EUROPE 1992 AND CANADA'S TELECOMMUNICATIONS INDUSTRY

EXPERIENCES OF CANADIAN TELECOMMUNICATIONS FIRMS IN THE EUROPEAN COMMUNITY

1992

CANADA EUROPE

External Affairs and International Trade Canada

Canada

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AND
CANADA'S TELECOMMUNICATIONS INDUSTRY

EXPERIENCES OF CANADIAN TELECOMMUNICATIONS FIRMS IN THE EUROPEAN COMMUNITY

A Report Prepared by NGL Consulting Ltd.

for

External Affairs and International Trade Canada

November 1991

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Printed on recycled paper

FROM THE GOVERNMENT OF CANADA

External Affairs and International Trade Canada (EAITC) is pleased to offer the Canadian telecommunications industry, as part of the Going Global trade strategy, this comprehensive study on market opportunities in the European Community resulting from the Europe 1992 initiative and the possible means by which Canadian firms can capitalize on them.

Europe 1992 is happening now. The European Community's ambitious Single Market program has already dramatically changed the way Europeans are doing business. The process is irreversible; the pace is rapid and accelerating. If Canadian businesses are to profit from the opportunities that this enormous market will bring, they must be well informed.

After the recent completion of a series of sectoral studies entitled *1992: Implications of a Single European Market*, EAITC conducted a consultative process which included government departments, the provinces and our European embassies to determine which subsectors should be the focus of further study. The result was the selection of the ocean industry, environmental industries, software, telecommunications products and services and value-added wood products. All of these studies will be published during the Fall of 1991 and into the Spring of 1992.

We also have tangible programs to introduce you to the European market. These are well-publicized through our CanadExport publications. Our trade officers in the European Community Division of EAITC and at the International Trade Centres in each province would be pleased to respond to your specific questions. Take advantage of these programs. They have been established to benefit you.

Publications that are currently available from the series *1992: Implications of a Single European Market* include: Agriculture and Food Products; Telecommunications and Computers; Automotive Industry; Minerals and Metals; Forest Products; Defence, Aerospace and Transportation; Specialty Chemical Products, New Materials, Pharmaceuticals and Biotechnology; Industrial Products and Services; Financial Services; Fisheries Products; and Professional and Consulting Services — Law and Accounting. Other reports include European Economic and Monetary Union; Company Law; Competition Policy; Standards; Freight Forwarding; 1992 and Related Issues; Intellectual Property; and Moving into Europe — Strategic Partnering.

For more information on publications available, please contact the EAITC InfoExport hotline, 1-800-267-8376.

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1. INTRODUCTION

1.1 Study Objective and Methodology

This study describes the experiences of nine Canadian telecommunications suppliers in Europe. It is the first phase of a two-phased study to assess and recommend various "marketing arrangements" to help Canadian telecommunications suppliers pursue opportunities in the European Community.

We first compiled a list of 15 Canadian companies known to be active in Europe. In compiling this list we tried to include a good cross section of experiences, both successful and unsuccessful, a range of products and a range of company sizes, including some small companies and several medium-sized ones. The dominant Canadian company in this sector, Northern Telecom, was not included, because its experiences may not be directly relevant to the kind of situations that will be encountered by new Canadian exporters to Europe, who will be mainly smaller companies.

The 15 companies were asked to participate in the project and the following nine companies agreed:

Consultronics Limited
Concord, Ontario

Eicon Technologies Corporation
Lachine, Quebec

Gennum Corporation
Burlington. Ontario

Gandalf Technologies Inc.
Nepean, Ontario

Newbridge Networks Corporation
Kanata, Ontario

Positron Industries Inc.
Montreal, Quebec

Nexus Engineering Corp.
Burnaby, B.C.

Microtronix Datacom Ltd.
London, Ontario

Glenayre Electronics Ltd.
Vancouver, B.C.

Officers from the first six companies in the list were interviewed face to face and the last three by telephone. In most cases, those interviewed were the presidents or the people responsible for international marketing. All of the interviewees provided good general information about their company's experiences, as well as some valuable insights and advice.

A case study was prepared on each of the nine companies, and each of the completed profiles was cleared with the interviewee. In addition, an overview of their collective experiences was prepared, highlighting some of the more important data, as well as some of the more interesting insights of the interviewees.

1.2 Trends in the European Telecommunications Market

In reading the case studies presented in the following sections it should be borne in mind that they represent the experiences of suppliers of telecommunications equipment in a number of discrete telecommunications service markets that were still highly regulated in many cases and, in some cases, controlled by state-owned monopolies.

With the spread into Europe of the worldwide trend towards a more deregulated and competitive services environment and with the introduction of the unified European market in 1992, the dynamics of the European telecommunications market will undergo a number of changes during the coming decade.[1] Among the more significant changes will be a standardization of equipment approvals procedures and an increase in the numbers of service providers. Consequently, there should be a dramatic growth in the European customer base for a wide range of telecommunications products, an explosion in the number and variety of services available, and an increase in the number of organizations providing these new and enhanced services. These changes will translate into greater market opportunities for telecommunications equipment and service suppliers.

The current telecommunications equipment market in Western Europe is approximately $40 billion and has been forecast to reach about $100 billion (in 1990 dollars) by the year 2000.[2] Many of the Canadian telecommunications equipment manufacturers are

niche players. To be competitive, such niche players must be active in all major markets for their products. The size and importance of this market is such that Canadian companies must improve their performance in it if the industry is to maintain its competitiveness.

Canadian exports to Europe in 1989 were about $280 million, only 0.7 per cent of the market.[3] The Canadian Telecommunications Action Committee (CTAC), an industry-led initiative of the Canadian telecommunications equipment industry, has set an objective of increasing Canadian production to $20 billion (in 1990 dollars) by the year 2000[4]. To accomplish this, Canadian sales in all of the major markets of the world, including Europe, must grow significantly.

Growth by the year 2000 to a realistically attainable three per cent Canadian share of the European market would mean an increase in Canadian sales to $3 billion, more than a ten-fold increase during the next decade. From the viewpoint of growth potential, the European market is therefore one of the most promising markets for Canadian telecommunications suppliers.

There are a number of Europe-wide industry-based technology development programs[5] in the field of telecommunications: for example, RACE (Research and Development in Advanced Communications Technologies in Europe), a European initiative that has the objective of developing the key technologies required to introduce an Integrated Broadband Communications Network in Europe by 1995; and ESPRIT (European Strategic Program for Research and Development in Information Technology), a program of collaborative pre-competitive research in information technology that is co-funded by the European Community and organized in close cooperation with industry, national governments and the academic research community.

The competition from European telecommunications equipment suppliers can therefore be expected to intensify. The maturing of these programs will result in a significant increase in the ability of European companies to supply the innovative and technically advanced equipment sought by more demanding users in the evolving telecommunications services markets of Europe.

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1 *1992: Implications of a Single European Market: Telecommunications and Computers,* External Affairs and International Trade Canada, December 1989.

2 Derived from various articles in *Telecommunications.*

3 *A Proposal Towards a Strategic Plan for the Canadian Telecommunications Equipment Industry. Part 1 —The Canadian Telecommunications Equipment Industry in a Global Context. Part 2 —A Framework for Action,* NGL Consulting Ltd. for Industry, Science and Technology Canada and the Canadian Telecommunications Action Committee, January 1991.

4 Ibid.

5 See, for example, J. Hothi and D. Byron, *International R&D Collaborative Programs,* Communications Canada, March 1990.

2. OVERVIEW OF THE EXPERIENCES OF CANADIAN SUPPLIERS

In this section, we give an overview of the collective experiences of nine Canadian telecommunications suppliers in developing their European business. The experiences that we describe show that — with some notable exceptions — you can succeed, given the right approaches and opportunity and a lot of hard work. These experiences should be valuable in helping potential new exporters of telecommunications equipment to Europe to develop their market entry strategies.

2.1 European Sales

In 1989, the Canadian equipment suppliers' share of the western European telecommunications equipment market ($40 billion) was only about 0.7 per cent, or a total of $280 million. Sales in Europe represented only five per cent of the Canadian production of $5.4 billion. (See section 1.2 above.)

The total sales of the nine companies in our survey were $600 million, or just over ten per cent of Canadian production. Of this amount, $144 million, or 24 per cent of their total sales, were in Europe. The top five companies in our study, in terms of their European sales as a percentage of the total company sales, had European sales totalling $135 million, which represents more than 30 per cent of the total sales of these five companies. Five of the nine companies, including three of the top five companies, are recipients of the Canada Export Award. The experiences described in this report are therefore exceptional.

Exhibit 2-1 shows some of the relevant sales data for these companies, including the levels of their European sales, in absolute terms and as a percentage of their total sales. The company that has been the most successful in Europe in terms of the percentage of its total sales is Consultronics Limited, with 60 per cent of its current sales in Europe. Other companies with more than 30 per cent of their total sales in Europe are: Eicon Technology Corporation, Gennum Corporation, Gandalf Technologies Inc. and Newbridge Networks Corporation. Gandalf had the highest sales in Europe in absolute terms, with $58 million. One of the remarkable facts we noticed was that many of the companies in our study, including all five of these companies, were founded by European-born entrepreneurs.

Exhibit 2-1
European Sales for Companies Surveyed

Company	Annual Sales ($ millions)	Non-Canadian Sales (%)	European Sales	
			(% of total)	($ millions)
Consultronics	8	80	60	5
Eicon	33	90	50	16
Gennum	18	93	44	8
Gandalf	161	70	36	58
Newbridge	149	90	32	48
Nexus	28	90	11	3
Microtronix	2	65	9	less than 1
Glenayre	166	49	3	5
Positron	35	80	1	less than 1

6 Note: Not all of the companies in our study fall into the category of telecommunications equipment suppliers as defined in deriving the figure for the Canadian production of $5.4 billion above.

Exhibit 2-2 Initial Sales in Europe			
Company	**Year Founded**	**Country of First European Sale**	**Year of First European Sale**
Consultronics	1974	Italy	1975
Eicon	1984	Finland	1986
Gennum	1973	Austria	1975
Gandalf	1971	UK	1974
Newbridge	1986	UK	1987
Nexus	1982	Norway	1986
Microtronix	1987	Netherlands	1988
Glenayre	1963	UK	1985
Positron	1970	UK	1987

Two of the companies, Nexus Engineering Corp. and Microtronix Datacom Ltd., have achieved more modest market penetration, with approximately ten per cent of their sales in Europe; and one company, Glenayre Electronics Ltd., is rapidly increasing its European business. The final company, Positron Industries Inc., has not had any degree of success in penetrating any of the markets in Europe, despite its considerable efforts in several of the major countries.

A composite of the nine companies interviewed gives an interesting picture of Canadian experiences in Europe. On the basis of the median values of the data they provided, the composite company would have total annual sales of $33 million, of which 80 per cent would be outside of Canada, with sales in Europe of $5 million, representing 32 per cent of total sales.

2.2 Entry Strategy

A few of the companies approached the European market in a systematic and planned way, selecting one or two target markets. The initial European sales for many of the companies in our survey, however, appear to have resulted from the identification and pursuit of specific business opportunities as they arose. Nevertheless, one piece of advice offered by some of the most successful companies was that any company planning to enter the European market should spend some time gathering information about the markets of interest to it and then determining its entry strategy for Europe.

The first element of the entry strategy should be the choice of country (or countries) through which to enter the European market. For each of the companies surveyed, the country and the year in which the initial European sale was made is shown in Exhibit 2-2.

One of the favourite entry points was the UK. Factors that contribute to the attractiveness of the UK include its language, cultural similarity to Canada, the openness of the market, a partially deregulated telecommunications services environment with relatively low-cost telecommunications, and its relatively straightforward (though stringent) regulatory approval procedures.

In continental Europe, the largest markets may not necessarily be the best choice for the initial efforts of a new exporter. A smaller country with good market potential for the company's products, relatively simple procedures for type approvals, and no strong domestic competitors for the product may be the best choice. None of the companies surveyed made its initial European sales in either France or Germany.

Most companies emphasized the need to be patient and not to expect results too quickly. The time and capital investment required to develop the various markets in Europe can be quite substantial. It is interesting to note that the majority of the companies made their initial sales in Europe very shortly after the company was founded. Three of the first four companies in the list have been in Europe for over a decade and a half.

2.3 Sales Vehicles

The second element of the entry strategy is the choice of sales vehicle. The sales vehicles used in Europe by each of these companies are presented in Exhibit 2-3. The most popular is the use of distributors or agents; most of the companies in our survey use more than one sales mechanism.

In choosing the most appropriate sales vehicles, the factors to be considered include: the nature, technical complexity and price range of the product; the number and the geographic distribution of the potential customers; the nature of the distribution mechanisms for the products; the difficulties associated with the type approval processes; and the anticipated difficulty and expense involved in introducing the product to the market.

Direct selling from a Canadian base of operations is used by many of the companies, but not as the sole vehicle by any company. The exception is Gennum, with one of its two major product groups, devices for the hearing instrument industry. One of the companies surveyed strongly advised against trying to rely solely on direct selling from Canada if the product requires significant support.

Almost all of the companies use distributors for some of their products in some of the markets. Generally speaking, the smaller companies appear to rely more on distributors, while the larger companies have set up a number of sales offices in Europe. The use of distributors may be the only realistic initial option for a small company that cannot afford to establish sales offices in Europe immediately.

2.4 Choosing Agents and Distributors

If the decision is made to use distributors as the main sales vehicle, the most critical element in the execution of the chosen strategy — and possibly the most difficult step — is to find and choose the distributors or agents to represent the product in each of the chosen markets. Ideally, the distributor should be large enough and have enough financial stability and resources to stay with the company over the long haul. In addition, it should have well-established distribution channels so that the products can have the widest exposure. Another key factor in choosing distributors is their understanding of the products and their technical ability to support and service them.

Most of the companies found that good agents with a thorough knowledge of the market and the potential customers, along with the technical competence to explain, install and support their products were not easy to locate. Many of the companies found their first distributors by participating in trade fairs. In a number of cases, it was the distributor that made the first contact.

Some of the larger companies advised that exclusive distribution agreements be avoided wherever possible. Newbridge uses national distributors to tap national markets and pan-European distributors to serve markets that go beyond national borders — a situation that will become increasingly important with the full implementation of Europe 1992. Gandalf has a policy of establishing non-exclusive relationships with about five distributors and then using their performance over the ensuing year or so as the basis for choosing the ones with which it will establish long-term relationships.

Exhibit 2-3
Sales Vehicles Used

Company	Direct Selling from Canada Sales Office	Distributors and Agents	Direct Selling from European Sales Office	Strategic Partner
Consultronics		x		
Eicon		x		
Gennum	x	x		
Gandalf		x	x	x
Newbridge	x	x	x	x
Nexus		x	x	
Microtronix		x		
Glenayre	x		x	
Positron	x	x		

On a practical note, however, it may not be possible for smaller companies to find distributors that are willing to make the heavy initial investment necessary to introduce a product without some degree of protection in the form of an exclusive agreement. Most of the companies began with exclusive distributors for their products in each of the market areas, moving to multiple distribution channels as the sales volume of their products expanded.

For smaller companies, it may be more practical to choose smaller distributors who are willing to give their products the degree of attention needed and who can grow with them. Microtronix Datacom advised that one of the most important factors in choosing a distributor is to find one that thinks the same way you do.

European distributors will dedicate more resources to the introduction of the products they represent and to the training of their product support staff than is customary in North America. A considerable amount of time may be required for both sides to establish the degree of commitment of each party. This investment of time in the early stages may be well worthwhile. One of the companies observed a direct correlation between the time it invested in locating and choosing its distributor and its success in that particular market.

Most of the companies stressed the need to support their distributors on an ongoing basis. Microtronix Datacom provides technical training in after-sales support for its distributors both on site in Europe and at its facilities in London, Ontario. Eicon has established an office in the UK, its principal role being to provide technical and marketing support to its well established network of distributors throughout Europe. The company saw its sales in Europe increase dramatically after this office was opened.

2.5 Sources of Information and Assistance

For the companies surveyed, the main source of information about European markets appears to be intelligence gathered about distributors and potential competitors at trade shows. A number of the companies participated in trade missions sponsored by External Affairs and International Trade Canada or used services provided by Canadian federal and provincial trade offices abroad, particularly in arranging visits with potential users, customers and distributors.

Most companies stressed that participating in trade shows and missions does not supplant the need to make additional visits on your own. They underlined the importance of ongoing direct contact with users and potential users as an important aspect of market research. Gennum has a policy of making sure that each of its customers is visited regularly by its staff.

One useful source of information that does not appear to have been fully used is the experience of the Canadian companies that are already successfully marketing their products into Europe. These companies have a wealth of information that they are willing to share with new Canadian exporters about such subjects as procedures for regulatory and type approvals, European business customs and how they differ from country to country within Europe, or where to go for more detailed information. Most of the companies with whom we talked indicated their willingness to pass on their experiences and insights to new Canadian exporters to Europe.

2.6 Obstacles Encountered

One of the main obstacles that these companies had to overcome in establishing their European sales was the time consuming, expensive and often frustrating process of getting type approvals for the products they wished to introduce. Type approvals, which have to be obtained separately for each piece of equipment in each of the countries, can use up considerable time and resources, depending on the market and the degree to which the representative is able to help. Several of the companies have dedicated staff to look after all type approvals from Canada.

The standards in the UK and Germany are the most stringent in Europe. The process and standards appear to be most difficult in Germany, in extreme cases taking as long as 18 months to complete. The process and standards appear to be much more straightforward and less demanding in some of the smaller countries, such as the Netherlands and Denmark. With the implementation of Europe 1992, the type approval process will become Europe-wide and therefore less onerous for companies wishing to sell their products in several European countries.

Exhibit 2-4
European Presence

Company	Function			Locations
	Sales	Sales Support	Manufacturing	
Consultronics			x	UK
Eicon		x		UK
Gennum				none
Gandalf	x	x	x	UK, Netherlands, France, Belgium
Newbridge	x	x	x	UK
Nexus	x			UK
Microtronix				none
Glenayre	x			UK
Positron				none

Another obstacle encountered by a couple of the companies was the strong bias towards domestically manufactured goods, particularly in Germany and France.

2.7 European Presence

One of the most universally proffered pieces of advice was to establish a European presence as quickly as the level of business allows. Six of the nine companies in our survey have established a European presence in some form or other. Exhibit 2-4 gives the function and location of the European facilities of these companies.

The UK is without doubt the favoured location. All six of the companies with a European presence established their initial European facilities in the UK for reasons that are similar to those that governed their choice of the UK as the initial target market. (See section 2.2 above.) Gandalf and Newbridge have established subsidiary companies in the UK both for direct selling into the UK market and for manufacturing. Glenayre and Nexus have established sales offices for direct selling in the UK; Eicon has established a sales support office in the UK.

It is generally agreed that, once the European offices are established, the local content of these offices should be increased as quickly as possible and they should be given as much autonomy as is practical to improve the company's ability to work with the customers in their language on a fully interactive basis.

Some of the companies have set up (or are looking at) multiple locations. In addition to its operations in the UK, Gandalf has set up sales subsidiaries in the Netherlands, France and Belgium. Glenayre and Nexus have plans to open additional sales offices on the continent. Eicon is looking at the possibility of opening other sales support offices, as well a European distribution centre.

The location of a company's European headquarters should be chosen with some care. A country that is perceived to be neutral, such as Belgium or the Netherlands, may be the best choice for a company thinking of entering the French or German market in the future. Cost is another important factor in the choice of a European headquarters, since travel within Europe is very expensive and the costs of maintaining an office in Europe can differ widely from location to location.

The final step in establishing a European presence should be to acquire a manufacturing facility in order to add local content, demonstrate commitment to the European market and, most importantly, obtain tariff-free status after the unified market is fully implemented in 1992. As noted above, three of the companies have manufacturing plants in the UK. Newbridge has benefitted considerably from its presence in the UK, taking advantage of UK trade development programs and even receiving the Queen's Award for Export.

Gennum, Microtronix and Positron had no permanent presence in Europe at the time of our survey.

Consultronics' presence takes the form of a manufacturing plant located in the UK; the firm is not involved in its European marketing activities. The enviable performances of Gennum and Consultronics show that it is possible to succeed in the European market without permanent sales offices in Europe, given the right circumstances.

2.8 Case Histories

The case histories of the nine companies are presented in the following sections in the same order as they appear in each of the exhibits, ranked by the size of their European sales as a percentage of the company's total sales.

3. CONSULTRONICS LIMITED

Products/services:	**Telecommunications test equipment**
Annual sales (1990):	**$8 million**
Non-Canadian sales:	**80 per cent**
European sales:	**60 per cent ($5 million)**
European markets:	**UK, France, Germany, Italy, Sweden, Finland, Spain**
Sales vehicles:	**Representatives**
European presence:	**Manufacturing facility in the UK**
Year founded:	**1974**
Entry into Europe:	**Italy, 1975**

Consultronics Limited designs and manufactures telecommunications test equipment used by telephone companies and by large users of telecommunications services worldwide. Its products include test equipment for voice and data, and automatic test systems for modems, facsimile machines and ISDN products.

Consultronics' annual sales are currently $8 million, 80 per cent outside Canada. Consultronics was founded in 1974.

3.1 Markets

At present, Europe accounts for more than 60 per cent of Consultronics' annual sales, or approximately $5 million. Consultronics entered the European market in 1975. Its first European sales were made in Italy, followed by sales in France, Germany and the UK.

From the point of view of current volume, the UK is now its number one market in Europe, followed by France and Germany.

Consultronics' customers include carriers such as British Telecom; Cable and Wireless; Deutsche Bundespost Telekom, Italtel and Telefonica; and manufacturers like SEL Alcatel, L.M. Ericsson, Nokia and Siemens.

3.2 Market Development Approach

Consultronics uses independent manufacturers' representatives in each European country. These representatives translate all material into the language of the customer, provide assistance with regulatory approvals, etc.

3.3 Choosing Distributors

In choosing its representatives, Consultronics looks for those that have the technical capability to promote its technically sophisticated products properly. Other factors that are taken into account are the potential agents' ability to service the products and the markets where they have good access. Many Consultronics agents were identified by attending trade shows and looking at the agents for competing or similar products, by talking to other Canadian companies, etc.

3.4 Sources of Information and Assistance

Consultronics made use of assistance provided by External Affairs and International Trade Canada and by the Government of Ontario to attend trade shows and to get information about potential distributors.

3.5 Barriers and Obstacles Encountered

Consultronics did not encounter any significant barriers or obstacles.

3.6 European Presence

Consultronics recently acquired a UK manufacturing company, but its marketing efforts are managed and its European representatives supported from its Canadian headquarters.

3.7 Some Observations

Robert Fitts, Marketing and Sales Manager,

Consultronics Limited, noted that you should not take "no" for an answer, even if the representative is not successful in its initial selling attempts. In essence, you have to demonstrate a commitment to the market to get your representative's commitment. He emphasized the need to make repeated trips to your target market, and to collect as much information as you can. Most of it is available without charge from a number of sources.

Mr. Fitts also underlined the need to play by the rules of the particular market that you are entering. For example, you should get to know the distribution chain for your product and then work out the best methods for getting your product into and through the chain. He advised visiting the approval authority quite early in your marketing efforts. In certain countries where regulatory approval procedures can be difficult, he suggested retaining a qualified consultant. In Germany, the right consultant will not only make the approval process easier, he or she may also ensure its successful completion, since the state authorities will likely be turning to the same consultant for advice about your products.

Another important piece of advice offered by Mr. Fitts was that you should be prepared to modify your product to suit the characteristics and requirements of your target market. In addition to changes in the technical and electrical specifications of your product, you will, of course, have to translate all documentation, software, etc. The aesthetics are often forgotten; the equipment should look and feel "European". All aspects of the user interface should be examined — not by the engineers, but by the marketing staff to ensure compatibility with European tastes and customs.

3.8 Conclusions

Consultronics Limited appears to have succeeded in Europe because it targeted Europe as an important market for its products quite early, made a serious commitment to develop this market, and recognized that it would have to play by the rules of the individual European markets and adapt its products to suit Europe's requirements.

4. EICON TECHNOLOGY CORPORATION

Products/services:	Communications products for personal computers
Annual sales (1990):	$33 million
Non-Canadian sales:	90 per cent
European sales:	50 per cent ($16 million)
European markets:	France, UK, Germany, Switzerland, Finland
Sales vehicles:	Distributors
European presence:	Sales support office in the UK
Year founded:	1984
Entry into Europe:	Finland, 1986

Eicon Technology Corporation designs and manufactures high performance communications products for personal computers. It is among the world leaders in the X.25 connectivity market. With more than 60,000 units installed, Eicon has a 20 to 30 per cent share of the PC connectivity market. Its products include the EiconCard, which allows IBM PCs and similar computers to connect to host computers in local or remote environments.

Eicon's sales last year were $33 million, of which over 90 per cent came from exports. Eicon received the Canada Export Award in 1989.

4.1 Markets

Eicon's sales in Europe are now over $16 million, or 50 per cent of its total sales. Eicon has succeeded in providing connectivity solutions to the financial and travel industries and other large users of computer networks throughout most of Europe. One of the main reasons for Eicon's early success in Europe was that its products had no real competitors.

Eicon was founded in 1984, and began its international marketing activities early in 1986. By November of that year, Eicon's products were in use in a system installed for the Union Bank of Finland. Eicon provided 600 LAN gateways, for a total value of approximately $1 million. Following quickly on this accomplishment, in 1987 Eicon teamed up with IBM France to provide a system for a large French insurance company. France is now Eicon's largest market. Not all sales happened as quickly; for example, a sale to the Union Bank of Switzerland took three years to conclude.

4.2 Market Development Approaches

Eicon's products are now sold in Europe mainly through two channels: distributors and large systems integrators.

Two years ago, Eicon moved from the use of exclusive distributors to multiple distributors in major markets such as the UK and Germany. Exclusive distributors played a very useful role in the initial introduction and promotion of Eicon's products, but multiple distributors made more sense in extending the reach of its products.

This change was made at the same time the company opened a European sales support office (see below). The effect was immediate and dramatic; Eicon's sales in Europe doubled in one year, with about half the growth attributable to each of the changes.

4.3 Choosing Distributors

Eicon looks for distributors that understand its products thoroughly and are able to support them. It has been company policy to sign exclusive agreements with distributors for up to three years. Eicon's first European distributors, in Finland and in France, were found at a trade show in Atlanta, Georgia.

4.4 Barriers and Obstacles Encountered

One of the bigger obstacles that Eicon faced was getting approvals to use its devices on the public telephone and data networks. In the earlier years, Eicon was helped by its distributors, but now looks after all certification from Canada. The approval process can be viewed as a barrier or a blessing,

depending on whether or not your product has passed the approval process.

4.5 Sources of Information and Assistance

During 1986 and 1987, Eicon used federal and provincial trade missions extensively as vehicles for locating new distributors. For example, it took part in a mission to the Scandinavian countries. Its first European distributors were located at a trade show, which Eicon attended in the spring of 1986 with support from the Province of Quebec. During the same period, Eicon also made use of the assistance provided by Trade Commissioners. It found PEMD (Program for Export Market Development) rather cumbersome because of its relatively slow response in those days.

4.6 European Presence

Two years ago, Eicon opened an office in London to support and manage its European distributors. The UK office, with a staff of 18, provides its European distributors with advertising, attendance at major trade shows, the preparation of high quality product brochures in local languages, and the introduction of new products into the distribution channels. One of the reasons Eicon opened the European sales support office was that the pre-sale and after-sale support it had to provide was much greater than the company could foresee.

Even with the opening of its London office, Eicon's senior Canada-based staff continue to make regular trips to Europe to meet its important clients and to attend trade shows. Direct contact with users and potential users is an important aspect of market research.

In order to adjust to the full implementation of Europe 1992, Eicon is looking at opening offices in other markets in the European Community, especially in France and Germany. The company is also looking at establishing a European distribution centre for warehousing and packaging products for its European customers.

4.7 Some Observations

According to Peter Brojde, President, Eicon Technology Corporation, a good European distributor will put money and resources behind your product and will train their staff to support it. The markup on your product will therefore be much greater, typically 50 per cent higher than in North America. The additional markup does not present a problem, since European customers focus more on performance than on price. Price, therefore, does not usually play a large part in negotiations with potential European customers; performance, quality and long-term support are of greater importance to them.

4.8 Conclusions

Eicon Technology Corporation is a young and dynamic company that has enjoyed a considerable degree of success in Europe during its relatively short life. Its success in penetrating markets in major European countries is no doubt attributable to the technical excellence of its products and to the thoroughness with which the company pursued opportunities as they arose. Eicon appears to have been very fortunate in locating the right distributors in two European countries without even visiting Europe.

5. GENNUM CORPORATION

Products/services:	**Audio amplifiers for hearing aids; switches for the video broadcast industry; user-specific integrated circuits**
Annual sales (1990):	**$18 million**
Non-Canadian sales:	**93 per cent**
European sales:	**44 per cent ($8 million)**
European markets:	**Germany, UK, France, Denmark, Netherlands, Spain, Italy, Austria, Switzerland**
Sales vehicles:	**Direct selling from Canada, distributors**
European presence:	**None**
Year founded:	**1973**
Entry into Europe:	**Austria, 1975**

Gennum Corporation (formerly known as Linear Technology Inc.) designs and manufactures analog silicon integrated circuits and thick-film hybrid circuits for special applications. It has two main divisions: the Hearing Instrument Industry Products group, which is the world's leading supplier of audio amplifiers and related devices to the hearing instrument industry; and the Video Broadcast Products group, which offers a line of cross-point switches and other devices that go into equipment used by the video broadcast industry. In addition, Gennum produces user-specific integrated circuits that are custom designed for the customer, primarily for communications applications.

Gennum's sales in 1990 were over $18 million, of which 93 per cent were outside Canada. Gennum was the winner of a Canada Export Award in 1985.

5.1 Markets

Gennum's sales in Europe were approximately $8 million, or 44 per cent of total sales. Sales of Hearing Instrument Industry Products account for about 85 per cent of total company sales; Gennum controls 50 to 60 per cent of the European market in this product area, with European sales of $8 million. Gennum has customers in the UK, Germany, France, Denmark, the Netherlands, Spain, Italy, Austria and Switzerland. Its largest current customer is Siemens, who is the world's largest manufacturer of hearing instruments.

Gennum's other main business division, the Video Broadcast Products Group, is a relatively new area for the company. Market creation in this area took three to four years. Gennum now controls about 20 per cent of the estimated world market of $10 million; 25 per cent of its $2 million sales in this product area are made in Europe.

Gennum concentrated its initial European efforts for the Video Broadcast Products Group on the UK market, since it is the largest market in Europe for video routers and switches. However, its biggest current customer is a Spanish company. Last year, Gennum won an order to supply switches for the manufacture of routing equipment destined for use in the 1992 Barcelona Olympics.

5.2 Market Development Approaches

Gennum's products are sold through a combination of direct sales and distributors. After Gennum saturated the North American market for hearing instrument devices, it decided to enter the European market in 1974. Its customers for this product line are hearing instrument manufacturers. Since there were only about 20 hearing instrument manufacturers in Europe at that time, Gennum's entry strategy for Europe was to visit every one of these companies. Its first European sales were achieved about a year later to an Austrian company, after two or three visits to the customer. Gennum was also successful in a number of other cases, but it took five or six years before it was able to succeed in the larger countries.

Gennum knew exactly who its potential customers were in this product area. The manufacturers were using older technologies (like discrete circuitry or simple integrated circuitry) compared to Gennum's more advanced devices. The company's main challenge in marketing, therefore, was to convince its potential clients to move to a more expensive but more powerful technology — in other words, to

convince the customer that it would benefit from buying Gennum's device.

This type of marketing cannot be done through contact with the potential customer's purchasing agent — it must be done with management. Also, there was no requirement for Gennum to have its components certified or to translate instruction manuals into the language of the client. Gennum therefore chose to tackle the European market by selling directly from Canada.

In its Video Broadcast Products business, Gennum has agents in most European countries to contact, follow up and generate leads. The actual selling is still done by Gennum's Canada-based staff. Gennum has sold video broadcast products to customers in the UK, Spain, Germany, the Netherlands, Switzerland, France and Italy.

5.3 Choosing Distributors

Agents that had the technical expertise and experience to represent Gennum's products properly were very difficult to locate. Very early in its efforts to break into the European market, Gennum tried to use agents in Denmark, which, with three companies at that time, was one of the leading producers of hearing aids in Europe. Gennum found out that the agent that it chose did not know the product and the industry well enough to be effective. In the end, the company had to do its own selling, paying the agent its commission until the agreement ended. The problem was not so much the competence of the agent, it was the highly specialized nature of the industry and the technical complexity of the product.

5.4 Sources of Information and Assistance

Gennum made use of support provided by External Affairs and International Trade Canada, taking part in some missions to Europe, and getting assistance with local logistics and finding the names of possible agents.

5.5 Barriers and Obstacles Encountered

Gennum did not encounter any significant barriers in developing a market for its products in Europe. As noted above, Gennum experienced some difficulty in locating distributors that had the technical competence necessary to represent their products.

5.6 European Presence

Gennum has no permanent presence in Europe.

5.7 Some Observations

Dr. Wally Pieczonka, Chairman, Gennum Corporation, emphasized that not only will you have to convince your customer of the technical superiority of your product, you must also convince customers that you are a reliable supplier willing to remain with them for the long haul as their markets develop through the incorporation of your device. You have to convince customers that you are competent and serious and can support your product. He also noted that you have to arm yourself with copious amounts of applications data. Europeans are more receptive to arguments based on overall benefits than are North Americans.

Dr. Pieczonka noted that meetings to discuss applications with your customers' senior management present opportunities to do market research that should not be bypassed. Gennum has a policy of making sure that every one of its customers is visited at least every two months by someone from the company.

Dr. Pieczonka stressed the need to think strategically in developing your export business, investing the time and resources required to do the job properly without expecting immediate results. You must get to know the customer and the customer must get to know you — to do so requires personal contact, which only the company's personnel can do, not an agent. There is a definite and important role for agents, but don't expect them to do the whole job. Also, you must do your homework well in advance of your regular trips to the target market.

5.8 Conclusions

The success that Gennum Corporation has achieved in penetrating markets in Europe appears to be the result of strategic planning coupled with good execution. Having reached the point of diminishing returns for its hearing industry products in the North American market, Gennum embarked upon a planned attack on the European market. In its highly specialized niche, the company had little difficulty identifying its main customers and competitors. Gennum systematically undertook to displace its competitors, who were offering a somewhat lower performance product at a lower price. Gennum

succeeded in convincing its customers that a move to a more expensive but more powerful technology would benefit them.

Having succeeded in dominating the European market niche for its hearing instrument products, Gennum appears to be in the early stages of a campaign to develop and dominate a market niche for its video broadcast products.

6. GANDALF TECHNOLOGIES INC.

Products/services:	**Computer networking products**
Annual sales (1990):	**$161 million**
Non-Canadian sales:	**70 per cent**
European sales:	**36 per cent ($58 million)**
European markets:	**UK, Netherlands, France, Germany, Belgium, Italy**
Sales vehicles:	**Direct sales, multiple distributors, strategic partnerships**
European presence:	**Manufacturing and sales subsidiary in the UK, sales subsidiaries in the Netherlands, France and Belgium**
Year founded:	**1971**
Entry into Europe:	**UK, 1974**

Gandalf Technologies Inc. provides computer communications solutions to end users through the design, manufacture and servicing of a broad line of computerized communication systems, software and hardware. An example of its products is the Starmaster system, which allows the connection of dissimilar networking protocols. Gandalf's philosophy is to provide solutions that let its customers use technologies as means for achieving business goals.

Gandalf's sales in 1990 were $161 million, with some 70 per cent resulting from sales outside Canada. Gandalf was founded in 1971.

6.1 Markets

Gandalf has been active in Europe for 17 years. Its initial foray into Europe was in the UK, a market that was opening up for Gandalf's products and which was familiar to the founders of the company. The next market tackled by the company was the Netherlands, a country in which there was an emerging market for Gandalf's product and which was (and still is) quite open to foreign equipment. Subsequently, Gandalf succeeded in penetrating the larger and more difficult markets of Germany and France. Gandalf is now selling to a number of other European countries, such as Italy and Belgium. European sales now account for 36 per cent of total sales, with the UK accounting for about 20 per cent of total sales. Sales in continental Europe added about 16 per cent to Gandalf's consolidated revenues.

6.2 Market Development Approaches

In entering a new market, Gandalf aims at establishing non-exclusive distributor relationships with about five distributors, using the performance of each of them over the ensuing year or so as the basis for choosing the one with which Gandalf will establish an exclusive arrangement. In some cases, Gandalf establishes a subsidiary company, which runs as a sales division of the corporation. When sales levels reach the $10 million level, the subsidiary operates as an autonomous subsidiary.

Gandalf's approach to the UK market in 1990 was two-pronged: developing major end-user network business and pursuing indirect distribution channels, particularly value-added resellers.

Gandalf has penetrated the market successfully in the Netherlands, where it began its marketing efforts through a distributor. Gandalf Nederland B.V. was subsequently established, with Gandalf Technologies owning approximately 60 per cent and employee ownership accounting for the balance. Last year Gandalf assumed full ownership of this subsidiary.

Gandalf has recently set up a sales subsidiary in France, where it has achieved significant sales, aided by major systems contracts with the national telecommunications carrier, France Telecom, and by relationships with other major French organizations. Gandalf recently set up a subsidiary in Belgium.

Another important European country for Gandalf is Germany, where it employs a national distributor. Although it is Gandalf's practice to use distributors as the initial step before setting up its own subsidiary company once the region's sales targets are reached, the situation in Germany is somewhat different. Unlike the case in most other European countries, the population of Germany is distributed in five major, well separated cities, so that it is necessary to

establish a number of sales offices at considerable expense to cover the whole German market adequately. A possibility that Gandalf considered — and rejected — was to find a number of locally focused distributors and a third party to provide technical support at the national level. Gandalf opted instead to go with a large German distributor. At present about 70 per cent of Gandalf's sales in Germany go through its distributor.

Recently, Gandalf signed an Agreement of Cooperation with Siemens PN Private Communications Systems in order to bring together Siemens' worldwide leadership in ISDN PBXs and Gandalf's expertise in data communications. While the agreement applies worldwide, the first installations will be in Europe. The partnership with Siemens was customer driven, and brought together the complementary expertise of Siemens in voice switching and Gandalf in data communications to provide their customers with more effective and economical solutions for their needs.

Gandalf also has partnership relationships with AT&T in the Netherlands and Belgium, GPT in the UK and Olivetti in Italy. In seeking out other potential strategic partnerships, Gandalf establishes a good customer base and then looks for commonality of interests with other suppliers, distributors, users, etc. Typically, the large supplier has a hole in its portfolio that Gandalf can fill.

6.3 Choosing Distributors

The most important criteria that Gandalf uses in choosing distributors are the size and financial stability of the distributor and the existence of well established direct and indirect distribution channels. Other factors that are taken into consideration include the familiarity of the potential distributor with certification procedures and its technical ability to support Gandalf's products. As noted above, Gandalf's current practice is to establish relationships with as many as five distributors on a non-exclusive basis.

6.4 Sources of Information and Assistance

During its initial market development period, Gandalf made good use of the travel subsidies provided by PEMD (Program for Export Market Development). In addition, Gandalf received considerable help from Canadian Trade Commissioners in locating distributors, arranging visits with potential customers, etc.

6.5 Barriers and Obstacles Encountered

Of the barriers that Gandalf faced, the most important was the expense of certifying every single box that the company wanted to sell in most of the countries, each certification process taking from one month to one year. The certification standards in the UK are extremely stringent. In Germany, the standards are equally demanding, and the procedure is made more difficult by a bias against non-German equipment.

6.6 European Presence

Gandalf established in the UK a wholly owned subsidiary company, Gandalf Digital Communications Limited, which has a manufacturing capability as well as a sales capability. Gandalf Nederland B.V. is a wholly owned sales company located in the Netherlands. Gandalf S.A. is a wholly owned sales subsidiary in France, located in Paris and Lyons. Gandalf Belgium is a wholly owned sales subsidiary located in Brussels.

The distributors are managed directly from corporate headquarters in Ottawa, although the handful of headquarters staff that support the European distributors are based in Europe. As noted above, it is Gandalf's practice to set up autonomous sales subsidiaries, which run either as sales divisions of the corporation or as autonomous subsidiaries, depending on the level of sales. Gandalf has a corporate policy of hiring local nationals to run each of its European operations, selecting people that have the competence and experience, as well as the contacts necessary to take care of the certification procedures and the subsequent business development. These practices ensure an adequate level of corporate control while at the same time seeing to it that the Canadian mind set and approaches do not unduly influence business growth in a particular country.

6.7 Some Observations

Roger D'Hollander, Vice President, International Markets Development of Gandalf Technologies Inc., stressed the importance of getting into the local culture and establishing capability in the local language as quickly as possible. He also emphasized

that Canadian companies should promote the fact that they are Canadian, as contrasted with American or British.

Mr. D'Hollander's advice for a new exporter to Europe is go first to a small market, like the Netherlands or Belgium, before tackling the larger but more difficult markets like France and Germany. In entering a country like Germany he stressed the importance of finding a good partner — whether it be a distributor, a manufacturer or a value-added reseller — to help with the certification process. He also identified the need to give some thought to the choice of a company's European headquarters. Politically, it may be unwise to have an office in one country to oversee the business of the company in another country, unless the head office is in a country such as Belgium or the Netherlands, which the more powerful countries perceive as neutral ground.

Mr. D'Hollander thinks that the exporter's life will become somewhat easier after Europe 1992 is fully implemented, because certification requirements will become Europe-wide rather than national. He also thinks that there will be good opportunities for selling quality Canadian products, because the relaxation of the commercial borders within Europe will result in the erection of higher cultural barriers as each of the European countries strives to maintain its national identity.

6.8 Conclusions

Gandalf Technologies Inc. chose the UK as its point of entry into Europe primarily because of the background of its founders, the similar language and the openness of the market. With the founding of a wholly owned subsidiary in the UK, this market was developed to a great extent as a domestic market. Gandalf then tackled the Netherlands and succeeded, because of the relative openness of this market compared to some of the larger markets, such as Germany and France. Its entry into continental Europe was made easier by its established base of operations in the UK.

Gandalf's use of multiple distributors appears to be a good solution to the important problem of choosing the right distributor in each of the target markets. It should be borne in mind, however, that the multiple distributor approach will not always be feasible, particularly where a heavy initial investment of effort is required of the distributors.

Gandalf has established subsidiary companies in four countries in Europe, staffed mainly by Europeans, and will no doubt continue to be a factor in the European market.

7. NEWBRIDGE NETWORKS CORPORATION

Products/services:	**High-speed digital networks**
Annual sales (1990):	**$149 million**
Non-Canadian sales:	**90 per cent**
European sales:	**32 per cent ($48 million)**
European markets:	**UK, Denmark, Netherlands, Italy, France, Germany, Switzerland**
Sales vehicles:	**Direct sales, distributors, strategic partners, direct selling from Canada**
European presence:	**Manufacturing and sales subsidiary in the UK**
Year founded:	**1986**
Entry into Europe:	**UK, 1987**

Newbridge Networks Corporation is a leading supplier of digital networks that enable corporations and telephone companies to build integrated voice and data communications systems. Corporate-wide networks are often international in extent and must satisfy a complex array of international standards and specifications. Newbridge's customers include corporations needing high speed networks for their internal communications and telephone companies that provide special tariff services.

Newbridge's annual sales for the fiscal year ending in April 1991 were $149 million, with 90 per cent of it resulting from sales outside Canada. Newbridge received a Canada Export Award in 1989. The company was founded in 1986.

7.1 Markets

Newbridge is active in all of the major markets of Europe. At present 32 per cent of Newbridge's sales are in Europe and are expected to plateau at around the 40-per-cent level. Newbridge entered the UK market in 1987, almost immediately after setting up operations.

7.2 Market Development Approaches

Newbridge has used a three-pronged approach in developing its European business: direct sales, national distributors in each target country and pan-European distributors. In some cases — particularly for large projects — Newbridge bids directly, supported by its national distributor.

The UK was Newbridge's first point of entry into the European market, largely because it is the biggest market for private networking in Europe. Other reasons were the availability of low cost communications and excellent transportation, favourable taxation rates and the existence of progressive development agencies — specifically, the Welsh Development Agency.

Since the UK has a relatively small geographic area, Newbridge established a subsidiary company and developed this market mainly through direct selling. Newbridge's direct selling activities in the UK have been augmented by the appointment of Mercury as a national distributor. In entering the UK market, Newbridge worked hard at appearing to be a UK company and also at appearing to be a much larger company than it actually was. Much effort was expended to this end, for example, by taking good-sized booths next to British Telecom at trade shows in the UK.

After the UK, Newbridge chose to concentrate on Denmark, the Netherlands and Italy before tackling France and Germany, which are larger markets but also more difficult to penetrate. Denmark was a particularly attractive market for two reasons: it was a deregulated market and the 2 Mb/s digital circuits that provide the basic highways for Newbridge's private networks were readily available at economical rates. In addition, the Netherlands was in the process of deregulation at the time and the digital circuitry was readily available.

In developing the continental European market, Newbridge established trading alliances with domestically based suppliers who provided local identity and experience with specific national issues. In some cases they were distributors, who provided

equipment primarily to the private sectors and they were usually handling the products of Newbridge's competitors. In most cases, Newbridge was able to displace these competitors. The company's initial entry into the European market was made easier by the fact that all of its competitors were non-European, except at the low end. Newbridge also established national distributors who were well positioned to deal with the various PTTs, like Italtel in Italy.

In anticipation of a more open market resulting from the full implementation of Europe 1992, Newbridge has appointed two pan-European OEM distributors, SEL Alcatel and AT&T Network Systems International, who are suppliers to major PTTs throughout Europe. Its pan-European strategy is distinct from its national strategies. The company was able to establish relationships with a number of the world's largest suppliers and, in doing so, it found that its relatively small size was advantageous in that it presented no threat to the large companies. In several instances, the initial approach came from the large suppliers, who saw Newbridge's products taking an ever greater market share.

7.3 Choosing Distributors

Newbridge participated at trade shows and made contact with distributors of its competitors' products in order to convince these distributors to take on Newbridge products instead. In choosing distributors, the firm found it important to examine who their current customers were, what products they were selling, how well and how quickly they were able to get the necessary approvals, etc.

7.4 Sources of Information and Assistance

In its earlier years, Newbridge made good use of the assistance provided by External Affairs and International Trade Canada, for example, the department's missions and participation at trade shows.

7.5 Barriers and Obstacles Encountered

Newbridge did not encounter any significant barriers, as evidenced by the speed with which it developed its European business.

7.6 European Presence

Newbridge Networks Limited is a wholly owned subsidiary located in the UK. It has manufacturing capability and is responsible for direct selling in the UK.

Operating out of its UK base, Newbridge not only looks like a UK company, it is also able to take advantage of UK trade development programs. Newbridge's status as a UK company was recently confirmed when it received the Queen's Award for Export.

Manufacturing, sales and engineering support for the European operations are maintained in the UK. Newbridge also maintains a 24-hour Network Technical Assistance Center to support customers and distributors who may have technical concerns. Newbridge is a member of various European approvals groups, such as the European Telecommunications Standards Institute.

7.7 Some Observations

Simon Gibson, formerly Assistant Vice President, Public Communications and Corporate Affairs at Newbridge Networks Corporation, who was recently transferred to the company's operations in the UK, thinks it is a mistake to try and sell directly into Europe from a non-European base if the product requires significant support or if the company wishes to benefit from European incentives. It is also his opinion that it is a mistake to try to manage European distributors directly from North America. Mr. Gibson emphasized the importance of choosing a good entry strategy.

He also stressed that considerable thought should be given to the choice of the European base of operations, taking into consideration such factors as the probable main customers, the competition, proximity to other potential markets, etc. The UK is one of the favourite choices for Canadian companies, including Newbridge. Other attractive locations in Europe are the Netherlands, Belgium, Ireland, France and Germany, depending on the company's products and target markets.

Mr. Gibson noted that there are cultural differences among the European countries in the way in which business is approached and carried out. He also thought that more emphasis should be placed on the ability to work in the language of the customer.

Newbridge's product software interfaces are multi-lingual. In selling to the French PTT, Newbridge had Alcatel make the presentations in French, with Newbridge's French speaking staff available to answer technical questions. Newbridge has also made good use of a couple of its Russian speaking staff members in developing its operations in the USSR.

Mr. Gibson had the following advice for companies interested in entering the European market for the first time: go to the target country and spend a week there; talk to as many people as you can, including potential clients, regulatory officials and other government people, your competitors, service providers, potential agents, etc. He also advised that you talk to other Canadian companies that are already in Europe. He recommended participation in trade shows as part of the External Affairs and International Trade Canada booth as one good way to establish a base of operations, but stressed the need to get out and do a lot of digging and prying on your own.

Mr. Gibson advised other companies to expect the worst; that way, you will not be disappointed. He also cautioned against getting too dependent on one distributor. It is Newbridge's policy to stay away from exclusive arrangements. He conceded, however, that it may not always be possible to stay away from exclusive agreements, particularly in the case of a smaller company trying to introduce a new product into a new market.

Mr. Gibson mentioned that Newbridge has a market researcher based in Europe, whose main responsibility is to gather market intelligence about emerging opportunities. Newbridge has quite a bit of information that it would be willing to share with other Canadian companies, but it has not been asked for help or advice so far.

7.8 Conclusions

Newbridge Networks Corporation is a relatively new firm that in a very short time has become one of the leading companies in the world in the area of high-speed digital networks. Founded by entrepreneurs with considerable experience and several contacts in Europe in related business areas, Newbridge established a subsidiary company in the UK and tackled this market in parallel with its early thrusts in the North American market and in other parts of the world.

Newbridge's success in Europe and elsewhere will be difficult for most Canadian companies to emulate. Nevertheless, there are valuable lessons to be learned from its experiences in dominating the niches for its products in all of the world's major markets. Newbridge appears to have tried many approaches in parallel and found the ones that worked the best for its particular circumstances.

8. NEXUS ENGINEERING CORP.

Products/services:	**Cable television head end equipment**
Annual sales (1990):	**$28 million**
Non-Canadian sales:	**90 per cent**
European sales:	**11 per cent ($3 million)**
European markets:	**Germany, UK, Spain**
Sales vehicles:	**Direct sales, distributors**
European presence:	**Sales office in the UK**
Year founded:	**1982**
Entry into Europe:	**Norway, 1986**

Nexus Engineering Corp. manufactures the most complete lines of cable television head end equipment in the world, specializing in satellite receivers, signal processors, television demodulators, modulators and various ancillary products for the satellite television market. Nexus Engineering, a member of the Nexus Group of Companies, was founded in 1982.

Total sales for Nexus Engineering last year were $28 million. Approximately 90 per cent of these sales were outside Canada. Nexus received a Canada Export Award in 1990.

8.1 Markets

Nexus now has sales in most of the major countries in Europe. Sales in Europe were $3 million, or approximately 11 per cent of total sales. Its first European sales were made in Norway in 1986, where there was a small market niche that Nexus was able to tap fairly readily.

Nexus' largest market at present is Germany, which has one of the largest markets in Europe for cable television head end equipment. Although entry into the German market was difficult and took more than two years, Nexus has been successful even against competition from German manufacturers.

8.2 Market Development Approaches

Nexus chose to tackle the UK market from a UK sales office. The office was established to capitalize on the attractive market opportunities created by the substantial investment being made in installing cable television systems in the UK, primarily by Canadian and American companies.

Throughout the rest of Europe, Nexus maintains a network of distributors. In each country Nexus appoints a single distributor, who is responsible for marketing the product and for providing the necessary levels of technical servicing and applications consultations.

Nexus' immediate customers are the distributors, who purchase the goods directly from Nexus in Canada and are responsible for clearing the goods and integrating the products according to their customers' requirements. The ultimate customers for Nexus' products are those people or groups who require a satellite system for commercial use, such as hotel or motel owners or operators of CATV systems.

8.3 Choosing Distributors

The Nexus distributor in Norway contacted Nexus, which it learned about at a trade show. Similarly, Nexus was approached by its eventual German distributor at a trade show in the UK.

The most important criterion that Nexus uses in selecting distributors is whether or not they possess the technical skills needed to market Nexus' products.

The process of choosing the best distributor is very difficult and expensive for a company like Nexus was in its earlier years. However, the effort appears to be well worthwhile. Nexus has found that, generally speaking, the more time it invests in locating and choosing the distributor, the more successful it has been. Patience is also important in that it has taken months or years to mature some distributor links.

Nexus' experience with distributors has been varied, and has depended very much on the ambition, technical competence and aggressiveness of the individual distributor. The firm's success in Germany is attributable not only to a high quality product but also to having chosen a very good distributor. In Spain, Nexus has seen excellent returns as a result of a long term commitment between Nexus and its distributor there.

8.4 Sources of Information and Assistance

Nexus has made good use of trade missions and PEMD support in developing its European network of distributors. Canadian Trade Commissioners also provided useful inputs in the early stages of the process of locating distributors.

8.5 Barriers and Obstacles Encountered

The toughest barrier that Nexus has had to face is getting type approvals from the various PTTs in each of the countries in which it wants to sell its products, since the standards differ from country to country. In Germany, the process took about 18 months.

8.6 European Presence

Nexus maintains a branch office in the UK to serve this market directly. The office also provided technical support to its distributors in the rest of Europe.

In an effort to be more responsive to its European customers, Nexus will be increasing its European presence dramatically in the near future. More resources will be allocated to Europe, in terms both of manpower and of local sales offices.

8.7 Some Observations

According to Michael Dinsmore, Senior International Account Representative, Nexus Engineering Corp., the key to success is patience. The time and capital investment required to develop markets in Europe is quite substantial. So far, he has seen no evidence of dramatic changes as a result of the implementation of Europe 1992.

Mr. Dinsmore thinks that the use of a distributor network may be the only realistic option for the smaller Canadian firm that cannot initially afford to locate in Europe. This alternative is cheaper in the short run, but will still require a substantial investment of time in searching for and choosing a suitable contact. Mr. Dinsmore recommends a visit to a European trade show as a good first step that would allow you to identify the players in your particular industry and to make contact with them more economically than by visiting them individually.

Regarding the company's plans to open more European offices in the near future, Mr. Dinsmore feels that these changes will dramatically change Nexus' European direction. By being closer to its customers Nexus will be better able to respond to their requirements and thus ensure its long term success in Europe.

8.8 Conclusions

Nexus Engineering Corp. appears to be making good inroads into a highly competitive product area in a number of European countries. The company expended a considerable amount of effort to locate and select good distributors for its products and was willing to spend the time and money required to develop these markets. The degree of success of Nexus in the different countries appears to be closely related to its choice of distributors.

At the present time Nexus has only one sales office in Europe, located in the UK.

With the implementation of its plans to open a number of additional sales office in Europe, we can expect a dramatic improvement in Nexus' performance in Europe.

9. MICROTRONIX DATACOM LTD.

Products/services:	**Data connection equipment**
Annual sales (1990):	**$2 million**
Non-Canadian sales:	**65 per cent**
European sales:	**9 per cent (<$1 million)**
European markets:	**Netherlands, France, Italy, Spain, Norway**
Sales vehicles:	**Distributors**
European presence:	**None**
Year founded:	**1987**
Entry into Europe:	**Netherlands, 1988**

Microtronix Datacom Ltd. produces data connection equipment, such as X.25 packet assemblers and disassemblers, X.25 network management centers and LSI-X.25 front end processors.

Microtronix Datacom has annual sales of approximately $2 million, 65 per cent of which come from exports. It was founded in 1987 through the purchase of an existing company. Microtronix Datacom Ltd. is a subsidiary of Microtronix Systems Ltd., founded in 1972, which manufactures telephone testing equipment.

9.1 Markets

Microtronix Datacom is still relatively recent in its European business development. Sales in Europe account for about nine per cent of total company sales. Its first European sales were made in the Netherlands in 1988. Other markets in which Microtronix Datacom has sold its products include France, Italy, Spain and Norway.

9.2 Market Development Approaches

Microtronix Datacom has established distributors in several European countries, including the Netherlands, Italy and the UK, and is in the process of establishing others. Usually the distributors are given exclusive rights.

The first European sale of its data products was made in 1988 in the Netherlands through a Dutch distributor that the company met at a trade show in the UK. In this case, the distributor handled the necessary regulatory approvals.

In addition to sales through its European distributors, some of Microtronix Datacom's products have entered Europe as part of equipment supplied by non-European OEMs with whom Microtronix has signed worldwide agreements. These sales are not included in the figures given above for European sales.

9.3 Choosing Distributors

Microtronix Datacom selects its distributors from contacts made at trade shows, responses to advertisements, lists provided by External Affairs and International Trade Canada, etc. The process of screening the potential distributors involves several reciprocal visits.

The most important criterion in the choice of distributors is their technical ability and their understanding of the product, not only to sell the product but also to provide support and service on a fast response basis. Microtronix Datacom provides after-sale maintenance training for its distributors at its facility in London, Ontario and at the distributors' facilities.

9.4 Sources of Information and Assistance

Microtronix Datacom advertises heavily in Europe, works with the Trade Commissioners of External Affairs and International Trade Canada and participates in a number of international trade shows, such as Telecom '91.

9.5 Barriers and Obstacles Encountered

Among the barriers that Microtronix Datacom encountered is the time it takes to receive regulatory approvals for its products in each of the target markets, since such approvals must still proceed on a country-by-country basis. Microtronix Datacom has been working for about one year to receive regulatory approvals for its data communications in the UK, which, along with the Federal Republic of Germany, has one of the most technically demanding standards in Europe.

9.6 European Presence

Microtronix Datacom has no permanent European presence at this time.

9.7 Some Observations

According to Karen Auzins, Marketing Director for both Microtronix Systems Ltd. and Microtronix Datacom Ltd., one of the most important factors in choosing a distributor is to find one that thinks the same way you do. In addition, it is necessary to make sure that the distributor has the right connections and is technically competent to install and support the products.

9.8 Conclusions

Microtronix Datacom Ltd. is still relatively recent in its efforts at developing markets for its products in Europe, and the company has had some degree of success. It is still too early to come to any definitive conclusions, but the company's approach and efforts in developing this highly competitive market may be of some value to Canadian companies of similar size that are contemplating entering Europe for the first time.

10. GLENAYRE ELECTRONICS LTD.

Products/services:	**Radio paging, voice messaging and mobile communications equipment**
Annual sales (1990):	**$166 million**
Non-Canadian sales:	**$82 million**
European sales:	**3 per cent ($5 million)**
European markets:	**UK, Switzerland, Sweden, Finland, Spain, Portugal, Yugoslavia**
Sales vehicles:	**Direct selling from Canada**
European presence:	**Sales office opened recently in the UK**
Year founded:	**1963**
Entry into Europe:	**UK, 1985**

Glenayre Electronics Ltd. supplies products and systems for radio paging, radio telephone, voice messaging, mobile data, land mobile radio, cellular, transit and railroad communications.

Glenayre's revenues during fiscal year 1990 were $166 million, $82 million of which were from non-Canadian sales. Glenayre was founded in 1963.

10.1 Markets

Glenayre made its first sales in Europe in the UK in 1985. The firm has been successful in penetrating the markets in the UK, Switzerland, Sweden, Finland, Spain, Portugal and Yugoslavia, but so far has had limited success in France and Germany. Glenayre began to tackle the European market in earnest this year, and sales in Europe during the first half of 1991 reached the $5 million level.

10.2 Market Development Approaches

Glenayre's European sales to date have been achieved mainly by direct selling from its Vancouver base. The company has been able to use direct selling because its customer base is limited in the regulated telecommunications environment of Europe. Glenayre's main customers are the PTTs along with a small number of private carriers. Each of its sales has been quite large, typically over $1 million.

10.3 Choosing Distributors

Distributors and agents have been tried in the past, but they have not worked out very well for Glenayre, whose products are technically very complex. In some cases Glenayre had to do all the work, including presentations, etc. and still had to pay commissions upon completion of the sales. Agents usually have five or six product lines and will push those that are successful. The introduction of a new product may take a year to a year and a half, and Glenayre's experience is that some agents are not willing to invest that amount of effort.

10.4 Sources of Information and Assistance

Glenayre makes regular use of assistance provided by External Affairs and International Trade Canada through PEMD, and has participated in a number of missions.

10.5 Barriers and Obstacles Encountered

The main obstacle that Glenayre has encountered is the high cost of entry into each of the European markets, including the costs associated with modifying its equipment technically to meet European specifications and getting type approvals. This typically costs $150,000. Glenayre has one person based in Vancouver dedicated full time to type approvals. At present, selling to a PTT can ease the problem of type approvals, but this situation will not last as deregulation increases.

In the paging equipment market, which represents the bulk of Glenayre's sales in Europe, the firm's main competitors are Motorola and NEC, who, together with Glenayre, control 80 per cent of the European market. There are a couple of European manufacturers (for example, Ericsson and Siemens) but Glenayre's experience to date has shown that

Europeans will buy the best products available regardless of the country of origin.

10.6 European Presence

Glenayre expects that its customer base will expand considerably in the UK with deregulation; it therefore opened a sales and service office in London in May 1991, and staffed it locally. Glenayre is planning to open an office somewhere in continental Europe later this year. These offices will be staffed by sales engineers, service engineers, applications engineers and, possibly, a sales coordinator.

10.7 Some Observations

Russ Allen, Vice President - International Sales, Glenayre Electronics Ltd., had the following advice for companies contemplating exporting to Europe. First, he advised, make sure that you have a strong domestic (North American) market before going offshore. Glenayre has now saturated the North American market, so that significant sales growth in its current product lines can come only from the development of offshore markets.
Mr. Allen also advised that you should find out how to make your product fit into the market.
He noted that operating conditions can be very different in foreign markets, and that your products should therefore be customized to suit the market requirements, through the development of specialized software, for example.

10.8 Conclusions

Glenayre Electronics Ltd. has concentrated its marketing efforts mainly in North America and, to date, has made relatively small inroads into Europe. With greater effort in Europe, including the recent opening of its UK office and plans to open another office in continental Europe, its performance should improve dramatically.

11. POSITRON INDUSTRIES INC.

Products/services:	**Telephone trading turrets, emergency response equipment, protection products for telephone companies and power utilities and other specialized telecommunications products**
Annual sales (1990):	**$35 million**
Non-Canadian sales:	**80 per cent**
European sales:	**1 per cent (<$1 million)**
European markets:	**UK**
Sales vehicles:	**Distributors, direct selling from Canada**
European presence:	**None**
Year founded:	**1970**
Entry into Europe:	**UK, 1987**

Positron Industries Inc. is a manufacturer of a broad range of specialized telecommunications products, including telephone trading turrets (dealer boards) for the financial industry, emergency response equipment (such as the 911 system) for municipalities, and protection products for telephone companies and power utilities.

Positron was founded in 1970. Its sales are now in excess of $35 million, of which more than 80 per cent came from exports. Positron was the winner of a Canada Export Award in 1988 and also received two best product awards from the IEEE.

11.1 Markets

In spite of its enviable success in other international markets, Positron has been able to achieve only a token penetration of European markets. Positron made its first sales into Europe in the UK in 1987. At present, European sales account for only about one per cent of its total sales.

11.2 Barriers and Obstacles Encountered

According to Reginald Weiser, President, Positron Industries Inc., the company's lack of success is not the result of a lack of effort. Positron has tried very hard, including direct contact with the head of the French PTT, to have that organization adopt its power protection equipment. Positron is one of the acknowledged world leaders in the supply of products to protect communications systems in power facilities. In essence, Positron was told that there would be no sales in France unless the product were manufactured in France.

Positron's experiences in the UK have been mixed. On the one hand, Mr. Weiser was scathing in his condemnation of the business practices of some senior officials of British Telecom with whom he has had business dealings. On the other hand, he is optimistic about the market opportunities for Positron's dealer boards once the regulatory approval hurdle — which can take a year or two — is passed. Positron is now negotiating with potential UK distributors for this product.

11.3 Some Observations

Mr. Weiser thinks that it would be easier to access markets in countries such as Italy, Spain, Greece and the Netherlands, but these countries have not been a priority for Positron because of the limited size of their markets for its products. Positron has marshalled its resources to capture its share of larger and more easily accessible markets, such as South East Asia, the Far East and some of the Latin American countries.

11.4 Conclusions

This brief case study is presented here to give another side of the picture. Most of the previous examples show that it is possible to succeed in penetrating European markets, in many cases to significant and rather enviable levels. The experience of Positron Industries Inc., on the other hand, shows that there may be unwritten obstacles that prevent some types of products from being accepted in certain European countries.

12. CONCLUSIONS

This study examines the experiences of nine Canadian telecommunications equipment suppliers in developing their European business. The companies chosen for this study include a number that have already succeeded to a significant degree, several that are in various stages of increasing their European sales and one company that has encountered considerable difficulty in penetrating the markets in a couple of European countries. European sales accounted for 30 to 60 per cent of total sales for five of the companies.

Most of the interviewees advised that new Canadian telecommunications equipment exporters to Europe should plan their entry strategy carefully, gathering as much information as they can about markets of interest, choosing the point of entry into Europe and selecting an appropriate sales vehicle.

Many of the companies gathered initial information about their target markets in Europe by attending trade shows or participating in trade missions, often with assistance provided by the federal government or a provincial government. Many of the companies made several additional visits to the target markets before they succeeded in making their first sales. Canadian Embassies and Consulates-General and provincial trade offices in Europe appear to have been used extensively in identifying potential agents or distributors and for arranging visits with possible customers, etc. Among the useful information sources that do not appear to have been exploited fully are the Canadian companies that are already in Europe.

Four of the companies in our study made their initial European sale in the UK, while for the other five companies the entry point was one of the smaller countries on the continent. None of them made its first European sale in France or Germany, two large markets that appear to be difficult to penetrate.

Most of the companies used distributors as their main sales vehicle, often in combination with other vehicles such as direct selling from Canada. A number of the companies chose to establish an office in the UK for direct selling into that market, which is quite open and relatively easy for Canadian companies to penetrate. One of the companies has chosen to establish an office in the UK to support its European distributors, while another has established sales subsidiaries in several countries.

Most of the interviewees were of the opinion that direct selling from Canada should be avoided as the primary sales vehicle except in certain very specialized circumstances, such as a very narrow and well defined market niche for a technically complex product that does not require a great deal of support.

Locating and choosing good distributors in each of the target markets appears to have been one of the most difficult and critical elements in determining the success of these companies in Europe. Most of the companies found that good agents with financial stability, a thorough knowledge of the market, well developed distribution channels and the technical competence to sell and support their products were not easy to find.

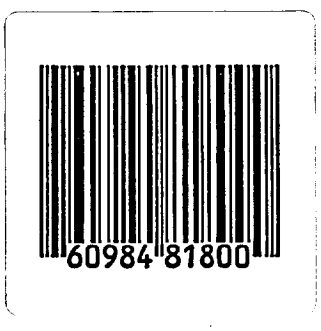
These companies found their distributors by using a number of mechanisms, for example, attending trade shows, taking part in government sponsored missions, looking at the distribution of their competitors' products, etc. In several cases, it was the distributor that made the initial approach. On the whole, they found that the investment of time and money to locate good distributors paid for itself. It has been their experience that there is a correlation between the quality of the distributor and the success in that market.

The main obstacle faced by these companies was the requirement to receive type approvals for each piece of equipment that they sold in each country in which the equipment was sold. This process can be very time consuming and expensive. In some countries, notably Germany, it can take more than a year. The process can proceed much more quickly in a smaller country such as the Netherlands or Denmark. With the full implementation of Europe 1992, this process will become Europe-wide and therefore less onerous. A couple of the companies observed a strong bias favouring domestically manufactured goods in Germany and in France.

The companies interviewed emphasized that, to be successful in the changing European market, Canadian firms will have to learn to play by European rules. They will have to modify or redesign their equipment, not only to meet European standards but also to conform to European tastes in design and aesthetics.

Canadian companies in the European market will have to think in terms of establishing a presence in Europe and of increasing their European identity if they are to continue to be successful. Two thirds of the companies surveyed have some sort of permanent presence in Europe, such as sales offices, sales support offices and/or a manufacturing plant. All six of these companies established their initial European facilities in the UK.

The consensus of opinion of the nine officials that were interviewed for this study is that Europe will continue to be one of the world's most important telecommunications equipment markets and will present significant business opportunities for Canadian firms. The interviewees for this study, in most cases the presidents or the people responsible for international marketing in the companies selected, provided valuable information and insights that will no doubt be of great value in helping potential new exporters of telecommunications equipment to Europe to develop their market entry strategies and to implement their initial marketing efforts. All indicated their willingness to share their knowledge and experiences with other Canadian companies.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