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A GUIDE TO BUSINESS OPPORTUNITIES IN NEW YORK STATE FOR CANADIAN SOFTWARE DEVELOPERS



Mary E. Mokka
Canadian Consulate
3150 Marine Midland Center
Buffalo, NY 14203-2884
(716) 852-1247

Acknowledgments

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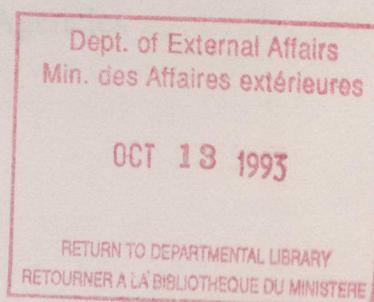
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James E. McConnell
Director
Canada-United States Trade Center
University at Buffalo
Buffalo, New York 14260
716-636-2299

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EXECUTIVE SUMMARY

The rapid changes that are presently occurring in the computer industry, along with the realization that innovations in the software industry are primarily responsible for these transformations, have motivated the Canadian Consulate of Buffalo to commission the preparation of this Guide. The **purpose of the Guide** is to present an informative and utilitarian perspective of the potential business opportunities in New York State that are available to Canadian developers of computer software. In addition, the document provides assistance in identifying appropriate marketing strategies, distribution channels, and cross-border movement procedures for penetrating the New York State market.

A **description of recent trends in the computer software market** is presented in **Section 2** of the Guide. The era of specialized, well-defined channels of distribution for software products is ending, and taking its place is a complex and very dynamic business environment of two- and three-step linkages between buyers and sellers. In addition, the software industry in North America is experiencing increased competition and downsizing; mergers and acquisitions (and business failures) are commonplace; traditional dealers are faced with more sophisticated consumers and eroding margins; and software developers are facing new challenges brought about by the OS/2 operating system and the increased efforts of many computer hardware manufacturers to provide funding to software developers for R & D and product-marketing assistance in exchange for software applications.

The **special marketing opportunities that exist in New York State** for Canadian software developers are reviewed in **Section 3**. The State of New York is already a major trading partner with Canada, and with almost 18 million people and retail sales of over Can\$102 billion annually, the State possesses enormous market potential for many Canadian computer establishments. Of special importance to Canadian software developers are the following characteristics: the State contains seven of the 150 top-ranked metropolitan computer markets in the United States; it currently employs over 11,000 people in the computer software industry; and it possesses over 7100 computer stores, 359 computer/software distributors, and over 300 Value-Added Resellers. The primary market areas of the State are differentiated in the Guide according to "downstate" and "upstate" regions, eight telephone calling areas, and two broad industry categories. Based upon these criteria, the top three computer markets in the State are identified as

New York City, Long Island, and the Buffalo/Rochester area.

Attention is given in **Section 4** to the kinds of strategic decisions **Canadian software developers should consider** in an industry where "the rate of technological and competitive change is so extreme that the market information is often unavailable or obsolete, where strategic windows are opening and shutting very quickly, and where the cost of error is involuntary exit." It is suggested in the Guide that software developers should formulate an overall strategic plan and be prepared to implement it quickly; that successful Canadian exporters to the United States typically emphasize specialty or niche products with narrowly defined applications and place a strong emphasis upon quality rather than price; that the U.S. market consists of a myriad of diverse regional markets, which in many instances are best accessed through a manufacturer's rep or agent; and that Canadian establishments in several key sectors of the computer software industry are well-positioned to compete successfully in the North American market.

Three sets of practical suggestions for **penetrating the computer market in New York State** are presented in **Section 5** of the Guide. The first set consists of advice on how to access the market in New York State. Important considerations include the proper timing of product entry into the market; partitioning the market into appropriate, homogeneous submarkets to maximize market penetration; taking advantage of numerous trade shows throughout the State; and participating in one of Canada's New Exporters to Border States (NEBS) trade missions.

A second group of recommendations is focused upon **identifying appropriate channels of distribution to the New York State market area**. Channel decisions typically involve legal commitments of a long-term nature, and it is therefore important to try and maximize flexibility and to utilize several channels simultaneously. Also noteworthy is the realization that the choice of distribution patterns will usually dictate the mode of entering the market, which in turn will affect options regarding pricing, producing, and promoting software products and services. The process of selecting proper distribution channels will also depend upon the characteristics of the software establishments and their products and applications, as well as upon the changes that are occurring nationally in the software distribution system. In addition to the mainstream distributor/dealer channels and the new two-step networks, other avenues for selling software in New York State include the employment of a direct sales force, the use of independent sales representatives, direct marketing, strategic partnering, and the establishment of a separate business entity in New York State.

The third set of suggestions emphasizes the three primary concerns Canadian software developers are likely to have in moving their software products and/or services across the border into the U.S. These are **procedures and recommendations for exporting to New York State, requirements for clearing U.S. customs, and opportunities for tapping into U.S. government procurement opportunities.** In particular, direct and indirect strategies for exporting software to New York State are outlined in the Guide; the requirements regarding proper documentation, copyright and trade mark regulations, labeling, customs duties, and temporary business travel, which are necessary to clear inspection by U.S. customs officials, are presented; and the procedures for selling software products and applications to various U.S. government agencies and departments are described.

To demonstrate the diversity of opportunities and market-entry strategies for the Canadian software developer who is interested in the New York State marketplace, **four case studies** are presented in **Section 6.** Each case represents a recent experience of a Canadian software establishment that has been successful in entering the New York State market, and together the examples demonstrate some of the marketing and distribution strategies that are effective.

Finally, the Guide contains appendices that list the **computer trade shows** that are held annually within the State of New York, the people that have provided helpful information in the preparation of this publication, and the key government agencies that are mentioned within the text.

1. PREFACE

"Another revolution in the computer industry is in progress, and it is software, not hardware, that is the real leader of the changes underway."

"I am in the computer software business, and it is changing so rapidly that even I don't know what is going on. Strategic decision making is so very problematic in this kind of environment not only because change is so dramatic, but also because it is difficult to predict the significance of change as it is occurring."

"One area in which the software industry is found lacking is in the marketing of its products to potential users. The U.S. market is not homogeneous. It is a collection of regional markets. Therefore, a standard distribution strategy for the U.S. will undoubtedly leave some market segments unserved."

"The next few years are going to be very difficult times for those in the software industry. Everyone will be going after the same value-added niches, and a tremendous amount of shakeout is inevitable."

Developers of software products in Canada are likely to be very familiar with quotations such as those above. It is because of statements like these about the market for computer software, and the realization of how rapidly the computer industry in general is changing that has prompted the Canadian Consulate office in Buffalo, New York to commission the preparation of this Guide. The primary purpose of the Guide is to present an informative and utilitarian perspective of the potential business opportunities in New York State that are open to Canadian developers of computer software, and to provide assistance in evaluating appropriate distribution channels and marketing methods for reaching this part of the United States. Although most of the comments in the Guide are focused upon doing business in New York State, many of them are also applicable to other parts of the country.

The Guide is divided into the following major sections: recent trends in the computer software market; guidelines for strategic decision-making in the

software industry; an overview of the computer market in New York State; suggestions for successfully penetrating the New York State market area; and appendices to support and augment the findings of the study.

2. RECENT TRENDS IN THE COMPUTER SOFTWARE MARKET

The focus of this Guide is upon customized computer programming services (SIC 7371), prepackaged computer software (SIC 7372), and integrated systems design and analysis (SIC.7373). Following common practice, computer software may refer both to systems software and applications programs. The former includes programming languages, operating systems, and compilers, while the latter includes software associated with word-processing, database management, and spreadsheets.

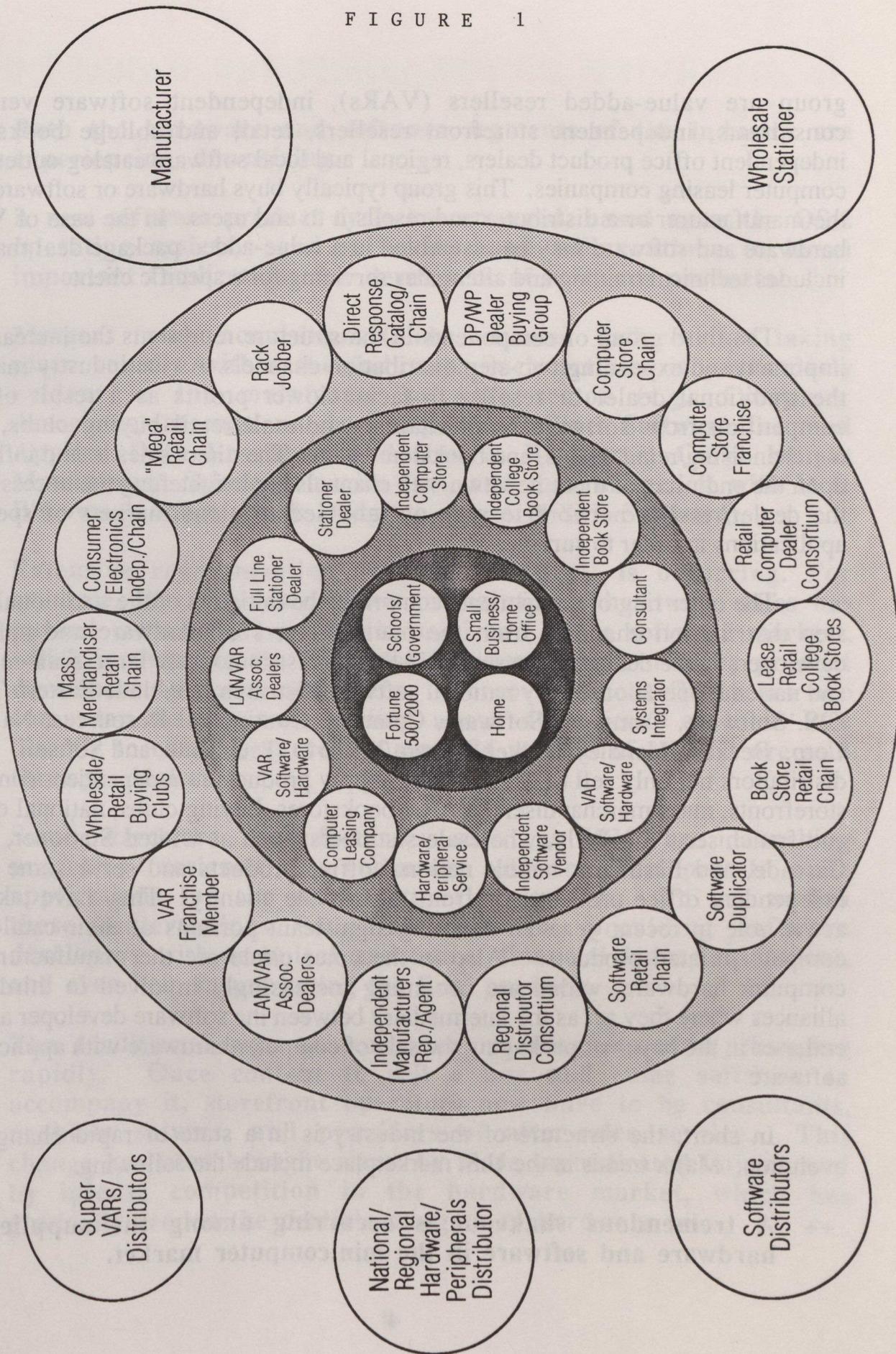
As a service-sector component of the computer industry, software development is becoming increasingly important as the computer industry matures. In fact, with the slowdown in the annual growth of computer hardware sales, decreasing margins throughout the industry, and the rapid pace at which mergers and other forms of restructuring are occurring, most of the computer business is going to look more and more like a service industry in which, as one writer describes it, "marketing savvy, more than entrepreneurial skill, will be increasingly crucial as the industry shifts from selling chunks of hardware to installing networks" [9].

For many industries in the United States, the channels for moving products from the point of manufacture or development to the end user are clearly defined. This is increasingly not the case for the computer industry in the U.S. The era of specialized, well-defined channels of distribution for software products is ending; taking its place is a complex, ever-changing system of two- and three-step connections between the developer and the end-user. Not only are the number of steps in the channels changing, the traditional role of the players in the distribution system are ever-shifting.

Figure 1 may be used to identify most of the groups of components in the computer software industry. From the inner circle outward, the first group consists of typical end users, which include large corporations, educational institutions, government agencies, small businesses, and individual homes. The next group contains various kinds of dealers, retailers, and suppliers. For example, in this

Distributor Channels/Software

FIGURE 1



group are value-added resellers (VARs), independent software vendors, consultants, independent storefront resellers, retail and college bookstores, independent office product dealers, regional and local software catalog outlets, and computer leasing companies. This group typically buys hardware or software from the manufacturer or a distributor and resells it to end users. In the case of VARs, hardware and software may be assembled in a value-added package deal that also includes technical training and after-sales servicing for a specific client.

The third group of components in the structure represents the increasingly important and expanding two-step distribution channels. As the industry matures, the traditional dealer or reseller is facing lower profits as a result of stiff competition from software retail chains, wholesale/retail buying clubs, mass merchandising/retail chains, and bookstore chains. The direct sales to and influence upon the end users of these new two-step channels are heightening the necessity for the dealer/reseller network to seek out and secure niche markets of specialty applications in order to survive.

The outer ring of components comprises the initiators of the traditional three-step distribution channels from the manufacturers of hardware and software developers to the dealers. The super VARs and distributors are large-scale regional and national operations. Key national software distributors include Eastern Texas, U.S. Software, Computer Software, Comtron, Continental Resources, Nayware Corp., Beckley, Handley Walker, Ingram/Micro D, Tech Data, and Softsell. These distributors not only sell to dealers, they supply products to independent computer storefronts, mass merchandisers, VARs, bookstores, buying clubs, national chains, and franchises. Similarly, wholesale stationers, such as United Stationer, Boise Cascade, and Eastman, handle national office products and serve some 6,000 independent office product storefronts across the country. They have taken an active role in recent years in devoting significant portions of their catalogs to computer-related products. Also in the outer circle are the manufacturers of computer hardware, which are becoming increasingly involved in third-party alliances where they act as the intermediary between the software developer and the end user in the hopes of packaging the sale of computer hardware with applications software.

In short, the structure of the industry is in a state of rapid change and evolution. Major trends in the U.S. marketplace include the following:

- ++ A tremendous shakeout is occurring among the suppliers of hardware and software in the minicomputer market.**

- ++ Both the hardware and software segments of the industry are experiencing downsizing.**
- ++ A new software product cycle has emerged, based upon the OS/2 operating system, and is having (and will continue to have) important implications for developers of software products.**
- ++ Mergers and acquisitions (and business failures) are taking place rapidly within the industry. Such activity is particularly evident in the mainframe software sector (e.g., Computer Associates International Inc. acquired Cullinet Software Inc. and Applied Data Research; and Dun & Bradstreet Corp. bought Management Science America Inc., and then merged it with D & B's own McCormack & Dodge to create D & B Software).**
- ++ Extensive reorganization of the industry is occurring. For example, the recent slowdown in mainframe hardware sales has pushed manufacturers into the mini and micro software markets, which is changing the distribution system that is used by product developers to reach end users. Moreover, about five years ago computer makers were selling about 40 percent of their PCs directly to customers; today, some 84 percent of all PCs are sold through dealers.**
- ++ Some hardware manufacturers, such as IBM, are launching programs designed to encourage software developers to write applications for the manufacturer's platform. To accomplish these undertakings, manufacturers are providing software developers with technical assistance, financial loans, equipment, and even help in marketing the final products.**
- ++ The traditional role of computer retailing stores is changing rapidly. Once content to sell a box and some software to accompany it, storefront operators now have to be consultants, problem solvers, and providers of after-sales service. This change has been brought about by more sophisticated buyers, and by intense competition in the hardware market, which has gradually eroded the dealer's margins on hardware sales.**

3. OVERVIEW OF THE COMPUTER MARKET IN NEW YORK STATE

a. The Computer Industry in New York State

The primary purpose of this Guide is to portray some of the characteristics of the computer software market in New York State and provide some assistance in penetrating this part of the U.S. It will come as no surprise to most Canadians that New York State is a major market for Canadian goods and services. For example, annual commodity shipments between Canada and New York State exceed Can\$12.8 billion, which is approximately 15 percent of total commodity trade between the two countries. Moreover, estimates suggest that another Can\$3.4 billion in service trade moves annually between Canada and New York State. It is also the case that Canadian direct investments in New York State amount to over Can\$3.8 billion, that Canadian parent corporations have equity holdings in approximately 190 New York State companies, and that approximately 7 percent of all the people in the U.S. working for Canadian-owned companies are located in New York State. **In short, Canadian business people have strong economic ties to New York State--a state that is home to almost 18 million people with a combined purchasing power in retail sales of over Can\$102 billion, and a state that shares a common international border with the provinces of Ontario and Quebec.**

Another important attribute of New York State for software developers in Canada is the relatively large share of the U.S. computer industry that is located in the state. For example, **the state contains approximately 11,000 employees in the computer software industry (SIC 7372)**, which amounts to about 5 percent of the country's total employment in this industry. [States with larger proportions of total U.S. employment in this industry are California (22 percent), Virginia (9 percent), Massachusetts (7.5 percent), Maryland (7 percent, and Texas (5.7 percent).]

Another indicator of the importance of the computer industry in New York State is evident from an inspection of Table 1. Based upon the number and value of multiuser computer systems (MCSs) installed in each of the top 150 Metropolitan Statistical Areas (MSAs) in the United States in 1988, New York State has seven of the top-ranked computer markets. [MCSs are defined as large general-purpose or high-speed scientific computers, as well as supermini-class computers and smaller-scale systems in a commercial environment.] Nearly 50 percent of the installed

TABLE 1

TOP-RANKED METROPOLITAN STATISTICAL AREAS IN
NEW YORK STATE BY NUMBER AND VALUE OF INSTALLED MULTIUSER
COMPUTER SYSTEMS (1988)

<u>Rank</u>	<u>Metro Area</u>	<u>Number</u>	<u>Value(000)</u>
1	New York City	88,125	\$7,843,952
16	Nassau-Suffolk	21,756	\$1,783,878
21	Syracuse	17,132	506,209
31	Rochester	11,724	781,991
62	Buffalo	6,622	778,040
68	Albany/Schenectady/ Troy	5,788	910,498
123	Utica/Rome	<u>2,402</u>	<u>156,833</u>
	Total	153,549	\$12,761,401

value of all MCSs in the country is located in the top 25 MSAs, and New York State contains three of these major market areas. Moreover, the seven New York State MSAs in Table 1 contain 8.3 percent of all installed MSCs in the country and approximately 7.5 percent of the total value of all MCSs in the nation in 1988 [7].

A similar ranking of U.S. metropolitan areas by the number and value of personal computers reveals that five New York State areas rank among the country's top 50 markets in 1988 (International Data Corporation, 1988). These are New York City (ranked #2), Nassau-Suffolk (ranked 17th), Rochester (ranked 38th), the Albany-Schenectady-Troy area (ranked 45th), and Buffalo (ranked 46th).

Also noteworthy is the fact that the Chain Store Guide Information Services Company of New York City reports that in 1988 the U.S. contained 2,531 computer store companies operating 7,131 stores, and an additional 359 computer + software distributors [2, p. xi]. The State of New York is the headquarters location for 184 of these computer + software companies. California leads the country with 349 headquarters, while the third-placed state is Texas, with 141 headquarter locations [2, p. xv]. **In short, while the computer software industry is fairly dispersed across the country, New York State lays claim to a significant proportion of the total stock of the industry, making it an excellent market that is in close geographic proximity to much of the Canadian software industry.**

Finally, the state contains over 300 Value-Added Resellers (VARs), which, according to a 1989 survey conducted by the Ziff-Davis Publishing Company, earn about 42 percent of their sales revenues from selling software [10]. These VARs typically assemble custom-integrated computer systems for specific vertical industries or application areas.

b. Differentiating New York State Market Areas

One of the objectives of this Guide is to assist Canadian developers of software in becoming more informed about the different market areas of the State. It is helpful, therefore, to delimit the computer software market in the state by telephone calling areas. This strategy is useful because these areas correspond roughly to the major economic planning regions used by the State's Department of Economic Development. In addition, such a spatial division of the State links individual computer dealers, VARs, distributors, and storefronts to major metropolitan areas of the State rather than to the various counties or other geographical areas of the state, with which Canadian business people may be less knowledgeable.

From personal interviews with several experts in the computer industry in New York State, **the observation is quickly made that the computer industry in the State consists of two primary market areas: "downstate" and "upstate."** These two markets differ sharply, not only in their relative sizes, but in the nature of their industry specializations. An examination of Table 2 reveals the distribution of computer companies for each of the major telephone calling areas in the "upstate" and "downstate" regions. The location of these calling areas is displayed in Figure 2. An evaluation of the data in Table 2 reveals that over 70 percent of the computer establishments in the State are located within one of the four downstate calling areas.

Further segmentation of the computer market in each of the telephone calling areas by two major SIC sectors is revealed in Table 3. Of the some 4149 computer-related establishments identified in the State, some 3.5 percent are classified as belonging to the "computer and office equipment" sector (SIC 357), 89.4 percent to the "computer and data processing services" category (SIC 737), and 7.1 percent to all other industry categories. In comparing Tables 2 and 3, it is evident that the relative pattern of distribution of the two major sectors within the "downstate" and

TABLE 2

DISTRIBUTION OF COMPUTER ESTABLISHMENTS
BY TELEPHONE CALLING AREA

<u>Area Telephone</u> <u>Calling Region</u>	<u>Number of</u> <u>Establishments</u>	<u>Percent</u> <u>of Total</u>
716 Buffalo/Rochester	562	13.55
315 Syracuse	249	6.00
607 Binghamton	119	2.87
518 Albany/Adirondacks	248	5.98
<u>Subtotal: Upstate</u>	<u>1178</u>	<u>28.40</u>
914 Poughkeepsie	512	12.34
212 New York City	1235	29.77
718 Brooklyn, Queens, Staten Is.	336	8.10
516 Long Island	888	21.40
<u>Subtotal: Downstate</u>	<u>2971</u>	<u>71.61</u>
<u>Totals</u>	<u>4149</u>	<u>100.00</u>

Source: Computed by author from: Computer Companies in New York State
(Princeton, N.J.: American List Counsel, Inc., 1989).

"upstate" regions is roughly similar to the breakdown for all computer establishments.

In summary, the top three markets for computer services and computer and office equipment are New York City, Long Island, and Buffalo/Rochester. Several important characteristics of these top three computer markets are set forth below.

FIGURE 2
TELEPHONE CALLING AREAS
IN NEW YORK STATE

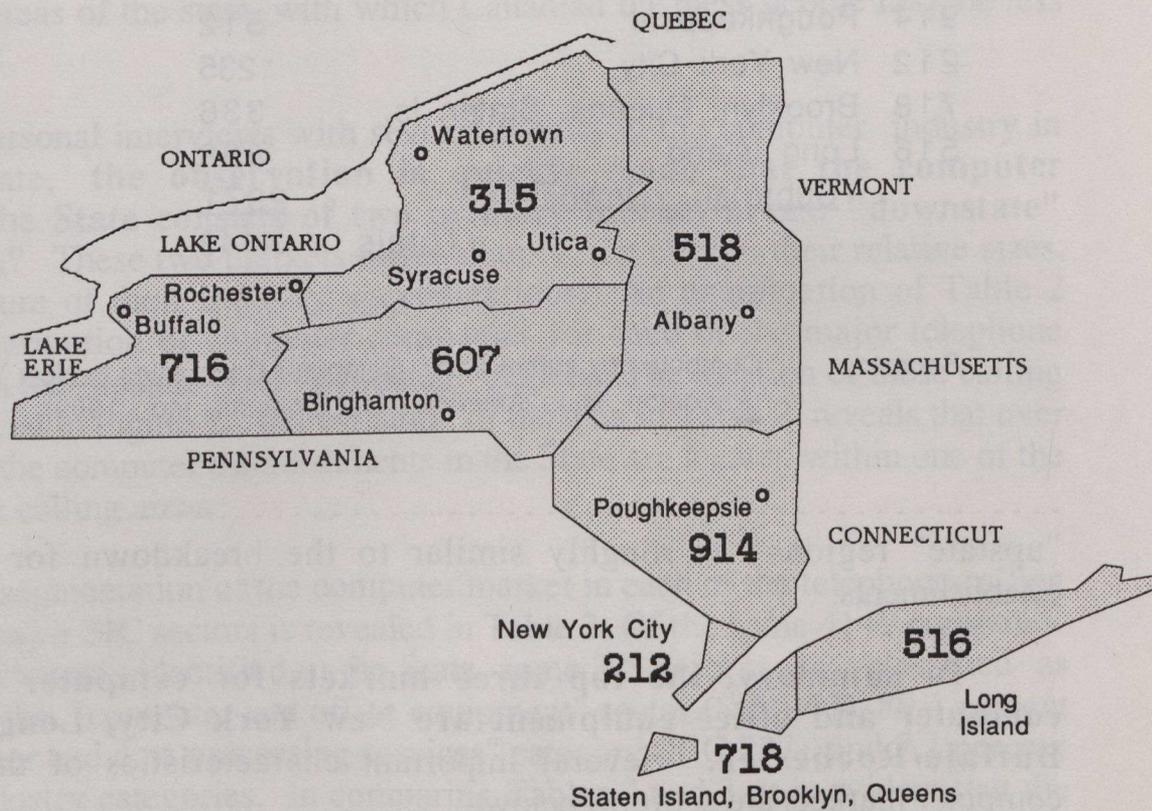


TABLE 3

DISTRIBUTION OF COMPUTER ESTABLISHMENTS
BY TELEPHONE CALLING AREA AND INDUSTRY SECTOR

Area Telephone Calling Region	Computer/Office Equipment (SIC 357)		Computer Processing Services (SIC 737)	
	Number	Percent	Number	Percent
716 Buffalo/Rochester	24	16.44	481	12.97
315 Syracuse	8	5.48	224	6.04
607 Binghamton	5	3.42	99	2.67
518 Albany/Adirondacks	<u>2</u>	<u>1.37</u>	<u>230</u>	<u>6.20</u>
SUBTOTAL: Upstate	39	26.71	1034	27.88
914 Poughkeepsie	24	16.44	457	12.32
212 New York City	28	19.18	1149	30.99
718 Brooklyn, Queens, Staten Is.	7	4.79	316	8.52
516 Long Island	<u>48</u>	<u>32.88</u>	<u>752</u>	<u>20.28</u>
SUBTOTAL: Downstate	107	73.29	1674	72.12
TOTALS	<u>146</u>	<u>100.00</u>	<u>3708</u>	<u>100.00</u>

Source: Computed by author from: Computer Companies in New York State (Princeton, N.J.: American List Counsel, Inc., 1989).

The New York City area: This metropolitan area, which contains over 40 percent of the total population of the state, has the largest and most highly integrated economy of any city in the U.S. Manufacturing, government, and services are all vitally important to the city's functional role in the country. In the services sector, for example, business services and health services are paramount; also important are the services of finance, insurance, accounting, and communication. Indicative of the city's relative importance is the fact that it possesses more of the nation's Fortune 500 industrial headquarters than any other U.S. state. In addition to the city's large industrial and commercial activities, it also possesses 90 institutions of higher education, of which about 60 are four-year colleges and universities.

The Long Island area: Although thought of primarily as a suburban environment, this part of the state is a growing high-technology center serving such markets as defense, telecommunications, and computers. Located in the 1200 square mile area are prime defense contractors, large manufacturers in the communications, computers, and instruments industries, numerous publishing firms, eleven technical laboratories, and over 20 colleges and universities.

The Buffalo/Rochester area: This area has undergone significant change in recent years, which has propelled services to outdistance manufacturing as the major economic force in the region. Increasingly important in the area are high technology and research facilities (e.g., the Western N.Y. Technology Development Center, and the R & D facilities of Kodak and Xerox), and over 30 institutions of higher education are located in the multi-county region.

4. GUIDELINES FOR STRATEGIC DECISION- MAKING IN THE SOFTWARE INDUSTRY

Canadian developers of computer software who wish to enter or expand their business in the U.S. marketplace must determine the optimal strategy for doing business in such a rapidly changing industry environment. More particularly: **"How do executives make strategic decisions in industries where the rate of technological and competitive change is so extreme that market information is often unavailable or obsolete, where strategic windows are opening and shutting quickly, and where the cost of error is involuntary exit?"** This question is posed by two authors studying strategic decision-making in the microcomputer industry [1, p. 816].

Based upon personal interviews with corporate executives, Bourgeois and Eisenhardt generate a number of guidelines for managers of computer-related establishments. For example, they find that in high velocity environments, which is certainly characteristic of the computer industry, successful executives deal with their extremely uncertain world by structuring it--by employing a thorough, analytical process; by carefully searching for strategic alternatives; and by being capable of articulating the goals of the establishments. Moreover, the more innovative and risky the set of strategic alternatives examined and chosen, the better the financial performance of the establishment. Finally, the authors find that the shorter the time frame in which strategic decisions are made, the better the performance of the establishment. The overall lessons advanced by the authors are, in their words, "apparent paradoxes: **Plan carefully and analytically, but**

move quickly and boldly...choose and articulate an overall strategy quickly, but put it in place only as it becomes necessary" [1, p. 833].

For those software developers who are interested in the specific factors that have enabled small and medium-sized Canadian manufacturing companies to be successful in penetrating the U.S. marketplace, the guidelines set forth by Hardy are noteworthy [5, pp. 67-73]. Hardy's findings indicate, for example, that successful Canadian exporters are producing specialty or niche products that pertain to narrowly defined products and/or narrowly defined applications; they are emphasizing product quality over price competitiveness; they are cognizant of the fact that the U.S. consists of a myriad of diverse regional markets, each with its own set of norms, business culture, and distributor networks; they make extensive use of regional trade shows in the U.S. to develop their market contacts and to identify new channels of distribution; they realize that in most U.S. markets the use of a manufacturer's rep or agent is the mainstay of effective sales and distribution strategy; and they are likely to be better received by U.S. dealers if they sell their products FOB U.S. destination and assume most of the problems associated with getting the products through U.S. Customs [5, pp. 67-71].

The importance of formulating proper business strategy in the software development industry becomes readily apparent when one realizes, for example, that most of the computer software industry in Canada consists of small and medium-sized "entrepreneurial" companies, many of which are not experienced exporters; **the United States represents the most significant single market for Canadian software suppliers (a \$25 billion market, with an expected 20 percent annual growth rate for the next 5 years);** the U.S. computer software market is technologically very advanced, but well-dispersed across the country, so that many regional markets exist; **that Canadian computer companies are in fact leaders in several computer-product areas, including systems integration and geographical information systems; and that the computer service sector is the fastest-growing segment of Canada's information technology industry.** In short, the possibilities for success are enormous, but to take advantage of these opportunities, software developers must make decisions within a marketplace that is increasingly complex and uncertain. To undertake this task successfully, it is crucial that a well thought-out business plan be in place. The remainder of this Guide, therefore, is designed to assist the software developer in penetrating the U.S. marketplace and coping with such a rapidly changing environment.

5. SUGGESTIONS FOR PENETRATING THE NEW YORK STATE MARKETPLACE

The successful penetration of the computer market in New York State requires an understanding of the following three important factors: assessing the marketplace, identifying appropriate channels of distribution, and selling across the Canada-U.S. border. The purpose of this section is to provide some practical considerations for each of these three factors, and to describe briefly some of the actual marketing experiences of software developers in Canada.

a. Assessing the Marketplace

"...authentic marketing is not the art of selling what you make so much as knowing what to make [8]."

The University Research Center of Chicago, Illinois recently conducted a study of 450 firms in eight major industries to determine those factors most frequently associated with business failure [4]. Interviews with the executives of the fallen companies reveal three major categories of responses. **The first is improper timing of product entry into the market.** Essentially, the executives failed to match selling strategy to the customers' needs. **The second factor is becoming too dependent upon a relatively small set of customers or dealers.** **The third contributing force is the lack of a business plan**--in particular, the absence of a well-thought-out strategy for covering both immediate and long-term financing needs. The results of this particular research are cited here because they are of critical importance for software developers, not only because the industry is changing so rapidly, making it difficult to forecast the needs of the marketplace, but also because the financing of software development is frequently difficult to obtain, and most of the developers are relatively small business operations where planning is just as crucial, if not more so, than in larger establishments.

From another perspective, marketing computer software is about answering two questions: Will people want to buy the software? And, what competitive advantage does the developer/seller have in supplying the software product? In arguing that the software industry in general lacks effective marketing strategy, Hershey H. Friedman and Linda Weiser Friedman argue that the best marketing

strategy for a software firm is to "define itself broadly in terms of the needs that it satisfies, not in terms of any one particular product" [3, p. 208]. **This requires the knack of partitioning the market into appropriate, homogeneous submarkets (or segments) to maximize market penetration.** As suggested in Figure 1, these industry segments may be as broad as educational and scientific software, government users, home computers, software for small businesses/home offices, and systems for large corporations. It is occasionally convenient to differentiate the market according to specific geographical regions, such as the telephone calling areas identified in Figure 2. A major challenge for the software developer, therefore, is to examine the changing market conditions in New York State within the context of market or geographical segments, and to plan accordingly.

Kenneth G. Hardy offers some suggestions to business executives of small and medium-sized Canadian firms about doing business in the United States [5]. According to his findings, of all of the factors that can work against effective marketing in the U.S., the most important are related to deficient management skills. In particular, he finds poor marketing skills to include inadequate targeting of customers and market segments, inadequate market research to determine a competitive pricing structure, little information on competitive products and companies, and ineffective distribution systems.

To address these deficiencies in marketing strategy, Hardy sets forth several recommendations based upon the experiences of Canadian firms that have been successful in selling south of the international border. **First, Canadian firms that are successful in exporting to the U.S. search out niche markets** where increased specialization can oftentimes protect the firm from direct competition. Once these niches have been identified, the firms tend to emphasize product characteristics over price competitiveness as the more important asset to exploit. **Second, he emphasizes the important reality that, while the U.S. marketplace is large and generally unrestricted to international competition, it is also composed of many distinctly different regional submarkets,** and the Canadian businessperson must be cognizant of such diversity. **He also stresses the importance of attending trade shows.** Such fairs offer attendees the opportunity to examine products and services of suppliers, engage in comparison shopping, see demonstrations of new product, exhibit new products, determine needs of various industry groups, contact reps or agents, and become known in the industry.

To become informed about the major trends and key competitors in the New York State marketplace, the most likely first step is to attend a computer trade

show. Major shows that regularly occur in the State are listed in Appendix A. Although trade shows may be somewhat time-consuming and costly undertakings, they provide excellent opportunities to observe what the competition is doing and to become acquainted with potential agents and reps. **Alternatively, a software developer new to the New York State market could participate in one of the New Exporters to Border States (NEBS) trade missions.** For example, the Canadian Consulate office in Buffalo recently hosted a NEBS mission that was focused specifically upon computer software. The NEBS program provides information on marketing and distribution strategy, as well as on some of the logistical and legal aspects of conducting business in a U.S. border state.

b. Identifying Appropriate Channels of Distribution

Few aspects of the computer industry are changing more rapidly than the distribution channels used to get hardware and software to end users. Even in less chaotic times, selecting the proper channel for moving software from developer to end user can be a difficult decision, especially when the distribution system extends across international borders. Channel decisions normally involve legal commitments of a long-term nature, which can further complicate the distribution decision if the developer of software is trying to maximize flexibility in the utilization of channels. It may also be prudent to utilize several channels simultaneously.

The important point is that the choice of distribution patterns will dictate the mode of entering the marketplace, which, in turn, will significantly influence specific options regarding pricing, producing, and promoting the software product or application. For instance, if the developer decides to enter the market through the services of a wholesaler or distributor, the general nature of the pricing problem to the end user may be determined by the margins required by the intermediary. Moreover, production decisions and the ability to operate under conditions of production stability may also be dictated by the number and type of distribution channels selected, and the volume level that is generated by each linkage to the market. In addition, if distribution patterns involve direct mail or catalog sales, then the nature of advertising and sales-promotion strategies will be significantly influenced.

The selection of suitable distribution channels, therefore, involves a very careful decision-making process, and will likely be based upon several important considerations. These include the marketing objectives and breadth of experience of the vendor; the availability of and risks associated with alternative channels to

specific markets; the economic costs of different distribution patterns, and the possibility that financial incentives may be provided for certain channel options; and, of course, the specific needs of the software product or application and any special characteristics of the existing market. For example, it is increasingly common for strategic partnering to occur in the software industry. Manufacturers of hardware may provide the software developer with R & D financing and marketing assistance in exchange for the adoption by the developer of exclusive marketing channels controlled by the manufacturer.

Fundamental to the selection of appropriate sales channels into the New York State marketplace is an understanding of the changes that are occurring nationally in the software distribution system. Traditional channels for selling computer software link the developers with wholesalers/distributors, dealers, and eventually end users. These typically three-step dealer networks include several key "players" (See Figure 1). For example, Value-added resellers (VARs) specialize in reselling hardware and providing a total solution, including turnkey packages. The VARs may include in the packages off-the-shelf or custom-designed software. Systems Integrators are typically independent of any specific hardware or software, and offer solutions without bias to meet the specific needs of end users. Another "player" is the independent software vendor, who develops proprietary software for special applications and then distributes such, often exclusively, to specific clients. Also within this distribution pattern are consultants that are selling knowledge rather than equipment or software, and that have established a symbiotic relationship with dealers. Occasionally, such individuals may initiate a limited software catalog operation on a regional or limited geographical basis that is designed to generate potential new clients for custom-designed software/hardware solutions. Frequently, these are one-person, freelance operations that work out of a home to minimize overhead costs. Other components of this kind of channel network include independent storefront resellers, independent retail and college bookstores, independent office products dealers, and computer-leasing and hardware-peripheral dealers.

Recently, however, this traditional system of channel distribution has experienced rapid transformations and reorganization as the demand for sophisticated applications increases, and as intense competition in the marketplace erodes traditional margins and puts severe downward pressure on prices. Such actions have thrust the traditional dealer and VAR into the unenviable position of having to cope with lower profits at the same time value-added services are costing more to provide. This situation has heightened the need of the dealers and VARs to seek out and secure niche markets in order to survive.

Much of the market competition for traditional dealers and VARs is coming from the a dramatic increase in the relative importance of two-step distribution channels. The key "players" in this distribution network are software retail chains, consortia of regional distributors and retail computer dealers, wholesale/retail buying clubs, mass merchandiser retail chains, "mega" retail chains, computer store franchises, and direct-response-catalog chains (See Figure 1). These agents of software distribution are having such an impact, that some believe that the VARs are an endangered species. As L.W. Henchey states, "VARs are facing increased difficulty because the steadily shrinking hardware margins continue to put the squeeze on their bottom lines. They have tweaked training, service and support charges and they've tried to put a stop to discounting...Consequently, many VARs believe that the only long-range cure is to court bigger accounts. Big game hunting is now in vogue, and tiered pricing based on a client's size is the new law of the jungle" [6, p. 39].

In addition to the mainstream distributor/dealer channels and the new two-step networks, several other avenues exist for selling software in the U.S. One approach is to employ a direct sales force. This option is very expensive and is generally used by developers/manufacturers of very high-end business software that are selling to Fortune-500 companies, large educational institutions, and government agencies. This method of penetrating the market is advantageous because it involves direct contact with the customer and permits effective customer service; however, this sales option is very expensive, and it works most efficiently if considerable marketing intelligence has been generated beforehand so that potential end users have been clearly identified.

In addition, the developer may decide to establish business ties with an independent sales representative. This person typically contributes toward all aspects of marketing the software product/application, including sales training for a dealer's sales force, packaging, pricing, promotions, and distribution allowances. In addition, reps generally operate under an extended contract; sell related, but non-competing products; and restrict their sales efforts to a specific geographic territory. In Hardy's study of what contributes to the success small and medium-sized Canadian establishments are having in exporting to the U.S., he reports that the dominant means of reaching wholesalers and end users is through manufacturers' reps [5, p. 70]. (See the next section for details on locating and contracting with reps.)

Another option is the use of direct marketing, which may include the

utilization of direct mail, trade journal advertising, catalogs, and telemarketing (including toll-free-800 telephone numbers). In most instances, the target market consists of dealer networks of small storefronts as well as end users in such areas as schools and businesses. This channel works best when the sales campaign is focused upon well-defined niche markets, when a strong follow-up mechanism is in place to respond to inquiries, when the software packages are geared toward vertical markets, when brand loyalty and proven reliability of the software product can be emphasized, and when the seller is trying to avoid the payment of margins to intermediaries. On the downside, this linkage mode can be quite expensive, and it requires fairly detailed information about the preferences and locations of potential end users

An increasingly popular distribution channel is known as strategic partnering or third-party arrangements. Small software operations are often good at generating innovations but unable for various reasons to exploit the potential wealth of their creations. In these instances, it may be advantageous for the software developer to contract with other firms that have needed financial assets, marketing know-how, or after-sales technical expertise and capabilities. Such arrangements may involve becoming a supplier of custom-designed software to a leading manufacturer of computer hardware, or of forging a cross-border alliance with Super VAR in New York State that already enjoys ready access to a major vertical computer market in the United States.

Finally, under special circumstances, it might be desirable for the software establishment to consider establishing a separate business entity in New York State. Although this mode of entry is most likely to be preferred by well-established software firms, it offers certain advantages. For example, incorporating in New York State may make banking easier in the U.S.; it permits the accumulation of capital in the U.S., and these earnings may have lower taxes than in Canada; immigration is easier into the U.S. if the Canadian company has a U.S. affiliate; and such status may enable the firm to avoid potential buyer prejudice against goods produced by non-U.S. companies. It is important to note, however, that incorporation in the U.S. must be done on a state-by-state basis, it will involve filing and attorney fees, and various legal concerns must be handled effectively.

c. Selling Across the Canada-United States Border

Software developers in Canada that wish to use one or more of the distribution channels identified above to export their products to markets in New

York State must engage in cross-border trade. What potential obstacles or restrictions are likely to be encountered in trading computer software and services across international borders? **Three areas of potential concern for the cross-border movement of software between Canada and the U.S. are examined below.** These are: procedures and recommendations for exporting to New York State, requirements for clearing U.S. customs, and suggestions for tapping into U.S. government procurement opportunities.

1) Procedures and Recommendations for Exporting to New York State

A close correlation exists between the distribution channel that is used to reach the New York State marketplace and the nature of the export-related procedures that the exporter of software will have to follow. In most instances, the decision regarding which distribution pattern is best for the establishment defines the export-marketing options available to the software developer. The selection of an appropriate export marketing strategy, as in the preference for a particular distribution system, involves a choice between two fundamental methods of getting a product from one country to the other: direct methods and indirect methods.

The direct method of exporting involves internalizing export-related activities and putting the responsibility for getting goods across the border into the hands of the Canadian software developer, or of an agent, representative, or maybe a distributor located in the New York State. Under this method, the Canadian exporter maximizes control over the market-entry and expansion process, but initially may have to pay a relatively high front-end cost. This method also requires considerable in-house expertise about exporting procedures and documentation requirements. In contrast, by selecting the indirect method, the establishment is externalizing the exporting operation, and is relying upon the services of various intermediaries, such as export trading companies and import houses, or upon the buyer to carry out the cross-border transaction. This method is less costly in the short-term and requires little expertise about the mechanics of international trade, but it minimizes the control the producer has over the exporting process and transfers potential profits from the cross-border movement to the intermediaries.

The extent to which the software developer has to get involved in the exporting process, therefore, will depend upon which method of exporting is selected. For example, **it may be prudent in certain circumstances for the Canadian software firm to utilize the services of a U.S. agent or representative to sell products in New York State.** The advantage of this

arrangement is that the agent represents the software firm's business interests in New York State and is familiar with marketing conditions in the area. Essentially, the agent generates the sales orders, relays the orders to the software firm in Canada, and the latter then supplies the goods directly to the consumer. The software developer bills the customer directly, collects the payments, and in turn pays an agreed-upon commission to the agent. Under this type of arrangement, however, the software firm may have to assume responsibility for getting the product across the border. This may be a particularly advantageous selling strategy if the end user is not a sophisticated importer. In such instances, the Canadian exporter could sell the software "F.O.B. Point of Destination" in New York State, quote the buyer in U.S. dollars, and request payment to a postal box at a New York State bank. This procedure minimizes the risks to the customer, and enables the buyer to treat the international transaction as if it were a purchase from a domestic software company.

Continuing with this example in which the Canadian exporter of software works through an agent or representative to get to the customer, the software firm has the tasks of selecting an appropriate agent, working out a contractual agreement with the agent, setting up a bank account with and renting a lock box from a New York State bank (or a Canadian bank that has established operations in New York State, or that has corresponding ties with New York State banks), and handling the trade documentation required to get the product through customs officials and into New York State. **Assistance in selecting the proper agent can be provided by the Canadian Consulate offices in Buffalo and New York City (telephone numbers: 716-852-1247, and 212-586-2400, respectively).** A contractual agreement with an agent in New York State would normally be expected to specify the following: the territory within which the agent or rep is to market the software products or applications; the kinds of products/applications to be marketed; the amount of compensation for the agent's services (e.g., 15 percent of the net invoice price); computation and payment date of commission; conditions under which orders are accepted by the software developer; the terms of sale, which usually indicate that the agent is not to quote prices without prior approval of the exporter; and the conditions under which the agreement may be terminated and the benefits thereupon for the agent.

Opening an account and a lock box with a bank that does business in New York State is a fairly easy venture that requires only an ID number from the Canadian exporter. The arrangement essentially permits the bank to act as a clearing house for business conducted by the Canadian software firm. Several times a day the bank opens the lock box, deposits any checks that have been received into the Canadian firm's account, and, if desired, wires the funds to a

corresponding bank in Canada as specified by the Canadian exporter. Such an arrangement also enables the Canadian exporter to request the U.S. bank to run credit checks on potential customers, and the firm can accumulate receivables in the U.S. and use such to expand business operations in the country. Currently, the monthly maintenance fee for a lock box in Western New York is approximately US\$50; after that, every check that is processed costs about U.S.\$0.08 plus U.S.\$0.25 for duplication of the check, if such is desired.

If the Canadian software firm does not wish to handle the export documentation directly, it can hire the services of a Canadian freight forwarder, a trade management company or trading company, or a U.S. customhouse broker. In some instances, these intermediaries will even take possession of the goods and take care of all of the documentation and transportation requirements. The names and addresses of these kinds of service providers may be obtained from local Canadian trading groups, from the provincial governments, and from the Canadian Consulate offices in New York State.

2) Requirements for Clearing U.S. Customs Inspection

A second area of concern in selling software across the Canada-United States border is fulfilling the requirements necessary to clear inspection by U.S. customs officials. **These requirements include presentation of proper documentation to customs officials; compliance with copyright, trade mark, and patent regulations; affixing proper marking labels on the software; payment of import duties; and qualifications under the Free Trade Agreement for reduced restrictions on temporary business travel into the United States.** Each of these issues is discussed below.

a) Presentation of Proper Documentation to Customs Officials

Software products moving from Canada to New York State must be accompanied by several pieces of documentation, which are required by U.S. Customs. For assistance in this process, contact can be made with a licensed U.S. customs broker or a Canadian freight forwarder. The Canadian Consulates in Buffalo or New York City can supply a list of such brokers. **The principal documents required include a bill of lading, a customs invoice, a certificate of origin, and a packing list.** It is common for the invoice and "exporter's certificate of origin" to be combined onto one document. The software firm will be expected to indicate on this invoice the type of diskettes being shipped (i.e., double or single sided, double or single density); the size of the diskettes (i.e.,

5 and 1/4 or 3 and 1/2); the name of the recorded program on the diskettes; a statement that the diskettes are "recorded media;" the proper export classification number for computer software (as defined by the Harmonized Tariff Classification); and the per unit value of the shipment. In listing the unit value of the diskettes, the exporter has to specify either the retail value of the software, or an estimate of how much it cost to produce the program. Even if the diskette is a sampler, a value has to be specified on the invoice.

b. Compliance with Copyright, Trade Mark, and Patent Regulations

The invoice and exporter's certificate of origin document will require the exporter to indicate if the software being shipped through customs is proprietary technology. **If the Canadian software developer has a Canadian copyright on the software, then copyright protection in the U.S. is afforded because of a mutual treaty between the two countries regarding copyrights.** In some instances, however, the software firm in Canada may be transferring a product to a computer manufacturer in New York State for which the latter owns the copyright. In this instance, the Canadian exporter must submit to customs officials a letter from the manufacturer indicating that permission has been given to export copyrighted software into the United States. The most likely instance when any Canadian exporter of software is likely to run into difficulty with U.S. customs officials is when a U.S. software company has a copyright or patent on software and complains to U.S. customs that software is coming into the country in violation of the existing copyright.

In the case of patents and trade marks, the requirements are a bit different than for copyrights. To obtain a patent on software, the developer must prove that the program or application is novel--no other of its kind exists in the world. If this is the case, then the developer can apply for a patent. **In contrast to copyright laws, if the Canadian software developer has received a patent in Canada, application for a patent must also be made in the U.S.** As is the case with copyrights, the only potential problem a Canadian exporter of software is likely to have with U.S. customs officials regarding patents is if a U.S. patent has not been received and a U.S. software company holding a patent complains to customs that software coming in from Canada is violating its existing patent. In a similar manner, Canadian software firms that want to protect a trade mark or brand name in the U.S. must register before exporting begins. Because of the legal nature of copyrights, patents, and trade marks, it is advisable for the Canadian firm to consult with attorneys who specialize in this area.

c. Affixing Proper Marking Labels on the Software

According to U.S. customs regulations, every article of foreign origin (or its container) imported into the country shall be marked in a conspicuous place as legibly, indelibly, and permanently as the nature of the article (or container) will permit, and in such manner as to indicate to an ultimate purchaser in the U.S. the English name of the country of origin of the article, at the time of importation into the customs territory of the U.S. **An appropriate marking label for diskettes is a self-adhesive sticker with the words "Recorded in Canada" affixed to the diskettes.**

d. Payment of Import Duties

As of January 1, 1989, all Canadian and American tariffs on computers have been eliminated under the Free Trade Agreement. Although the import duties on software are not zero yet, they are minimal. **In contrast to most traded commodities, the computation of customs fees for software is not based upon the value of the product, but upon the number of square meters of recorded surface.** The current import duty rate is U.S.\$0.097 per square meter of recorded surface. If the shipment qualifies for treatment under the FTA (i.e., if it can be demonstrated that the software programming occurred in North America), then the rate is U.S.\$0.077 per square meter. However, this potential savings of two cents under the FTA could be wiped out if the shipment is not relatively large. This could occur because the current fee charged by custom brokers in the U.S. to file for FTA treatment is U.S.\$2.50. So, the Canadian exporter would have to determine whether it is profitable to apply for the potential savings.

e. Qualifications for Reduced Restrictions on Temporary Business Travel

The FTA eases restrictions for residents of Canada and the U.S. on temporary business travel between the two countries. This has been achieved by agreeing upon rules for access to each other's markets for business travellers. **Under the FTA, four categories of temporary business travellers have been given easier access: business visitors, professionals in certain fields, traders and investors, and intra-company transferees.** The category most likely to be of concern to software firms in Canada is the first one: a temporary business traveller.

For example, if a Canadian software developer decided to travel

to New York State to sell or purchase products, to provide after-sales service during the term of a warranty or service agreement entered into at the time of the sale, or to assist in research and design activities, he/she could apply for admission at any U.S. port of entry. No formal petition is required, and no payment of a filing or processing fee is necessary. However, the Canadian traveller would be required to provide proof of the type of business activity being pursued in the U.S., which could be satisfied by presenting a business card and, if appropriate, a copy of the after-sales contract specifying that such service is part of the original sale. Although the Canadian business visitor to the U.S. is not required to have a passport, evidence of Canadian citizenship may be required.

3) Suggestions for Tapping into U.S. Government Procurement Opportunities

Another area of possible interest to the Canadian software firm is selling products and applications to U.S. government agencies and departments. Chapter 13 of the Free Trade Agreement expands the market opportunities for suppliers of goods and services in Canada and the United States. In particular, the trade accord lowers the threshold from U.S.\$171,000 for purchases of covered goods to U.S.\$25,000. All U.S. government purchases above this new threshold are now open to competition from Canadian suppliers unless the purchases are reserved for small business, minority-owned businesses, or excluded for reasons of national security. **From the perspective of Canada, Chapter 13 of the FTA opens up eleven out of thirteen U.S. government departments to Canadian competition.** The only exceptions are the Departments of Energy and Transportation. In all, a total of 40 governmental agencies and commissions, as well as NASA and the General Services Administration (i.e., the common government purchasing agency) are included. Purchases from the U.S. Department of Defense are covered within certain defined product categories such as vehicles, engines, industrial equipment and components, **computer software and equipment**, and commercial supplies; and in some instances, the Buy American Act permits limited preferences to U.S. companies. Except for these few exclusions, therefore, Chapter 13 plus the concept of "national treatment" in the FTA mean that a Canadian software firm has the same rights and privileges to bid on U.S. government purchases as are possessed by a U.S. competitor.

The opportunities available to Canadian software firms that wish to bid on U.S. government procurement contracts would appear to be very significant. For example, **the Federal Government Procurement and Market Access Unit**

reports that the U.S. government's budget for software, computer equipment, and computer-related services is in excess of \$8 billion annually, and it is growing by some 4 to 5 percent a year. In particular, the distribution of mainframes in the U.S. federal government by agency is: Department of Defense--44 percent; Department of Energy--14 percent; Department of Transportation--7 percent; NASA--7 percent; all other agencies--28 percent. The distribution of personal computers is roughly 63 percent in Defense, 7 percent in Treasury, four percent in NASA, 3 percent in Agriculture, and 23 percent in all other agencies. In short, these mainframes and PCs represent a significant opportunity for software sales in a wide variety of operating environments.

The following details and suggestions are offered to those Canadian software developers that may wish to pursue procurement opportunities from various U.S. government agencies. First, more specific information on departmental acquisition history can be obtained at a modest price from the **U.S. Federal Procurement Data Center (4040 N. Fairfax Drive, Suite 900, Arlington, VA 22203; phone: 703-235-1326)**. Second, purchases of many commercially available products, in amounts up to U.S.\$300,000 are administered through Washington, D.C.; other contracts are handled by the regional or local offices of the U.S. federal department or agency.

Third, the Information Resource Management Service (IRMS) of the General Services Administration (GSA) has been given the authority to procure all U.S. federal government information technology. This authority is administered in several ways. Most "common-use" computer products (i.e., hardware, software, and peripherals) procured by two or more U.S. federal government agencies or departments are purchased from schedule contracts negotiated by IRMS. These schedules, which are somewhat similar to standing offers in Canadian federal procurement, are non-mandatory, which means that the U.S. departments and agencies do not have to buy from them. In certain instances, therefore, the IRMS may delegate procurement authority to individual departments if an open-market price provides a better deal.

The first step in bidding for a particular government contract is to submit the Bidders' Mailing List (BML) application form (SF 129) to a specific U.S. government agency. The procedure requires that the seller list the goods and services to be sold and the Federal Supply Classification Code (FSC number) for the goods and services. A procurement officer from the agency then sends copies of bid invitations back to the seller. This can be accomplished by contacting: **Schedules Division, Office of Information Resources Procurement,**

Information Resource Management Service, U.S. General Services Administration, 18th and F Streets, N.W., Washington, D.C. 20405. In addition, it is strongly suggested that the interested Canadian software developer arrange an appointment beforehand with the contracting office responsible for the product area. This enables the developer to introduce his/her company and products, and to discuss the most appropriate schedule for each product. In fact, it may be more convenient to contact any of the GSA's regional Business Service Centers for more information. For the State of New York, the appropriate center is at 26 Federal Plaza, New York City, N.Y. 10278, phone: 212-264-1234.

To enter into the schedules process, the Canadian software developer must be prepared to provide the U.S. government with information on such things as pricing or developmental costs, corporate structure and ownership, current audited financial statements, and financial guarantees of ability to fulfill any contract that may be won. Furthermore, if a schedule contract is successfully negotiated, the software firm must agree with GSA to sell a specific product at a given price for a fixed period in indefinite quantities.

Several other possible avenues are available to reach the markets of U.S. government agencies. For example, information on U.S. trade shows and special conferences designed to assist firms in selling to the U.S. government can be obtained from the **Canadian Embassy, Federal Government Procurement (501 Pennsylvania Avenue, N.W., Washington, DC 20001, phone: 202-682-1740)**. In addition, a subscription could be taken with Commerce Business Daily, which is a weekday publication of the U.S. Department of Commerce listing proposed procurements by U.S. government agencies. Two other valuable publications are: the Federal Yellow Book, which is published quarterly by Monitor Publishing Co., 1301 Pennsylvania Ave., N.W., Washington, D.C. 20004. This book provides the specific program offices within each U.S. federal agency. The second publication is: Doing Business with the Federal Government, which is available for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. This provides an overview of the principles and procedures of U.S. government procurement practices, and it provides a directory of names and addresses of contacts in each of the departments and agencies.

6. CASE STUDIES

Opportunities for selling software products and applications in New York

State are many and varied, as are the distribution channels and marketing strategies entrepreneurs can use to penetrate this geographical area of the U.S. To demonstrate this diversity of opportunities and market-entry strategies, several examples are presented below of Canadian establishments that have entered the New York State or U.S. marketplace successfully. Initially, all of these software firms were small businesses, often beginning as one- or maybe two-person operations. The particular cases chosen to be presented in this Guide are representative of the diversity of avenues that can be utilized to penetrate the U.S. marketplace. Information for the cases is based upon telephone and in-person interviews.

a. Case #1: Establishment A

Establishment A is a Canadian firm that has been selling software applications in New York State and other parts of northeastern United States for approximately 15 years. It began as a two-person operation, and now employs around 70 people. One of the initial founders of the firm had been employed at Statistics Canada for several years, and was very much interested in developing computer applications that would integrate census data with other vital information and enable the firm to conduct marketing and location analyses for private-sector businesses.

Initially, it was difficult for Establishment A to enter the U.S. market because of competition from U.S. companies; consequently, several avenues of penetration were explored. First, they began to participate actively in trade shows in New York State and Massachusetts. At the same time, they began to put small ads in trade journals that were aimed at urban and regional planners and location consultants. In addition, one of their first hires was a marketing person from the U.S. who already had established relations with a few clients in the northeastern part of the U.S.

While these activities were going on, Establishment A was also busy improving its software capabilities. Emphasis was eventually given to establishing a user-friendly geographical information system that could represent census data within a spatial context. In addition, the firm focused much of its attention upon marketing its programs and application software to targeted clients in Canada. This work quickly established the company's experience and reputation in the field in Canada, and eventually won it the attention of a large New York State company that had a similar operation throughout the U.S. Ultimately, Establishment A formed a joint venture with the U.S. competitor and now acts as a subcontractor in the U.S. for custom-designed software and applications.

Most recently, the firm has been expanding its application capabilities in a number of different marketing sectors, including the fast-food industry, commercial banks, and government agencies. Moreover, they are now developing and installing menu-driven, custom-designed programs for urban and regional planning offices in North America, delivering post-sales training clinics for the clients, and providing on-line assistance if troubles arise.

b. Case #2: Establishment B

A second example of a Canadian firm that has been successful in the U.S. is a Canadian manufacturer of relational database software products for the higher end of the market. The company had won technical awards in Canada for its product, but had difficulty getting known in the U.S. As the person being interviewed noted, "a company can have a technically superior product, but if you have difficulty getting such a message across in the U.S., the product obviously won't sell there."

Establishment B eventually decided to hire a marketing person, establish an office in New York State, take on a small (two-person) sales force, and begin calling on potential clients. It is important to note, however, that the managers of Establishment B adopted a very restricted marketing strategy. Because of the nature of their previous software development activities in Canada, they decided early on to design products and applications only for Sun workstations. In other words, rather than attempt to deal with the entire PC market, they focused their efforts on reaching a very restricted marketing niche. As the person interviewed noted, such a strategy enabled management to identify more easily the potential clients and to begin operations in the U.S. with a minimum sales staff.

Today, the firm has expanded both its sales staff and its targeted geographic and product market areas. It also has sales offices in other states. The person interviewed believes that the primary success of the firm has been its adoption of a direct marketing approach to developing a sales presence in the U.S., the excellent quality of the company's product lines, and its early decision to target its software to specific hardware platforms.

c. Case #3: Establishment C

Another Canadian-based software firm is enjoying the benefits from a trend that is affecting many larger manufacturers in the United States that are deciding to hire outsiders to run their software and telecommunications operations. Several

large companies in New York State (as well as elsewhere in the U.S.) are finding that they are bewildered by the rapid pace of technological change in the computer industry, and are not about to continue to spend millions of dollars on equipment and software that may be obsolete in another year or so. Difficult economic times and restructuring has intensified pressures to reduce costs. At the same time, however, these manufacturers are very dependent upon computer systems to handle their business operations.

About a year ago, Establishment C signed a contract with a relatively large New York State manufacturer to act as computer-system managers for the company. Essentially, the firm is providing technical advice, training, hardware and software solutions, and after-sales service to the manufacturing company. The firm specializes in weaving together hybrid systems from competing hardware and software manufacturers to fit the specific needs of this company. Although several competing service-providing firms attempted to win this contract with the New York State manufacturing company, Establishment C feels that it was the successful bidder because of its existing ties in Canada with one of the manufacturer's branch plants. Although Establishment C began as a relatively small software applications operation, its management believes that the future growth of the firm is in acting as computer hardware and software applications consultants.

d. Case #4: Establishment D

The fourth representative Canadian firm is one that has been supplying a New York State computer dealer with customized software applications for approximately four years. Establishment D, which specializes in software products for the health-care and medical-services industries, established ties with the New York-based dealer following initial contact at a computer trade show in Upstate New York. The Canadian firm had rented a booth at the trade show, and was approached by the New York company to begin discussions on working out a mutually profitable agreement. After several months of negotiation, a suitable arrangement was put into operation.

The agreement worked out between these two businesses is one in which Establishment D acts as a vendor to the New York State dealer. The latter has an established sales force, and essentially agrees to advertise and market the Canadian firm's product applications to its various clients. In return, Establishment D has agreed to a specific margin percentage for the dealer, it must provide the dealer's salespeople with formal training sessions on the application and use of new software packages, it provides margin enhancements to the dealer's salespeople to encourage

increased sales and the expansion of the dealer's base, and it meets periodically with sales staff from the dealer to appraise trends in the marketplace and to assess the changing needs of customers.

Once orders for software applications have been received from the dealer, Establishment D exports the merchandise C.I.F. (i.e., cost, insurance, and freight charges) to the dealer. The documentation and transportation arrangements required for these export shipments are handled by a large customs broker in New York State. Establishment D receives payment from the dealer through a lock box arrangement with a New York State bank that has a correspondence relationship with the firm's Canadian bank. According to the person interviewed, the major disadvantage of this arrangement is the loss of margins to intermediaries; however, at this point in time, the establishment is not in a financial position to launch its own sales operation.

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APPENDIX A

COMPUTER TRADE SHOWS IN NEW YORK STATE*

* Source: "A Guide to Hi-Tech Electronics Trade Shows in the U.S., 1989-90" (Ottawa: U.S. Trade and Investment Development Division, Department of External Affairs).

1. ACCOUNTING SHOW

New York State Society of CPAs
200 Park Avenue
New York, NY 10166-0010

Approximate date: April

Description: The largest and oldest CPA marketplace features supplies of accounting computer systems, financial services, investment services, products, systems, and services for CPAs and their clients. **The Canadian government offers sponsorships to those Canadian firms wanting to exhibit at this show.**

2. AEC EXPO

Expoconsul International Inc.
3 Independence Way
Princeton, NJ 08540

Approximate date: December

Description: Computer and management show for the design and construction industry including computer graphics, other computer systems, and reprographics; marketing to architects, engineers and contractors the latest hardware, software and services for the construction industry.

3. BUFFALO COMPUTER AND BUSINESS SHOW

Southex Exhibitions
135 Delaware Avenue, Suite 102
Buffalo, NY 14202

Approximate date: October

Description: Computer systems, data processing equipment and software, time sharing, CAD/CAM, plotters, printers and other peripheral devices, bar-coding equipment.

4. **CENTRAL NEW YORK OFFICE COMPUTER EXPO**
Professional Program Management *Approximate date:* May
1552 Hertel Avenue
Buffalo, NY 14216
Description: Computers and word processors, including hardware, software, peripheral equipment and services; business and financial services; and office machinery and related supplies.

5. **COMPUTER GRAPHICS**
Computer Graphics - New York *Approximate date:* January
Suite 690, 8300 Greenboro Drive
McLean, VA 22102
Description: Brings together dealers of computer graphics, hardware, software, business presentation systems, desktop publishing, video animation products and related technology.

6. **CPA COMPUTER FALL SHOW**
NY State Society of CPAs *Approximate date:* November
200 Park Avenue
New York, NY 10166-0010
Description: This fall show assembles some 7,000 CPAs and accounting professions to help improve accounting practices, private practices and client operations with the latest CPA computer systems.

7. **INFORMATION INDUSTRY ASSOCIATION ANNUAL CONFERENCE**
Information Industry Association
P.O.Box 76480
Washington, DC 20013
Description: Information industries demonstrating products services such as videotex, storage technology, satellite communications, electronic publishing, financial information and market research service software and hardware.

- 8.8. **INFO SHOW** (Information Management Exposition and Conference)
 Cahners Exposition Group *Approximate date:* October
 999 Summer Street, P.O. Box 3833
 Stamford, CT 06905
Description: Devoted to the business of information systems and software; covering every aspect of information systems for business including microcomputers, minicomputers, mainframes, PCs, LANs, telecom and datacom systems, desktop publishing, computer security systems, data storage systems and a large collection of business-oriented software, peripherals and services.
- 9.9. **NATIONAL FINCOM** (National Financial Computer Automation Conference)
 H.A. Bruno Inc.
 P.O. Box 1521
 Englewood Cliffs, NJ 07632-0521
Description: Computer hardware and software, office automation and telecommunication/data communications equipment, automatic teller machines and workstations.
10. **PC EXPO**
 PC Expo *Approximate date:* June
 385 Sylvan Avenue
 Englewood Cliffs, NJ 07632
Description: Designed for corporate volume buyers and resellers of computer systems, microcomputers, minicomputers, mainframes, information systems, peripherals, software packages, supplies and related services. **The Canadian government offers sponsorships to those Canadian firms wanting to exhibit at this show.**
11. **ROCHESTER COMPUTER BUSINESS SHOW**
 Southex Exhibitions *Approximate date:* September
 135 Delaware Avenue, Suite 102
 Buffalo, NY 14202
Description: Computer hardware, software, office related equipment.
Attendance: 20,000. The Canadian government offers sponsorships to those Canadian firms wanting to exhibit at this show.

APPENDIX B

CONTACTS FOR BACKGROUND INFORMATION AND DATA

1. **American List Counsel, Inc.** (Princeton, NJ).
2. **Judith A. Bradt.** Commercial Officer, Canadian Embassy (Washington, DC).
3. **Robin Braithwaite.** International Trade Centre (Toronto, Ontario).
4. **Lloyd Cohen.** International Data Corporation (Framingham, MA).
5. **Edwin T. Cox, Jr.** Operations and Industry Relations, General Services Administration (Washington, DC).
6. **Environmental Systems Research Institute** (Redlands, California).
7. **Ronald Evans.** CADAPSO (Toronto, Ontario).
8. **Gary Gassman.** Triple Vision, Inc. (Buffalo, NY).
9. **Graham Hughes.** Information Technology Associate of Canada (Toronto, Ontario).
10. **Mary Inoussa.** International Trade Specialist, International Trade Administration, U.S. Department of Commerce (Washington, DC).
11. **Paul Kennedy.** International Data Corporation, Canada (Toronto, Ontario).
12. **Joseph Koenig.** Ontario Software Developers' Association (Toronto, Ontario).
13. **Robert Juskiewicz,** Commodities Specialist, U.S. Customs (Buffalo, NY).
14. **J. P. Lauzon.** Prime Wilde GIS (Toronto, Ontario).
15. **John Lombard.** Moran, Stahl and Boyer (New York City, NY).
16. **Carrie Manion.** IBM (Buffalo, NY).
17. **Francis McCormack.** International Trade Division, U.S. Bureau of the Census (Washington, DC).
18. **Mary E. Mokka.** Commercial Officer, Canadian Consulate, Buffalo, NY.
19. **John Owen.** C. J. Tower & Sons Customshouse Brokerage (Buffalo, NY).
20. **Jeff Pease.** Azerty (Buffalo, NY).
21. **William Petrie.** Ministry of Industry, Trade and Technology (Toronto, Ontario).
22. **Dwight Robinson.** Consultant to Division Chief, U.S. Bureau of the Census (Washington, DC).
23. **Carl A. Rockburne.** Consul and Trade Commissioner, Canadian Consulate, (Buffalo, NY).
24. **Gern Scott.** C. J. Tower & Sons Customshouse Brokerage, (Buffalo, NY).
25. **Tricia Semmelhack.** Attorney, Hodgson, Russ, Andrews, Woods, & Goodyear, (Buffalo, NY).

APPENDIX C

NAMES AND ADDRESSES OF KEY AGENCIES REFERRED TO IN THE GUIDE

1. **Canadian Consulate**
3150 Marine Midland Center
Buffalo, New York 14203-2884
Phone: 716-852-1247
Geographic areas of responsibility are western, central, and upstate New York
2. **Canadian Consulate General**
1251 Avenue of the Americas
New York City, N.Y. 10020-1175
Phone: 212-768-2400
Geographic areas of responsibility are southern New York State, Connecticut, New Jersey, and Bermuda
3. **Canadian Embassy**
Trade Promotion and market Access Section
501 Pennsylvania Avenue N.W.
Washington, D.C. 20008
Phone: 202-682-1740
4. **Schedules Division**
Office of Information Resources Procurement
Information Resource Management Service
U.S. General Services Administration
18th and F Streets, N.W.
Washington, D.C. 20405
5. **U.S. Customs Service (Treasury Department)**
111 West Huron St.
Buffalo, N.Y. 14202
Phone: 716-846-4373
6. **U.S. Federal Procurement**
Data Center
4040 N. Fairfax Drive, Suite 900
Arlington, VA 22203
Phone: 703-235-1326
7. **U. S. Trade Investment and Development**
Division of External Affairs Canada
125 Sussex Drive
Ottawa, Ontario K1A 0G2

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