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# Segmenting technology markets: applying the nested approach

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## Abstract

**Purpose** – Sound target marketing leads to winning business strategies. While market segmentation is an intriguing academic concept, most B2B practitioners struggle with the design and implementation of such initiatives. This paper aims to illustrate an effective strategic segmentation process in a high-technology market context.

**Design/methodology/approach** – Bonoma and Shapiro's nested model – consisting of geodemographics, operating variables, purchasing approaches, situational factors and characteristics of the buyer – is used as a conceptual framework for market segmentation analysis. The model is applied to Citrix Systems as a way of finding new business opportunities in the desktop application streaming market.

**Findings** – In this study, 17 potential segmenting variables within the five major levels are examined with an initial emphasis on firmographics and technology. Census data identified market priorities based on establishment size, key sectors and geographic sales territories.

**Practical implications** – A four-stage segmentation plan consisting of corporate commitment, research/refinement, implementation and evaluation/enhancement is proposed and discussed. Strategic planning lessons and research extensions are offered.

**Originality/value** – While the work on business segmentation has proliferated over the past 25 years, there has been a paucity of practical applications on how to conduct segmentation analysis successfully in technology markets. This paper provides an important roadmap for marketers to enhance segmentation initiatives via a comprehensive application and analysis of a leading global company.

**Keywords** Market segmentation, Computer industry, Technology markets, Nested approach, Case studies

**Paper type** Research paper

## 1. Introduction – the importance of segmentation in business markets

Innovative and effective segmentation has become a strategic imperative for business and technology marketers. Bain & Company's global longitudinal study of 25 management tools found that customer segmentation was rated third in usage (82 percent) behind only strategic planning and customer relationship management – this increased from 51 percent usage and ninth place ranking in the 2000 study (Rigby and Bilodeau, 2007, p. 42). An intensive competency model developed in cooperation with the Institute for the Study of Business Markets (ISBM) defined exceptional B2B marketing management practices. Segmentation, operationalized as the technical manifestation of truly understanding the customer, was rated the most critical concept out of a pool of 153 marketing issues evaluated by leading marketing practitioners (Stines, 2003).

While the acceptance of segmentation as a valuable strategic tool in business marketing is clearly on the rise, its usefulness remains highly questionable. A survey

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The author thanks John-Marc Clark and Tim Graf for their insights in this segmentation project.



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of 200 top executives found that 59 percent of large companies conducted a major segmentation project within the past two years, yet only 14 percent of them said they derived real value from this initiative (Yankelovich and Meer, 2006, p. 4).

This case study contributes to the business segmentation literature in a two-fold manner. First, it provides a recent in-depth, research-based application of a widely cited but seldom evidenced segmentation model – Bonoma and Shapiro’s (1983) nested approach. This is consistent with Powers and Sterling’s (2008) recommendation of micro-macro segmentation in other industries to bridge the gap between demographics and needs-based data. Second, it offers numerous practical insights on market analysis and implementing segment-based strategies for marketing managers in business and technology-based organizations. This addresses operationalizing segmentation strategy, which is a major challenge for many organizations (Simkin, 2008).

## 2. Segmentation application – Citrix Systems

### 2.1 *The focal company and market opportunity*

Citrix Systems is a leading global computer solutions company. The company has a rich tradition of technological innovation, marketing prowess and a reputation for vision and compelling products in the computer application delivery sector. This has led to an average annual sales growth of more than 20 percent over the past five years, revenues exceeding \$US1.4bn, more than 215,000 worldwide customers including 99 percent of the *Fortune* Global 500 and approximately 8,000 partners in 100 countries (Citrix Systems, Inc., 2007). This superior business performance has been achieved in a rapidly changing market with sophisticated information technology buyers and formidable competitors such as Adobe Systems, Cisco Systems, F5 Networks, Hewlett-Packard, IBM, Juniper Networks, Microsoft, Oracle and Sun Microsystems.

To continue their success, management knows that they must also innovate in their processes for selecting new markets. Following a mandate from Mark Templeton, President and CEO of Citrix Systems, the various business units initiated efforts to more effectively segment and target their customers. At least six major segmentation initiatives were launched in 2006 and 2007 at their South Florida-based regional office.

Project Tarpon was the in-house code name for a promising new technology later called Citrix Streaming Server (CSS). CSS is a new product to be bundled with Citrix’s flagship brand, Citrix Presentation Server (CPS). Desktop application streaming is an emerging market. According to product management, the customer value proposition summarizes the competitive advantage of CSS:

Citrix Streaming Server is a desktop application streaming solution that allows IT organizations to centrally manage one instance of a desktop application and deliver it to users on-demand. Applications are streamed to a protected isolation environment on users’ machines, eliminating the need to physically install applications. CSS provides all the benefits of desktop applications, including offline access, while dramatically reducing the cost of delivering and maintaining these applications.

Competitors (and collaborators) such as Microsoft have recognized the vast potential of this technology. Innovative segmentation can provide a mechanism for a successful product launch for the next generation of CPS, which will include CSS. This case study discusses segmentation analysis, opportunities and challenges within the US market.

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## 2.2. Purpose of the study

A collaborative effort between Citrix Systems' Product Marketing team, Emerging Markets and the researcher was used to develop an effective, efficient, adaptable and practical approach for segmenting the market and finding appropriate target customers for the Citrix Streaming Server. Specifically, five research objectives were established in the project:

- (1) critically evaluate all potential segmentation dimensions;
- (2) develop a segmentation framework that goes beyond firmographics to include behavioral components;
- (3) conduct business demographic analyses at the organization level for the US market;
- (4) identify potential market segments and niches for CSS; and
- (5) prepare a plan to take the segmentation structure from the design stage to the implementation stage.

## 3. The nested segmentation approach

### 3.1 The basic model – rationale

According to William D. Neal, the founder of Atlanta-Based SDR Consulting and former President of the American Marketing Association, the use of segmentation research by companies has made positive strides in the past decade. He explains: "Business managers have relearned the benefits of target marketing. Most marketers now recognize that simplistic segmentation schemes based on demographics, geography or SIC codes are suboptimal at best – and disastrous at worst" (Neal, 2002, p. 37). Simkin (2004) presents a somewhat dissenting view and says that many companies do not understand the true essence of segmentation. He adds: "too often business-to-business marketers utilize little more than trade sectors or product groups as the basis for segmentation" (Simkin, 2008, p. 464).

Plank (1985) explains that there are three approaches for selecting segmentation bases:

- (1) unordered segmentation notions (a single segmentation dimension is chosen with no specific reasoning for how it is selected);
- (2) two-step notions (macro/micro segmentation – macrosegments are based on organizational size, sector, geographics, usage; and microsegments are based on behavioral factors such as adopter characteristics, benefits, purchasing approaches, psychographics); or
- (3) a multi-step approach.

The use of multiple business segmentation bases (the multi-step approach) should be considered to provide the most complete view of potential market segments and target markets (Plank, 1985). There has been limited work on the multi-step segmentation tool with the exception of Bonoma and Shapiro's (1983) nested model. The general nested approach is a practical and comprehensive means for segmenting business markets. It consists of the following five nests (bases) and related segmentation variables:

- (1) demographics – industry, company size and customer location;
- (2) operating variables – technology, user status and customer capabilities;

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- (3) purchasing approaches – purchasing function organization, power structures, buyer-seller relationships and purchase policies/criteria;
  - (4) situational factors – urgency of order fulfillment, product application and size of order; and
  - (5) buyers' personal characteristics – buyer-seller similarity, attitudes toward risk and buyer motivation/perceptions (Bonoma and Shapiro, 1983).

Generally, marketers should work systematically from the outer nests (numbers 1-3) to the inner ones (numbers 4 and 5) because data are more available and definitions clearer. However, the inner nests (situational and personal variables) may, at times, be more useful. In situations where knowledge and analysis exists, marketers may begin at a middle nest and work inward (occasionally outward). A balance between the simplicity and low cost of the outer nests and the richness and expense of the inner ones is desirable to maximize the value of the segmentation analysis (Shapiro and Bonoma, 1984). Palmer and Millier (2004) note that the conceptual bases and variables utilized by the nested approach (e.g. industry sector, product type and buyer characteristics) can provide the data needed for effective segmentation practice in B2B markets.

Although the nested approach was developed in the mid-1980s, it holds up remarkably well to the segmentation challenges of industrial markets; and, in fact, no new multi-step models have earned widespread attention by business marketers. Ben Shapiro's thoughts on the nested approach cited by Cates (2002) two decades after its development follow:

The "Nested Approach" is still applicable to industrial markets today in the twenty-first century. It is still relevant but changes are taking place. Although still useful, what is happening is it is much harder to segment markets than in the seventies. It is much more important to segment markets when possible; unfortunately, more is being done in this area since everyone is doing demographics. This is commonplace in market research today. It is also easier to get information on demographics versus in the seventies. What will give today's marketers a competitive edge is those who can unlock the key to address personal characteristics of the buyer and situational factors that can be tapped into by the supplier. The three outer rings are still there but should play far less a role in the importance than the two inner most rings. They now play the most important role in nested segmentation in the twenty-first century. It must be noted that segmentation is much harder to do today than ever before. Potential research into other factors that could affect industrial segmentation should be considered.

### *3.2 Applying the nested model*

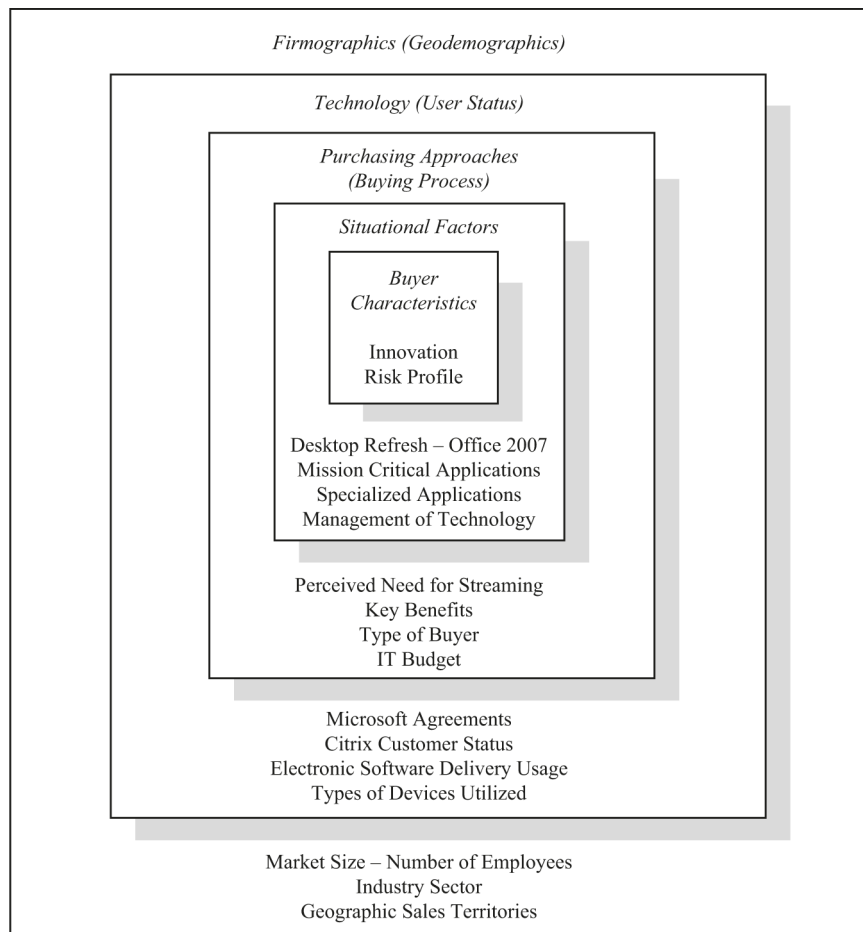
While the basic segmentation model offers a simple and valuable approach for understanding B2B markets, the power of the framework is magnified when designed in the context of an appropriate use situation (such as CSS). This segmentation approach has been successfully utilized in other high-tech companies such as Bayer Diagnostics and Cordis Corporation as well as in re-supplier markets (Christ, 1997). A customized nested approach can energize a company to understand, initiate and implement a strong segmentation-based marketing strategy.

#### 4. The CSS segmentation model

##### 4.1 The process and nested framework

A series of in-depth meetings over a three-month period were held in-person, by telephone and via GoToMeeting web conferencing with the project leader and three other Citrix Systems product marketing managers. Building on these work sessions and a review of project documents, numerous relevant segmentation dimensions were identified. A set of geodemographic (firmographic) and behavioral bases were developed. These inputs provided a logical springboard for the application of the nested model. The resulting segmentation approach for CSS is comprised of the following five levels and 17 variables (see Figure 1):

- (1) firmographics – establishment size by number of employees, industrial sectors and geographical sales territories;



**Figure 1.**  
Nested segmentation  
approach for CSS

- (2) technology – Citrix customer status, Microsoft enterprise agreement/software assurance agreement, electronic software delivery usage and devices;
- (3) purchasing approaches – perceived need for streaming, key benefits, type of buyer and IT budget;
- (4) situational factors – desktop refresh, mission-critical applications, specialized applications and management of technology; and
- (5) personal characteristics of the buyer/decision-making unit (DMU) – innovation and risk profile.

#### 4.2 *The model – levels and variables*

4.2.1 *Level 1: firmographics.* An in-depth analysis of the US market was conducted using two primary dimensions:

- (1) organizational size by number of employees; and
- (2) industrial sector.

According to Laiderman (2005), B2B organizations should use meaningful and homogenous “buckets” such as large (500 + employees), medium (50-499 employees) and small (fewer than 50 employees) in framing segmentation analyses. Laiderman (2005, p. 69) adds that “frames should be defined by what makes statistical sense (in terms of sample size) and in terms of how an organization ‘views the world’”.

Census data evaluated the 7.4 million business establishments with payroll (US Census Bureau, 2004). Of organizations, 98 percent employ fewer than 100 employees and were excluded from further analysis. There are 49,593 establishments that employ more than 250 employees and are considered large in this study – this represents only 0.7 percent of establishments. An additional large target market consists of 5,396 governmental agencies with 250 or more employees (US Census Bureau, 2002). As Figure 2 shows, seven US states (California, Texas, New York, Florida, Pennsylvania, Illinois and Ohio) in five sales territories have more than 2,000 large prospects. Eleven other states (see Table I) have greater than 1,000 prospects and above average national indexes.

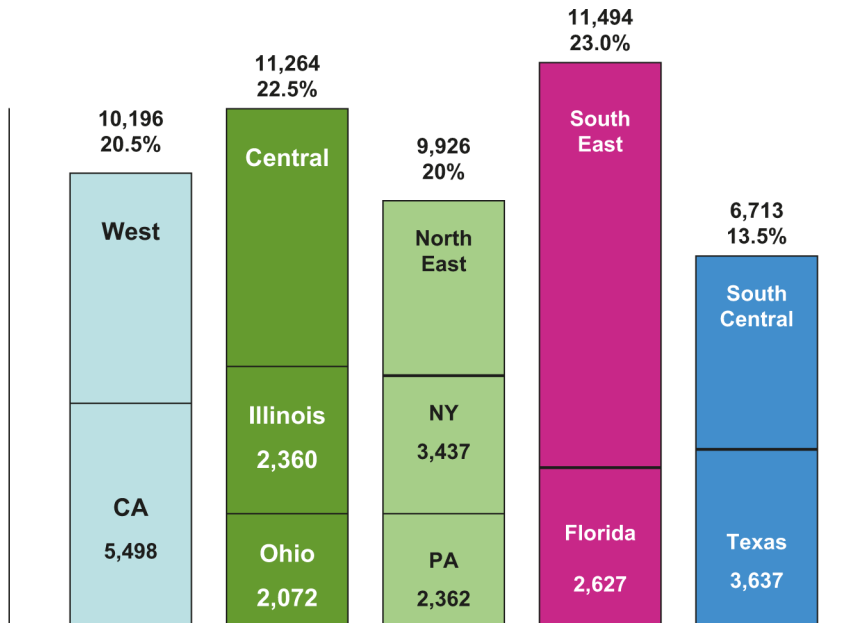
Medium establishments were defined as those with 100-249 employees. Seven broad industrial sectors based on NAICS categories were selected to target knowledge-based or highly regulated organizations (US Census Bureau, 1997). These included food and beverage manufacturers, high-technology manufacturers (aerospace, computers, electrical components, electronics, medical equipment and pharmaceuticals), information services, professional, scientific, technical and management services, finance, insurance and real estate, healthcare, and education. This resulted in the identification of 43,286 establishments or 0.6% of the total business population in the USA (see Table II). Hence, 98,275 organizations in the USA were found to be “first-cut” potential customers based on firmographics for CSS.

4.2.2 *Level 2: technology.* The technology dimension assesses user status. It is comprised of four key variables:

- (1) customer status;
- (2) Microsoft enterprise agreement (EA)/software assurance (SA) agreement;
- (3) electronic software delivery (ESD) usage; and
- (4) type of devices.

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678



**Figure 2.**  
Key US states in the five sales regions for large prospects

State	Geographic sales region	Establishments with 250 or more employees	Index <sup>a</sup>
1. California	Western	5,498	5.66
2. Texas	South Central	3,637	3.74
3. New York	North East	3,437	3.54
4. Florida	South East	2,627	2.70
5. Pennsylvania	North East	2,362	2.43
6. Illinois	Central	2,360	2.43
7. Ohio	Central	2,072	2.13
8. Michigan	Central	1,631	1.68
9. New Jersey	North East	1,619	1.67
10. Georgia	South East	1,602	1.65
11. North Carolina	South East	1,463	1.51
12. Virginia	South East	1,380	1.42
13. Massachusetts	North East	1,243	1.28
14. Indiana	Central	1,189	1.22
15. Wisconsin	Central	1,149	1.18
16. Tennessee	South East	1,119	1.15
17. Minnesota	Central	1,082	1.11
18. Missouri	South Central	1,033	1.06

**Table I.**  
US states with the greatest number of large establishments

**Note:** <sup>a</sup>The mean number of “large” establishments per state is 972. An index >1.0 is above the state-wide average while an index < 1.0 is below the average. For example, Ohio (2.13) is more than twice the US average. The index ranges from 0.06 for Wyoming ( $n = 62$  or about 1/16th the national average) to 5.66 for California ( $n = 5,498$  or almost 5.7 times the national average)



Industrial Sector	NAICS Codes	US establishments
Food/beverage manufacturers	311, 312	2,030
High-tech manufacturers	334, 335, 3254, 3364, 3391	2,599
Information services	51	4,025
Finance, insurance, and real estate	52-53	6,457
Professional, scientific, technical, and management	54-55	9,183
Education	61	2,391
Healthcare	62	16,601
Targeted sectors	Various	43,286

**Notes:** For the purpose of our study, medium establishments are defined as those with 100-249 employees in the USA

**Source:** US Census Bureau (2002, 2004)

**Table II.**  
Medium businesses in  
the USA

Customer status consists of two types of current Citrix Systems customers, i.e. CPS customers and non-CPS customers, and two types of non-customers, i.e. non-Vista customers and new PC buyers (Microsoft Vista bundled). The size dimension from level 1 (firmographics) coupled with customer status (relationship with Citrix Systems) yields a  $2 \times 2$  matrix. The resulting four quadrants (S1-S4) represent market priorities.

Since Segments 1 and 2 are existing Citrix Systems customers they merit particular attention and resource allocation. S1, the On-board, are existing customers of large national and multinational companies. They have bought into the Citrix vision of computing as evidenced by their ongoing relationships with the firm. They are excited about innovative technologies and may purchase hundreds or thousands of product licenses for their organization. The key challenge is to offer exceptional service to this segment and defend their customers from similar competitive offerings. S2, the Solution Seekers, are typically found in medium-sized business and information service organizations. Currently, they use one or more Citrix applications such as GoToMeeting, GoToMyPC, Access Essentials, etc., to tackle individualized problems (e.g. frequently updated applications, conflicting applications, mobile users, need for temporary and on-demand access, etc.) within their organizations. These clients are receptive to new products that will increase office productivity, add value to the sales force or reduce operating costs.

S3 is the High Potentials. This is an attractive target market to management because of their ample resources. Prospects will require a large investment in sales and promotion activities to convince them that Citrix Systems has the right capabilities to improve their IT function. S4, the New Economy, is comfortable doing business in the physical (marketplace) and virtual (marketspace) worlds. The target profile of this non-user group is similar to Segment 2 – knowledge workers and managers in medium-sized, technology, information and service-oriented sectors. A foot-in-the-door sales approach can be an effective marketing strategy for this target market. This campaign would feature free trials, pilot tests, integrated marketing communication, education and marketing support aimed at persuading them of products' benefits.

Prospects without a Microsoft enterprise agreement or software assurance agreement or companies considering purchasing an electronic software distribution solution may find CSS helpful in managing desktop applications. Many other organizations would prefer not to buy Microsoft's Softricity product or lack an ESD solution and may be good candidates for CSS, as well. Finally, the number and type of

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devices (PCs, laptops, thin-clients) operating within an organization is a technological variable. Mobile users represent an important area of interest. A concurrently connected users (CCU) model may be designed with variable usage in mind.

4.2.3 *Level 3: purchasing approaches.* The purchasing approaches examine organizational buying processes. It consists of four dimensions:

- (1) perceived need for streaming;
- (2) key benefits;
- (3) type of buyer; and
- (4) information technology budget.

A closer review of the Citrix Systems customer – segment priorities 1 and 2 – shows that some customers will have no perceived need for desktop streaming technology; they may believe that the current version of CPS is all they need. Three other scenarios include those perceiving a need for CSS. These are:

- Case 1 – Citrix Systems is their preferred application delivery vendor;
- Case 2 – Citrix Systems may not be their preferred application delivery vendor for streaming but is part of their consideration set; and
- Case 3 – Citrix Systems is not part of their consideration set or they have an alternative streaming solution.

Hence, this sub-segment qualification process advocates focusing on case 1 and 2 prospects.

Six potential key benefits were identified for desktop streaming in a product analysis (Graf, 2006). These are:

- (1) frequently updated applications;
- (2) conflicting applications;
- (3) laptop/mobile users;
- (4) application and version control for compliance;
- (5) temporary and on-demand access or provisioning; and
- (6) high-value or resource-intensive applications.

It is expected that organizations acknowledging one or more of these key benefits are excellent prospects for CSS. Reducing security threats from viruses, spyware, phishing, etc., was also a high priority for customers and prospects. CSS has the ability to assist in the management of applications in this area – this benefit can be an important selling point to IT/IS buyers.

Buyer motivations vary by individual buyer and buying group. Economic buyers are motivated by the “best deal” and carefully evaluate the price/value equation. Technical buyers want the “best product/service” based on features, functionality, and capabilities. Relationship buyers seek a “best friend” in the business and are most influenced by personal relationships and service more so than price or quality.

The IT budget is also an important consideration. Organizations that have sufficient resources and the willingness to invest in desktop application streaming products are attractive prospects for CSS.

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*4.2.4 Level 4: situational approaches.* The introduction of Microsoft's Vista operating system and Office 2007 suite impacted the personal computing market. While technology-driven companies are likely to embrace these new products, many other organizations will take a wait-and-see approach. Vista is not projected to surpass XP installations until 2010 (Bergstein, 2006). Hence, the operating system – Vista, XP, other Microsoft, other vendor – can provide segmentation insights for CSS. Desktop refreshes could present a great opportunity for the new product.

The identification of mission-critical applications (i.e. the key software solutions that run businesses) or specialized applications such as CAD/CAM, statistical software such as SAS, SPSS, etc., are also relevant situational segmentation factors.

Edge Research found that there were three types of IT departments based on how effectively they were managed. Only 10 percent of IT departments were considered tightly managed. The other 90 percent, identified as typically managed and unmanaged, represent strong prospects for CSS (Edge Research, 2006).

*4.2.5 Level V: personal characteristics of the buyer and decision-making unit (DMU).* Markets can be segmented based on the rate of customer acceptance for new product concepts (innovation and risk profile). Given that CSS is at the introduction stage of its product life cycle, there is very limited information available at this time about current buyers. Buyer adopter groups can be a valuable area for examining segmentation possibilities. While adopter category segmentation is useful in many industrial market situations, it is particularly insightful in high-tech markets (Weinstein, 2004). Easingwood and Koustelos (2000) state that innovators may be *techies* (users excited by the new technology) or *visionaries* (managers who can see a product's potential for improving processes, enhancing operations, or delivering value to gain a competitive edge).

Finally, risk analysis can be a segmentation variable that can be assessed in subsequent studies. Kotler and Keller (2000) explain that there are several types of perceived buyer risk such as functional risk (the product may not perform up to expectations), financial risk (the product may not be worth the price paid), time risk (the failure of the product may result in an opportunity cost of finding another more satisfactory product) and business relationship risk (tension and uncertainty in customer-supplier transactions and relationships).

## 5. Managerial implications

Successful segmentation means have a plan (a customer-centric model), be able to communicate it effectively to the organization, work the plan (operationalize it) and fine-tune the market-based strategy. Going from the segmentation design phase to the execution stage can be viewed as a four-stage process:

- (1) corporate commitment;
- (2) research/refinement;
- (3) strategic implementation; and
- (4) evaluation/enhancement.

This section provides insights on these four issues in the context of the Citrix Streaming Server segmentation initiative.

### *5.1 Corporate commitment*

It is evident that a segmentation-based strategy is desired by top management. This realization and prioritization is commendable; in fact, great strides in this area have been made by Citrix Systems within the past two years. Clearly, various forms of segmentation activities are ongoing in all business and product arenas. Segmentation can provide a competitive edge for companies and business units. The nested CSS framework takes segmentation from an interesting marketing concept to a practical strategic business tool. It offers a systematic and controlled market coverage strategy as opposed to the hit-or-miss, random initiatives of unfocused marketing programs.

While the commitment is in place for segmentation at the top and within most business units, buy-in needs to be accomplished throughout the organization. The segmentation framework provides a logical springboard for launching a successful, efficient, adaptable and differentiated target marketing strategy. Full buy-in consists of advocacy, education, communication and dissemination.

### *5.2 Research/refinement*

The output to-date is built on a solid foundation of work in segmentation in the high-tech corporate context. As a research design, it is considered exploratory in nature (an evolving segmentation framework). The objective would be to strengthen it to a descriptive or causal methodology through subsequent updates and improvements, over time.

As of now, limited demographic analysis has been conducted of the US market. The preliminary results provide a competitive basis for sound target marketing. The basic NAICS analysis can be readily extended to European markets via the NACE system (European Union, 2002) and other major international markets for Citrix Systems. Further analysis, specification, and quantification of the dimensions and variables expressed in the nested model are encouraged.

### *5.3 Strategic implementation*

Segmentation should be the basis for strategic and tactical decisions. The nested approach can play a significant role in future marketing planning for CSS. A two-tiered roll-out strategy is proposed. The current Citrix Systems customer base (more than 200,000 worldwide) should be the first priority since they already know the company, are likely to have favorable predispositions toward new Citrix products, and are less costly to serve.

Simultaneously, new business development initiatives should be pursued to reach the proposed target markets. Firmographics (level 1 in the nested approach) is the first step. In the USA, organizations in all industrial sectors (companies and government agencies) with 250 or more employees are potential prospects for CSS. Should management opt to introduce a stand-alone version of CSS, medium-sized organizations with 100-249 employees in seven broad sectors (see Table II) represent excellent candidates for CSS since they are knowledge-based or in highly regulated industries.

While the size of an organization is a useful dimension for macro-level segmentation and initial sales prospecting, this outer ring in the nested approach needs to be supplanted with higher-level analysis. Dexter (2002) explains that "size of an organization does not tell us much about the way people think". Thus, business

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marketers have a powerful need for segmentation information on technology preferences, purchasing approaches and organizational psychographics (Barry and Weinstein, 2009).

As knowledge is gained about prospects from follow-up contact, more and better information is collected (levels 2-4) from prospects about technology (user status), purchasing approaches (buying process) and situational factors. A streamlined sales tool can be devised to readily assess important variables from prospects such as how entrenched their relationship is with Microsoft, device usage, perceived need for streaming, buyer motivations, desired applications, etc. While innovation status/adopter category and risk tolerance (level 5) may be quite insightful, this level of analysis will probably become most relevant once initial and detailed customer profiles have been established.

#### *5.4 Evaluation/enhancement*

The nested framework should be regularly evaluated and improved over time. As data is collected on the key variables, major segmentation insights will emerge. This will lead to precision target marketing. Target market selection criteria should be based on segment size, growth rate, profitability and/or other quantitative or qualitative marketing metrics agreed upon by management (McDonald and Dunbar, 1998; Simkin and Dibb, 1998). Once targets are selected, market positioning and strategic and tactical program decisions can be made.

Feedback from the sales force, channel partners and new customers can be extremely valuable in learning which dimensions and variables matter the most and why. Early-stage performance measures may answer pertinent questions such as:

- Is there more interest in the product in the West, North East, South East or other geographic sales territories?
- Which NAICS categories (vertical markets) are responding most favorably or unfavorably to CSS? Why?
- Are niche markets emerging in unanticipated sectors?
- Are medium-sized companies better prospects for CSS than larger organizations?
- Are they more successful with CPS customers, non-CPS customers, or should they target non-Citrix customers?
- Which channel partners are most successful in selling CSS? Why is this the case?
- What changes are called for in the segmentation framework (specific variables)?

### **6. Concluding remarks and research opportunities**

Innovative segmentation can provide high-tech companies with a strong competitive edge. This analysis of desktop application streaming developed a framework for effective multi-level segmentation for a new product. The firmographic analysis (level 1 in the nested approach) identified several geodemographic opportunities on where to compete. The technology dimension (level 2) probes user status – who to target. The behavioral components in the model (levels 3-5) assess the why and how questions – for example motivations, needs, applications, business psychographics, etc.

Other business and technology companies can use a similar segmentation methodology to develop winning marketing strategies in highly competitive global

markets. Thinking outside of the box (i.e. not using traditional industry segmentation) can provide companies with a unique marketing edge in the marketplace. Marketing scholars and practitioners are urged to further assess and improve the measurement of segmentation bases and variables used in the nested approach as well as develop alternative multi-step models.

Dibb and Simkin (2008) note that the “blank canvas” assumption is flawed since companies already have products, buyers, channel relationships and constraints. Hence, segmentation must assess existing customer groups (fine-tune segmentation to better run the mainstream business) and emerging markets (anticipating the future outlook). This is consistent with Abell’s (1993) idea of parallel strategies for dual markets and is a worthy segmentation area to explore further, particularly in rapidly changing technology markets.

### 7. Questions for discussion[1]

- Critique the use of the nested approach by Citrix Systems.
- What other approaches could Citrix Systems use to segment its market?
- How can Citrix Systems replicate this research program to segment the Canadian market?
- What other international markets would be worth pursuing?
- Develop an IMC (integrated marketing communication) plan for introducing CSS into the marketplace.

### Note

1. Contact the author for a PowerPoint presentation of the segmentation analysis and a teaching note for this case study.

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