

MT Users and Usage: Europe and the Americas

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Introduction

Does anyone actually *use* machine translation? That's a question which has reappeared at regular intervals throughout the more than four decades in which people have tried to program computers to translate from one human language to another. The short answer is "yes," people do—not as much as some might wish, but more than many believe. Success using MT has proven to be an elusive goal for many users; early adapters have not always remained faithful adherents. Recent developments, however, are radically altering this landscape.

All indications are that 1995 is shaping up to be a watershed year for MT. In the two years since Summit IV, the market for machine translation has seen a virtual revolution, and this has greatly affected the ways in which MT is being used. The sea change for the MT market in the last two years is that prices have dropped and the platforms are such the technology is now accessible to almost anyone. MT is now also readily available through several on-line services. These changes have given people more flexibility in approaching the MT option. Because so many more modalities are now available, it can be said that in 1995 the hallmark of MT usage is *diversity*.

An Overview for 1995

For Summit V, we have endeavored to sketch a rough map of MT usage in Europe and the Americas.² Our overview is based in part on an official survey we conducted in the first half of 1995 with partial funding by the International Association for Machine Translation (IAMT) (see Annex 1). In this survey we attempted to gain insight into the current MT experience and to identify trends in MT use. The first IAMT-sanctioned survey of MT users was conducted in 1993, and the results were reported at Summit IV in Kobe (Vasconcellos 1993). The latest survey has helped us to identify a variety of innovative applications, and it has shown us how some of the new products that have appeared are affecting the uses to which MT is being put.

The responses this time were considerably fewer in number and less cohesive than two years ago. In 1993 they clearly pointed to certain trends, and by and large the trends correlated with the characteristics of the MT products being used. Thus, for example, in 1993 the more "mature" systems were responsible for the major share of the work being done. For the most part, the large-scale uses of general-purpose MT systems involved technical manuals and other aspects of localization, and most often the direction was from English into several other languages. The respondents found that the use of MT systems with filters that preserved graphics and format markup was saving them from 30% to 50% over their former production costs. On the other hand, the MT packages then being sold for PCs were mostly being used in casual applications, and often not for business at all. In business, they were being used to meet a variety of small-scale translation needs. In

1995, however, there is a much wider range of uses, and the trends are less consistent. The PC systems are now being used in large-scale production and are becoming important components of the business environment.

In 1993 the number of responses (38) was large enough to risk an estimate of total MT usage in the world—namely, 380 million words, or 1.2 million pages. However, a much larger sample would be needed in order to confirm this figure, which is undoubtedly only a very small share of the world's total volume of translation—perhaps less than 1%.³ Because of the modest response this year, it is less possible than ever to estimate the percentage of translation in the world being supported by machine translation.

All in all, the 1995 survey provided us with a representative snapshot of MT use rather than a comprehensive quantitative picture. We think the response rate may reflect that MT is significantly less exotic than it was two years ago and people are less motivated to profile their operations. We also speculate that as machine translation achieves a certain stature there may be less pressure to keep records of productivity. And of course, as prices drop dramatically there is less need to justify the investment in the purchase or license of the system.

Trends

We observe four significant trends in MT today:

- An explosive growth in PC-based systems;
- An upsurge in the use of MT on-line;
- More diversified uses of MT;
- A gradual merging of machine translation proper and *machine-aided* translation.

MT on PCs

Serious machine translation is now available in affordable PC packages. In the first half of 1995 two of the MT behemoths, SYSTRAN and Intergraph, became available for the Windows environment in low-cost versions which retain all the power and capacity of their workstation or mainframe predecessors. Both these product lines, SYSTRAN Professional for Windows and Intergraph's Transcend, have the capability to handle large-scale production, and between them they cover a wide range of language combinations (see Annex 2 for details).

Globalink, in turn, which has already thoroughly penetrated the market with its PC-based line, is about to unveil a new generation of its translation software for Windows, which has all the characteristics of a full-scale transfer system and includes a user-friendly tool that allows the user to write rules for the handling of complex grammatical structures.⁴ The Danish system Winger 92 is also now available in an "expert" version that allows the user to modify the existing grammar.

In another recent development, SPANAM and ENGSPAN, the systems developed by the Pan American Health Organization for internal use and the first of the mainframe systems to be ported in toto to the PC environment in 1992, are now being licensed to a limited number of public institutions.

Finally, IBM/Deutschland has teamed up with a German publisher specializing in electronic publishing to market a low-cost (DM199-DM499) English-German translation package on CD-ROM, called Personal Translator. It is derived from LMT (Logic-based Machine Translation), a system that has been under development at various sites within IBM since the mid-1980s, and it is targeted at the non-professional market. Even before the package had been released in May of this year, IBM had received over 1,000 orders for it in Germany.

Also, we should not forget that there are several PC-based systems for English-Japanese and Japanese-English: EJ Bilingual and LogoVista are being marketed in the United States for US\$795 and stripped-down versions for even less.

What makes these products significant in the picture being painted here is their tremendous power coupled with their very low prices. While it had long been expected that companies with transfer-based mainframe and workstation systems would be porting their products to the desktop, most pundits doubted that the new products would have all the same capabilities or that they would be affordable to the mass market. To give an idea how wrong they were, the 1991 Ovum Report (Engelien and McBryde 1991) predicted that by the year 2000 the average MT system would be selling for US\$150,000. As it turned out, the most expensive of the new heavy-duty PC systems is priced at only US\$1,495. In other words, they are selling for less than 1 % of the predicted cost.

Even before these new products were available, the low prices of the PC-based MT packages already on computer store shelves had been attracting users in droves, especially in the United States. The rush to reach the mass market was led by MicroTac's Language Assistant series, now owned by Globalink, which is priced at US\$59 for the Windows version and sells on the street for even less. It would appear that the lower the cost, the more people are willing to try MT: all-time total sales for the Language Assistant line amounted to 400,000 units, not including upgrades or returns, at the end of 1994 when the two companies merged. (Compare with the Ovum prediction that annual sales would reach 400 units worldwide by the year 2000—at the US\$150,000 price point).

Prices of other MT products will continue to fall as systems are increasingly bundled with other software and/or distributed at minimal cost on CD-ROMs. With over 40 PC-based MT products on the market at prices starting as low as US\$39, people no longer hesitate to try out MT both in new ways and for uses that had previously been reserved for the “mature” systems. A list of PC-based MT products, current as of the date we went to press, is found in Annex 2 at the end of this report.

Yet another recent trend that is helping to boost the PC-based MT market is the availability of output in the form of synthesized speech (not to be confused with speech translation, in which the input as well as the output is in voice form). The public seems to be eager for the opportunity to hear spoken translations!

MT On-line

Another impressive development, with potentially far greater impact, is that MT is now reaching large numbers of users in Cyberspace. In the past, raw output from SYSTRAN, ATLAS, PIVOT, and Globalink has been offered for sale on-line with varying degrees of acceptance. Now MT is being deployed to enable subscribers of on-line services to

communicate with one other. In 1994 the Intergraph system was introduced in CompuServe's MacCIM support area, and March 1995 saw inauguration of its World Community Forum, where MT enables users to chat in English, French, German, or Spanish, with additional languages in the pipeline. Some 15,000 subscribers had joined this forum by the end of the first four months, which is especially significant because the connect time is chargeable over and above the basic cost of CompuServe membership. At least half of them are now regular users, and they have already posted some 26,000 messages. This experiment is reported elsewhere in detail at the present conference.

At the same time, both CompuServe and Globalink are currently gearing up to offer not only "raw" MT on-line but also fully postedited translations on demand. Translation customers will soon be able to submit their texts to one of these on-line services from any desktop and charge the cost to a credit card.

In another innovative use of MT on-line, the Global Schoolhouse, an offshoot of the U.S. National Science Foundation's Global SchoolNet Foundation, uses Globalink's Language Assistant series on the Internet to bring together students from 16 schools around the world. The students write stories about themselves and their families in English, French, Spanish, and Italian, which are then compiled in the form of a newsletter and exchanged.

Diversification

In 1993 it was still possible to speak of two basic categories of MT users: "industrial strength" users who used high-end systems largely for the production of technical manuals, and casual users who used inexpensive products to extract or communicate the content of short documents. While publication-quality translation of technical documentation undoubtedly remains the major use of MT, lots of other interesting applications are emerging, and many of these focus on putting translation tools in the hands of non-professionals—i.e., non-translators—and are capturing the content of texts which would otherwise remain untranslated. For example, PC-based MT is now being used to sort documents by keyword in an application not unlike the military and industrial monitoring that heretofore could only be performed by the largest of the MT systems.

This trend does not mean that skilled human translators are being displaced—in fact they are likely to have their hands more than full for the foreseeable future. Rather, it fulfills what is often referred to as the "latent demand" for translation.

Desktop Integration

With the surge in popularity of inexpensive PC products, the PC desktop is something that vendors of the well-established Unix workstation systems can no longer ignore. SYSTRAN, LOGOS, and METAL have all been rendered local area network-aware. SYSTRAN offers a network version of its new PC-based products, while LOGOS and METAL offer Windows client software which allows PC-based users of these two Unix-based systems to submit texts remotely for translation. It is now almost universally recognized that MT has to be brought to the user; this means, in essence, bringing it to the PC-based word-processing environment of commercial packages like WordPerfect, Word, and AmiPro.

From a different perspective, machine translation and *machine-aided* translation are gradually becoming indistinguishable, by necessity, as the once monolithic high-end MT systems become more interactive and make their way to the desktop. In turn, traditional desktop translation aids such as terminology management tools, translation memory, and on-line reference works are being integrated and made MT-ready. This has led to impressive “translation workstation” packages which try to improve the overall ergonomics of translation software within the document production cycle by capitalizing on the respective strengths of automatic and manual translation.

This development has an intriguing geographical dimension: while the bulk of commercial MT development is largely a U.S. phenomenon, virtually all the major translation support packages have been developed in Europe. The result is a flurry of transatlantic activity, in which, for example, EuroLang (France) is working closely with LOGOS (USA) to render its Optimizer package LOGOS-friendly; Trados (Germany) has recently demonstrated its Translator’s Workbench package harnessed to InterGraph’s (USA) Transcend; and SYSTRAN (USA) has teamed up with IBM to create an environment using the latter’s (Europe-based) Translation Manager. Initiatives such as Microsoft’s OLE and, more MT-specific, Globalink’s MTAPI, are likely to hasten this process.

Users—Europe

By now we all know that many languages are spoken in Europe and that Europe faces an awesome multilingual challenge. But language technology in general—and MT in particular—has been slow to find its way to users here. In the PC-based arena, structural differences have made the kind of success Globalink has enjoyed in the United States difficult to duplicate: European markets are smaller and more fragmented; there are fewer distribution channels; users are more conservative; and the needs of European users may not always correspond with the priorities of U.S.-based software developers.

In the high-end arena, vendors of workstation and mainframe systems have had European customers for many years, but one gets the impression that there are more ex-users than *current* users of MT in Europe. This impression was confirmed by two respondents to our questionnaire who identified themselves as ex-users of high-end systems. Their comments were quite revealing. “Actually, we have never really used it in the production of documents, but rather as a ‘toy,’” concedes one ex-user, who installed a high-end system in 1988. This user cited hostility among translators towards the system and poor support by the system’s developer as contributing factors to its “failure.” A representative of another company well known for its use of MT since the mid 1980s cited “inability to handle the processes involved” for joining the ranks of ex-MT users.

That being said, a small but steadily increasing volume of Europe’s huge, virtually indeterminable volume of translation is done each year with the aid of translation tools of varying sophistication. As we observed above, Europe is home to four of the leading translator’s workbench packages: EuroLang’s Optimizer, Trados’ Translation Workbench, IBM’s Translation Manager, and STAR’s Transit. All these packages were developed by translation and documentation practitioners, and they reflect, to varying degrees, the clear dictates of production environments. The IBM system, for example, was used for many years internally at IBM’s internationalization center in Denmark before being released as a commercial product. Aimed primarily to meet the needs of teams of professional

translators, these products are considerably more costly than inexpensive stand-alone packages, which are geared more for casual users. While the latter may find even the rudimentary linguistic capabilities of the inexpensive packages a godsend at given moments, translation professionals have entirely different requirements. Basic comprehension of a raw source text is the least of their problems; they may come to rely on a workbench package more for its project management and repetition handling facilities (particularly among multiple users) than for whatever linguistic smarts it may offer.

LOGOS in Europe

A couple of years ago the venerable MT developer LOGOS received an influx of German capital, and it now has a very active team based near Frankfurt which is marketing the system and supporting European users. LOGOS' customer base in Europe appears to be steadily growing, and this may be partly stimulated by their close cooperation with the French company Eurolang to offer a Logos/Optimizer package.

One of LOGOS' chief customers is the Language Services unit of the Swedish concern Ericsson, which uses the software to translate large technical manuals from English to Spanish, French, and German. Three of Ericsson's translators postedit all the output. In contrast to Ericsson, Osram, based in Munich, provides LOGOS to non-translators—in this case, engineers—to enable them to produce English versions of technical reports for in-house reports. Rather than postedit the output, the Osram engineers tend to tweak the input to get the translation right.

From Russia with Stylus

MT has been pursued in Russia for decades, and while the resulting systems may not enjoy the polish of their slick American counterparts, Russian MT systems are being used in Russia—and elsewhere. The St. Petersburg firm MT Project reports that more than 3,500 copies of its PC-based STYLUS have been sold. Interpol/Moscow, for example, uses STYLUS for quick translations of telexes, e-mail, and regular mail from English into Russian in the course of police work. At LONIIS (St Petersburg Telecommunications Research Institute), translators and engineers use STYLUS to process some 30,000 pages per year (English to Russian) and 2,000 pages (Russian to English) of telecommunications and computer texts.

METAL at the Technological Edge

Over the years, Sietec (a subsidiary of Siemens) has built up a small group of METAL users in Europe. The most notable of these is the German software giant SAP, which runs large volumes of its software documentation through METAL, achieving enviable productivity gains. Sietec demonstrated a Russian-German prototype of METAL last year. METAL was recently taken over by Max Delta.

IBM Joins the Fray

We mentioned earlier that IBM/Deutschland has gotten into the PC-based MT market in Germany. An IBM spokesperson noted that the launching of this product had also stimulated interest in their more sophisticated UNIX version. On a different front, IBM is

actively marketing its VoiceType dictation system in conjunction with its Translation Manager package; this combination has attracted considerable attention among the sizable number of professional translators who prefer to dictate translations.

Users—Americas

The picture in the Americas continues to be dominated by the two very different approaches to MT usage that we have mentioned already: heavy-duty use of “industrial-strength” systems, and casual use of PC-based systems. However, we do already see some of the PC systems playing a serious role in businesses and other activities. “Serious” could mean that there are multiple users, that the system is being used on a regular basis or even full-time, or that MT is making a difference in the way the user’s work is accomplished. The advent this year of full-scale systems at affordable prices is certain to create many intermediate points along the casual-to-heavy-duty spectrum.

With these systems, the true test of MT's acceptability to users in the Americas is about to be faced.

The PC Phenomenon

PC-based MT packages are selling like hotcakes in the Americas. The explosion that we described above has been felt more strongly in the United States than anywhere else in the world. They are being sold to a lesser extent in Canada, Mexico, and Latin America. It is no coincidence that these products have flourished in a highly organized mass market that is avid for PC software; a number of them might never have seen the light of day in other circumstances. In fact, it would not be unreasonable to say that the popularity of the Language Assistant series—which has led the trend in terms of volume sales—has been more of a marketing phenomenon than a linguistic one.

The evidence of users’ acceptance and satisfaction with PC-based MT products is still largely anecdotal. Increasingly they are being used for occasional business correspondence. Many people start to use the inexpensive packages to make themselves understood in a language that is foreign to them, which then sets up an exchange in which MT is also used for understanding the message that is received in return.

In the 1993 report we heard about an American priest using MT to prepare a sermon in French, and about tourists carrying around their PCs on their travels. There was also a man who was finally able to communicate with his relatives in Italy. This year we learn that an American admirer of Italian sourdough bread has translated the original recipes using Language Assistant and is now able to make the same bread that he had “eaten and loved in Italy.” Students of MT evaluation will remember that cooking recipes are the performance test par excellence of a translation.

Large-Scale Users

In the meantime, the high-end, heavy-duty MT systems continue to be used to process large volumes of translation. The break point that appears to justify using MT is an output per language combination of at least 1,000,000 words (4,000 pages) of translation per year. In the majority of cases, MT is being used for technical documentation, whether

produced by the manufacturer or by an independent translation agency. Although these users seem to be satisfied with the role that MT plays in their operations, their number does not appear to have increased very much in the last two years.

LOGOS has a few new users in the Americas as well as in Europe. One of them reports “high volume output of decent quality if the text is sufficiently simple in structure” but complains that it is “difficult to convince and ‘evangelize’ skeptics who judge MT only by output quality in comparison to human translations without taking the whole process into consideration.”

The caveats about simplicity of style apply mostly to producing translations of publication quality. There are also several long-term users of MT in the Americas that rely on MT to convey the information content of large volumes of unconstrained input over a large range of subject areas. The most venerable example is the U.S. Air Force, which after 25 years is still so satisfied with SYSTRAN that it continues to underwrite the development of new source language modules and cover the cost of conversion to up-to-date platforms.

Another satisfied information-gatherer switched in 1991 from Weidner’s old MiCRoCAT to Intergraph’s DP Translator. This company also uses MT for publication-quality translation. They report a 30% increase in productivity for the latter type of text and gains of 50% and more in the case of information-only translations. They note that, despite using MT for nearly a decade, there is a “continuing requirement for substantial time commitment to dictionary updating.”

One of the other long-term users is the Pan American Health Organization, which has had MT for 15 years. PAHO developed its own systems from Spanish to English (SPANAM) and English to Spanish (ENGSPAN) and ported them to the PC in 1992. The translations cover a wide range of subjects and the input texts are not controlled or pre-edited in any way. Into English the annual volume is 1,400,000 words (86% of the service’s total volume in that language direction) and into Spanish, 1,100,000 (70% of total volume). PAHO’s success may well be due to the fully supportive environment, from specially tailored word-processing macros to daily updating of the MT dictionaries.

Conclusion

Thanks to MT, a small but growing percentage of professional translation activities in several major languages is being automated. MT is also making it possible for texts to be translated for informal or non-publication use which would otherwise remain untranslated. So we can safely conclude that MT is serving a useful albeit modest function in the area of multilingual communication.

But MT is not for everyone. In the vast majority of cases, highly skilled human translators continue to outperform even the best of today’s systems when publishable texts are required. Reasonable productivity gains can only be achieved in a very small number of domains in which the syntax is naturally constrained—technical documentation is the best example. Tremendous amounts of work on all these systems have yet to be done to make them adaptable to additional domains. And while MT vendors have been making great strides in getting MT closer to users’ desktops, there are still gaps in the levels of integration, particularly with regard to terminology management and MT lexicons. For

now, it seems likely that a certain segment of the products on the market will continue to serve casual users, and that the “professional” and “expert” versions will remain the tools of translators and other specialists. However, eventually the two types of systems are likely to merge into a single entity.

So what does the future of MT look like? Well, it runs on a PC and it costs less than five hundred dollars...

NOTES

1. E-mail: Brace, colinb@ibm.net; Vasconcellos, 71024.123@compuserve.com; Miller, 70303.314.
2. The Asia-Pacific region was included in 1993 survey, but the Summit V program divided up the task by region, and as a result the survey and present report have been limited to Europe and the Americas.
3. If there are 175,000 working translators in the world (Van Slype 1983), and they produce an average of 1,000 words a day for 200 days in the year (a low figure for a full-time professional and a high one for the casual translator), the total volume in the world in a given year would be 35 billion words, or 140 million pages).
4. The new Globalink product line, code-named “Barcelona” at this point, offers full-scale transfer MT from English to Spanish, French, German, and Italian and will be ready for beta-testing in the third quarter of 1995.

REFERENCES

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- Van Slype, Georges. 1983. *Better Translation for Better Communication: A Survey of the Translation Market, Present and Future*. Oxford: Pergamon Press.
- Vasconcellos, Muriel. 1993. “The Present State of Machine Translation Usage Technology, or: How Do I Use Thee? Let Me Count the Ways.” In *MT Summit IV: Proceedings* (Kobe, 20-22 July 1993), pp. 35-45.

1995 International Survey of MT Users

The 1995 International Survey of MT Users was an official survey conducted and compiled with partial funding from the International Association for Machine Translation (IAMT). The first IAMT-sanctioned survey of MT users was conducted in 1993, and the results were reported at Summit IV in Kobe (Vasconcellos 1993).

For the report to the present Summit, the authors updated the 1993 survey using basically a two-pronged approach: first, obtaining current information from the users who had responded two years earlier, and second, ferreting out new users. With support from IAMT, the responses collected in 1993 were entered into a database, which will now be maintained on a regular basis. As a next step, the respondents in Europe and the Americas were presented with their entries from two years ago and asked to bring them up to date.

In the effort to find new users, several strategies were enlisted. As before, the commercial vendors were contacted and asked for client names. At the same time, appeals were posted on CompuServe and on various places on the Internet. In addition, continued networking yielded further leads, and, finally, the authors followed up on examples of MT usage that they had been gathering in their own files over the intervening two years.

In order to have comparable data between systems and over time, we repeated the same questions that had been asked before. They were kept to a minimum so that they would not be too formidable:

Survey Questions

System used? Since when?

Language combinations (from ___ into ___)?

Hardware platform? Since when?

Form of input (e.g., disk, downloaded files, OCR, manual keying)?

Purpose of translation?

Type of documents translated: discourse genre (e.g., "technical manuals"), subject matter?

Output per year (number of words) percentage of total translation volume?

Dictionary size (number of entries) for each language combination?

Description of personnel who use it (e.g., contract translators, etc.)? How many?

Type and amount of pre-editing done?

Type and amount of postediting done?

System for incorporating feedback from end-consumers?

Advantages, disadvantages of MT?

News flash: Latest developments? Novel uses of MT?

Plans for the future?

Commercially Available PC-Based MT Products

Compiled by L. Chris Miller

COMPANY AppTek, Inc.
 CONTACT INFO 1420 Beverly Road, Suite120, McLean, VA 22101
 (703) 821-5000 Fax (703) 734-5703 APPTEK@CLARK.NET

PRODUCTS AppTek EAMT for UNIX or SUN
 LANGUAGES English into Arabic
 IN DEVELOPMENT Arabic into English, Translator Workstation for Windows

COMPANY Bilingual Software
 CONTACT INFO P.O. Box 292700 Davie, FL 33329-2700
 Sales (800) 232-8228 Information (305) 434-2721 Fax (305)434-5604

PRODUCTS Translate INSTANT SPANISH v2.0 DOS \$169, Pronto Spanish \$69 CDROM only
 LANGUAGES English into Spanish
 IN DEVELOPMENT Windows version expected in June 1995

COMPANY EJ Bilingual Inc. - Nippon Texa Co., Ltd./Kimihira and Taylor Associates, Inc.
 CONTACT INFO 2483 Torrance Blvd., Suite #1, Torrance, CA 90501
 (310) 320-8139 Fax (310) 320-3228

PRODUCTS EZ JapaneseWriter v.2.0 Windows \$795, v 2.1 DOS \$595 Basic version \$299
 LANGUAGES English into Japanese

COMPANY Globalink, Inc.
 CONTACT INFO 9302 Lee Highway, 12th Floor, Fairfax, VA 22031
 (800) 255-5660 (703) 273-5600 Fax (703) 273-3866
 CompuServe Vendor J Forum or info@Globalink.com

PRODUCTS Spanish, French, German, and Italian Assistant v.5.1 DOS, v.1.0 Windows,
 v.1.0 MAC \$59.00, localized Windows versions \$79
 LANGUAGES Spanish, French, German, and Italian Assistant Deluxe Windows CD-ROM \$59
 PRODUCTS Bidirectional Spanish/English, French/English, German/English, Italian/English
 LANGUAGES Power Translator DOS v.2.0 \$89
 PRODUCTS Bidirectional English/Spanish, English/French, English/German
 LANGUAGES Power Translator DOS v.2.0 \$89
 PRODUCTS English into Chinese
 LANGUAGES Power Translator Windows v.2.0, MAC v.2.0 \$249
 PRODUCTS Bidirectional English/Spanish, English/French, English/German
 LANGUAGES Power Translator Deluxe for Windows CDROM edition \$299
 PRODUCTS Bidirectional English/Spanish, English/French, English/German
 LANGUAGES Power Translator Professional DOS v.3.0 \$299
 PRODUCTS Bidirectional English/Spanish, English/French, English/German, English/Russian
 LANGUAGES

Globalink, Inc. (cont.)

PRODUCTS Power Translator Professional Windows or Mac \$595, OS/2 \$199
LANGUAGES Bidirectional English/Spanish, English/French, English/German
PRODUCTS Dictionaries for Power Translator Professional DOS \$59,
Windows, Mac or OS/2 \$89
IN DEVELOPMENT Italian, Portuguese

COMPANY INFO:Partner A/S
CONTACT INFO Arnold Niensens Boulevard 68, DK 2650 Hvidovre, Copenhagen, Denmark
+ 45 3677-1810 fax +45 3677 1905

PRODUCTS Winger 92
LANGUAGES Danish-English, English-Danish, Spanish-English, English-Spanish

COMPANY Intergraph Corporation
CONTACT INFO 1 Intergraph Way - GD3001
Huntsville, AL 35894-001
(800) 222-9242 (205) 730-9832 Brazil 55 11 887-5300 Mexico 52 5 207-5262

PRODUCTS Transcend for Windows \$495 per language direction \$795 Bidirectional
LANGUAGES English into Spanish, Spanish into English, English into French,
French into English
IN DEVELOPMENT German into English, English into German, English into Italian,
English into Portuguese (shipping June 1995)

COMPANY Language Engineering Corporation
CONTACT INFO 385 Concord Avenue, Belmont, MA 02178
(800) 458-7267 (617) 489-4000 fax (617) 489-3850

PRODUCTS LogoVista E to J v.2.1 Japanese Windows or MAC or Power MAC \$1995
LogoVista E to J Personal v.1.5 \$795
LANGUAGES English into Japanese
PRODUCTS 21 subject-specific dictionaries \$495/\$995
IN DEVELOPMENT English to Japanese E-mail translation service.
Japanese into English expected w/in 1 year

COMPANY Linguistic Products
CONTACT INFO P.O. Box 8263, The Woodlands, TX 77387
(713) 298-2565 fax (713) 298-1911

PRODUCTS PC-Translator DOS v3.3 \$985 per language pair \$1585 Bidirectional
LANGUAGES English into Danish, Dutch, German, French, Italian, Norwegian, Portuguese,
Spanish, and Swedish. Danish, Dutch, French, German, Italian, Norwegian,
Portuguese, Spanish, Swedish into English

COMPANY Road Scholar
CONTACT INFO 2603 Augusta, Suite 1000, Houston, TX 77057
Sales (800) 336-5989 Support (713) 266-7623 Fax (713) 266-4525

PRODUCTS Spanish Scholar v.2.0 Windows \$49.95
LANGUAGES Bidirectional Spanish/English

COMPANY SMART Communications, Inc.
CONTACT INFO 885 Third Avenue, 29th floor, New York, NY 10022
(212) 486-1894 Fax (212) 826-9775 jsmart@interport.net

PRODUCTS Smart Translator V3.1 Site licenses \$25,000+ (custom client/server solutions)
LANGUAGES Bilingual English into Castillian or Latin American Spanish, European or
Canadian French, German, Italian, Creole
IN DEVELOPMENT English into Mandarin Chinese

COMPANY Socatra
CONTACT INFO 5500 Royalmount Ave., #320, Town of Mount-Royal, Quebec, Canada H4P 1H7
(514) 735-7079 Fax (514) 735-9697

PRODUCTS XLT v.3.0 UNIX \$5,000 initial subscription, additional language pairs \$2,500
Microchip access rate from 2 to 3 cents a word. Annual renewal \$1,000.
LANGUAGES English into French, French into English
IN DEVELOPMENT English into Spanish or Italian, Spanish or Italian into English
Windows expected within 1 year

COMPANY Softkey International, Inc.
CONTACT INFO 450 Franklin Road, Suite 100, Marietta, GA 30067
Sales (800) 227-5609 Support (404) 428-0008 Fax (404) 427-1150

PRODUCTS Key Translator for Windows v.1.0 Disks or CDROM \$39.95
LANGUAGES Bidirectional English/Spanish

COMPANY SYSTRAN Software, Inc.
CONTACT INFO 7855 Fay Avenue, Suite 300, P.O. Box 1926, La Jolla, CA 92037
(619) 459-6700 Fax (619) 459-8487 info@systranmt.com

PRODUCTS Systran Professional for Windows standalone version \$1495 per language pair;
network version \$2495 5 user, 10 user \$3995, 20 users \$7495
LANGUAGES English into Spanish, French, German, Italian. Spanish, French,
German, Japanese into English.

PRODUCT Systran Professional for Windows standalone version \$995
LANGUAGES English into Portuguese
SUPPORT 60 days unlimited technical support via toll-free hot line, Internet, fax, and BBS
Yearly maintenance agreement \$225 Standalone, \$375 5 users, \$600 10 users,
\$1125, 20 users
IN DEVELOPMENT Korean, Chinese, Russian, etc.

COMPANY Westcliff Software
 CONTACT INFO 343 Soquel Ave. #207, Santa Cruz, CA 95062
 Sales through CLR (800) 900-8803

PRODUCTS DosAmigos DOS 5.0 \$199.00 Spanish Amigo Windows v.2.0 \$99.00
 LANGUAGES Bilingual Spanish/English

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COMPANY Character Language Resources
 CONTACT INFO 2130 Sawtelle Blvd., #304-A, Los Angeles, CA 90025-6250
 (800) 900-8803 (310) 996-2300 Fax (310) 996-2303

Distributes comprehensive assortment of multilingual software, including many Machine Translation software products. This is a good resource for MT products that are difficult to find, such as:

PRODUCT ESP Plus for Windows \$349 Requires Chinese Windows
 LANGUAGES Bidirectional Chinese/English

PRODUCT Targumatic DOS \$119 per language pair \$199 Both pairs
 LANGUAGES Hebrew into English, English into Hebrew

PRODUCTS JE Bank DOS, Windows, Mac \$795
 LANGUAGES Japanese into English

PRODUCTS PC-Transer ej/je Windows (Win-V or Japanese Windows) or Mac (with System
 LANGUAGES 7.1 and Japanese language kit) \$1995 per language pair.
 English into Japanese, Japanese into English

PRODUCTS PC Transer Junior (with Twinbridge, Win-V, or Japanese Windows) \$129
 LANGUAGES English into Japanese

PRODUCT LTGold DOS \$169
 LANGUAGES Russian into English

PRODUCT LexiTrans DOS \$385
 LANGUAGES Bidirectional Russian/English

PRODUCT STYLUS for Windows \$585
 LANGUAGES Bidirectional English/Russian, German/Russian
 IN DEVELOPMENT Bidirectional French/Russian

The information on this list was believed to be accurate at the time of writing. The inclusion of a product should not be taken as an endorsement. Comments are welcome and should be addressed to L. Chris Miller via mail at 2020 Penn. Ave., N.W., Washington, DC 20006, fax (703) 780-1822, or by electronic mail at 70303.314@Compuserve.com.