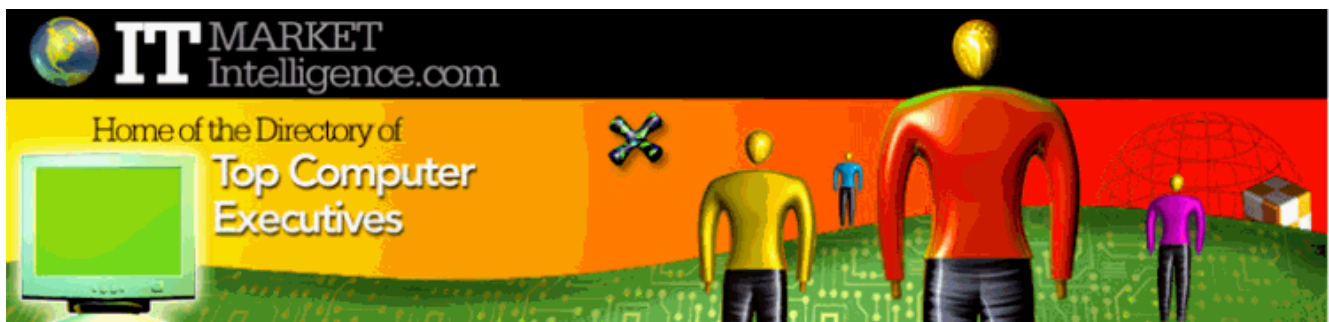


IT MARKET CHARACTERISTICS: ESSENTIAL DETAILS FOR TODAY'S INFORMED MARKETING AND SALES EXECUTIVE

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Information Technology Market Characteristics: Essential Details for Today's Informed Marketing and Sales Executive

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One of the most important elements of any marketing or sales program is determining who we spend our time contacting. *Time*, of course, is the key word. Time is the most finite resource available, and the possible number of contacts we can make far exceeds the time we have. Therefore demographic market segmentation is the most effective way to see that sales and marketing time is made as productive as possible.

Effective market segmentation requires a knowledge of how to segment data and an understanding of how to properly interpret the data that exists. Unfortunately, there are many list and data providers who do not have the adequate depth of demographic understanding for a technical sales environment. *Caveat emptor*: YOU must understand the dynamics and idiosyncrasies of your industry demographics, or pay the price by chasing unproductive leads.

You Have To Be An Expert

Failure is not an option when designing a marketing campaign or developing a marketing strategy. Although every variable (media, message, offer, design, response method, action call, etc.) is important to success, the most critical of all is *audience*. Who is the target audience? Even when all other variables are carefully crafted to perfection, without an accurately targeted audience, failure is inevitable.

Target audience identification is a challenge because the only demographic market segmentation expert you can be sure of is yourself. Outside experts are available, but every time you purchase a prospect list, the possibility that

you'll be working with someone with expertise in your specific industry (with detailed knowledge of the market segments you target) is highly unlikely.

You must know what you want to buy before you call. If you find a skilled and competent sales representative at your source for prospect data, that's great. But you have to assume these people don't exist, and you'll need your new market segmentation expertise and marketplace intuition to guide you. You can't afford it any other way, and your organization can't afford it any other way.

There are many ways to purchase data and many places from which to purchase it. Most are reputable businesses with conscientious sales representatives, but too much is at stake to place your trust into anything but a sure thing. It is important that your own knowledge guide the process of purchasing data, but it's imperative that you develop an intuition that will let you know that the information and quotes you're getting from your data vendor are right for you and your organization.

Most marketers buy print materials (such as brochures) from a printer. When we go through the purchase process with a printer, we expect them to know how to produce a quality product. Our comfort level is easily satisfied when we receive the product and we can personally evaluate the quality of a piece using sight and touch. Plus, we generally don't have to pay until we are satisfied that the quality matches our expectations. This isn't true with marketing data. Sometimes you can look at a list and find data that looks like garbage but turns out to be valuable. On the other hand, you might buy a list that looks like just the right data, but is totally worthless. You won't know for sure until you have the opportunity to use it.

I love all the "players" in the list business: compilers, circulation, community and response list developers, and brokers especially. But as a technology marketer myself, I can't afford to trust anyone I don't already know as an expert or an authority, and you can't either.

Understanding Demographics for the Computer Industry

Now that you're thoroughly convinced about the importance of being your own expert, the rest of this report will cover the fundamentals to get you started. Here's what you'll learn:

- *Types of data to use* - the different types of demographic data to segment your list.
- *Rules of thumb* - describes some standards and statistics to help you interpret demographic data.
- *Accuracy* - the kind of accuracy and guarantees should you expect, and current industry standards.
- *Develop a marketing data strategy* - ideas to create a general strategy; a *must* to effectively and efficiently utilize marketing data.
- *Results tracking and testing* - a critical element that's not just important for the current campaign, but for many years of planning in the future.
- *Cost* - don't let cost scare you away, success is the more important factor.

Types of Demographic Data

Following is a list of the types of demographic characteristics that may be available to you. Not all data sources may offer each type, and they may not support different types of selectability. It's important to keep in mind that if you request a particular data type or demographic selection, the answer may be *no*. If you can be a little pushy without being rude, however, you will often find that the answer is actually *yes*, and your sales representative doesn't know it.

This section discusses types of data, but the secrets of how to use them most effectively are found in the next section, "Rules of Thumb."

Geographic

Geographic regions can be selected by using zip codes; telephone area codes; state, county, or city names; or a combination of these. Zip codes are most commonly used, with area codes being used occasionally. Zip codes can be found in the U.S. Postal Service's *National Five-Digit Zip Code and Post Office Directory*. You can also visit a variety of Web sites to help identify zip and area codes. Some of the sites will allow you to specify a starting point on the map and a radius in miles, and will report back a list of zip or area codes that cover the geographic area you're looking for. Some of the more common sites include www.melissadata.com, www.jcsm.com, www.greatdata.com, www.zipmath.com, or www.zipfind.net.

Size

The most common size characteristics are company gross revenue and the number of company employees. There are also other size characteristics particular to each industry (such as assets, number of students or taxpayers, kilowatts produced, etc.) that are helpful if you are a vertical marketer, but these are not usually helpful for selling general business products or computer-related products or services. For the computer industry in particular, size can be measured in terms of the number of information technology (IT) employees, the number of desktop systems or IT users deployed throughout the organization, the types of systems or servers installed, or IT budget.

Industry Sector

Selecting data by industry sector is one of the most basic demographic segmentation methods. Most common is the Standard Industrial Classification (SIC) code. The SIC code system allows you to specify basic industry sector groups, then subsets within that group. For example, you might specify industry group 34 (Manufacturers of Fabricated Metal Products), and within that group only the classification 3452 (Manufacturers of Bolts, Nuts, Screws, Rivets, and Washers). To take it one step further, specify 3452-04 (Screw Manufacturers).

The SIC code system is being replaced by a newer system of codes called the North American Industry Classification System (NAICS). At this time, NAICS is still in the deployment phase, being used mostly by the governments of NAFTA countries. The system has been developed to accommodate greater levels of detail that are necessary to properly identify organizations that did not exist when SIC codes were developed. In time NAICS will become the standard. For the time being, however, SIC codes are widely available, and most large data purveyors also carry NAICS or a conversion to SIC equivalents. The Web site www.siccode.com is a good source of SIC and NAICS code information.

Other list vendors may use a more generalized approach. Some lists, for example, are selected by Yellow Pages headings. *Fortune* magazine has used a generalized scheme for years. A very basic industry classification scheme might classify organizations into groups such as:

- Manufacturing/Service
- Banking
- Diversified Finance
- Insurance
- Retail
- Transportation
- Utilities
- Education
- Health
- Federal Government
- State Government
- Local Government
- Other/Non-profits

If the software or product you're selling is specialized, it becomes important to specify a higher level of granularity for the industry sector you're targeting. In most cases, a very generalized approach is adequate, as it will protect you from over-specifying your demographics. Over-specifying demographic specifications will result in overlooking valid and important sales leads.

Technology Use and Propensity

In many cases the types of technology being used can be helpful. If you're looking for a particular type of computer equipment or software user (such as IBM, Hewlett-Packard, Cisco, Novell, or Oracle users, for example), it's beneficial if the market research organization is keeping track of that type of technology. In many situations, however, a certain technology is obscure or not tracked, and technology propensity may be the only option.

Simply put, technology propensity is identifying existing and available demographic characteristics of a group of data to achieve a segment with the highest likelihood of being a particular type of technology user. If, for example, you are looking for organizations with a need for Cisco router configuration training and you can't find a list of Cisco router users, you may be able to identify some typical customer characteristics that can be used as a proxy. For example, by examining existing customers, you might be able to determine that 80 percent of your customers are IBM mainframe machine users, and furthermore, each has a client/user base of over 1,500. These are solid and easily available demographics that can be employed to create a more targeted and effective campaign.

In a 2007 ACR study, 98.8% of IT user organizations reported using MS Server for production workloads, 85% reported using SQL Server for production applications. For MS Server the market penetration is so high that there is no need to seek a data source tracking the technology, so the emphasis can be placed on other demographic characteristics. As a side note, The 2008 Data Center Purchasing Survey, published by TechTarget, found 91% of their respondents were using MS Server.

For SQL Server, 85% market penetration would be considered adequate for most marketers to not worry about finding a data source that specifically identifies that technology, but there is room for improvement. However, perhaps the bigger issue is how well various data sources capture that technical piece of data. If there are 10,000 users of a particular technology, and a data source only has 5,000 of them, at 85% market penetration it may be more productive to focus on more important demographic characteristics as opposed to the technology.

In the same 2007 ACR study, 56% of organizations reported using Oracle for production applications. Too low to ignore. However, a deeper look at the data reveals that 85% of IT organizations with 60+ IT employees are using Oracle, a more acceptable level of market penetration to stomach.

In some cases the use of a particular technology can be used as an indicator of organization size. For example: the average number of IT employees at an IBM mainframe shop in organizations with 500 or more employees is 140, and the average number of desktop systems supported is 2,657. More details are in the "Rules of Thumb" section.

Contact Type and Level

Should you purchase one name or 25 names per company? Don't be impressed by numbers alone. The contact you purchase is an absolutely critical element. In all honesty, it is highly unlikely that you will find a list of "buyers" or "decision makers." If these were actually available we'd all be rich. Your best bet is to find the closest match and plan a campaign strategy that has a high probability to allow the contact you make to direct you to the actual decision-maker (or closest counterpart).

The key is to target contact type and their level in the organization. *Type*, in most cases, should be an executive in the IT department. If you specify the decision-maker for computer products, for example, you might receive a list

of controllers, financial managers, or office supply buyers. You must be sure you are receiving IT department contacts exclusively. In addition, it's important that you can specifically identify the level and/or "functional responsibility" equivalent. Do you want the highest ranking IT executive, or the manager of programming, systems development, or systems software? There can be multiple functional areas, and many organizational levels within each area.

The most specialized contact lists are typically owned by associations or user groups, who often don't sell their lists as a matter of privacy for their members. Unfortunately, there isn't enough market demand for a list compiler or market research firm to develop and maintain a list of very specialized contacts (unless, of course, you're willing to pay someone to develop the list exclusively for you). This is an expensive proposition, but in many cases it can be just what you need.

Lastly, what may seem like the most common names to acquire may be the worst to find. A common request in the computer industry is for programmers, or programmers of Java or C++. A complete list, or anything near it, doesn't exist. Again, like a list of very specialized names, the market demand isn't sufficient to convince a compiler or market researcher to create and maintain such a list. Plus, the turnover rate is so high for these individuals that it is almost impossible to maintain the list with an acceptable level of accuracy.

Other Types of Data

There are a variety of additional demographic selection criteria that may be available, but they are not discussed in detail here because they are seldom used for selecting data for business-to-business IT-related products. Some examples include: date company established/years in business, headquarters vs. branch locations, single-site organizations, subsidiary or division vs. headquarters, legal status (corporation, partnership, or sole proprietorship), public vs. private, importer/exporter, annual growth rate, etc.

Rules of Thumb

The first three rules of thumb focus on the decisions you make on how to go about demographic segmentation. The others consider specific data types.

Selectability

The ability to create a demographic selection based on your specifications is the most basic requirement—can I select what I need? Just as important, however, is your understanding of both data rate-of-fill and standardization of data meaning.

Rate-of-data-fill is whether or not the data provider has completely collected a data point for all records on a file. For example, if you're looking for IT organizations with 200+ deployed PCs, and the data provider only knows the PC count for 80% of the records, you will be skipping 20% of the market for lack of that data point. In a case like this and additional and comparable size demographic should be used. In this case of 200+ PCs a statistically equivalent data point would be to include IT sites with 10+ IT employees. Where the rate-of-fill is unacceptable, the use of other proxy data (described below) may be an option.

Standardization of data meaning is important where your target market has the potential to be misidentified. For example, if you are looking for ERP (enterprise resource planning) sites in particular, most any organization can say they are using ERP just because they have an inventory control package. That may not fit the profile you're looking for. UNIX is another good example: most organizations have some UNIX, even if it's a few software developers using Sun workstations. It's another story and a much smaller market if you're looking for high-volume UNIX-based Internet servers that need security software.

Inclusive vs. Exclusive Demographics

It all depends on what you're selling, of course, but your choice to either include or exclude organizations based on their demographic characteristics can make a big difference in how complete your market coverage is. Rather than guessing in a general way if a demographic characteristic applies, what's more important is deciding whether it definitely does not apply.

Examples of typical inclusive characteristics might be: IBM mainframes, if that's the only market your product applies to. UNIX might include UNIX users, along with RS/6000 and pSeries, H-P 9000, Sun and Alpha sites, to be sure your coverage includes sites where UNIX itself might not be coded properly. If the target is financial services then it's important to be sure banking, finance, and insurance are all included.

Examples of exclusive characteristics might be: no federal, state, or local governments if you want to avoid the government sector; or eliminating organizations with only one to five IT employees *and* less than 300 desktop systems. Excluding organizations themselves is a little more tricky. Typically, a set of inclusive characteristics is first identified. Then, from that set of data, a subset of data is eliminated based on an undesirable demographic characteristic.

Proxy Data

Using a data selection proxy is substituting a demographic selection characteristic for a demographic that doesn't exist, isn't available, or to achieve ever greater depths of market coverage. *Substitution* is the key word. You are using a demographic that is not optimally part of your predefined demographic set but has an identifiable relationship to the predefined demographic set. The substituted selection demographic has a high likelihood of selecting more potential prospects that otherwise wouldn't have appeared based on the original demographic selection specification. Examples are given in some of the additional rules of thumb below.

Geographic

Zip codes, area codes, states, counties, metropolitan city area, or city name proper are the basics for geographic segmentation.

- *States* - you don't get more basic than specifying state names. Selecting by certain states is the most finite and well-defined geographic segmentation characteristic available. It's safe, but it's not the only sure thing as long as you understand the shortcomings of other geographic segmentation options.
- *Zip code* - zip code is the most common and most reliable geographic segmentation method. Sources of zip code information are referenced in the "Types of Demographic Data" section above. TIP: In most cases the first three digits of the zip code, called the Sectional Center Facility (SCF), are the only part necessary to select the proper area.

Zip codes can be complicated within a given area, and using all five digits of the zip code to specify a geographic area will tend to skip some areas and organizations. When using a zip code radius identification service, like the www.jcsm.com site referenced earlier, a list of five-digit zip codes are usually suggested. It's important to use this type of list as a reference for developing a three-digit SCF criteria that will be more complete.

This is not to say that there are not circumstances where a five-digit zip code specification is the best solution. If your targeting is that specialized, like a local computer maintenance company that wants to concentrate in a downtown area, then a five-digit zip code approach is the best option available.

- *Area codes* - area codes are another common selection criteria, but they have the same inherent risk as zip codes of skipping areas. The more serious problem with area codes is how often they change. The current

system of area code expansion has created multiple splits in focused geographic areas, so they should be used with caution. The physical coverage of multiple area codes often looks like a jigsaw puzzle.

- *County, metro city, or city name proper* - these should be reserved for very specialized cases: where your confidence level is exceptionally high that this limitation will result in including only the proper organizations. The inherent risk with these geographic qualifiers is that they may exclude close and viable target markets. In addition, if you specify a metropolitan area, like New York City (for example), you must know about the metro area or spend time investigating it. Metropolitan New York City can also include Westchester County, Stamford, CT, as well as Jersey City and Newark, NJ. The only way you're going to know this is through your own investigation of the area you are trying to target. This will naturally increase your own intuitive understanding of what your needs are.

So, five-digit zip codes, area codes, and geographic area names are only used in occasional specialized cases. If you can, stick with three-digit zip codes for complete coverage and safety.

Size

The key to size, at least for marketing computer-related products, is not so much organization size but rather the size of the IT organization or the end-user population. Each industry sector has a relatively consistent rate of automation based on the needs of that industry. At the low end is organizations with an average IT investment of about 2 percent of gross revenue. This includes the majority of organizations in the market, and they are mostly related to manufacturing. At the high end is the financial services industry, with an average IT investment of about 6 to 9 percent of gross revenue.

Manufacturing	2%
Consulting/Services/IT Companies	4%
Banking/Diversified Finance	8%
Insurance	3%
Retail	2%
Transportation	2%
Utilities	2%
Health	4%
Education/Non-profits	Not Available
Government	Not Available

Table 1. Percent of Gross Revenue Devoted to IT Budget by Industry¹

In terms of IT dollars, what this means is that a manufacturing organization that grosses \$1 billion per year will, on average, invest \$20 million into their IT function. A financial services firm with a comparable \$1 billion annual gross revenue will, on average, invest \$60 million into their IT function. Financial services firms invest three times more into IT than do manufacturing organizations. Obviously, \$1 billion in gross revenue doesn't differentiate between these two extremes.

Table 2 offers another look at averages based on industry sector. Averages are just averages, of course, and don't reveal absolute size for all the organizations. But it's another intuition building block that can be used to understand the relative amount of technology that can be expected within different industries.

Industry Type	Average # IT Employees	Average # PCs Deployed
Manufacturing/Service	32	743
Banking	159	2589
Diversified Finance	166	1369
Insurance	177	1997
Retail	26	475
Transportation	44	756
Utilities	148	2035
Education	50	2327
Health	35	1082
Federal Government	116	2468
State Government	81	1869
Local Government	43	1424
Other/Non-profits	16	455
Total Average		

Table 2. Average Number of IT Employees and PCs Deployed by Industry in U.S. Organizations Indicating 500+ Employees²

NOTE: This chart is interesting, but not particularly useful as an indicator on how to segment data. It indicates vertical markets that are, by their very nature, larger employers or larger users of IT.

Not that organization size isn't useful, because it can be. In some cases, however, there may not be the specific kind of demographic data available to completely select the type of organizations you need. For example, you may find a highly desirable database that only has an 80 percent rate of data fill for the IT organization size. Using size rules of thumb, you may find that organizations with a certain minimum level of gross revenue will meet your minimum IT organization size criteria. This may sound contradictory to the premise that gross revenue is a poor indicator, but when used as a minimum target based on rules of thumb, it can be a highly effective way of assuring comprehensive market coverage.

Continued on next page...

Table 3(a) shows the ratio of total company employees to PCs. This ratio can be applied to the total number of company employees to estimate the number of IT or PC users.

Manufacturing/Service	3.0:1
Banking	1.7:1
Diversified Finance	1.7:1
Insurance	1.9:1
Retail	6.8:1
Transportation	3.7:1
Utilities	2.1:1
Education	0.9:1
Health	2.0:1
Federal Government	1.7:1
State Government	1.4:1
Local Government	1.7:1
Other/Non-profits	2.7:1

Table 3(a). Ratio of Total Organization Employees to PCs in U.S. Organizations Indicating 500+ Employees³

Table 3(b) shows the ratio of total PCs to IT employees. This ratio can be applied to either total PCs or to IT employees to calculate the other characteristic.

Manufacturing/Service	24:1
Banking	19:1
Diversified Finance	13:1
Insurance	12:1
Retail	21:1
Transportation	20:1
Utilities	16:1
Education	43:1
Health	32:1
Federal Government	21:1
State Government	23:1
Local Government	33:1
Other/Non-profits	28:1
Total Average	

Table 3(b). Ratio of Total Deployed PCs to IT Employees in U.S. Organizations Indicating 500+ Employees³

Beyond the basic knowledge of IT investments by industry, there are two additional measures that are easy to use and relatively clear in interpretation: gross revenue per company employee, and the amount of IT budget dollars per

IT employee. Both are averages based on statistics collected in industry studies and provide a way to equate easily accessible demographics to more complex and less available demographics.

Organizational Gross Revenue per Organization Employee - The average organization/company gross income per employee (GRE) is about \$300,000. This is the total gross income (per year) divided by the total number of employees. The typical ratio of IT users to total company employees is still a close correlation to the industry, but using basic minimum size assumptions is a safe way of utilizing this type of an inclusive demographic. In other words, you can be sure of including the prospects you are looking for if you are sure you are including the ones that are obvious, based on minimum size standards

Manufacturing/Service	\$351,951
Energy/Oil/Petroleum	\$2,071,814
Banking	\$319,336
Diversified Finance	\$485,301
Insurance	\$1,104,525
Retail	\$263,016
Transportation	\$193,575
Utilities	\$698,023
Health	\$557.553
Education/Non-profits	Not Available
Government	Not Available
Median	\$300,000

Table 4. Average Organization Gross Revenue Per Organization Employee ⁴

IT Budget Dollars per IT Employee - The average amount of IT budget per IT employee (ITBITE) is \$200,000. This is the total amount of IT budget divided by the total number of IT employees. This statistic is not as vulnerable to the idiomatic properties of individual industry sectors, as it is a direct measure of the number of staff dedicated to IT activities. As a general rule, it requires the same amount of IT personnel effort to implement \$10 million worth of information technology in the manufacturing industry as it does to implement \$10 million worth of information technology in the financial services industry. This means that whether you're in the manufacturing industry or the financial services industry, it's going to require the same amount of investment to implement a Web site, e-commerce site, or CRM application.

Size demographics are probably the most complicated in terms of applying rules of thumb. Here's an attempt to summarize how size demographics can be applied. In general, below are five common size demographics generally accepted and used to segment databases:

- Gross revenue of the organization (GR)
- Number of employees in the organization (CE)
- IT budget (ITB)
- Number of IT employees (ITE)
- Number of PCs deployed (PC)

And, there are rules of thumb that can be applied to these common demographics to correlate one demographic to another:

- Average organizational gross revenue per organization employee (GRE)
- Average IT budget dollars per IT employee (ITBITE)
- Average percent gross revenue invested into IT activities (PCTREV)
- Ratio of PCs deployed to total organization employees (PC RATIO)

Typically, a marketer will have a particular target number for a particular demographic in mind. For example, all companies with a gross revenue of \$1 billion or more. By applying rules of thumb, the given target number may be correlated to any of the other demographics a marketer might want to use. This can be invaluable for establishing either inclusive or exclusive demographics.

Some examples of how these statistics might be used include:

1. Estimate the number of potential employees where the gross revenue is a given. If we're looking for organizations that have \$1 billion in gross revenue, we can estimate that any organization with 3,333 employees is likely a \$1 billion organization (this is calculated by dividing the target \$1 billion by the median of \$300,000, arriving at just over 3,333 employees).
2. Estimate the amount of potential revenue where the number of employees is a given. If we are looking for companies with 1,000 employees, we can estimate that any company with a gross revenue of \$300 million is statistically likely to have 1,000 employees (calculated by multiplying the number of target employees of 1,000 times the median of \$300,000, arriving at the \$300,000,000 target).
3. Estimate the number of desktop systems, based on an assumption of the ratio of desktop systems to total employees. If we assume that the maximum ratio of desktop systems to employees is 1:1 (which is generally accepted as a maximum possible ratio for this type of exercise), it is appropriate to use as an inclusive demographic. More often, an assumption of the ratio of desktop systems to employees will be based on our most likely target environment, and will be lower than the number of company employees. Based on our own customer knowledge and intuition, we might believe that the ratio of desktops to employees is 1:3, and would therefore select companies with 1,500 or more employees if we were actually targeting organizations with 500 or more desktop systems.

The table on the following page shows the necessary formulas to correlate a given or target demographic to the available demographics.

Continued on next page...

Table 5. Demographic Conversion Formulas

Legend:

GR Gross revenue of the organization
 CE..... Number of employees in the organization
 ITB IT Budget
 ITE Number of IT employees
 PC..... Number of PCs deployed
 GRE.... Average organizational gross revenue per organization employee (\$300,000 suggested)

ITBITE.....Average IT budget dollars per IT employee (\$200,000 suggested)
 PCTREVAverage percent gross revenue invested into IT activities (2 percent suggested, use .02 to calculate)
 Apply PC RATIO The ratio of PCs to total company employees, previously described (1:n), or 1 PC to n total company employees

	I want to know... GROSS REVENUE	I want to know... COMPANY EMPLOYEES	I want to know... IT EMPLOYEES	I want to know... IT BUDGET	I want to know... NUMBER OF PCs
I know... GROSS REVENUE (GR)	N/A	$\frac{GR}{GRE}$	$\frac{GR * PCTREV}{ITBITE}$	GR * PCTREV	$\frac{GR}{GRE}$ Then apply PC RATIO
I know... COMPANY EMPLOYEES (CE)	CE * GRE	N/A	$\frac{(CE * GRE) * PCTREV}{ITBITE}$	(CE * GRE) * PCTREV	Apply PC RATIO to CE
I know... IT EMPLOYEES (ITE)	$\frac{ITE * ITBITE}{PCTREV}$	$\frac{(ITE * ITBITE)/PCTREV}{GRE}$	N/A	ITE * ITBITE	$\frac{(ITE * ITBITE)/PCTREV}{GRE}$ Then apply PC ratio
I know... IT BUDGET (ITB)	$\frac{ITB}{PCTREV}$	$\frac{(ITB/PCTREV)}{GRE}$	$\frac{ITB}{ITBITE}$	N/A	$\frac{ITB/PCTREV}{GRE}$ Then apply PC ratio
I know... NUMBER OF PCs (PC)	(PC * PC RATIO) * GRE	PC * PC RATIO	$\frac{((PC * PC RATIO) * GRE) * PCTREV}{ITBITE}$	((PC * PC RATIO) * GRE) * PCTREV	N/A

One last note on size demographics: IT budget is highly suspect and consequently a poor demographic to use. Not that IT budget isn't indicative of the level of technology adoption and/or deployment, but it's difficult to collect accurate IT budget information. Granted, there are many organizations where the departmental budget is known and clear. But the more common situation is that market research interviewers ask what the IT budget is and receive a guess.

It makes sense that even the less informed IT employees would have a feel for the number of IT employees in the department where they work, or know roughly how many company employees their department supports and/or how many of them have PCs. These are non-complex organizational facts. But it is not as likely they will know the IT budget with an acceptable level of accuracy.

Industry Sector

Don't let industry classification fool you. Many marketers eliminate specific industry sectors based on a personal perception that a particular type of business doesn't have a need for a particular type of product, or the sector is too difficult to work with. Education, government, health care, and non-profits are commonly eliminated from demographic specifications. Sometimes this is done for good reason, but more often because of a misunderstanding of the environment.

Each of the aforementioned can have a very heavy volume of information processing activity and a dense population of deployed desktop systems. Colleges and universities support large computing populations and often have a greater need for some types of products and services than do traditional businesses. Security, asset management, and software upgrade deployment packages are a few examples.

The bottom line is that IT is used in most all organizations to perform generally similar functions. American Greetings Corp., Sabre Group, Barnes and Noble, and Mutual of Omaha buy the same Unicenter TNG system management software from Computer Associates as does the Brigham Young University, USAF Air Mobility Command, the City of Sarasota, the State of Alaska, Charleston Area Medical Center, and the Visiting Nurses Service of NY. But these organizations are often shunned by over-paranoid marketers. This is the classic marketer's dilemma: What are the economics of contacting an extra 1,000 organizations and not making any sales, as compared to making one sale?

How you go about using industry sectors is largely dependent on what's available from the provider you use. Some offer generalized industry classifications, as discussed earlier, while others use more detailed methods including SIC codes and the newer NAICS classification scheme. SIC and NAICS codes can be exceptionally beneficial—or equally detrimental. The danger is over-specifying industry specifications, thereby eliminating potentially highly productive industry segments. The level of detail available may be used to include specific segments or exclude specific segments, depending on how focused a campaign is intended to be.

Technology Use and Propensity

This demographic can be pretty straightforward, because you are only trying to establish if an organization is or is not using a particular technology. The more common the technology the easier it is to identify, and the more common it will be that data vendors will be keeping track of it. Also, a more common technology often provides the luxury of knowing the size of the market. In this case, it's easier to assess the completeness of coverage available in the list you're evaluating.

A common problem with identifying technology use is understanding manufacturer nomenclature as well as compatibility with other manufacturers. The most classic examples are IBM mainframes. Without an in-depth understanding of both nomenclature and compatibility, many marketers might only specify that their need is limited to the IBM zSeries. A complete selection of this type of machine would also include the IBM ES/9000, ES/9021,

IBM ES/9121, IBM ES/9221, IBM 20xx, IBM 70xx, IBM 9672 and IBM S/390 machines. And, don't forget the compatible Amdahl/Fujitsu or Hitachi machines.

Another common misinterpretation of nomenclature is the specification of operating systems. UNIX, again a classic example, is commonly misused to specify a particular market segment. The problem is that the use of UNIX can be specified by simply asking "Are you using any UNIX?" This can be answered yes by any organization using UNIX as a standardized operating system for all designated servers, or yes by any organization with a single Sun workstation at a developer's desk. This leads to another problem: some marketers assume that UNIX use and/or standardization will only occur at sites with hardware that is typically consistently used as UNIX servers. This generally limits the demographic selection to the more common Sun, H-P 9000, IBM pSeries and RS/6000, and Alpha servers. This, of course, effectively eliminates the less common hardware-related implementations of UNIX.

Technology use can also have a rough correlation to organization size. Using machine types as a common example, the table below shows the average number of desktop systems and IT employees found at these types of sites. An even greater level of accuracy can be obtained by knowing the averages listed below broken down by industry. There comes a point, however, where the level of detail and complexity becomes counterproductive.

Host Type	Average # PCs	Average # IT Employees
IBM Mainframe	2657	140
H-P 9000, RS/6000, Sun, or DEC Alpha	1620	63
IBM AS/400	653	27

Table 6. Average Number of IT Employees and PCs Deployed by Type of Host Computing Environment in U.S. Organizations Indicating 500+ Employees⁵

NOTE: This chart is interesting, but not particularly useful as an indicator on how to segment data. It indicates that users of generally larger servers have generally larger IT organizations and user communities.

This can be a demographic used for inclusive segmentation. That is, to be sure you are including all potential prospects, it's wise to use multiple inclusive demographics where the rate of data fill is not 100 percent, or to use a proxy demographic where no data is available. If you are looking for organizations with 200+ deployed PCs, you can substitute the selection of IBM mainframes as a proxy, safe in the knowledge that the average number of PCs at those sites has an appropriate relationship to your minimum target.

Lastly, the propensity to use a particular technology is another form of using proxy data. It is helpful in cases where the types of organizations you're trying to identify are using a technology that is difficult to track or not available. If you're selling Cisco router configuration training, it sure would be nice to contact Cisco users. But what if "Cisco users" is not a selectable demographic for the file you want to use? And, even if Cisco is a selectable demographic, are you sure you are getting complete market coverage? If a data provider says that 40 percent of their database is Cisco users, are you sure that the data provider's market coverage is comprehensive? Do the numbers match your intuitive understanding of the market size? Here again, your knowledge of your market's size is going to be critical, and your intuition will come into play to be sure you are achieving the market coverage you deserve and must have.

The fact is that the more technical the data point the less likely data sources will be able to capture the information accurately. In this case it may be wise to consider technology use propensity to achieve more complete market coverage. The key is to identify the most common demographic characteristic that can be applied to the target market. You might find out, for example, that 80 percent of IBM mainframe shops are ABC Company router users,

or 90 percent of Fortune 1000 organizations are XYZ Company network software users, etc. This type of knowledge can often lead you to appropriate proxy demographics.

Contact Type and Level

As the industry has evolved over the last number of decades, so has the title and department names that organizations use to identify and describe their computer departments. As the industry has evolved some organizations have adopted more modern descriptive names, while others lag behind by decades. To further confuse the matter, title and department names can be unique to different industry sectors. This confusion can cause a marketer to select a job title group that has nothing to do the product offering but sounds like a dead-on match. Here are some of the more common examples of title and department confusion:

- *CIO* – The Chief Information Officer is still not universally applicable. The actual number of CIO's, as the specific job title, has increased dramatically over the years. Asking for the CIO, however, still gets a number of blank stares over the phone. Today, if you ask a data provider how many CIOs they have, you might get an answer in the tens of thousands. This is a clue that what you're getting is the number of top-level IT managers, not true CIOs. In fact, for organizations with 500 or more employees, the number of individuals with the title of CIO is less than 4,000 out of 17,000.
- *CTO* – Although occasionally Chief Technology Officer is a title used for the IT boss, more often this title refers to the responsibility over the technology a company actually develops, or the technology they might use in the manufacture of their product, as opposed to the development and support of information technology.
- *Senior VP vs. VP vs. Director vs. Manager* - any of these titles may be applied to almost any management-level individual. In a large corporation, a software development project manager can have a title of Senior VP, whereas in another organization the highest ranking IT boss can simply have a title of Manager. So title is important to identify management status, but it doesn't identify level by any means.
- *IT vs. IS vs. MIS* and occasionally *vs. IRM vs. DP* - all of these terms still work and are still used. The problem is that they can be used to indicate the overall organization, or an individual functional department within the information technology organization.
- *Systems Programming vs. Systems and Programming* - "Systems Programming" has traditionally identified the department in a mainframe organization with responsibility for operating systems upgrades/maintenance, subsystem upgrades/maintenance, hardware and system software configuration management, performance management, and capacity planning. The "Systems Programming" department name has been mostly succeeded by the name "Technical Support." "Systems and Programming," on the other hand, has been traditionally used to identify the actual software development and programming department. Today, common names for this function include software development, development, programming, systems, information systems, business systems, etc.
- *Information Systems* - commonly used to identify either the overall information technology department, or the top-ranking management level individual of the information technology department. It is also used to identify the manager of software development. Simply identifying the manager of information systems does not guarantee the functional responsibility of the individual.
- *Technical Support* - in a mainframe shop, this is generally the function of overseeing some of the unique technical aspects of mainframes as discussed in the earlier Systems Programming description. This is still commonly used. In many organizations, however, it is the function most commonly related with supporting problems and questions of the end-user community.

In addition, it's also important to understand who oversees a function if the organization isn't large enough to establish and support an actual manager of that function. Communications, security, and electronic commerce development are all common examples. Communications is often an data center/operations responsibility, as it is more closely related to the hardware architecture and configuration issues already handled by the operations department. Electronic commerce development is most often a software development responsibility, as it is related to coding. Security, although most often a data center/operations responsibility, today has an important role in applications security and network security, and there are often individuals with security responsibility in those departments.

The most definitive approach for selecting prospects is to identify them according to where they fit into the organization, their *functional responsibility*, as opposed to their exact title. This isn't to say that that the title can't be used to identify proper prospects, but it's not a sure thing. The bottom line is that there are no standards. Your industry understanding and intuition must guide you.

Accuracy of Data

This seems pretty basic. If a lot of envelopes come back or a lot of phone calls result in bad phone numbers or bad names, you get angry and promise to never buy that data again. There's something missing in this approach however: Accuracy is an important indicator, but *results* are the determining factor—and the ultimate goal. The only way to determine results is to try the data, hopefully with a low-cost test.

You should always insist on an opportunity to evaluate the data. Not that you should expect to make a sale, but an evaluation should be able to tell you if the data you're considering buying is the correct market segment, reasonably accurate, or is totally inadequate.

Here's the basics on accuracy:

1. You should have the opportunity to check the accuracy of the data you want to purchase. Don't accept "Here's 10 sites and contacts you can call," but something more significant you can quantify. Ten sites is nothing. Demand 100 sites in the area/profile you are after. It's a no-brainer that even if you spend your time trying to sell to these sites, you'll be back to try and sell to the rest of the group if your pilot project is successful. At the same time, if you demand more sites and get turned down, don't let that alone stop you from trying the list. As always, it's the results that are most important.

Another alternative is to request all the information a prospective data provider has on a number of organizations. For example, you might request information on 10 different organizations and compare that information to the knowledge you already have about those organizations. If your provider believes in their own value they should be happy to accommodate. Ten sites is an absolute minimum for this approach, 20 is better. In order to achieve any statistical significance, you must evaluate enough data to be sure you have statistically overcome the average error rate. In other words, if the error rate could potentially be 25 percent based on industry change averages, you must evaluate enough data to quantify that you match the industry average rate, or determine for sure that the error rate of the data you're working with is significantly different.

2. You should get a guarantee on the accuracy of the data you want to purchase. This exercise will generally save you a few bucks on mail returns for bad addresses, but the real goal is to encourage your provider into ever greater levels of disclosure. The relative level of accuracy isn't nearly as important as the response rate. So, the accuracy issue is a better indicator of how well the provider is attempting to make this database an active and productive marketing database.

3. Again, accuracy should not be your main concern. Your main concern should be results. Do not let the accuracy of the data or the guarantee be your guide. If the data you want to purchase seems to be the correct market and the demographic segmentation fits your needs, then your testing strategy should prove if you've made the right choice. The most inaccurate data and worst guarantee may produce the best bottom-line results.

The rate at which data changes is high for the IT industry, but understanding how often data changes will temper any unrealistic expectations. For example:

- 20-25 percent of top IT executives change jobs each year
- 6.5 percent of telephone numbers change each year
- 7 percent of addresses change each year

This is not to say that data is consistently as bad as these statistics suggest. The actual rate of bad data is dependent on how the updating of data is accomplished. It does reiterate, however, that if you pick 10 organizations to call and verify for accuracy, the statistical significance of such a small sample is questionable. The direct mail industry generally offers a guarantee that not more than two percent of your mail will be returned.

Totally rotten data is a bad deal. But it's the exercise of evaluating the data that will give you the insight to know if you should take the risk of trying it out. Again, your intuition will tell you how to approach the situation. If your evaluation of the data suggests that a large amount of data is bad but the profile of the data seems good, then perhaps a more controlled test sample size (maybe just 1000 records) should be the first step. If the data seems to be mediocre, then perhaps a larger sample should be used in the initial campaign (3000-5000 records).

Develop a Marketing Data Strategy

Most data providers have multiple usage discount programs, or programs for more comprehensive use of the data they provide. At least that's what you should expect. If you're looking to execute a one-time direct mail campaign, you can generally expect to spend anywhere from \$250 to \$350 per 1,000 names, with a minimum order quantity of typically 5,000 names. But what if you want to use the list three times? What if you want to mail two times, then call all the prospects on the phone? What if you want to mail as many times as you want, give the list to your telemarketing group for a seminar project, have the technical demographic data available for market research, and also split up the data for salespeople across 14 regions?

You should expect ever-greater economies of scale for ever-greater uses of a provider's database. Plan ahead for how you might use the data, and ask these questions:

- What is the discount for multiple usage if I buy multiple uses up front, or buy the extra uses later?
- Can I buy a list now, and buy the phone numbers later?
- Can I buy another list later and be guaranteed there will be no duplication?
- What if I want to buy a big list for a seminar, then use more specific segments to market to locals?
- Can I do a direct mail campaign and provide all the leads to my salespeople for later follow-up?
- Can I buy a database for absolute unlimited use, and can I own it forever?
- Do you have an upgrade policy, where I can decide to buy more and only pay the incremental cost?

One of the most important elements of a strategy is the ability to track results back to their origin. This may mean keeping copies of the lists you use to compare to the new customers you acquire over a number of months in the future. This is somewhat more complicated than using a clear direct response device, but it may be the only way to know. Mailing list providers are not generally keen on allowing a list user to retain a list for tracking. In fact, most list providers will only allow a bonded mailing house to take delivery of the list, and you're not allowed to touch it. Know the rules in advance so you can plan how you will track results.

Developing a marketing data strategy should really be part of a more comprehensive marketing plan. Marketing data itself is key to a successful marketing program, but how the data is acquired, deployed, and utilized for all facets of the marketing plan is what a marketing data strategy should really be about.

Results Tracking and Testing

Although a basic marketing function is tracking results, in our world of 1-800 numbers and Web sites, it is becoming an incredibly difficult task. It is, however, absolutely critical that some form of tracking be used to have even the most remote chance of identifying a productive project or program. Frankly, it's suicide to not have even the most vague attempt at tracking.

CASE EXAMPLE: Company X was using three databases for a well-planned campaign that included a direct mail attack, with follow-up from the sales team. At the end of the project, each list owner that provided data was informed that the project was a failure and would not be repeated. What a disappointment for both the client and vendors. The evaluation of the project results was achieved through an interview with each of the participating members of the sales team. After a detailed post-mortem evaluation of the project (encouraged by one of the data vendors), it was established that when the successful portion of the project was evaluated, it was all from the data provided by one of the three vendors. The other two had provided data that was not successful at all. Although the overall project was a failure, when divided into its component parts two projects were a miserable failure, while the third was a reasonable success.

Testing is another important aspect of effective demographics utilization. Your data provider should offer a variety of options to help you test a database in order to determine its roll-out potential. Some options might be: an a/b split, a tagged random selection, an identifiable demographic segment, or a portion of any of these. In addition, any test must be of a significant enough size to merit some level of statistical significance.

Cost

Don't let cost scare you away from a test. Cost is like accuracy in the sense that cost alone should not be a determining factor. If it works it was worth it. If anything, cost and accuracy should simply indicate a higher level of caution with regard to the test size of a list.

Intuition is the First Key to Success

The knowledge you gain about demographic details and your market should bring you to a point where your intuition will tell you if the information you are getting makes sense or not. Even if your intuition doesn't provide a clear indication, it should give you the power to question the information you receive from a data provider. In fact, it's a simple exercise in assertiveness to question the results or information with which you are provided.

You can't afford to *not* question the integrity of the information you receive. It's not the money you spend on the data, it's the astronomical amount of time and money you will spend chasing bad leads. Squandered sales dollars is nothing, absolutely nothing, compared to squandered sales time.

Notes

1. Table 1, Percent of Gross Revenue Devoted to IT Budget by Industry. Data adapted from the InformationWeek 500, published in the September 15, 2008 issue of *InformationWeek*, published by CMP Media, Inc.
2. Table 2, Average Number of IT Employees and PCs Deployed by Industry. Data derived from the *Directory of Top Computer Executives*, a database of IT departments in organizations with typically 250 or more employees. Averages calculated based on the median 90 percent of organizations in the sample.
3. Table 3(a), Ratio of PCs to Total Organization Employees, and Table 3(b), Ratio of PCs to IT Employees. Data derived from the *Directory of Top Computer Executives*, a database of IT departments in organizations with typically 250 or more employees. Averages calculated by selecting the median 90 percent of organizations based on number of PCs, then the median 90 percent of organizations based on total number of organization employees or IT employees respectively.
4. Table 4, Average Organization Gross Revenue per Organization Employee. Data adapted from the Fortune 500, published in the April 18, 2005 issue of *Fortune* magazine.
5. Table 6, Average Number of IT Employees and PCs Deployed by Type of Host Computing Environment. Data derived from the *Directory of Top Computer Executives*, a database of IT departments in organizations with typically 250 or more employees. Averages calculated based on the median 90 percent of organizations in the sample for number of PCs and number of IT employees. The sample does not discriminate on the number of host systems installed.

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