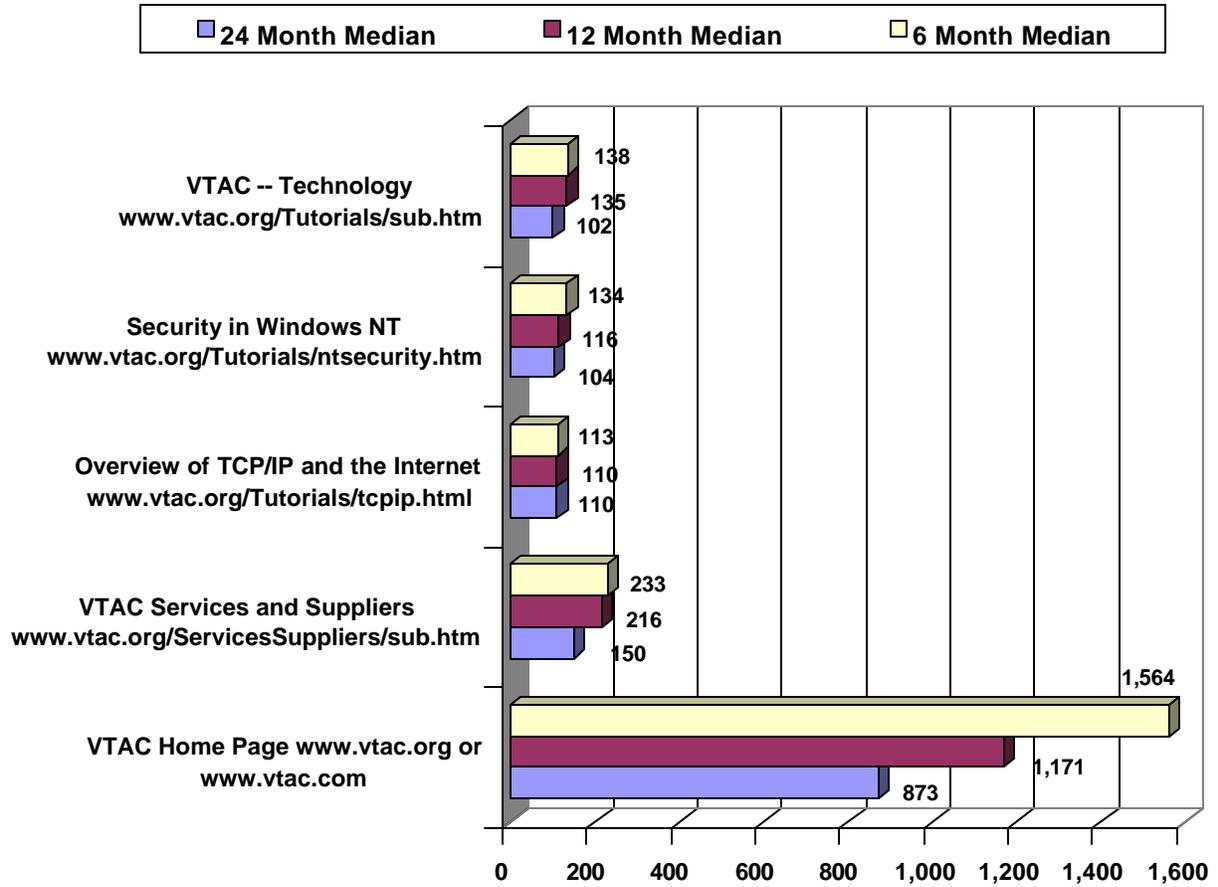
The top five user directories have remained the same over the past 12 months. They are [www.vtac.org](http://www.vtac.org), “tutorials,” “Business Applications,” “questions,” and “services and suppliers.” These directories appeared in the data across all 12 months. The directory [www.vtac.org](http://www.vtac.org) had an increase in mean user activity over the past 12 months. It increased by 169% from a mean of 997 users in 1999 to a mean of 2,684 users in 2000. This increase can be partly attributed to the overall increased activity at the Web site.

### Top Requested Pages

Most-requested pages act as a good indication of what users are looking for when they access the VTAC Web site. As expected, the VTAC homepage is the most requested page on the VTAC Web site. In the past six months, the VTAC homepage has seen an increase in requests from its 24-month median of 873 users per month, to a median of 1564 users per month, a 79% increase. This pattern holds true for all top-requested pages.

Figure 21

### Top Requested Pages

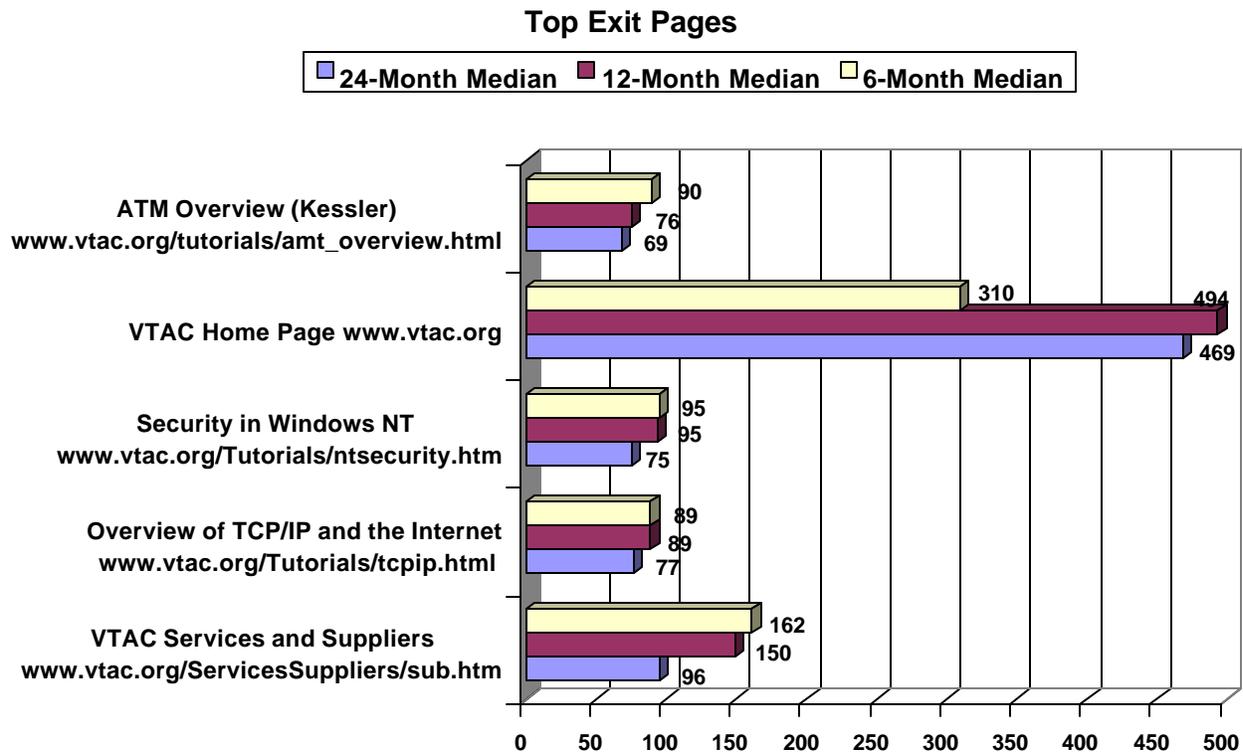


## Top Exit Pages

This section examines where users were when they left the VTAC Web site. VTAC's homepage was most likely to be used as an exit page. There are two implications that can be drawn from a home-page exit. It either means that the user found what they were looking for on VTAC's homepage and did not need to proceed further. It also may mean that when they accessed the VTAC homepage, they did not find what they were looking for and left before exploring the site further.

Data collected over the past 12 months shows an increase in the median amount of exits from the VTAC homepage. The median number of exits in 1999 was 421, while the median number of exits in 2000 was 494. This is an increase of 17%. This increase corresponds with the overall increase in activity on the VTAC Web site. Almost all pages showed an increase in the number of user exits. Below are the top five pages from which users exited.

Figure 22

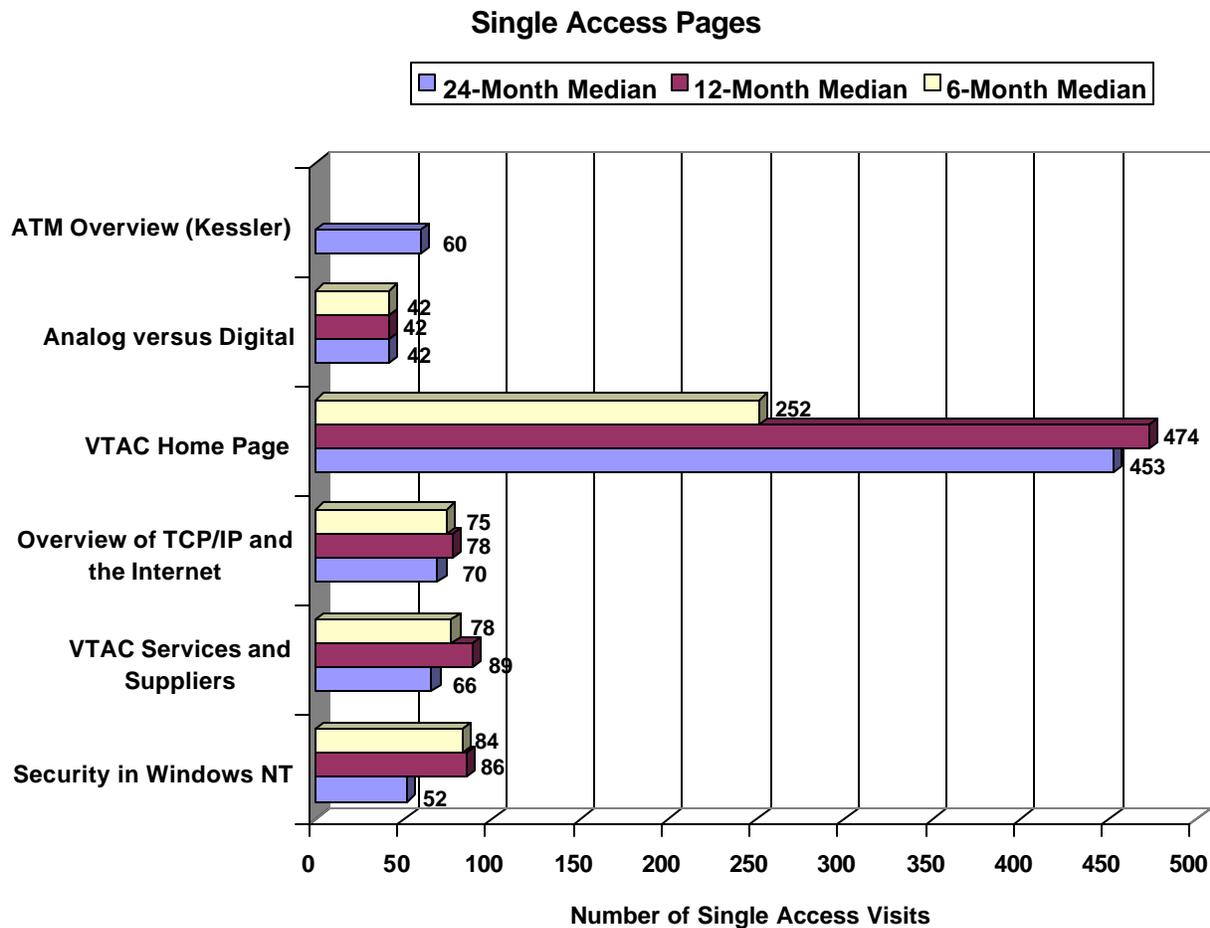


## Single-Access Pages

Single-access pages identify pages on the site that visitors enter and exit without viewing any other page on the site. This can be indicative of two phenomena. First, these pages may have been bookmarked by the user during a previous visit. Second, users may be accessing a specific page directly from a search engine. This data helps to determine whether VTAC’s Web site, especially its homepage, provides users with the information that they truly wanted to obtain.

VTAC’s homepage continues to be the most common single-access page. It has a median of 453 users over the 24-month data collection period. The second most popular single-access page was “Overview of TCP/IP and the Internet” with a median of 70 users over the 24-month period. “VTAC Services and Suppliers” had a median of 66 users over the 24-month period. Although the “ATM Overview” page had a lower median number of users (54) in the past two years, it was the only page to appear in the data for all 12 months of 2000. The “Analog versus Digital” page came in sixth place with a 24-month median of 42 users.

Figure 23



## IV. Evaluation of VTAC Presentations and Focus Groups

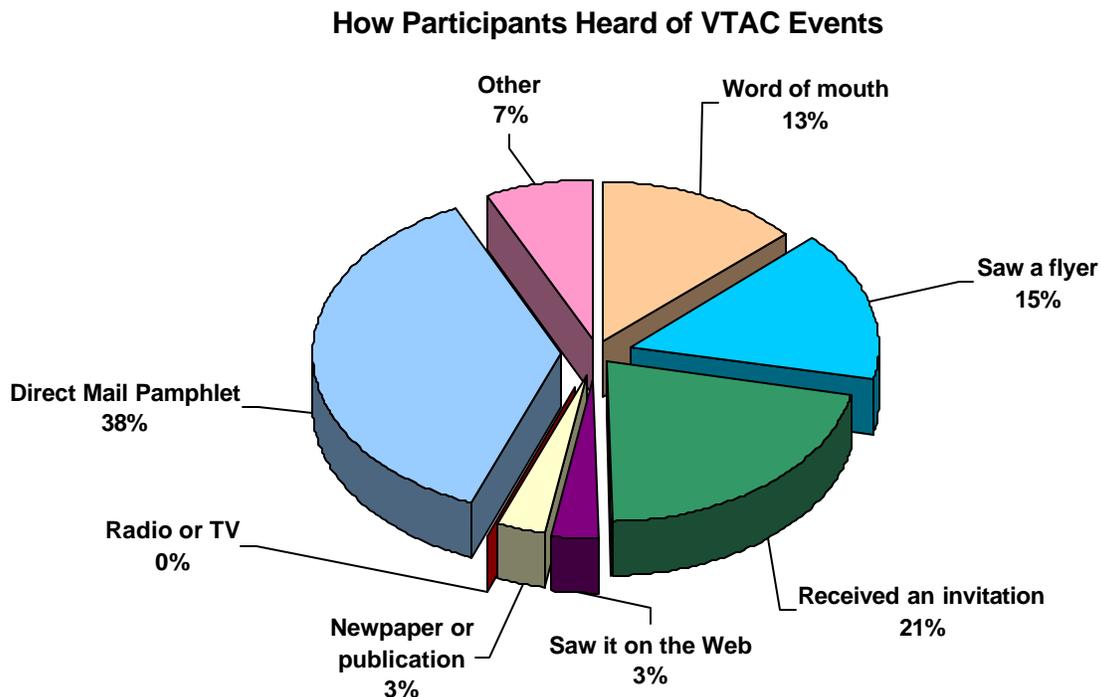
### A. Introduction

As part of its outreach efforts, VTAC sponsors a number of focus groups and Vermont Interactive Television (VIT) events. The purpose of these focus groups and events are two-fold. The first goal is gather information on how the organization may serve the community better. The second goal is to inform and update Vermonters on VTAC's activities and the latest technologies.

VTAC has provided ORC Macro with information on the following VIT events held on the June 6, 2000

For two-thirds of the attendees, these three VTAC events were the first e-business events that the participants had attended (66%). Nearly all participants who filled out evaluations attended the June 6, 2000 event.

Participants learned about the VTAC VIT events through a wide range of methods. The most successful method of advertising was via a direct mail pamphlet (38%).

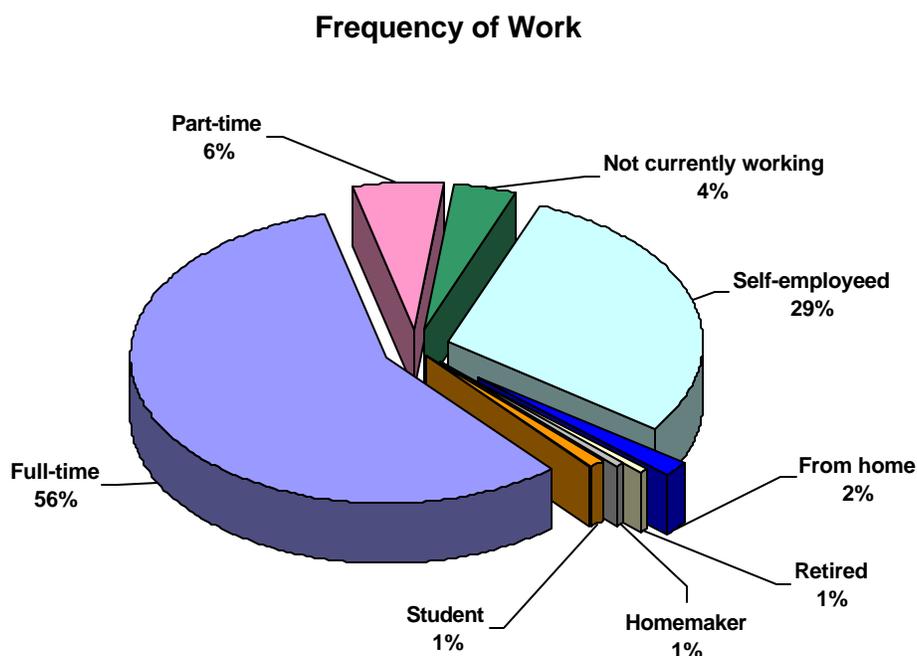


## B. Demographics

Understanding participant demographics will prove critical to the planning of future VTAC events. The evaluation gathered demographics from two main categories: individual demographics and business demographics, sometimes called “firmographics.” Understanding both types can help VTAC obtain a wider cross-section of participants overall and help target the advertising for particular seminars.

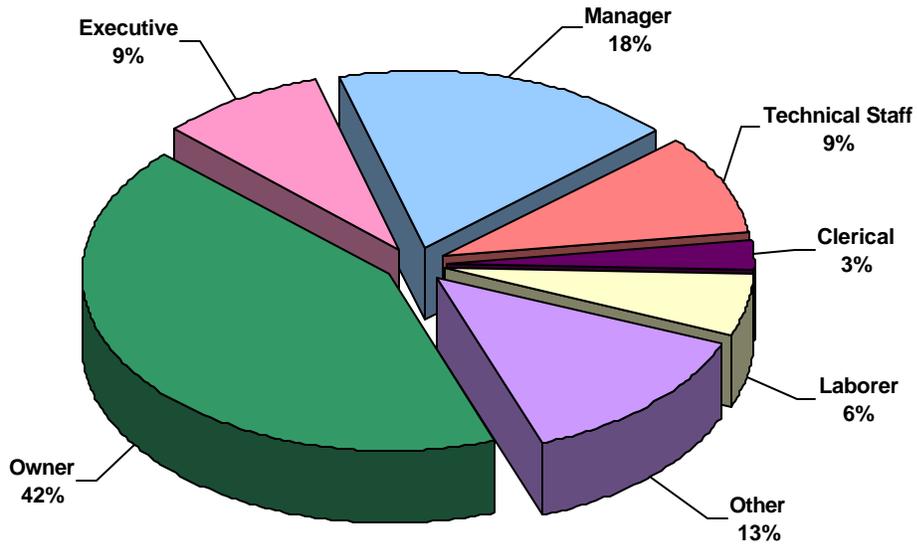
### Individual Demographics

Over half of the attendees at VTAC’s seminars are employed full-time (57%), while only 6% indicated that they worked part-time. A small percentage indicated that they were not working at all (4%). A little over a quarter of the participants identified themselves as self-employed (29%). Two percent stated that they worked from home. Less than 2% indicated that they were retired (0.6%), a homemaker (0.6%) or a student (1%).



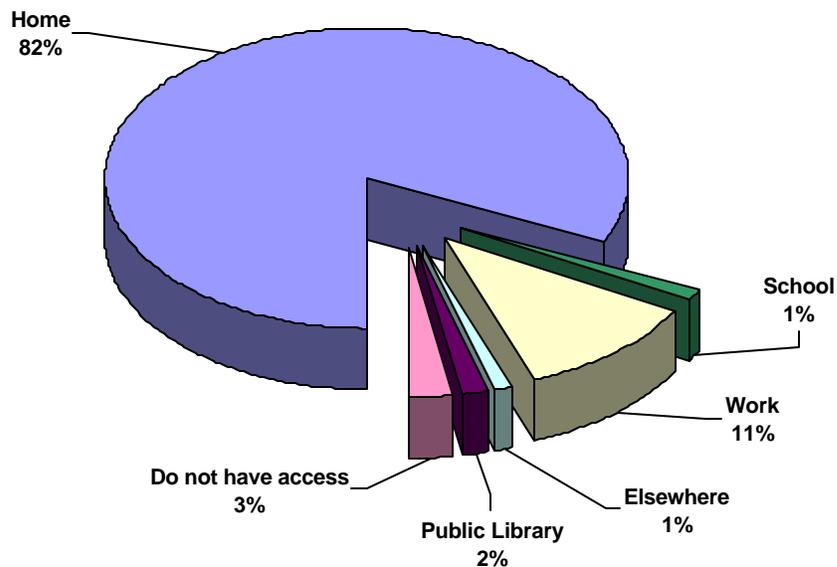
VTAC workshop participants fell into six main categories: owner, executive, manager, technical staff, clerical, and laborer. The largest percentage of attendees classified themselves as the owner of the business that they were representing (42%). Managers ranked second (18%), while technical staff and executives tied for third (10%). Clerical staff (3.0%) and laborers (6%) were the smallest groups represented among VTAC participants. Nearly 13% said that the type of work did not fall into any of the established categories.

### Job Role



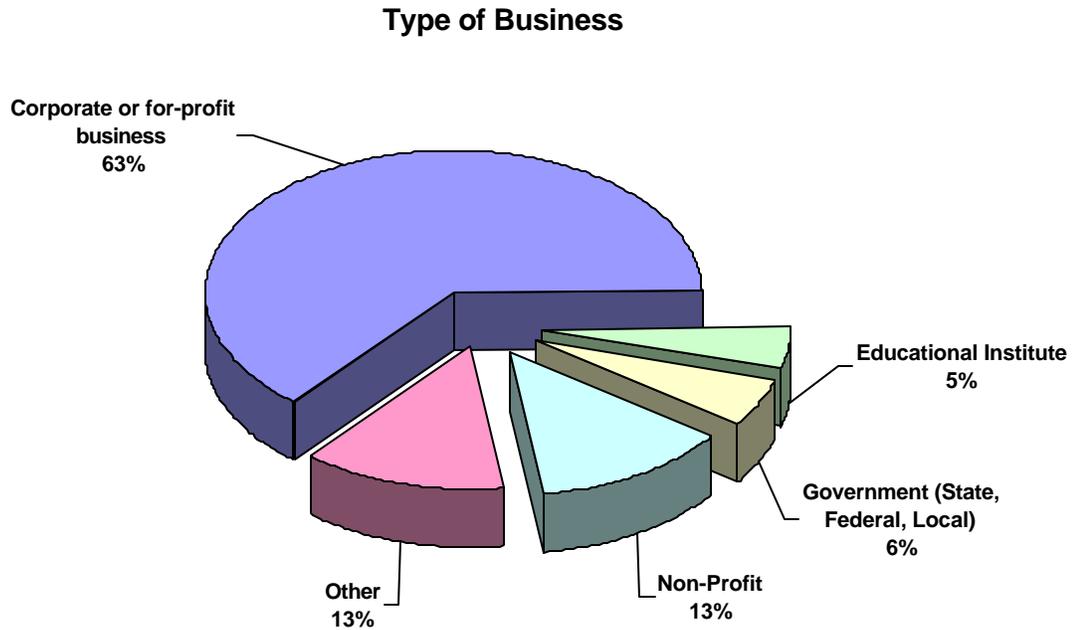
Nearly all of the VTAC program attendees reported some sort of Internet access (97%). Roughly eight out of 10 respondents had home Internet access (82%). Other points of access included work (11%), public library (2%), school (1%), and miscellaneous locations (1%). Only a handful of attendees had no Internet access (3%).

### Point of Internet Access



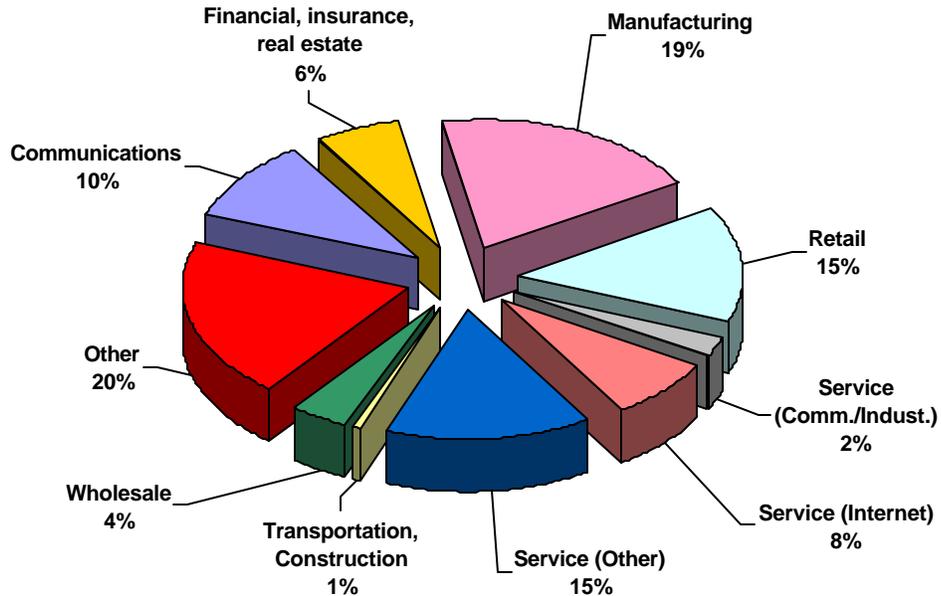
## Firmographics

The largest percentage of VTAC program attendees represented corporate or for-profit businesses (63%). Miscellaneous (13%) and non-profit organizations (13%) comprised the second largest types of businesses. Government entities were third (6%), with educational institutions placing a close fourth.



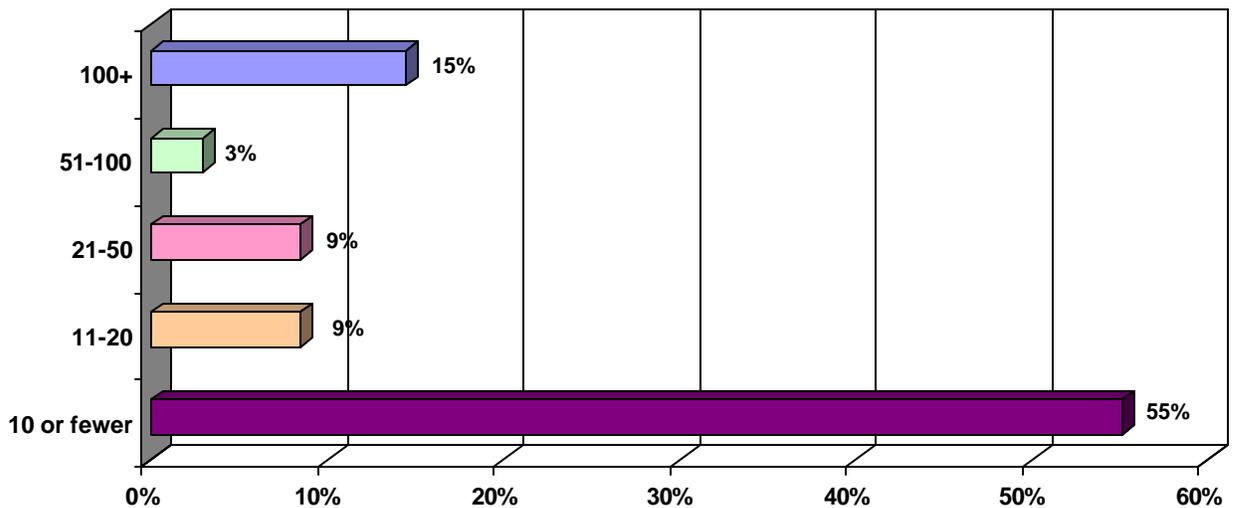
Manufacturing was the largest single category identified as the primary line of business for attendees (19%). Retail (15%) and miscellaneous service (15%) were the second largest lines of business. The communications field represented 10% of the businesses at VTAC's seminars while Internet service-related businesses comprised 8% of businesses. The remaining categorized businesses were finance, real estate and insurance (6%), wholesale businesses (4%), commercial service-based businesses (2%) and transportation and construction businesses (1%). Fully 20% of the businesses did not fall into any of the provided classifications.

### Primary Line of Business



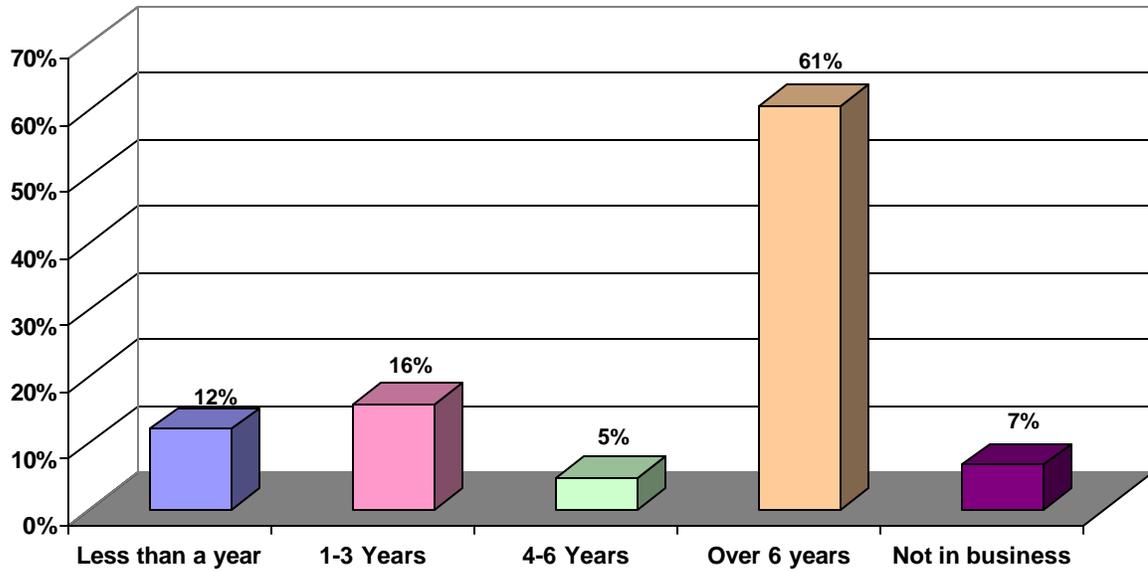
Nearly 70% of study participants worked for a small business (businesses with 100 or fewer employees). Over half worked for companies with 10 or fewer employees (55%). Businesses with 11-20 employees and 21-50 employees each represented 9% of the participants. Small businesses with 51-100 employees comprised just 3% of all attendees. Fifteen percent of the participants worked for large to mid-sized companies (those with over 100 employees). The remaining 15% of participants either did not know how many employees worked for their companies or did not answer the question.

### Number of Employees



Nearly two-thirds of the participants represented business that have been in existence for more than six years (61%). Only 12% of participants worked for a business that could be considered new, that is, businesses in existence for less than one year. Attendees affiliated with businesses that have been in existence for 1-3 years comprised 16%, while businesses that have been around for 4-6 years made up only 5% of the participants. Seven percent of the participants said that they were not in business at all.

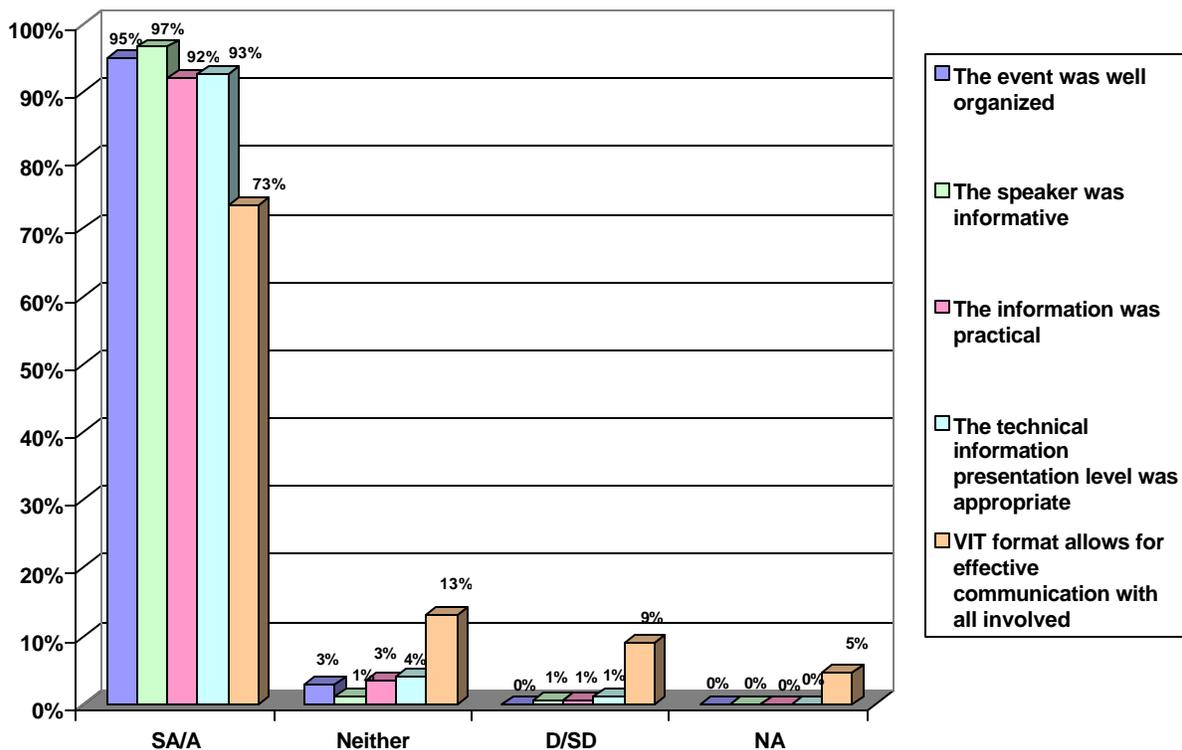
**Number of Years Company in Business**



### C. Program Assessment

Participants were asked to rate the program that they attended on 12 items on a five-point Likert scale: *strongly agree, agree, neither agree or disagree, disagree and strongly disagree*. These items have been grouped into three analysis areas: overall attitudes towards VTAC programs, attitudes toward the value of VTAC programs, and the utility of information presented in the programs. Nearly all attendees who filled out surveys agreed that the events were well organized (95%), that the speakers were informative (97%), the information was practical (92%), and that the technical information was presented at an appropriate level (93%). The biggest difference in the overall assessment was participants' assessment of the VIT format. Only 73% felt that the VIT format was effective, while 13% felt it was neither effective or ineffective.

Overall Attitudes Towards VTAC Programs



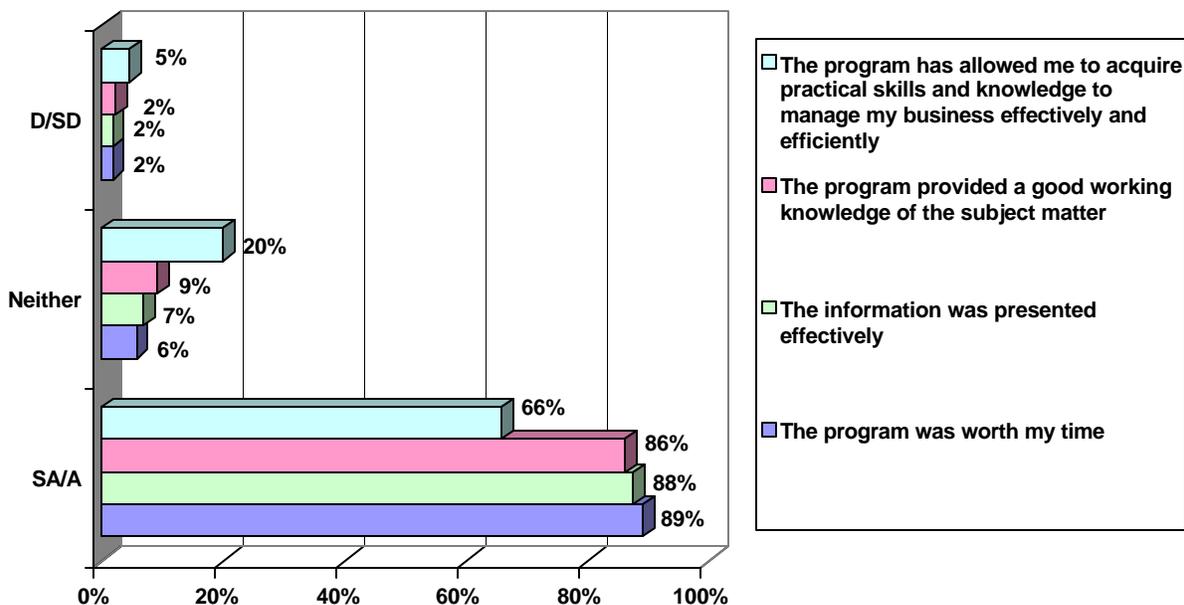
Overall, participants seemed satisfied with the value of the VTAC programs; respondents rated their agreement with following three statements well over 80%:

- The program has provided a good working knowledge of the subject matter (86%).
- The information was presented effectively (88%).
- The program was worth my time (89%).

Participants rated the programs' delivery of practical skills and knowledge that would allow them to effectively and efficiently manager their business somewhat lower (66%); a much higher number said that they neither agreed nor disagreed with this statement.

For all four questions, less than 5% disagreed at any level with the with the four statements.

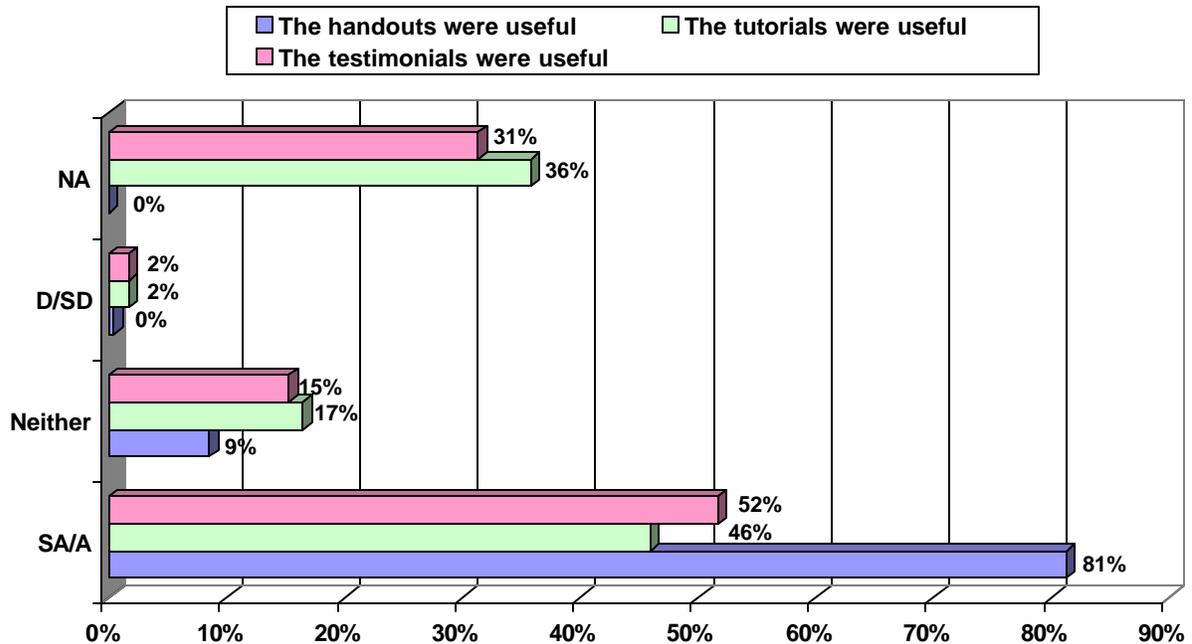
**Attitudes Toward the Value of VTAC programs**



The verdict on the utility of the information aids presented at the VTAC programs offered a split decision. Program handouts received the highest agreement rating when the participant was asked if they were useful (81%). Less than half of the participants found the tutorials useful (46%); however, it is important to note that 36% stated that the usefulness of the tutorials at the sessions they attended were not applicable. Just over half found the testimonials useful (52%). Again, nearly a third said that the testimonials were not applicable to the programs that they attended.

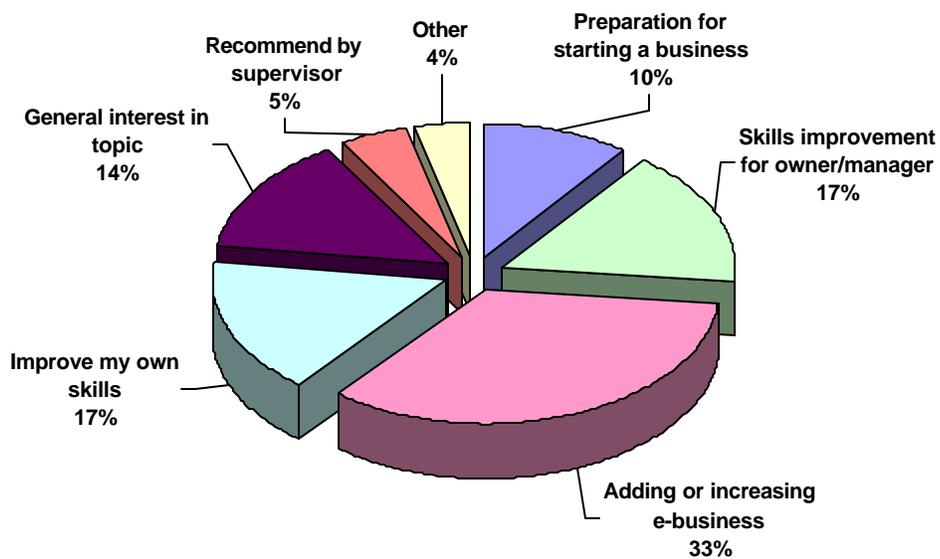
Two percent of the participants disagreed with the statements that testimonials or tutorials were useful. No participants felt that the handouts were not useful.

**Utility of Information Aids Provided for VTAC programs**



Participants chose to attend VTAC's seminars for many different reasons. The most common reason was that they want to add or increase an e-business component to their current business (33%). Skills improvement was the next most popular reason, whether it was for self-improvement (17%) or improvement for an owner or manager (17%). Others were motivated to attend due to a general interest in the topic matter, while others were preparing to start a new business (10%). A smaller percentage decided to attend after the seminar was recommended by a supervisor (5%). A handful attended for miscellaneous reasons (4%).

### Why Participants Attended VTAC seminar

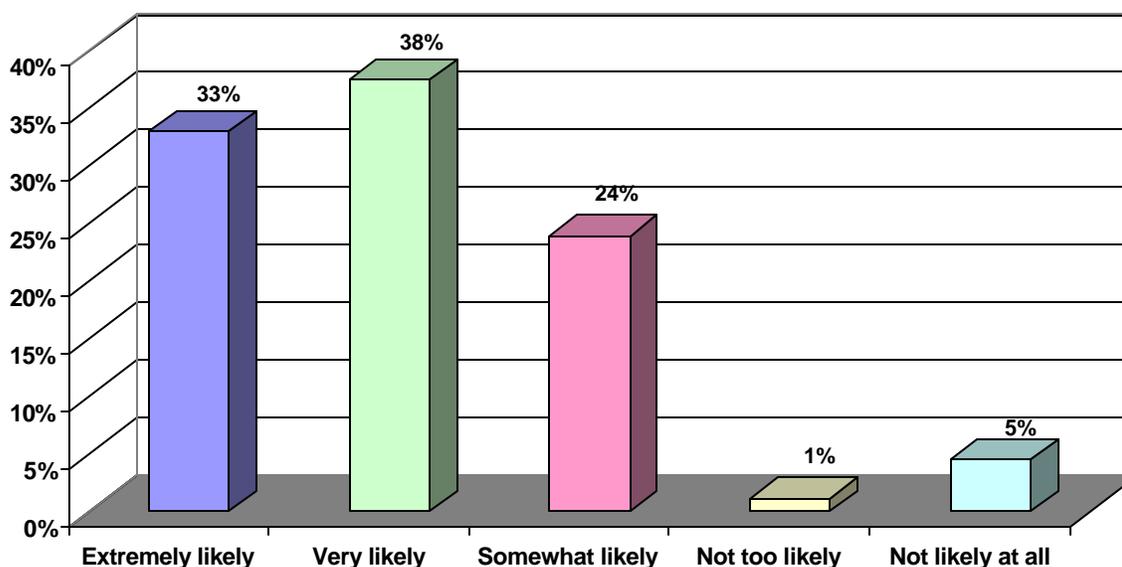


Participants were presented with a list of potential seminar topics and asked to indicate whether they would be interested in attending a future seminar in that area. The most popular topics were how to use technology more effectively in their business (55%) and advertising on the Internet (41%). Other popular topics included business-to-business electronic commerce (41%); using the Internet for electronic commerce (40%); how to use e-mail more effectively in business (39%); high speed telephony (38%); business-to-consumer e-commerce issues (32%); how to pick the right Internet package (30%); how security issues can affect businesses (27%); technology and telecommunications legislation workshops (24%); electronic privacy issues (18%); and other assorted issues (12%).

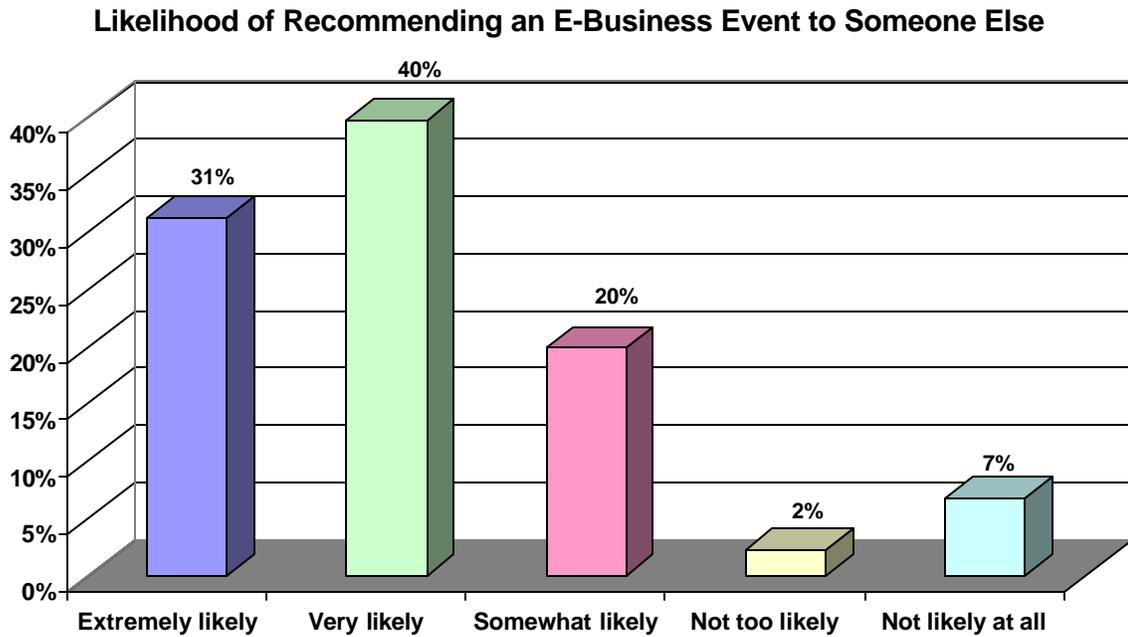
Interest in Future Seminar Topics	
Using technology effectively in business	55%
Advertising on the Internet	41%
Business-to-business e-commerce	41%
Using the Internet for e-commerce	40%
How to use e-mail more effectively in business	39%
High speed telephony, such as cable, wireless, and DSL	38%
Business-to-consumer e-commerce issues	32%
How to pick the right Internet service package for business	30%
How computer security issues affect businesses	27%
Technology and telecommunication legislation seminars	24%
How electronic privacy issues affect businesses	18%
Other	12%

Nearly three-quarters of the participants in all three seminars indicated that they would be interested in attending another e-business activity in the future (71%). One-third stated that they were *extremely likely* to attend another event (33%), while just over a third stated that they would be *very likely* to attend a similar event (38%). More than one in two said that they were *somewhat likely* to attend another event (24%). Only 6% said that they were *not too likely* (1%) or *not likely at all* (5%) another VTAC e-business event.

**Likelihood of Attending a Future E-Business Event**



The same percentage that would attend another e-business event would recommend attending an e-business event to someone else (71%). Almost a third of the seminar participants said that they were *extremely likely* to recommend another event (31%), while 40% said that they were *very likely* to recommend another event. Two in ten stated that they were *somewhat likely* to recommend another event. Less than 10% said that they were *not too likely* (2%) or *not likely at all* (7%) to recommend in another VTAC event.



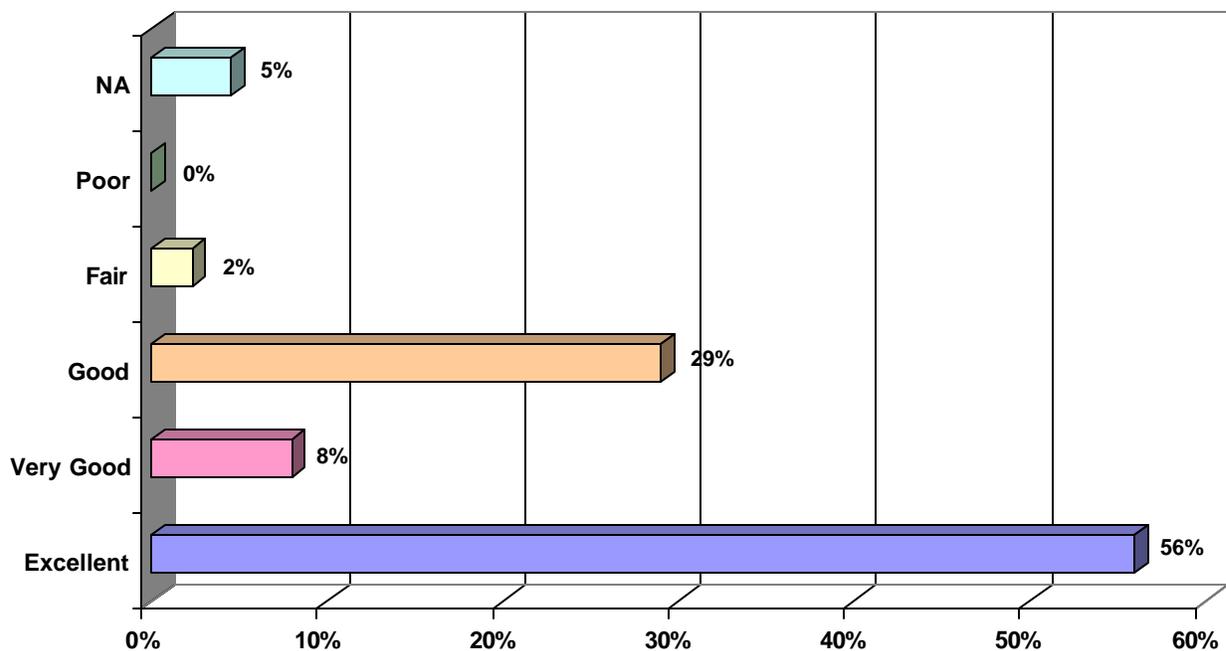
## D. Speaker Assessment

As part of the evaluation process, the attendees were asked to rate the speaker on several key attributes such as communication skills and knowledge. They were also asked to rate the actual presentation with regard to how well it held their interest, the effectiveness of the visual aids and how well-organized the presentation was.

### Speaker Evaluation

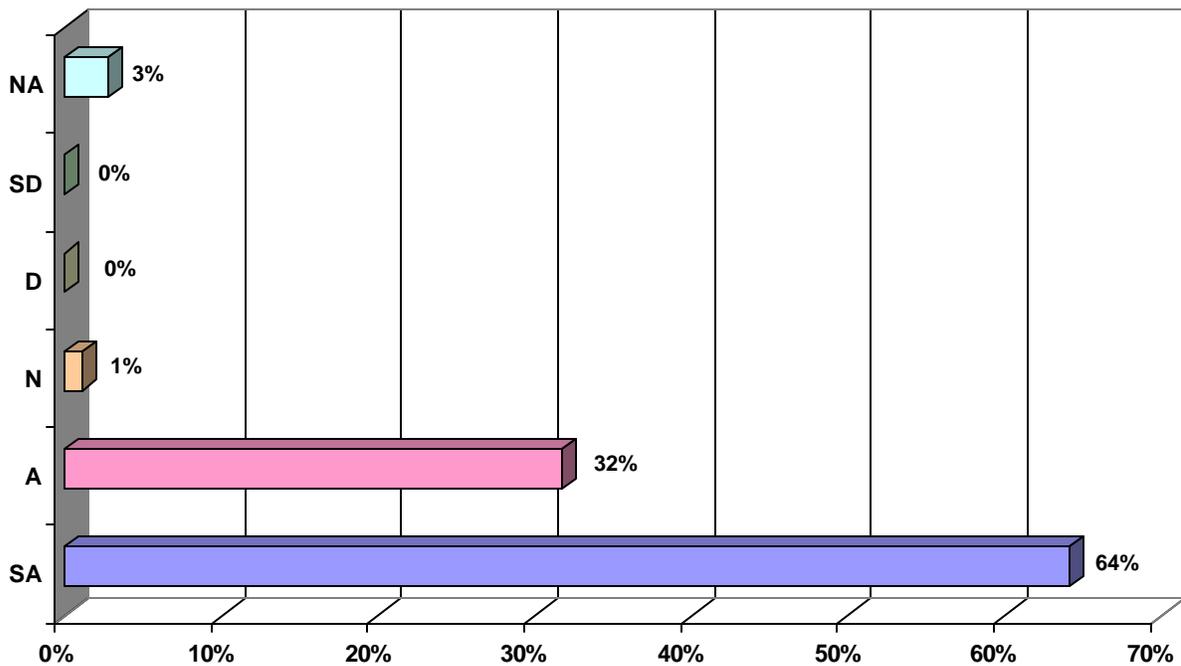
The majority of the seminar participants found that the speaker's skills were *excellent* (56%), while an additional 8% thought that they were *very good*. Nearly a third (29%) found the presenters to be *good* speakers, while only a small minority rate their communication skills as *fair* (2%) or *poor* (0%).

Quality of Speakers' Communication Skills



Nearly two-thirds of the attendees strongly agreed that the speakers were knowledgeable about their areas of expertise (64%). Another 32% agreed that the speakers were knowledgeable in their presentations. Only 1% neither agreed or disagreed that the speakers were knowledgeable. No attendees disagreed or strongly disagreed.

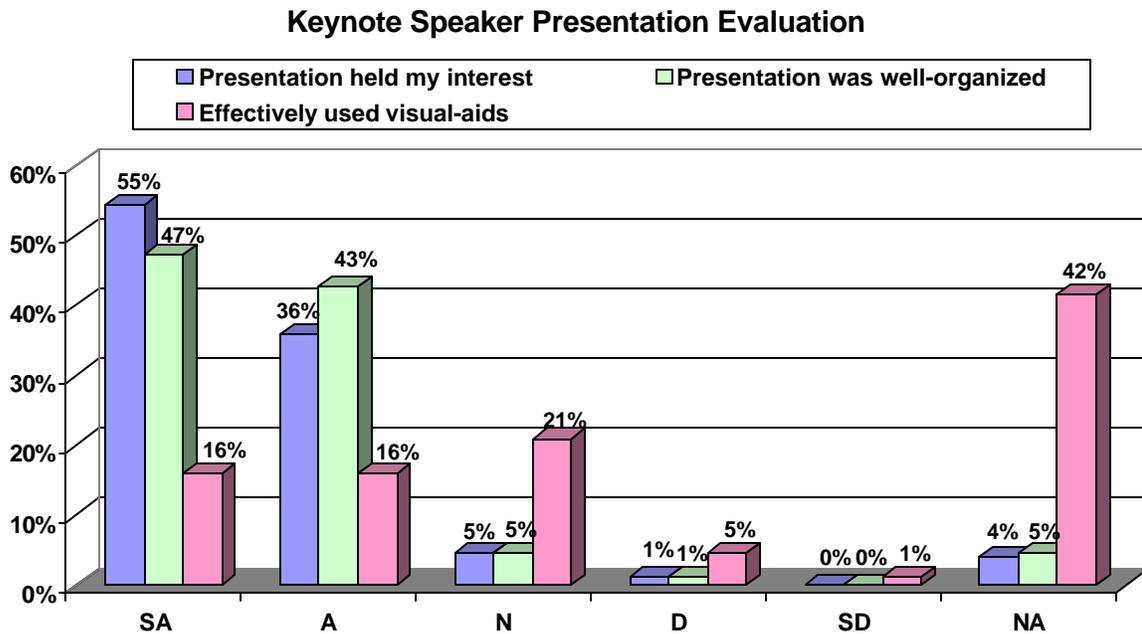
**The Speaker Was Knowledgeable About the Topic**



## Presentation

Most respondents agreed that the presentation held their interest (91%); over half strongly agreed with the statement (55%), while a little over a third merely agreed (36%). Five percent neither agreed or disagreed, while a minority said that the presentation did not hold their interest (1%).

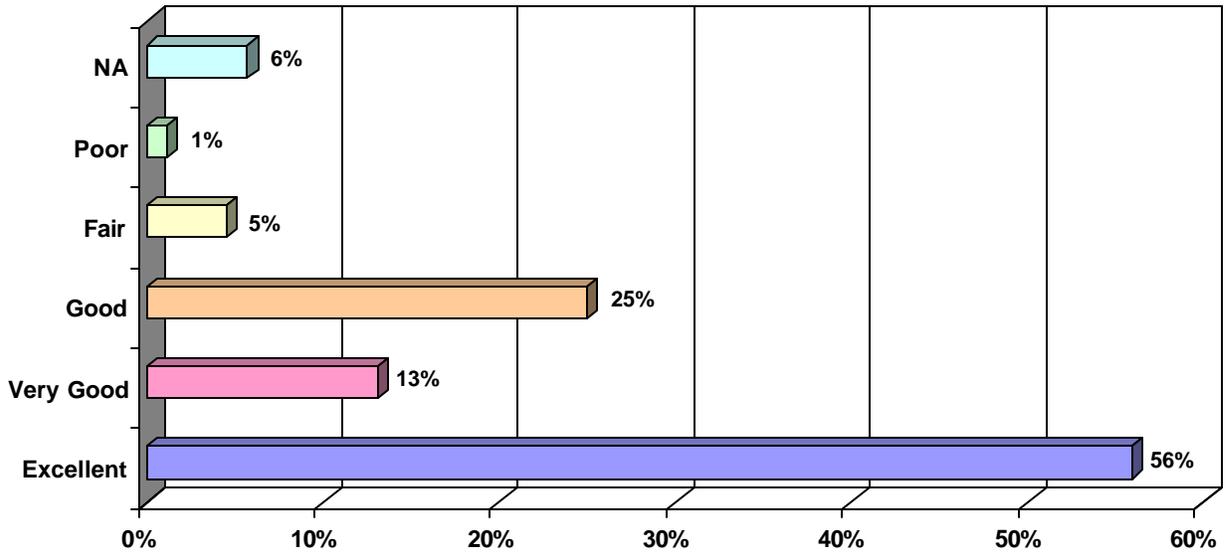
Overall, nearly all of the attendees agreed that the presentations were well-organized (90%). Nearly an equal amount of those who agreed strongly that they were well-organized merely agreed (43%). Again, 5% neither agreed or disagreed on the organization of the presentation, with 1% disagreeing that the presentation were well-organized. None of the participants strongly disagreed that the presentations were well organized.



The biggest disagreement with regard to the success of the presentations came in the area of use of visual aids. Forty-two percent said that visual aids were not applicable to the presentations that they observed. Of those who expressed an opinion, only 32% agreed that aids were effectively used; an equal amount strongly agreed (16%) and simply agreed (16%). More than one in 10 neither agreed or disagreed about their effectiveness (21%). Five percent felt that the visual aids were ineffective, while 1% strongly felt that they were ineffective.

A majority rated that the presentation level the seminars *excellent* (56%). An additional 13% stated that the presentation level was *very good*. A quarter thought that the level was simply *good* (25%). Only a minority thought that the presentation level might have been too high for the intended audience, rating the presentation level as *fair* (5%) or *poor* (1%).

**The Degree to Which the Presentation Level Met the Audience Needs**



## V. Second Awareness Survey

### A. Project Overview

As part of its overall evaluation, VTAC commissioned a 1999 baseline awareness study, designed to assess both the growth of VTAC's name recognition in Vermont as an organization designed to help small businesses and the success of outreach efforts to Vermont small businesses. ORC Macro met with VTAC in December 2000 to evaluate and revise the original survey instrument; their changes reflected technology innovations of the last two years, as well as a re-evaluation of the utility of certain questions.

ORC Macro fielded the 2001 Awareness Study in February and March 2001, collecting data from 400 Vermont small businesses with 100 employees. This report provides a comparison between the baseline 1999 data and the new 2001 information. There are four primary areas of analysis: Firmographics, Internet Profile, Investigating Telecommunications Options, and Awareness of Small Business Agencies. The report describes study methodology.

Please note that that some charts and graphs may not add up to 100%. In many cases, categories of less than 5% or those not relevant to the analysis such as *don't know* or *refused* have been excluded. In addition, multiple response questions, where respondents are encouraged to select more than one answer, may add up to more than 100%. The margin of error for the sample is  $\pm 4.9\%$ . Significant changes from the baseline study. Those larger than the margin of error are denoted with a asterisks (\*).

## **B. Methodology**

ORC Macro conducted the 2001 Awareness Study in February and March of 2001. After revising the questionnaire in December 2000, ORC Macro purchased a sample of small businesses with employees numbering fewer than 100, based on Standard Industrial Codes (SIC) codes. From that sample, ORC Macro drew a random sample of 2,500 records to load for the study. Over the course of the four-week study, ORC Macro obtained 400 completes, with a margin of error of  $\pm 4.9\%$ .

Upon completion of fielding, ORC Macro created cross-tabulations of the data, using number of full-time employees, Internet access, those that had visited VTAC's Web site, those who had heard of VTAC, and primary line of business as variables by which each question was cross-tabulated. However, in many cases, the cross-tabulation variables did not yield sufficient data in order to draw conclusions.

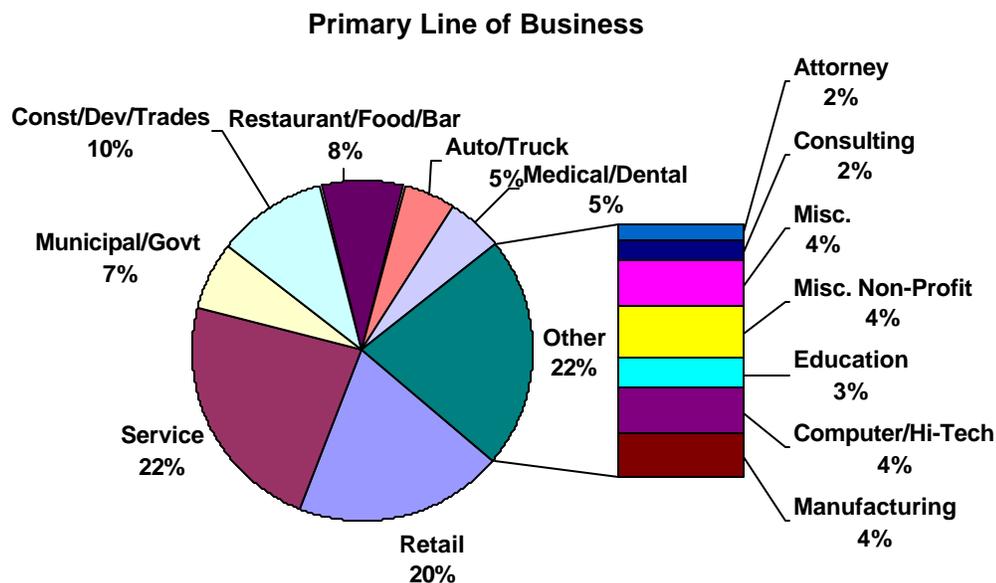
Because of the wide range of SIC codes used to categorize respondents' primary line of business, this variable was recoded into 14 different categories, based on the categorization that respondents provided in question 3b. The respondents answers were used rather than the SIC codes to weed out any inaccuracies in the SIC coding.

## C. Firmographics

By analyzing characteristics and attributes of the businesses, otherwise known as *Firmographics*, that participated in this study, ORC Macro will provide VTAC with a context to understand the data in the following sections.

### Type of Business

Study respondents represented a diverse group of businesses, led by the service (22%) and retail (20%) industries. Other primary lines of business included: construction/development/trades (10%), restaurant/food/bar (8%), governing authorities (7%), automobile- or trucking-related industries (5%) and medical/dental businesses (5%). Nearly one quarter of the remaining Vermont small businesses fell into the *other* category; no business in this category accounts for more than 4% of Vermont's small businesses.



Smaller segments of Vermont businesses included computer/hi-tech industries (4%); manufacturing (4%); a hodge-podge of small business that did not fit into any standard category of businesses (4%); non-profits (4%); education-oriented businesses (3%); consulting businesses (2%); and attorneys (2%).

### Number of Employees

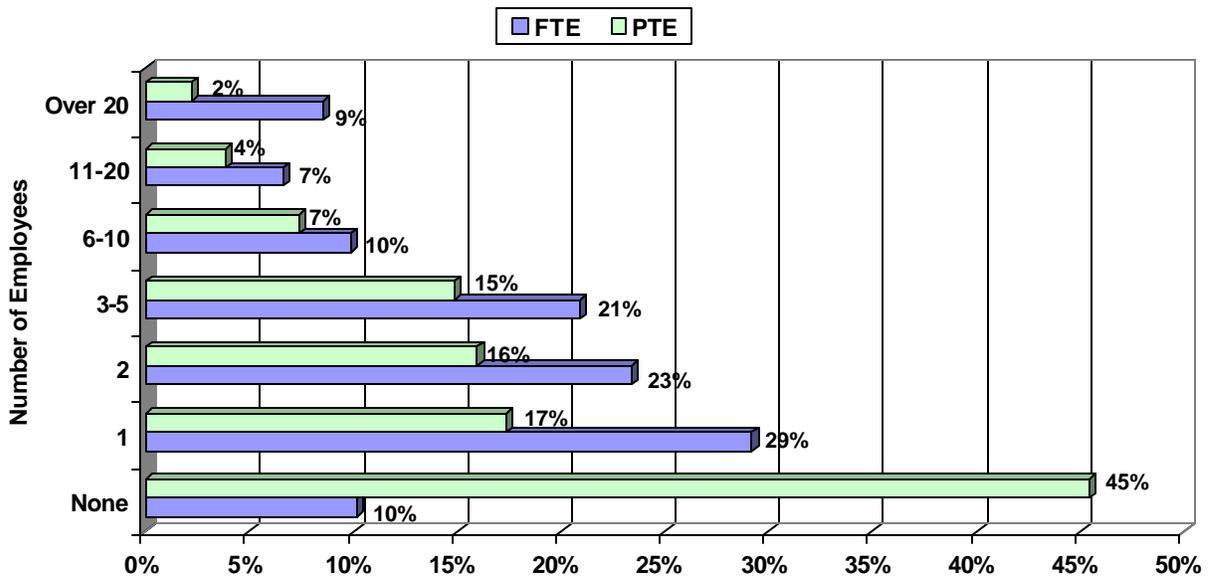
Based on August 2000 data, there were nearly 20,000 privately-owned, non-farm small businesses in Vermont with 19 or fewer employees.<sup>5</sup> According to the 2001 Awareness study, a little over two-thirds of Vermont small businesses had five or fewer employees in 2001. Nearly half of the small businesses in Vermont had only one or two employees (48%). Over a quarter of

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<sup>5</sup> Vermont Department of Employment and Training, 2000, "Labor Market Information: Vermont Size Class By Industry, 1999, Private Ownership." <http://www.det.state.vt.us/lmi/>

Vermont small businesses had only one full-time employee (FTE) (27%), while approximately one in five had two FTEs (21%). Another 19% had 3-5 employees. Businesses with 6-10 employees (9%) and 11-20 (6%) comprised 15% of Vermont's small business FTE workforce. Businesses with over 20 workers made up only a small percentage of small businesses (8%). Less than 10% of Vermont small business reported having no FTEs (8%).

**Comparison of Part-Time (PTE) and Full-Time (FTE) Employees**

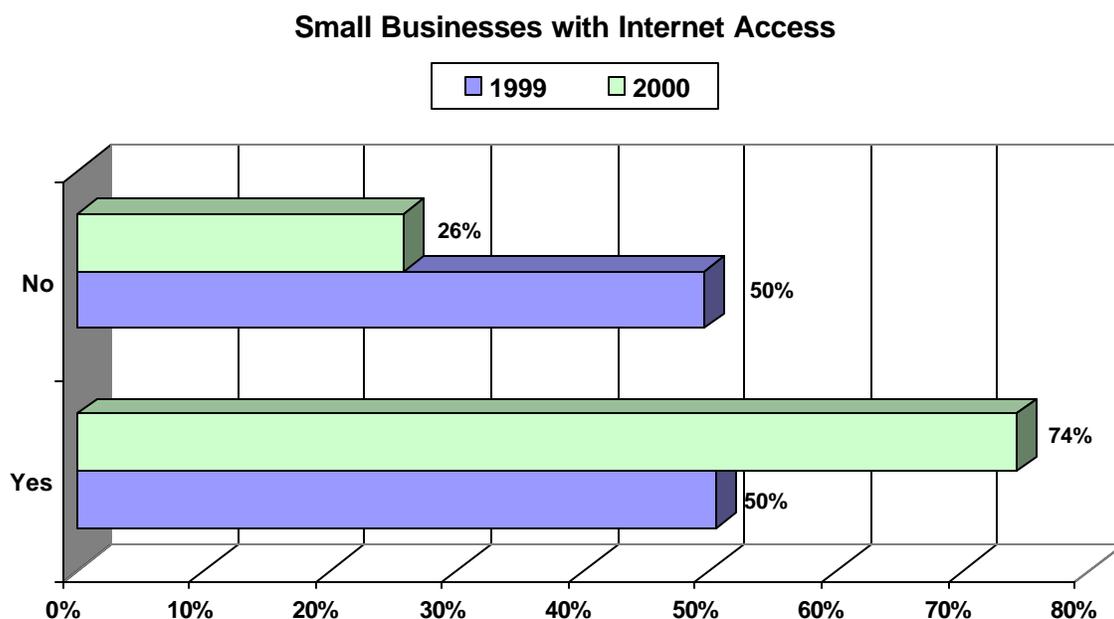


By contrast, 41% of all small businesses in Vermont reported having no part-time employees (PTEs) in 2001. Of those small businesses that did report having PTEs, businesses with five or fewer employees ranged between 14%-16% and had on average 2 PTEs. Small businesses that reported having 6-10 PTEs (7%) and 11-20 PTEs (4%) comprised only 11% of all of Vermont small businesses. Only 2% of small businesses had more than 20 PTEs.

## D. Business Internet Profile

Over the last five years, more and more businesses have joined the Internet age. For traditional brick-and-mortar type businesses, doing business on the Internet has become a requirement for expanding business growth in a stagnating economy. For small businesses having an Internet presence is just one more way for them to target niche markets that they might not be able to reach otherwise. While simply providing information about businesses products was in 1999, in 2001, successful small businesses are expected to provide interactive online opportunities for their customers.

According to a August 2000 government report, only 12.3% of the population had Internet access from their place of work.<sup>6</sup> A little over 30% of New Englanders had Internet access from work according to a 2000 Gartner study.<sup>7</sup> Small business owners in Vermont did much better than the nation-wide and regional business averages; in 2001, nearly three out of four small businesses surveyed had Internet access (74%). This was a 23% improvement over small business access in 1999.



According to the 2001 Awareness Study, small businesses with five or fewer FTEs are twice as likely to have Internet access (65%) than their colleagues with more than five employees (26%). Additionally, 41% of small businesses with no part-time employees were more likely to have Internet access. Service-related businesses were the most likely to be connected to the Internet (23%).

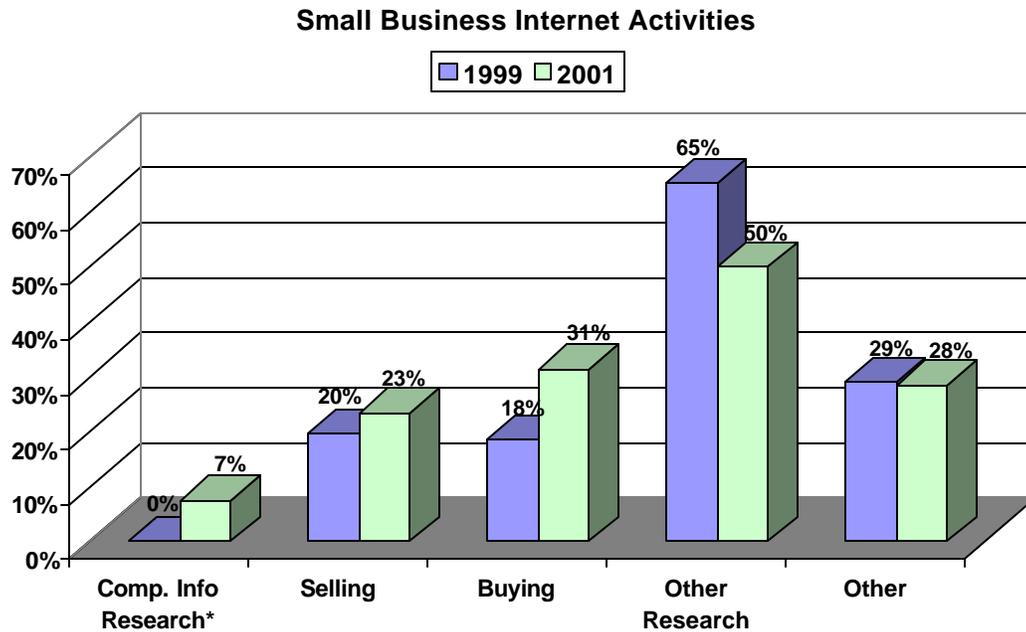
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<sup>6</sup> US Department of Commerce. August 2000. "Falling Through the Net: Toward a Digital Inclusion – A Report on American Access to Technology Tools." Downloaded from the Internet April 4, 2001, [www.ntia.doc.gov/ntiahome/digitaldivide.htm](http://www.ntia.doc.gov/ntiahome/digitaldivide.htm)

<sup>7</sup> Garter. February 2000. "Digital Divide Regional Report: New England."

## Internet Activities

In 2001, of those respondents who use the Internet at their place of business, over three-quarters did so for research purposes (77%). While half used the Internet for general research (50%), 28% used it for competitive research purposes. Other popular uses for the Internet included buying merchandise (31%), selling merchandise or services (23%), and miscellaneous reasons (28%).



The largest growth in activities during the 2000-2001 period was use of the Internet for overall research purposes (+13%). VTAC added a new category to its 2001 instrument, *competitive information research*, which allowed respondents to specify what type of research that they do for their business. This addition accounted for the 15% decline in the *other research* category between 1999 and 2001.

The other significant area of growth in Internet activities was in the area of online purchasing. In 2000, 52% of Internet users reported that they had made at least one purchase online.<sup>8</sup> While small businesses experienced significant growth in online purchasing since 1999 (+15%), they still lagged behind the general population in this area.

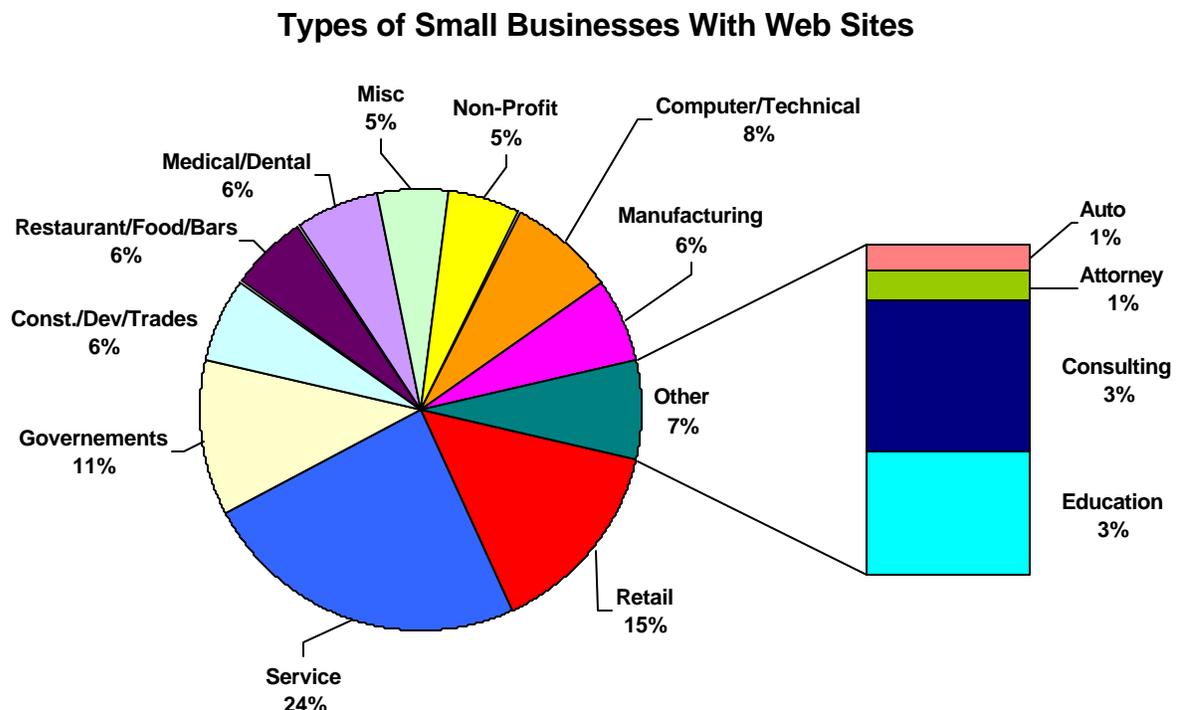
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<sup>8</sup> Pew Internet Project. 2000. "Internet Tracking Report: More Online, Doing More Online," downloaded from the Internet on April 4, 2001, [www.pewinternet.org](http://www.pewinternet.org)

## Company Web Sites and E-Commerce Activities

Retail e-commerce is booming on the Internet. The United States Department of Commerce reported that total e-commerce sales (including both goods and services) for 2000 were estimated at \$25.8 billion.<sup>9</sup> In the fourth quarter of 2000, retail sales alone were up 67.1% from the previous year, despite a slowing economy. As increasing numbers of consumers are buying on the Internet, no businesses, particularly small ones, can safely ignore this outlet for expanding business growth.

Less than half of Vermont's small businesses had Web sites as of February 2001 (39%). Of small businesses with Internet access, a little over half of those sites did not have Web sites (53%). Of the 154 small businesses reporting Web sites, the service industry had the highest Web presence (24%); retail was second at 15%. However, due to the small number of businesses reporting the presence of Web sites, caution should be exercised when drawing conclusions as to the representativeness of the Web site distribution within individual business sectors.

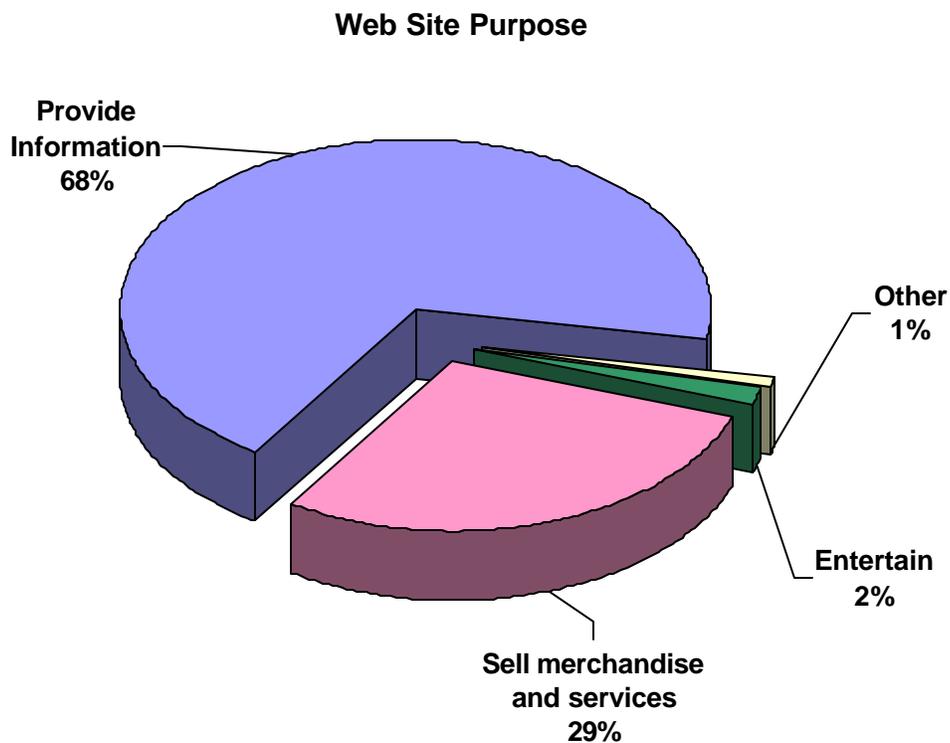


<sup>9</sup> United States Department of Commerce News, February 16, 2001, "Retail E-Commerce Sales in Fourth Quarter 2000 were \$8.7 Billion, up 67.1 Percent From Fourth Quarter 1999, Census Bureau Reports," downloaded from the Internet on April 4, 2001 from [www.census.gov/mrts/www/current.html](http://www.census.gov/mrts/www/current.html)

Company Web sites serve multiple purposes, including advertisement, marketing and e-commerce. According to the “Second Annual Small Business Internet Survey,” only 27% of small businesses have Web sites. For those that have Web site, their main purpose is advertising and promotion, rather than e-commerce.<sup>10</sup> Additionally, small businesses with a Web site presence are often ahead of their competitors. While 48% of small businesses without Web sites commonly think that their customers are limited to a 50-mile radius, research shows that only 20% of small businesses with Web sites have that same idea.<sup>11</sup> Small businesses with a Web site have global opportunities.

The lion’s share of Vermont small businesses reported that the goal of their site was to provide information to visitors (81%). Only 34% of the 154 Web sites were devoted to selling merchandise or services. A minority were designed for entertainment (2%) or other miscellaneous goals (1%).

Of those businesses not currently selling services or merchandise over the Internet, only an additional 17% expected to be selling on the Internet over the next 12 months.



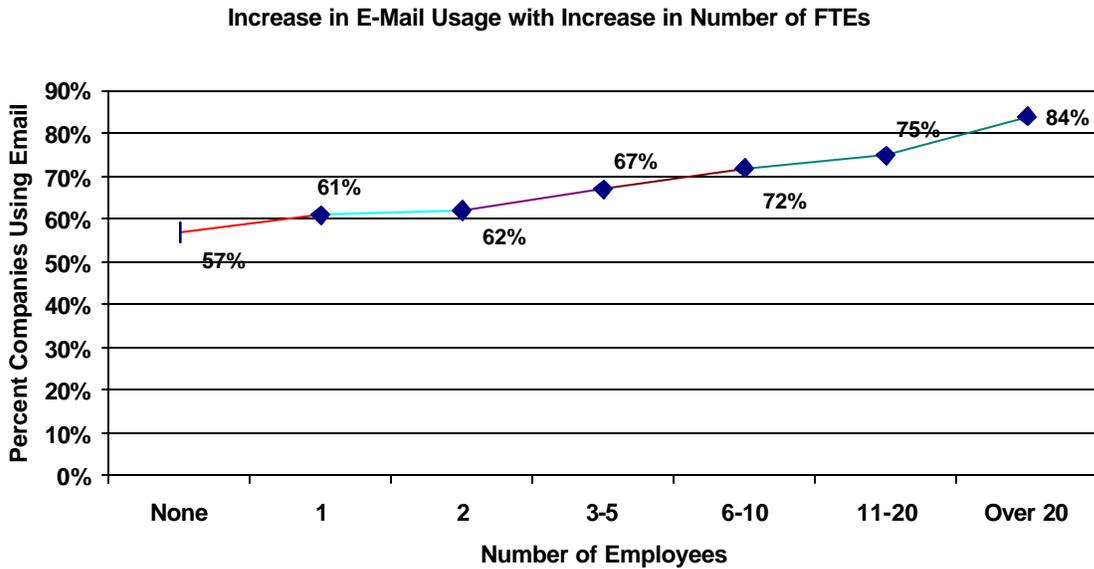
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<sup>10</sup> Michael Pastore, “Small Businesses Still Shy Away from E-Commerce,” [CyberAtlas](http://CyberAtlas.com) downloaded from the Internet April 12, 2001 at [cyberatlas.internet.com/markets/smallbiz](http://cyberatlas.internet.com/markets/smallbiz)

<sup>11</sup> Ibid.

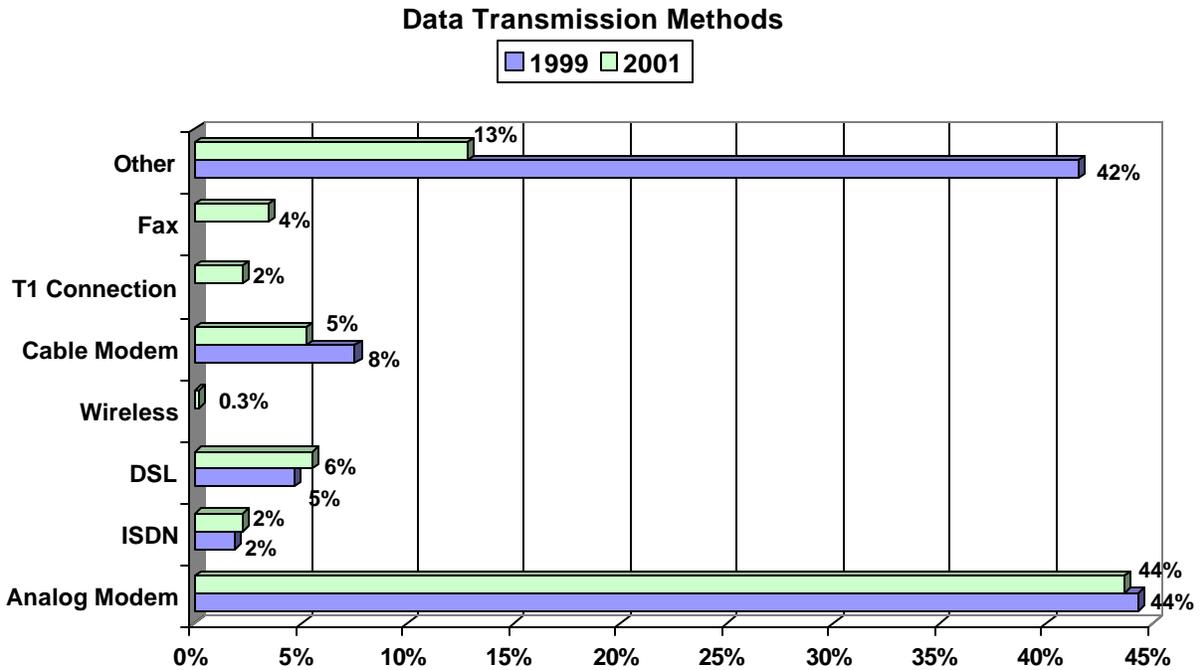
## E-mail Usage

E-mail has become a standard method of business communication, much like faxing or telephone. Two-thirds of Vermont small businesses use e-mail on a regular basis (66%). Of the two-thirds that use e-mail, the percentage of businesses utilizing this technology increased as the number of full-time employees increased. Businesses with over 20 employees had the highest usage patterns in the study (84%). However, because of the small number in some of these subgroups, more research is recommended to test this trend over time.



## Electronic Data Transmission Methods

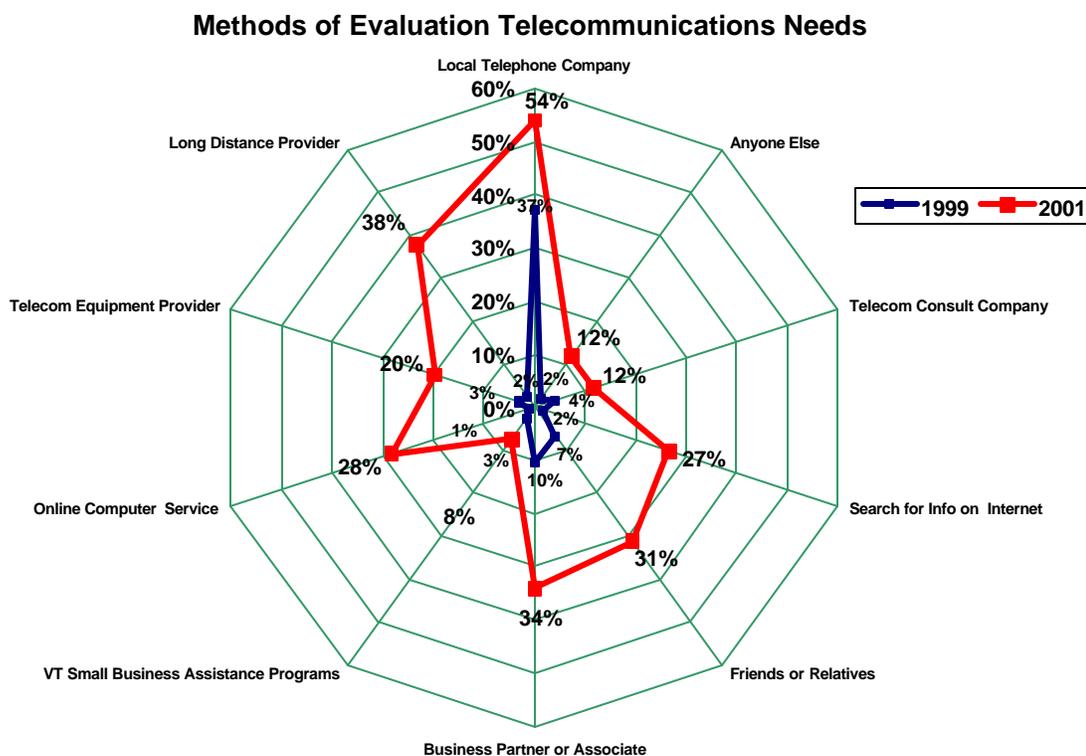
Analog modems (i.e. 33.6k and 56k) remained the most popular electronic data transmission methods for small businesses in 2001 (44%). This figure has held steady since the original 1999 Awareness study. Usage of high-speed technologies such as cable modems, DSL, wireless technologies and T1 connections have slowly increased since 1999 (+2%). However, as of 2001, these technologies still lag behind the use of analog modems (-28%).



## E. Evaluating Small Business Telecommunications Needs

Overall, small businesses reported availing themselves of a wider range of telecommunications resources than ever before. The most frequent source of information was their local telephone company (54%). Respondents using this resource has increased by nearly 45% since 1999. Thirty-eight percent of all respondents considered long distance carriers a good information resource in 2001 as opposed to 2% in 1999 (+1800%). Small Vermont owners reported relying on business partners and associates (34%), friends and relatives (31%), online services (28%) and Internet sources (27%) to help them navigate the confusing array of telecommunication choices in 2001. Other less frequently exercised options include telecommunication companies (12%), miscellaneous sources (12%) and Vermont small business assistance programs such as VTAC and VMEC (8%).

The radar chart below compares the aggregate values for each of the evaluation options utilized in 1999 and 2000. When using a radar chart, each category has its own value axis radiating from the center point. Lines connect all the values in the same series. The red 2001 line shows the increase in all categories over the 1999 data.



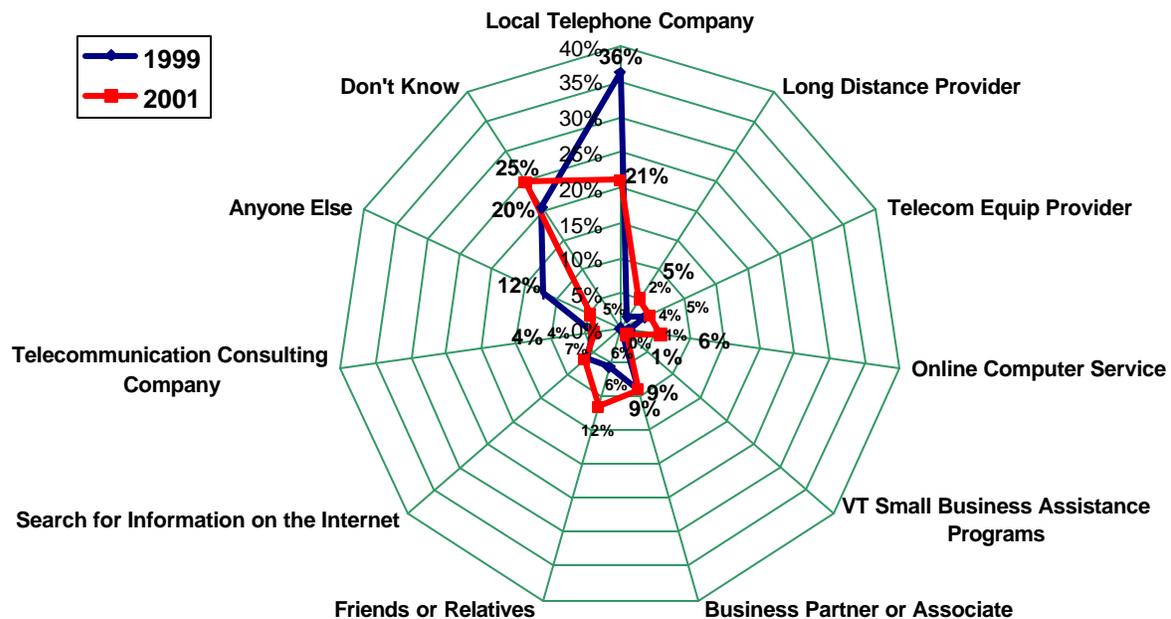
Of information sources that respondents stated they had consulted, a quarter were unable to distinguish which had been the most valuable when making a decision (25%). This is a 25% percent increase over 1999 respondents. This result may be indicative of the increasing difficulty the average person has in making a decision in a sea of confusing telecommunications solutions. It also indicates that no information source or company in the marketplace source has cornered the market as a trusted information source. In 1999, the most valuable resource was the local telephone company (36%). In 2001, the number of respondents identifying the local phone company as a valuable resource fell almost 42% to 21%.

Small business ranked the remaining information sources as valuable in the following order for 2001:

Friends or Relatives	12%
Business Partner/Associate	9%
Online Computer Service	6%
Long Distance Provider	5%
Telecom Equipment Provider	5%
Telecom Consulting Company	4%
Vermont Small Business Assistance Programs	1%

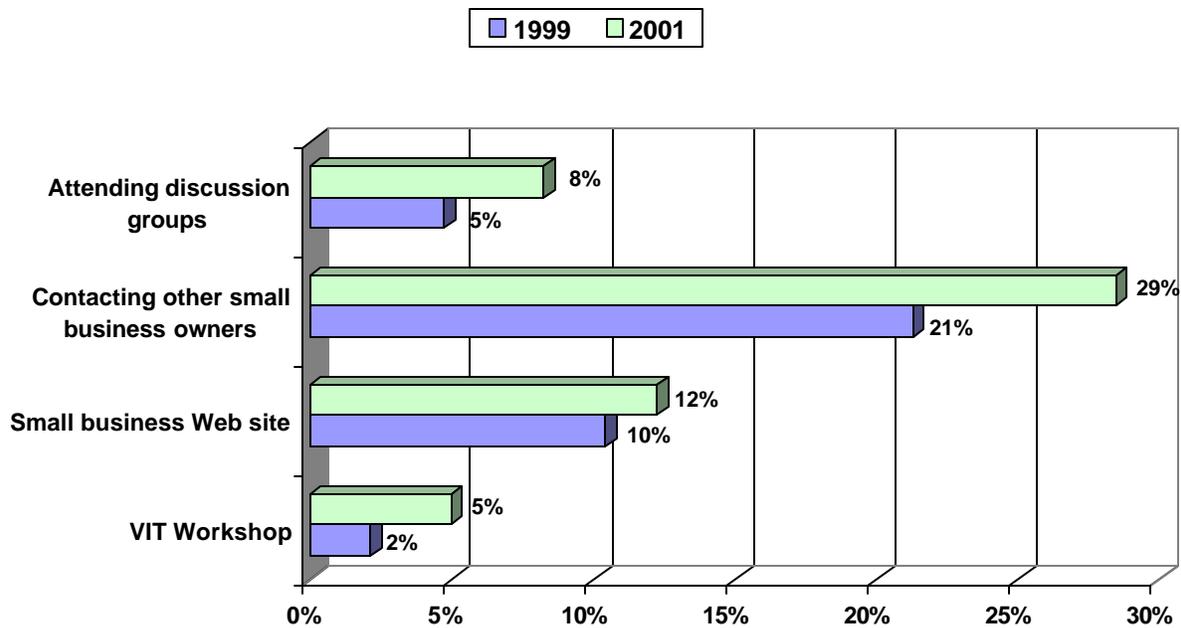
The red 2001 line in the following radar graph illustrates the decrease in dominance of the local telephone company and the lack of a dominate information source.

### Which Telecommunications Resource Was the Most Valuable



Networking with other small business owners (29%) was still the most common way small business owners educated themselves about telecommunications needs and options in 2001. This method showed an 8% growth over 1999's data. The next most frequent educational tool was visiting a Web site that assists small organizations with telecommunications questions and concerns (12%). Small business owners cited attending discussion groups as their third educational choice. The least common choice was attending Vermont Interactive Television (VIT) workshops (5%).

### Educational Telecommunication Activities In the Last Year

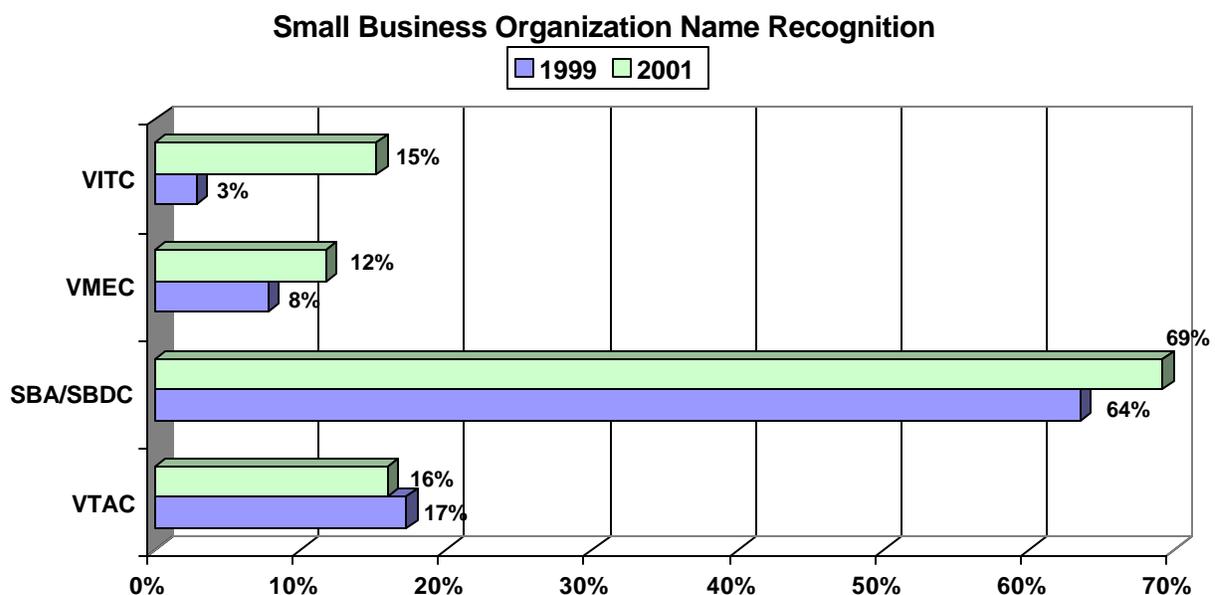


## F. Awareness of Small Business Assistance Agencies

A number of government and small business assistance agencies exist to help small businesses in Vermont flourish. In order, for businesses to have an advantage of such an agencies services, they must first be aware that it exists. This section measures the awareness of local small business assistance agencies, focusing specifically on VTAC and the awareness of the services that it offers Vermont small businesses.

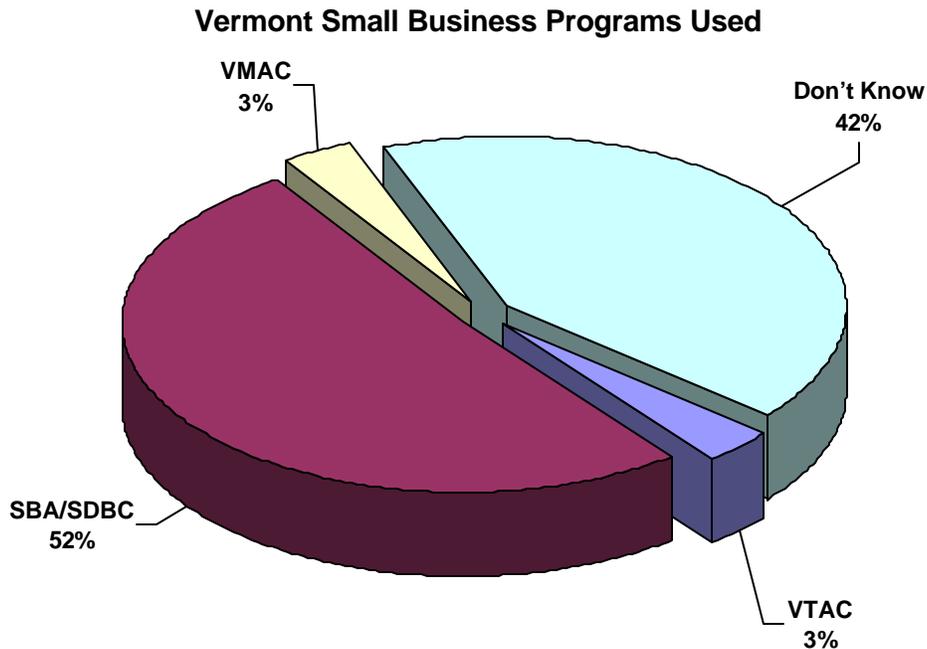
### Name Recognition of Small Business Assistance Agencies

The Small Business Administration (SBA/SBDC) remained the small business assistance agency with the strongest name recognition in 2001 (69%); the brand awareness of this agency increased by 5% since 1999 (64%). The SBA outpaced its closes competitor, the Vermont Telecom Advancement Center (VTAC), by 53%. VTAC's name recognition among small businesses in Vermont was 16%. This was a 1% decline since 1999; however, it is important to note that this result fell well within the margin of error for this study ( $\pm 4.9\%$ ). The organization with the third highest name recognition was the Vermont Information Technology Center (VITC) (15%). VITC gained 12 percentage points in terms of name recognition from 1999 (3%). The Vermont Manufacturing Extension Center was ranked last for the second year (12%). It made a small gain in name recognition, but its gain also fell within the margin of error ( $\pm 4.9\%$ ).



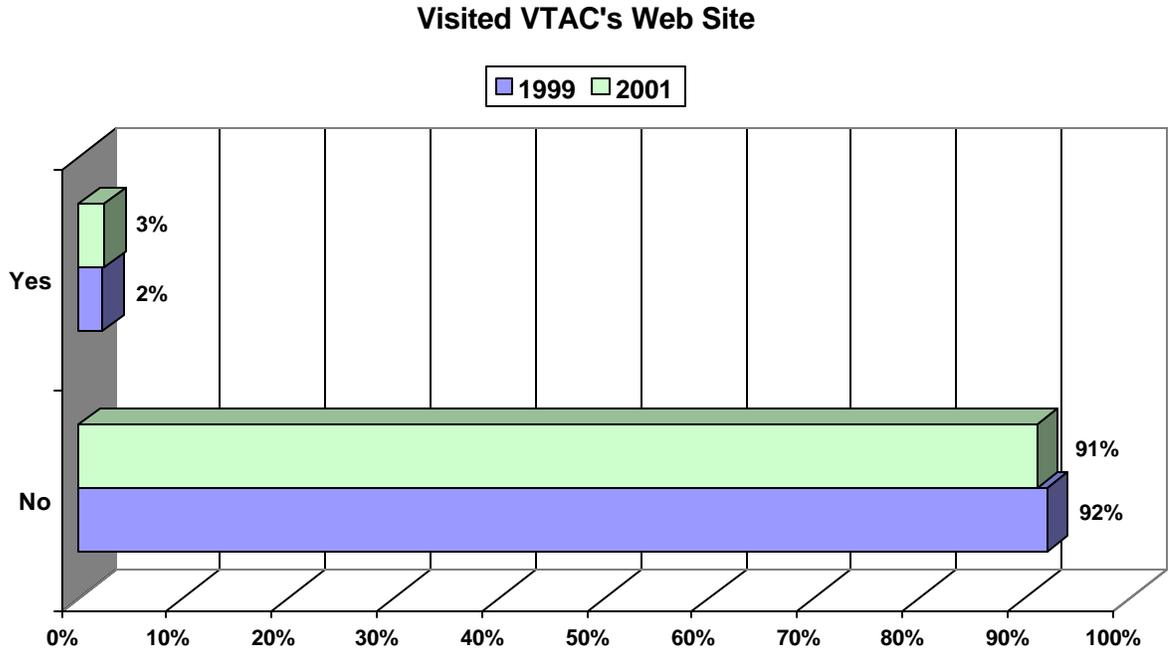
## Use of Small Business Agencies

A very small percentage of businesses in both the 1999 and 2001 surveys tapped agency resources. In 1999, less than 1% of all responding businesses had utilized their services. In 2001, use of these agencies improved, but these agencies remained underutilized; less than 8% of Vermont small businesses sought their help (30 businesses). Of those businesses using one of these agencies, the Small Business Administration (SBA) or its counterpart the Small Business Development Association (SBDA), was the most commonly utilized (52%). Another 42% reported using some type of agency for assistance, but could not recall the agency's name. Only one company reported using either the Vermont Manufacturing Extension Center (VMEC) (3%) or the Vermont Telecom Advancement Center (VTAC) (3%).

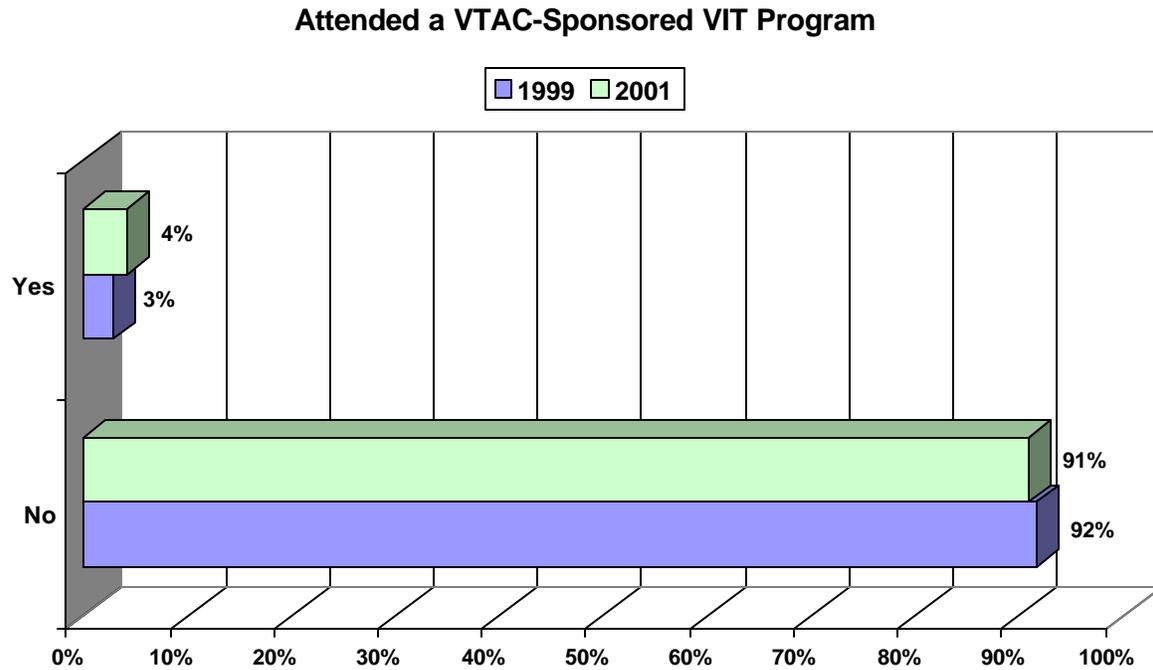


## Utilization of VTAC's services

**Web site.** Only a small percentage of small businesses utilized VTAC's Web site in 2001. The number of those using VTAC's site remained virtually unchanged in 2001 (3%) versus 1999 (2%). However, it should be noted that this was within the margin of error ( $\pm 4.9\%$ ).

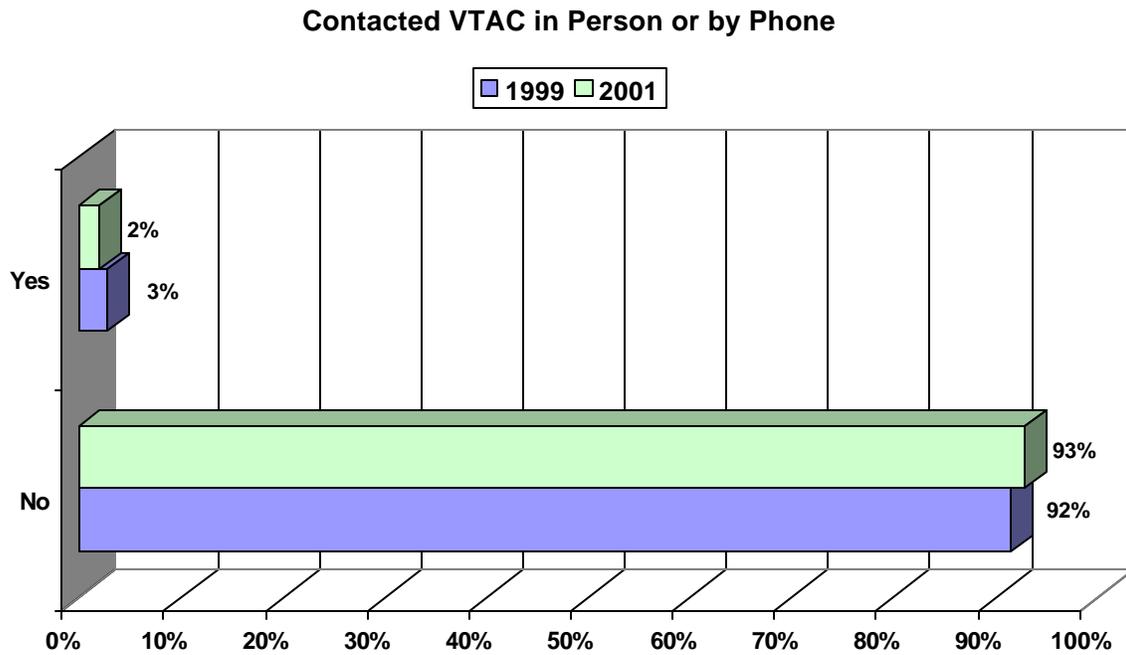


**VTAC-sponsored VIT programs.** VTAC experienced a small amount of growth in its VIT-sponsored programs (1%). However, again, this was well within the margin of error for this study ( $\pm 4.9\%$ ).



### Contact with VTAC.

The number of small businesses reported contact with VTAC in the last year declined modestly (-1%) from 3% in 1999 to 2% in 2001. As with the number that have visited VTAC's Web site and participated in VTAC's VIT programs, this decline is well within the margin of error ( $\pm 4.9\%$ ).



# **Appendix A**

## **Evaluation Instruments**

**A. VTAC SEMINAR EVALUATION INSTRUMENT**

# PROGRAM EVALUATION

Thank you for taking the time to fill out this evaluation. Please answer the questions by marking the "O" in front of the appropriate response category with a "✓". It is not necessary to fill in the "O" completely.

Date \_\_\_\_\_

VIT Site \_\_\_\_\_

1. Is this the first E-Business event you have attended?      Yes                      No
  
2. How did you hear about this event?                      Word of mouth                      Newspaper or publication  
     Saw a flyer                              Radio or television  
     Received an invitation              Direct mail pamphlet  
     Saw it on the web                    Other, specify \_\_\_\_\_
  
3. Please use the following scale to indicate how strongly you agree or disagree with the statements below:
 

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	Not Applicable
a. The event was well organized	<input type="radio"/>					
b. The speakers were informative	<input type="radio"/>					
c. The information presented was practical	<input type="radio"/>					
d. The handouts were useful	<input type="radio"/>					
e. The technical information was explained at a level I could understand	<input type="radio"/>					
f. The program was worth my time and investment	<input type="radio"/>					
g. The information was presented effectively	<input type="radio"/>					
h. The program provided a good working knowledge of the subject matter presented	<input type="radio"/>					
i. The program has allowed me to acquire practical skills and knowledge to manage my business more effectively and efficiently	<input type="radio"/>					
j. The VIT format allows for effective communication with all involved	<input type="radio"/>					
k. The tutorials were useful	<input type="radio"/>					
l. The testimonials were useful	<input type="radio"/>					
  
4. What was your primary reason for attending this program?
 

<input type="radio"/> Preparation for starting a business	<input type="radio"/> To improve my own skills	<input type="radio"/> Recommended by supervisor
<input type="radio"/> Skills improvement for owner/manager	<input type="radio"/> General interest in topic	<input type="radio"/> Other, specify _____
<input type="radio"/> Adding or increasing E-Business in current business		

5. What types of program topics would you be most interested in? (Mark all that apply.)
- Seminars on how technology and telecommunications legislation affects my business
  - How to use technology more effectively in my business
  - High speed telephony such as cable, wireless and xDSL
  - Using the Internet for electronic commerce
  - How computer security issues can affect my business
  - How to use e-mail more effectively in my business
  - Advertising on the Internet
  - How to pick the right Internet service package for my business
  - How electronic privacy issues affect my business and my employees
  - Business to Business electronic commerce
  - Business to Consumer electronic commerce
  - Other, please specify \_\_\_\_\_
6. **Based on your experience, what is the likelihood that you will attend another E-Business event?**
- Extremely likely    Very likely    Somewhat likely    Not too likely    Not at all likely
7. **What is the likelihood that you would recommend an E-Business event to someone else?**
- Extremely likely    Very likely    Somewhat likely    Not too likely    Not at all likely
8. **Where do you have access to the internet?**
- At home    At work    At a library  
 At school    Elsewhere    Don't have access
9. **Do you work:**
- Full-time    Part-time    Homemaker    Not currently working  
 Self-employed    Retired    Student    From Home
10. **Which of the following best describes your place of work?**
- Corporate or for-profit business    Government (Federal, State, Local)  
 Educational institution    Non-profit    Other, specify \_\_\_\_\_
11. **How many employees work at your place of business?**
- 10 or less    11-20    21 to 50  
 51 to 100    100 +    Don't know
12. Are you:
- Owner**    **Manager**    **Clerical**    **Something else,** \_\_\_\_\_  
 Executive    Technical staff    Laborer
13. Check the main type of business you are engaged in or plan to be engaged in:
- Communications    Service (commercial/industrial)  
 Financial, insurance, real estate    Service (Internet)  
 Manufacturing    Service (other)  
 Retail    Transportation, construction  
 Something else, \_\_\_\_\_    Wholesale
14. **How long has your place of employment (or your business) been in existence?**
- Less than a year    1-3 years    4-6 years    Over 6 years    Not in business

**KEY NOTE SPEAKER/PANEL EVALUATIONS**

Please rate each speaker on each of the following criteria:

**15. Keynote Speaker**

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	Not Applicable
a. The speaker was knowledgeable about the topic	<input type="radio"/>					
b. The speaker's presentation held my interest	<input type="radio"/>					
c. The speaker's presentation was well-organized	<input type="radio"/>					
d. The speaker effectively used visual aids to illustrate his/her ideas	<input type="radio"/>					
			Very Good			Not Applicable
	Excellent	Good		Fair	Poor	
e. The speaker's communication skills were:	<input type="radio"/>					
f. The level at which the topic was presented was:	<input type="radio"/>					

**16. Panel #1**

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	Not Applicable
a. The speaker was knowledgeable about the topic	<input type="radio"/>					
b. The speaker's presentation held my interest	<input type="radio"/>					
c. The speaker's presentation was well-organized	<input type="radio"/>					
d. The speaker effectively used visual aids to illustrate his/her ideas	<input type="radio"/>					
			Very Good			Not Applicable
	Excellent	Good		Fair	Poor	
e. The speaker's communication skills were:	<input type="radio"/>					
f. The level at which the topic was presented was:	<input type="radio"/>					

**17. Panel #2**

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree	Not Applicable
a. The speaker was knowledgeable about the topic	<input type="radio"/>					
b. The speaker's presentation held my interest	<input type="radio"/>					
c. The speaker's presentation was well-organized	<input type="radio"/>					
c. The speaker effectively used visual aids to illustrate his/her ideas	<input type="radio"/>					
			Very Good			Not Applicable
	Excellent	Good		Fair	Poor	
d. The speaker's communication skills were:	<input type="radio"/>					
e. The level at which the topic was presented was:	<input type="radio"/>					

**THANK YOU VERY MUCH FOR TAKING THE TIME TO COMPLETE THE SURVEY!**

**B. SECOND VTAC AWARENESS SURVEY INSTRUMENT**

**VTAC**  
**Vermont Telecommunications Application Center Awareness Survey Project**

Job Number 1798.75  
Draft VTACBASE.Q#2

---

**NOTES TO CLIENT:**

**I. TYPOGRAPHIC CONVENTIONS:**

- A. [Off-script instructions to the interviewer are shown enclosed in square brackets, as is this sentence.]
- B. {Instructions to the questionnaire programmer, or notes about material which needs to be added to the questionnaire, are shown enclosed in curly brackets, as is this sentence.}
- C. Notes to client are highlighted in green as is this sentence.

**II. EDITING CONVENTIONS:**

- A. Additions since previous draft are underline twice in blue, as is this entire sentence.
- B. Deletions since previous draft are shown in STRIKEOUT,

**III. MOVE DATA IN FROM SAMPLE**

- A. Phone number
- B. Business Name
- C. Contact Name
- D. Complete Address
- E. Sales/Revenue
- F. Number of Employees
- G. Profit/Not for Profit

**IV. MOVE DATA OUT TO INTERVIEW RECORD**

- A. Phone number
- B. Business Name
- C. Contact Name
- D. Complete Address
- E. Sales/Revenue
- F. Number of Employees
- G. Profit/Not for Profit

**V.. QUOTAS**

- A. 400 Statewide

**VI. SAMPLE**

- A. Genesys -- Vermont Businesses with 20 or fewer employees

**VII. LOCATION OF WORD FILE: J:\projects\vtac\_eval\awareness survey\awaresurv\_DX**  
where X is the current version number shown in heading at top of page.

## INTRODUCTION

---

1. Hello, this is [FIRST AND LAST NAME]. I'm calling on from Macro International, a Vermont opinion research company. May I please speak with [if non-profit] the Executive Director/ [if for profit] a principal owner of the business *[if you don't have a name]* OR to [Respondent]?
  - 1 Yes, speaking
  - 2 Yes, transferring to person
  - 3 He/she is not here; or is busy now {Set Callback time}
  
2. [Respondent], this is [FIRST NAME, LAST NAME]. I'm calling on from Macro International, a Vermont opinion research company. We are calling today to discuss the effectiveness of telecommunications programs designed to assist small organizations. The survey will require about seven minutes and all responses are strictly confidential. I assure you that I am not selling anything. Your responses will be used to improve the reach and effectiveness of programs designed to assist small organizations.

[Prompt as necessary: I can not reveal who is sponsoring this survey now, but I will be happy to at the end of the interview.]

### Section A: Current Phone Service Profile

---

3. Ask Business Sample} First, what is your business' primary line of business in Vermont?  
{Ask Non-Profit Sample} First, what is the mission or primary purpose of your organization?  
  
{Restore Business Type from Sample}

[RECORD LINE OF ORGANIZATION IF DIFFERENT FROM SAMPLE ]

- 3.1 \_\_\_\_\_
- 3.2 [DK]
- 3.3 [Refused]
  
4. How many full time people does your organization employ in Vermont?
  - 4.1 [RECORD NUMBER:] \_\_\_\_\_ {NUM 3, 777=DK, 999=Refuse}
  
5. How many part time people does your organization employ in Vermont?
  - 5.1 [RECORD NUMBER:] \_\_\_\_\_ {NUM 3, 777=DK, 999=Refuse}

6. Do you have Internet access at your place of business....?

- 1 Yes
- 2 No
- 7 [DK]
- 9 [Refused]

7a. {Ask If Flag Internet=1} Do you use the Internet for....? {MUL 5}

- 7.1 Competitive Information Research
- 7.2 Selling {SKIP TO 10A}
- 7.3 Buying
- 7.4 Research (Other)
- 9.5 Other
- 7.6 [DK]
- 7.7 [Refused]

9b If you are not currently selling on the Internet, do you intend to in the next year?

- 9b.1 Yes
- 9b.2 No
- 9b.3 [DK]
- 9b.4 [Refused]

8a. Do you use E-mail on a regular basis?

- 8.1 Yes
- 8.2 No
- 8.3 [DK]
- 8.4 [Refused]

10b. Does your company have a web site?

10b.1 Yes

10b.2 No

10b.3 [DK]

10b.4 [Refused]

{SKIP TO 11}

10c. What is the purpose of your company's web site? {MUL=4}

10c.1 provide information

10c.2 sell merchandise or services

10c.3 entertain

10c.4 Other; \_\_\_\_\_

10c.5 [DK]

10c.6 [Refused]

11. How does your organization transmit and/or receive data? {MUL=6}

11.1 Analog modem

[SKIP TO 17]

11.2 ISDN

[SKIP TO 17]

11.3 DSL

[SKIP TO 17]

11.4 Wireless

[SKIP TO 17]

11.5 Cable modem service provided by the local  
cable company

[SKIP TO 17]

11.6 Other, specify \_\_\_\_\_

[SKIP TO 17]

11.5 [DK]

[SKIP TO 17]

11.6 [Refused]

[SKIP TO 17]

## Section B: Telecommunication Service Needs

---

Now I would like to ask you about how you evaluate your telecommunication service needs. By that I mean when you considered adding, removing or changing any aspect of your telecommunication service such as adding a line, purchasing an office voice mail system or upgrading your Internet access.

9 When you evaluated your telecommunication needs, how did you proceed? Did you contact.... {Allow responses of Yes, No, DK or Refused for each of the following}

{Randomize List}

- 9.1 your local telephone company
- 9.2 an intrastate or interstate long distance service provider
- 9.3 telecommunications equipment provider (Twin State, Business Communications, etc.)
- 9.4 on-line computer software service (CompuServe, Together Networks, America Online, etc.)
- 9.5 VT small business assistance programs {Set Flag FOLLOW-UP1}
- 9.6 business partner/associate
- 9.7 friend or relative
- 9.8 searched for information on the Internet
- 9.9 Telecommunication consulting company
- 9.10 Anyone else? {Please specify:\_\_\_\_\_}
- 9.11 [DK]
- 9.12 [Refused]

{Ask if FLAG FOLLOW-UP1=1} What VT small business assistance programs have you used?  
[Do Not Read List] {MUL=3}

- 9.13 VTAC
- 9.14 SBA/SBDC [Small business Development Association]
- 17.15 VMAC
- 9.16 [DK]
- 9.17 [Refused]

{Skip Next question if only one contact source is listed above}

10 Of the telecommunication information resources you mentioned, which one do you find to be most valuable? {Display ONLY Selected categories} [Please Select One Response From The Following]

- 10.1 your local telephone company
- 10.2 an intrastate or interstate long distance service provider
- 10.3 telecommunications equipment provider (Twin State, Business Communications, etc.)
- 10.4 on-line computer software service (CompuServe, Together Networks, America Online, etc.)
- 10.5 VT small business assistance programs
- 10.6 business partner/associate
- 10.7 friend or relative
- 10.8 searched for information on the Internet
- 10.9 Telecommunication consulting company
- 10.10 Anyone else {please specify:\_\_\_\_\_}
- 10.11 [DK]
- 10.12 [Refused]

In the past year have you tried to learn more about how to manage the telecommunication service needs of your organization by ...

{Randomize}

11 Attending a telecommunications workshop on Vermont Interactive Television (VIT)?

- 11.1 Yes
- 11.2 No
- 11.3 [DK]
- 11.4 [Refused]

12 Visiting a website that assists small organizations with telecommunication questions and concerns?

- 12.1 Yes
- 12.2 No
- 12.3 [DK]
- 12.4 [Refused]

13 Contacting other small business owners?

- 13.1 Yes
- 13.2 No
- 13.3 [DK]
- 13.4 [Refused]

14 Attending discussing groups sponsored by telecommunication services companies or non-profit organizations?

- 14.1 Yes
- 14.2 No
- 14.3 [DK]
- 14.4 [Refused]

Now I would like to ask you about a number of non-profit agencies that help small organizations with telecommunication issues and related needs. Have you ever heard of the ...

{Randomize}

15 Vermont Telcom Advancement Center, formerly known as Vermont Telecommunications Application Center or VTAC?

- 15.1 Yes {Set Flag VTAC=1}
- 15.2 No
- 15.3 [DK]
- 15.4 [Refused]

16 Small Business Administration or SBA/SBDC?

- 16.1 Yes
- 16.2 No
- 16.3 [DK]
- 16.4 [Refused]

17a Vermont Manufacturing Extension Center or VMEC?

- 17a.1 Yes
- 17a.2 No
- 17a.3 [DK]
- 17a.4 [Refused]

25b Vermont Information Technology Center (VITC)?

- 17b.1 Yes
- 17b.2 No
- 17b.3 [DK]
- 17b.4 [Refused]

{If VTAC=0 Prompt} The Vermont Telecommunications Application Center or VTAC is a not-for-profit organization that educates small business entrepreneur and non-profits in the available telecommunication products, services and technology which can assist their company in growing. There is no charge for services.

VTAC=s Small Business services include sponsoring telecommunication and Internet programs on Vermont Interactive Television (VIT) and small organization discussion groups throughout the state. In addition, VTAC maintains a telecommunications website that offers small organization discussion rooms, a Q&A bulletin board and numerous links to other Internet sites of interest to small organizations.

In the past year have you ....{Randomize}

18 Visited VTAC's Web site?

- 18.1 Yes
- 18.2 No
- 18.3 [DK]
- 18.4 [Refused]

19 Attended any VTAC-sponsored Vermont Interactive Television (VIT) program?

- 19.1 Yes
- 19.2 No
- 19.3 [DK]
- 19.4 [Refused]

20 Contacted VTAC in-person or by phone?

- 20.1 Yes
- 20.2 No
- 20.3 [DK]
- 20.4 [Refused]

21 Attended any VTAC-sponsored small organization discussion, service club (for example Rotary Club or Lions club) or focus group?

- 21.1 Yes
- 21.2 No
- 21.3 [DK]
- 21.4 [Refused]

That is the last question I have. Thank you very much for taking the time to complete this survey with me.