CONQUERING 1992

THE FUTURE OF MULTILINGUALISM
EC LANGTECH

POLICIES
CORPORATE
SOLUTIONS
THAT WORK

SPECIAL BONUS:
MULTILINGUAL
WORDWORKER'S
RESOURCE GUIDE

PLUS,
OF COURSE,
ALL THE NEWS,
VIEWS, TIPS,
AND REVIEWS
Speeding up translations for Europe 1992

Europe 1992. A home market of 320 million people with nine different official languages. Translations will be needed more than ever before, but conventional translation methods are already unable to cope with the huge volume of work. Translation times of a year or more for large technical documents can make a nonsense of product marketing schedules.

But Europe is setting the pace. A new computerized translation system increases the productivity of translators several times over. Siemens has developed METAL (Machine Evaluation and Translation of Natural Language), the first machine-translation system to use Artificial Intelligence techniques. In contrast to previous systems, it does not simply translate word for word, but deduces the meaning context. METAL is both intelligent and fast—230 pages a day.

New challenges call for new solutions. For Siemens, 1992 can start tomorrow.

Siemens Computing
The European Solution
GRAMCHECK

REVOLUTION

MARCHES ON

Two linguistic software developers, Brighton Mifflin and Mircosoft, are said to have unveiled new OEM deals for their grammatical checkers.

Mirodict is grammarcheck for the Mac, as evidenced by Lingware developer Emerson & Starns, who is tipped to be a player in MS-DOS, OS/2, and Unix computing, as well as personal software from Addison-Wesley Claris, Lotus, Microsoft, and Symantec.

Meanwhile, Brighton Mifflin has been doing business, having used OEM business, following the integration, last year, of the CorrectText Grammar Correction System (GCS) into Lotus's Volkswriter 4 (see review, page 59).

The Bottom-based company has licensed Lotus to market GCS as an add-on to MS-DOS product, under the name Correct Grammar for a two-year period. The first fruits of the deal are to be released in June with WordPerfect 4.2 and 5.0. Versions compatible with other major word processors are planned soon.

CorrectText is based on a database of over 130,000 headwords. Each word is accompanied by such linguistic information as its semantic functions, inflections, spellings, and derivations.

Advanced compression techniques allow large quantities of information to be stored, while algorithm optimization makes the system fast.

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**DESKTOP DIP**

With more and more of the world's paper-based info being digitized, it was just a matter of time before the once lowly PC would become a serious document imaging device.

Many Dip systems are implemented via fast local area networks on a departmental level within medium-to-large organizations. DIPs' downward migration to PCs' is now means that the all-important standard facilities of the huge installed base of DPs will remain available alongside and within such systems.

The heart of the HPX-DIP system is the Ximic Image Processor (XIP) add-on card, which can be stocked in any PC with a free slot. The XIP must come bundled with a variety of image-processing software.

(continued on next page)
LEARN PAGEMAKER WHILE JOGGING

As if HyperCard Help stacks that white, trashy and dubious message isn’t enough, there’s now a new Mac-compatible Mac software by Walkman. The system is a series of scripts that accompany PageMaker, Publisher, Illustration, and any other HyperCard compatible programs. Each package includes a 90-page manual and contains all the Mac software.

The most important is the "Signed" feature, which allows you to sign your name to any document on your Apple IIi.

RC Digital Paper is a completely new form of optical data storage, it consists of a polymer-coated substrate, coated with an optical recording material made of polyvinyl and a magnetic medium.

The new material can be cut into lengths as long as a piece of paper, inserted into a cassette, and cut into strips of paper. A laser is used to record the data, which is permanently recorded.

RC says the archive life of Digital Paper is currently at least 10 years. The chemical giant expects to store the data at a density of 200,000 gigabytes per inch, which is 100 times the current capacity of CD-ROMs.

Some intriguing storage capacities are possible: 2,000 feet of 10-inch tape has a storage capacity of 200 gigabytes. That’s 100,000 times the capacity of a CD-ROM.

Ipsen, a company best known for its optical systems, is now developing a new media with the same capacity as Digital Paper.

The title may imply that the accuracy of Digital Paper is actually exceeding expectations. Now published by Quantum Press.

CIA NOW ON CD-ROM

Called the World Almanac of the Federal Government, the CIA CD-ROM Book is an annual publication of the Central Intelligence Agency, which a CD-ROM version is now published by Quantum Press.

While the title may imply that the CIA is actually staking a claim on the world’s information, it is not at stake. Information in the Fact Book was compiled from public domain sources and contains data on intelligence and community estimates.

What it does contain is extensive documentation of terrorist and countries around the world, with socio-economic, geo-political, demographic and other data collected by various agencies of the U.S. government.

TextWare Software generated the index for the CD-ROM and is supplied as the retrieval software. Quantum released single compact disks at 300 dpi in Tuff format for diffusion on the CD-ROM.
POSTSCRIPT CRACKED

Two companies have recently deciphered the encryption code that Adobe uses with its PostscriptWriter. Bitstream (Cambridge, MA) andRaster Image Pro- cessing Systems, or RIPS (Chatsworth, CA) both claim to have independently discovered the algorithms used by Adobe. Adobe, of course, is the owner of the "library" by means of special encrypted code, that specifies the proprietary printer controller. Adobe currently licenses the library to printer manufacturer- ers on a confidential basis.

While it won't immediately mean cheap Postscript laser-printers, it does mean that true Postscript printers will no longer be necessary for printing Postscript text, either Adobe or Postscript text of any other vendor.

Bitstream, already a ma- jor font supplier, is formally looking to cash in on its find. It's planning to release a library of more than 1,000 fonts during the second quarter of 1985, competitively priced at $850 for personal use. RIPS went a step further, deciphering not only the specific character description code, but the "fonts" that exist.

SHELL, UTILITY AND MENU SYSTEM IN ONE

Testing Software (Bellevue, WA) has announced the release of its "shell" software. You can "freely" group your files any way you want, even within a single directory. Just type control-d to go through all the DOS steps. Word-processing documents, specialized- purpose programs, graphs, files and more can be taken to a single directory that is possible to cut and paste elements of each into the others.

How does this fit in with other soft- ware packages offered by Testing Software? It acts as a "shell" that contains and protects your programs from unauthorized access. Testing Software even goes a step further by offering the shell at $22.50.

Take a Note, MAC

If you teach the Voice Navigator a basic vocabulary of com- mands, you'll be able to operate your Mac just by speaking text. The Voice Navigator, introduced at the most recent Macworld Expo in San Francisco, is a hardware/software combin- ation consisting of an analog-to-digital converter and voice recognition software. The external unit has a built-in microphone and speaker, as well as jacks for external devices. The software loads as a Desk Accessory or a DIT and is thus available from within any application. The Voice Navigator has potential for the handicapped and disabled, as well as those Mac users who feel that using the mouse is too compli- cated.

Voicetel, Inc., 500 10th St., San Francisco, CA 94103, USA. Tel: (415) 286-0500

EURO DTP

While some computer-based technologies are working towards digital composition, availability, DTP is actually doing the re- verse. Witness Graphtype, Developed by a French-American com- rany, and marketed by British-based Profile Com- puter Services, Graphtype is the first European-designed DTP system for the high-volume, corporate printing market. It works on Digital's New, and Apollo worksta- tions, and has extensive integration with the microcomputer-based office automation system, a text editor, word processing, database management, and the manipulation of scanned images. It accepts ASCII files generated by UNID, VAX, or MS-DOS.

Profile Computer Services, Ltd., 122-18 65th Rd., Flushing, N.Y. 11378, USA. Tel: (212) 633-8344

LET'S TALK ABOUT THIS FUIJITSU SPEECH REC

Fujitsu, Japan's largest computer manufacturer, is shipping a voice recognition unit with a vocabulary of up to 4,000 words in two years. The megacorporation has been designing the unit for 13 years.

Fujitsu claims its Voice Communication Unit, VCU, can handle multiple users simultaneously at ordinary microphone speeds. It uses recogni- tion techniques that bring it close to understanding what is known as a "true industry standard" -- which is a laudable goal to be sure, but the unit isn't going to become.

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Two German companies are marketing a hardware-software product to let your word-processing or spreadsheet application generate Chinese at the click of these keys: Orch. Abh. P-4, to be exact.

The script-o-meter, called BC-Mult-X, was developed by Uwe Bunsch of Bunsch Computersysteme (Essen, FRG). It consisted of a card and some software on a floppy disk. These come with a special keyboard from peripheral manufacturer or Marquardt.

Each of the keys has a Roman character in black and a corresponding Cyrillic (or revolutionary new alphabetical or something like) on it. So switching scripts doesn't mean you have to switch keyboards too.

Bunsch and Marquardt will be selling version 3 of the system in the West as well as in the East. According to Marquardt, the new version works with Open Access, Word, Multiplix and others. it is available with PC systems. Bunsch: Computer-Systeme, Wittgensteingr. 5685, 4500 Essen, FRG; Tel: 440 (201) 772 070

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$5000 CHINESE MI

Cyrillic
JUST A KEYSTROKE AWAY

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SEARCH ME!

Since we are a consumer of software average engineers specifically tailored for fast and search-and-retrieval needs and are qualified to use them.

It is used with four English French dictionary, 5.5 GB Mac clients using more than 1,500,000 business terms. 600 computer terms, and 300 "syntactic" terms.

Fuzzy searches are an important feature, allowing partial or misspelled words to be retrieved. String searches are also possible, that is, searches on entries that include a given string of characters.

The retrieval software is loaded as either standalone or network resident, the latter enabling access from within practically all commercial workstations, and allowing cut-and-paste operations to other programs.

sold under the name of the French Dictionary, and De- fication of the A.I. Prin- cipal, "Fujitsu NT".

Unfortunately, the brave performance of such a tool is to be desired. The system crunched a lot of fuzzy English and was greeted with guffaws from others, especially those working in the natural language-processing field. Among them was Hohgakun's 's "who commented "Fujitsu's hit the mark and one of the worst machine translation systems ever. The system is tight."

Otherwise, good translation is probably not the point. The fact that Atlas was translating French news to good quality of its output providing enough insights into the reverse texts to extract sufficient information to make decisions even when those decisions also include getting a good translation.

Atlas's eventual aim is to take long technical and scientific texts in Japanese script, and turn them into English. It may not be perfect at first, but it is improving. System settings will be kept in, the user interface.

Once the market, Atlas is expected to be priced at around $3,000, and the cost of the program will probably be available for the PC.

MONDOGLOSSO

A group of leading French linguists and lexicographers has signed an article published in Le Monde, France's leading daily, calling for modifications in French spelling. The signatories, which is a response to the introduction of a new spelling reform for French spelling texts. According to the signatories, the new spelling reform has improved the spelling of a large number of words and corrected some of the mistakes found in the previous spelling reform.

The group, which includes some of the most prominent linguists in France, is calling for a return to the previous spelling system, which was used for many years in France. The signatories argue that the new spelling reform has led to confusion and has made it harder for learners to learn French. They believe that the previous spelling system was more intuitive and easier to learn.

The signatories also express concern about the impact of the new spelling reform on children. They say that the new system is more difficult for children to learn and that it is harder to teach.

The signatories note that the new spelling reform has led to a number of problems, including a decrease in the number of people learning French and a decrease in the number of books written in the language.

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"Technology has changed the rules. For the first time, it's possible to offer with total time and space independence--something unexceptionable even a decade or two ago. Managers in the late 1970s had only begun to expect with Buckminster Fuller's eye, as the technology was then known, that everyday hardware of the personal computer would be an instrument of corporate life taken far granted by today's harried executives. Today, we stand on the threshold of the age of the virtual office--that is, of an era in which most of the effort of daily work is handled electronically; of an era in which the office is no longer a place of work at all but a virtual one that exists only when and where it's needed." —Donald R. Neuberger, Jr., chairman of Arlington, Virginia-based The Natherdale Group, and founder of the Wind Laboratory's Advanced Systems Laboratory.

"We're monitoring three separate projects where they are creating an electronic printing press. Where you go direct from electronic signals, to four color output at printing press speeds, printing 10,000 four-color pages in 11-1/2 or 12 pages an hour. They tell us that you'll be in your office, as is a 15 x 15 ft room, and on the bottom of the room, there's a long, continuous belt with a two-sided printing press. On top of that, the machine is a machine that can print every 100 copies on..." —Dr. David Henry Goodchild, president of the Boston-based InterCom, consultants on electronic publishing to Fortune 500 companies in the US, Japan and Europe.

"The price of leadership is eternal vigilance." —Andrew Grove, CEO Intel, author of the most widely used productivity books in computing.

"Incorporating sound blips in documents may seem a superficial addition to the basic word processing function, but it is in line with the tendency toward object-oriented programs and user preferences, hypertext and multimedia documents. And if those powerful trends in the technology will continue we are to think of word processing as much broader than the typing or typing-up functions predominant in today's word-processing and desktop publishing programs. While wordprocessing will accommodate voice and graphics, we can also count on an equally strong tendency toward a more abstract and artificial view of the document as an interactive program." —Adam Bodgell, writing in Practical Computing magazine.

"Japanese IVRX will be obsolete by the time it triumphs. In the 1980s it will simply replace the technology of 1970 with the technology of 1990. The Eye between television - a business where Sony now reigns supreme - and the computer revolution holds the best cards - it is thrilling every day. The TV as the future of the future will be an improved version of today's TV a computer. The TV is to become a part of the computer. In this way, the TV can serve as an input terminal to the computer. The TV is to become a part of the computer. In this way, the TV can serve as an input terminal to the computer." —Geoff Corden, writing in Forbes magazine.

"This Macintosh community is a well-funded, smiling face. Kind of like Kodak's, I say. The problem has been that the one-vendor system. Without clones or competition, how can one be competitive? It is like a one-party political system. When that party is in control and there are no elections, competition, in this case, the system is stable and the market is stable. There are no changes in the market. Without competition, there is no competition for the Macintosh. The Macintosh is the only computer that has the potential to become a ubiquitous computer. This is the key. The Macintosh has the potential to become a ubiquitous computer. This is the key."

"Thank you for your response, in "His Deadly Adversary" column in MacUser magazine." —John Bresnahan.
ALAN SUGAR TAKES ON THE RICH KIDS
"If there was a market for mass-produced portable nuclear weapons, we'd sell them too."

Less than a decade ago, Amstrad was a small consumer electronics manufacturer, earning a considerable part of its revenue selling cheap, plastic dust covers for home stereos. Today, Amstrad has captured 20% of the entire West European market for personal computers. Company sales last year topped £1 billion for the first time, and pre-tax profits soared to £280 million. Alan Sugar, the company's founder and chairman, is not your average PC manufacturing mogul. You might even call him a rough diamond.

By Richard Brooks

Born in London's tough East End, then a red-solid state of the country's working class, he left school at 15 to work in a busy engineering and sales career selling car radio aerials out the back of a van. Proud of his origins, Sugar is a ruthless entrepreneur and aristocrat, who once said: "If there was a market for mass-produced portable nuclear weapons, we'd sell them too."

Amstrad doesn't sell to the Condolierung of British

Industry or any other business

scent, because Sugar thinks

they're a waste of time. Not

quite "scrool" him in a more

self-sacrificing British

businessman.

In fact, Sugar is widely regar-

ded as a fire-breathing Yeni-

girth with a nation for

Amstrad, like Sony in Japan is

open to public-relations cam-

paigns. The company's comput-

ers are built and sold cheaply and

sometimes he is "scrool." However,

is business to make money," says

Sugar. "That may seem re-

markable to some people."

Sugar launched the way

many companies try to promote

"friendly" images in the press. Addressing a gathering of Brit-

ish b-school students, he once

joked at such corporate

shenanigans as "Pan Am" takes

good care of you. Marks &

Spencer leaves you. IBM says

the customer is king. As Am-

strad we just want your money.

And they're getting it. Each year Amstrad in-

creases its sales more than all

other computer company

in the Fortune 500.

Yet, Alan Sugar's unflinching and

incessant outbursts of execu-

tive personality - and his is far from the

model of a perfect Thatcheresque

entrepreneur that he's painted

Sugar has kept quiet the

fact that he gave £1.5 million to

build an old folks' home in east

London and £200,000 to the

Great Ormond Street children's hospital. In 1988, he set up a personal foundation in

requests for charity

SUGAR VS. OXFORD STREET

As if to keep his prettier side from the public eye, Amstrad's chief has frequently locked horns with the computer press. In 1986, when Amstrad launched its first IBM clone, the PC-1570, the press was circ-

ulating rumors that the design of the build-in hard disk had an overheating flaw that made it pop bursts.

Sugar was furious, calling his journalistic critics "in-

detectable" idiots. He stood and - as a refutation, but the dam-

age had been done. Sales of the PC-1570 slumped, and Am-

strad had to fend off the assault on the IBM business market it had hoped for. Perhaps understandably, Alan Sugar now treats the press with underlying scorn. "It often seems that these people end up writing about com-

puters because they don't have the talent to do anything useful with them," smirking Sugar in a recent interview.
DAN WINKLER
HYPERCARD'S OTHER HALF

DRAM DRAIN

Right now, though, Amstrad has about 6,000 employees in the UK, and they are engaged in manufacturing the vast bulk of component suppliers for the 480,000 or so IBM-compatible computer systems on the UK market. The UK is a major market for Amstrad, and the company is very much aware of the impact of the French strike on its operations. The strike has caused a shortage of components, which has in turn led to delays in the delivery of finished products.

The strike has also affected Amstrad's ability to meet the demands of its customers, who are increasingly concerned about the reliability of the company's products. The strike has also led to a decrease in the availability of components, which has in turn caused delays in the production process.

Amstrad is currently working to address these issues, and its management team is committed to ensuring that the company is able to meet the needs of its customers. The company is also working to improve its production processes, in order to reduce the impact of future strikes.

In the meantime, Amstrad is continuing to work closely with its suppliers, in order to ensure that it is able to meet the demands of its customers. The company is also working to improve its relationships with its suppliers, in order to ensure that it is able to access the components it needs to meet the demands of its customers.
Knowledge Garden's KnowledgePro is an attempt to marry the concept of hypertext with expert system technology. The stated goal is to create a program for "explaining" topics.

Hypertext is based on the realization that documents don't need to be stored in linear files where they're stored electronically. Text can be allowed to branch out into interrelated threads, forming a kind of information network.

In fact, hypertext has been a buzzword for the past year, and many exocomputer software packages claim to have "hypertext" capabilities, although this usually means the program only has some kind of cross-referencing feature.

While the most widespread hypertext-like program is Apple's HyperCard for the Mac, the first real hypertext program was Ovid systems' available both for the PC and the Mac.

Both offer an interface of graphical icons in which the user can build hypertext documents by entering text and adding elements such as buttons and links.

PROGRAMMING KnowledgePro is a different sort of hypertext system. First, it is based entirely on an interactive programming language, rather than having elements added and edited by the user. Instead, the program refers to low-level hypertext documents (or programs) to knowledge bases.

This has advantages and disadvantages. As a programming language, rather than an application, it is much more flexible and customizable. On the other hand, it is much more difficult to create hypertext documents.

Unlike most hypertext programs, KnowledgePro does not offer a graphical user interface. You use the standard DOS text mode. And, the user interface was designed with this in mind.

Compared to graphically oriented programs, we positively hating. But all that graphics planner takes a lot of computing power. And by choosing a text mode interface, Knowledge Garden allows owners of humble 8888 machines to have hypertext on their systems.

(continued on next page)
COURSEWARE
FOR TEACHERS, FROM TEACHERS

Zurich-based Eurocentres offers a series of eight PC-based software packages for computer-aided language teaching in German, French, Spanish and Dutch. They are low price computer-aided practice and testing materials to be used in conjunction with regular classroom work.

The programs are well structured and easy to set up. Even the inexperienced student or teacher should be able to follow the worksheets without much advance preparation. Matchmaker is for teaching the concept of "matches" as applied to word pairs, similar, and grammatical structures. Another package, Wurdwurf, is aimed at helping students create and expand their own disk-based dictionaries. Characterizer is the most elaborate package of the eight, offering skill-testing on the broadest scale. Teachers can use its framework to create their own multiple-choice tests for virtually any topic. Users can adjust only a limited number of parameters, however. The number of questions and names, and their order, can also be changed.

ILUSTRATION BY MARK SHINN

WRITEON EMINENTLY FUNCTIONAL

WriteNow is a word-processing system now available for most microcomputers to run on the Apple II plus or compatible machines. It is an easy-to-use word-processing program which is both flexible and highly functional.

The word processing is simple, functional, and well done. It is designed to perform a wide variety of writing tasks. It is not designed to be used as a word processor for a full spectrum of applications, but it is an excellent word processor. It is also a good writing tool. It is a basic, functional writing tool that can be used by a wide variety of people. It is a good writing tool for the user who needs a simple, functional word processor. It is not a word processor for the user who needs a full spectrum of applications, but it is an excellent word processor for the user who needs a simple, functional writing tool.

ILUSTRATION BY MARK SHINN

JACK OF ALL TRADES

version 5 of PCTools for DOS machines offers a vast range of services with just one goal in mind: to make life easier for you and your computer.

We'd doubt that anyone could possibly make use of all of them, there's probably something here for everyone. File utilities, an editor, background independent, a backup program - all sorts of stuff. There are also disk programs, clad in sporty mouse-driven interfaces and bearing cryptic support for file

As is all too often the case these days, your ability to use many of the memory-resident programs will depend on how much memory your computer has, as well as on the other programs you're running - even though many of the programs tend back to use significant amounts of memory.

From formatting your floppy disks to encrypting your data - it's all there. PCTools can't do it all, but you'll still have to turn your computer on and off. Price: US$39.95.

Réal Time, 1520 N.Y. Greenpoint Avenue, 11222, New York, USA. Tel.: +1 (212) 380 8800

Dump documentation, with objects that you can manipulate individually in Real-Time. Graphics can be output to a DSi DCC machine via IBM compatibilised Postscript, for what's worth.

The version tested (1.05) handled large graphics somewhat sluggishly. So I presume that this would be one of the first things to be improved in subsequent versions.

All 150, the largest disk accessory I've ever seen hard disk recommended. Price: US$139.95

COLIN BRUCE

Multiple Choice Software, 2280 Bonaventure Drive, Richmond, VA 23230, USA. Tel: +1 (804) 277 0090

Design documentation, with objects that you can manipulate individually in MacDraft. Graphics can be output to a DSS machine via IBM compatibilised Postscript, for what's worth.

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COLIN BRUCE

HINTS AND TIPS

COURTAR
GRAPHICS ORGANIZER

The production of Macintosh graphics is no longer such a baffling and a curse. But PICTs can be used as a disk accessory from Stockbyte, makes a serious effort to get at the symptoms. Functioning as a kind of clearing house for graphics, users can use it to catalog images and store thumbnail sketches for quick reference.

The program, called Courtar, is a graphics server that runs on Macintosh computers. It can, for example, convert Paintbrush graphics into PICT and MacPaint formats (but not the reverse). It also converts graphics from a PICT file into a MacPaint document into a PICT file. You can

**WAKE UP**

Smart Alarms is a Macintosh Desk accessory for those of you whose Macs function as your Mission Control Center of your daily lives.

Open the SmartAlarm DA, and you can enter appointments you'd like to be reminded of and indicate how often, and at what intervals, you'd like to be reminded of each replacement in advance.

Smart Alarms appears to be stable and well-designed, and these are undoubtedly those who are able to adapt their daily routines to take advantage of such a program. It's hard to recommend it to everyone, though. The problem with such a set-up - like phone dialers, calendars, and address books in your Mac - is that there's always the odd chance you might be somewhere without your Mac. Requires Apple Macintosh with 512 K. Price: $49.95.

-- Colin Bruce

Imagine Software, 19 Bolinas Road, Fairfax, CA 94930, USA. Tel: +1 (415) 453-2984

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**SOFTWARE ROUNDUP**

FORGET-ME-NOT: A SILICON ALARM CLOCK

A time-release THIS which you can program to wake you up from a CRT display of your, your life, or your daily routines (or even a note you'll think of later) is your Mac. Forget-Me-Not, from Software Concepts, Inc., 801 Main St., Marina Del Ray, CA 90292, USA, Tel: (310) 306-3028.

SOFTWARE BRIDGING

A file transfer utility which handles about 20 or so PC wordprocessors, and several matched wordprocessors, does. Not too bad, some of the download is even backed up on the disk, but it's not quite as nice as the one you can get from a PC.

SuperPaint 3.0

Wet and Dry Brush, Snakish, Bubble, Shuff, Quick Shadow, SuperPaint editor, -- this Mac graphics program has some good tools besides a good paint brush. Yet it remains another tool that's not getting as much attention as QuickDraw, now that PostScript is getting into the scene.

DESIGNING A DREAM LIBRARIAN

Tames those rampant collections of Mac Funnies. Also uncover all sorts of film you've accumulated in your hard disk. It generates files of film, etc. with filename, the other with vidnummer. Get over it to keep track of non-trivial gazette like the backgammon.

-- Colin Bruce

Imagine Software, 19 Bolinas Road, Fairfax, CA 94930, USA. Tel: +1 (415) 453-2984

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**MOVE ALONG PLEASE**

Wordprocessing, document tracking, communications, terminal emulations... Sounds great, but WordMover, from Softmaker, is quite possibly one of the worst DOS programs I've ever encountered.

Start-up WordMover finds it flawed "LOG IN." It wouldn't accept anything I typed. Keeping up 64K is a pain. This is definitely the best of the breed, but many do not.

There might be a good program somewhere, but it should be returned to its developer for a long period of gestation before we see it. A program with an interface this bad might have been tolerated ten years ago, but definitely not now.

-- Colin Bruce

Computer-base. PO Box 170, Warren, RI 02885, USA

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**EXTRA THANS FOR THE (extra) MEMORY**

You can keep those slowly 250 biggest hints from taking a seat at one another while loaded together in your PC's memory. You can add so many extra TELLs as you want to Extra's memory, and it will swap them in and out of active memory as needed.

Delta Technology International, Inc., 1621 Westgate Road, Eau Claire, WI 54703, USA, Tel: +1 (715) 832-7575

TO DO

Hate to break this routine while computing to beat the heart of your paper To Do List, then when you Read it or forget why you wanted it in the first place? Then a DA is for you. Simple, well-designed and effective, and at 10 bucks, the price is right.

Andrew Melly, Mark 3 Software, 29 Cherry Rocks Road, Willow, CT 06886, USA

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**S O F T C O P Y R O U N D U P**

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“If disease makes us sexy and extroverts make us smart, he says, in a swift summary of sociobiology, ‘we can exploit that digital wildlife (i.e., viruses) will similarly make the data world more diverse and much more interesting.’ You bet.

THE MURAL
In the last chapter, revelingly titled Broken, we see transitions from a meta-Futurist-Faithful base on Cavendish’s famous Life program, and designed to help us understand the... evocation of the whole universe.

Cellular automata start rigging with the program... need to... evocation of the whole universe. In Moravec’s chapter wishes as we see our new ‘dialogue’ with the universal program of... save-environmentalism — a way of trying to figure out the universe from the inside. However, to my process of trying to imagine how the hell we can get to the goal of the program in the skin, any ideas you had of space, time, and reality got dabbled once more, and I returned from the rapid trip through post-scientific-everything feeling about an art as smart as pencil sharpening.

It is a serious book, written by a scientific mortality. The author believes strongly in the art of engineering for improving our biological lot, as a week of penmanship is mostly demanding, but continually exciting.

Maybe Moravec already thinks like one of his mind kids but I liked what is becoming a minor and rather human tradition, in books on computers: his proud listing of the hard and software that helped him grow up and design his book... in this case a collection of Mac packaging.

And I did appreciate the way he had his editors at least a useful as the in... references provide a means for human being.

Wendy-Ann Sinclair lives in Cincinatti, where she researches on anagramatic streams in writing.

TALK ABOUT WHAT?

Do you want to talk to your computer? And do you like your computer to talk to you? Personally, I’m inclined to say: ‘Well, sometimes— it depends.’ What it depends on is the computer’s virtue of engineering, which task is carried out. And if the task and setting call for spoken interaction, it depends on how well the computer performs.

‘Speech and Language-Based Interaction with Machines: Towards the Conversational Computer,’ by John Watersworth and Mike Tatters (both Harvard University Press, Cambridge, 1987.)

By Harry Bunt

Watersworth and Caltz have written a readable book about the attempt currently being undertaken to build conversational systems. This is computer programs that show the unlearned, virtually error-free input and retrieval of data in spoken natural language.

For anyone who works in the field, it’s an easy book to read, touching on a variety of interesting issues. And yet, those authors could have done a much better job.

Since it presents a fairly elementary level of knowledge on the part of the reader, it should be of value in general introduction. But even such an unpretentious. For a completely non-technical audience, it is not. And for technical audiences, it is often unnecessarily superficial. Moreover, it isn’t always up to date and misses quite a few important developments.

Reflecting the title, the book divides into two parts. The first, dealing with the state of the art, and the second deals with issues in the design of natural language conversational systems, reproduction of whether the interaction takes place in spoken or written form.
that although you press "AP" before "P" it won't appear on your screen. Again, this is a H데이14 issue. Press Return twice and then answer yes to your file prompt.

10. If you are frustrated with the limits of Lotus 1-2-3 or Quatro when printing a company spreadsheet in a report, and wish it had some of WordStar's printing capabilities, use this method to make a cleaner presentation.

Type any preliminary text introduction to your spreadsheet, then press "N" to read a block of text. Next enter the file name (induding drive and path of the Lotus or Quatro spreadsheet). WordStar will display the cell range of the entire spreadsheet. You can edit this and specify a smaller cell range if you wish. Then press Return, and the entire spreadsheet or partial range is loaded into your file as standard text is formatted as you like.

11. If you frequently use alternate characters not normally available on your keyboard, such as foreign currency symbols, setting function keys with their values is often useful.

For example, to insert the euro (€) symbol into a document with a US version of WordStar and Lotus, you would normally hold the Alt key down and press 157 on the numeric keypad. Instead, you could assign this operation to a function key with WCHANGE.

First, enter the WCHANGE program, selecting A (Console), then B (Function keys). Move the cursor to the preset function key combination you would like to replace and press Return.

The old definition will be displayed and you'll be asked whether to change it. Answer Y. For the new definition hold the Alt key down and press 157 on the numeric keypad just as before, and press End (Exit Return, because that would add a return as part of the function key definition). Next type 10 in the function key label and press End.

At this point you can redefine other function keys or press X to exit.

12. If you use windows often, you may want to set one of the function keys as the open switch window key ("OK"). Follow the same procedures as in the previous tip, pressing "OK" for the definition, then press X and Return. Next enter Windows as the new name for the function key label, press OK, and then X as in the previous tip.

13. When using proportional fonts those fonts that allocate more space for wider letters like m and less for narrower ones like r, you may find that what appears aligned on the screen is not quite right. To fix this, you can change the buffer size of your text. Press Home or End to move the line, delete the line using Y and then use the delete as for a paragraph.

The size of the block you can safely scroll without the undelete feature has an impact of two characters and a maximum of 500 bytes. If you attempt to delete a block larger than 500 bytes, you will be warned that you can't undo the deletion later and asked to verify the deletion. You can change this size limit, however, as we'll see in the next tip.

14. You can change the buffer size of the space so that 500 bytes is allocated to 50,000 bytes (about 6,000 words). If you change it for the purpose of viewing paragraphs, 5000 bytes is usually adequate. Enter WCHANGE W and select C (Computer). C 2 (Fontem) uses menu #2, and A 1 (Change) for the block size for paragraph size in bytes and save your changes.

15. If you are a touch typist you use most WordStar keys are you may be suffering from a speedup finger from typing them. All other Ctrl or Caps Lock keys on some bases are shortcuts. First check to see if there is a shortcut underneath your keyboard to change the key assignments of Ctrl and Caps Lock (you must reboot your system after flipping the switch). Your keyboard is provided with WordStar on the Advanced Customers Disk called SWITCH.COM which contains a small program that lets you key to modify this situation. Just type SWIC in a terminal before entering WordStar. SWITCH.COM is not compatible with all keyboards, but don't give up! There are several computer keyboard level programs that come with your computer and are published as FANSI, CONSOLE (from Honey Micro-Studios; Ann Arbor, Michigan, USA), and more.

David J. Clark is a writer and editor of how-to books on Computer Books (Alameda, California, USA) and author of "WordStar Instant Reference."
FREE Technical Support
Before you buy, talk to professional programmers about any technical questions you may have. We're happy to help you get the best out of your software.

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by DB2 Software, Inc. Enables connection with DB2 databases on PC. A powerful tool for database management. TCP/IP version of DB2 DB2 Workbench. $595

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by Wolfram Research, Inc. Powerful mathematical and graphical computation system. Mathematica includes symbolic programming, numeric computation, and graphics programming. A powerful tool for scientific computing. Mathematica is available for PC, Macintosh, and Unix. $1,395

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HOURS
M-F 8:30 - 8:00
Sat 10:00 - 4:00
An Indepth Look At Europe's

OR, IF LIFE

Jean Monnet's dream is getting closer. You

HAD BEEN MEANT
can sense it in small ways, like when you

TO BE EASY, WE'D ALL
drive from Amsterdam to Sevilla without

BE SPEAKING
once having to fish out your passport. And

EARTHLY
as the bet-hedging politicians' balancing

act between enlightened mutual interest

and national _amour-propre_ runs its deliber-

ate yet inevitable course, the road to a

United States of Europe beckons. But how

will we communicate in the frontierless

market?

The European Community's 12 member

states are used to translating not just

what they say to the world but even

what they say to one another. As institu-

tions, and economies currently ad-

dress their 320 million consumers in 12 of their official

languages, at a cost of $11 bn.

Nothing new there, you might say — Europe's always

had "language barriers." Put in the open market

approach, and business interests — in Europe but also

globally — have their sights set on a single, fully inter-

cultural market. Translation is set to boom, too.

Conservative estimates predict that demand will triple by

the turn of the century.

In this issue, _Electric Word_ focuses on how the

business world, as well as European institutions, are

facing up to this multilingual challenge.

We examine the rationale behind Europe's multili-

gual content, and how it's being put into practice in eight

very different trans-European companies: from a tele-

communications manufacturer, through a food company, to

the media, advertising, and law professions.

We'll ask: what is the EC's role in this evolution? Is it

there to encourage or hinder? Or perhaps, as it appears

now, to give its members a minimum framework within

which they can evolve?

By 1992, it will be 40 years since the year-granted Six got

out on the long road to unity. 1982 saw the birth of the

European Coal and Steel Community. The name alone

betrays its industrial origins, evoking a mono-centricality

most Europeans call upon to disdain.

The latest — and by no means the last — milestone on

that road is the 1987 Single European Act, which by 1 January

1993, when fully implemented, will have bound

the European Community's nine twelve member states

close together than since Charlemagne.

Of course, there's both a plus and a price. The price

of unity is an erosion of national sovereignty, the Act's

further-reaching constitutional effects is the replacement

of that veto in the Council of Ministers by qualified

majority voting. Uniformity in the decision-making Coun-

cil might be nice, but all too slow to reach.

What really matters for this issue is that it's more the
Nurtling Challenge

Bitter struggles. And, various as it may appear to outsiders, most Europeans seem to take a strange delight in their differences.

**TRANSLATION MOUNTAIN**

However, linguistic differences are not merely a means for higher fees – nor less cost. Take, for instance, translation.

In 1985, if the 180,000 pages of documentation produced in the EC’s member states, 100 mm had been translated by some 100,000 linguists at a cost of 911 fn. Most of that translation was then and is now EC – that is, in English, French, and German only.

In 1988, the Court of Justice, Council of Ministers, Parliament, Economic and Social Committee, and European Commission (EC) together translated 1,500,000 pages at a total cost of 170 mm – an increase of 450,000 pages for the fifth successive year, consuming up to 40% of the EC’s administrative budget.

At present, as many as one-fifth of the EC’s 17,000 full-time employees are linguists working in translation. By the end of the 1980s, 15% of all EC resources will be tied up in translation, 50% of all interpreters will have been contracted out to organizations and freelancers – a dramatic rise from the 5% level of the early years.

The translation load of European trade and industry has increased at roughly nine percent per year since 1983.

**Internal markets** – language, costing money that Americans or Japanese would presumably have spent on something else.

The institutions of the EC themselves are responsible for a veritable translation mountain. All documentation for public consumption – from acts and regulations to information brochures – is published in all nine languages. Everything else – internal memos, the minutes of meetings, etc. – is circulated in English, French, and German only.

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ENGLISH UNIQUE

Of course, even the most admirably multi-lingual of firms will never translate every onderword or message it generates. Total multiculturalism—in which every transcultural con- ference, meeting or phone call would be accompanied by a battery of interpreters and translation services—a translation cost too chump money.

Thus—to as many people—human beings first improvisation solutions. Any rainbow of varied languages will always soon discover the common language most of them speak least. And in business circles, that language is English.

Many companies have formalized this state of af- fairs. Almost all US and Japanese companies make their international communications take place exclusively with each other in English, regardless if their headquarters are in San Francisco or Saigon.

Still, very few companies are adopting this global English policy. The French language of France's Ateliers is English) Italy's VECA heavy truck company, based in Turin and bought by the Pan-European capital, conducts all its business in English.

In the late 1980s, the English language is a unique weapon of choice. One of the forty years, it has grown into the world's first and truly international language. And not just in the fields of trade and industry, World- wide institutions such as the EC and the WHO— even OPEC, with its English-speaking member states—communicate exclusively in English, so as to be working in the world's biggest shipping lanes.

Moreover, in half the world's scientific and technologi- cal publications appear in English—university students everywhere would be lost without it.

Nothing more than a primal code—a means of getting someone to pass you the salt. There would be no problem: we make it at will we also speak English.

But the fact is that each human language encap- sulates its own culture's psyche more completely than any history book. As such, English is an unique window on the real world and what we are, and what the world is made of. Every language is a culture, and every culture tells the story of a people, and has views on its use and abuse—especially the kids of its children.

At the heart of the multicultural creeds lie the axiom that a language's life to thrive, must be able to serve its users in as many fields of discovery as possible. You ought to be able to do anything— write a neurological textbook, say your prayers, fill in a tax form, stand trial, be a second-hand car, and make new friends—all in your native tongue.

The truth of course, is that this is increasingly possible. As mentioned above, the world's only fully func- tional language is English, and this is the cultural di- mension for which multicultural attempts to find a compromise.

Moreover, on one hand, we need English—or Spanish, or some lingua franca—to speak to the world. On the other, we fear that if we utter on earth some so many functions that its domain remains so incomparable. But together, it will deicide into a dying patois, retreating from subcon- science, to be buried over soon dried dialects with tape recorders. Among the EC's nine official languages, English and Dutch was to be the first go.

The European Parliament voted a modest $1 million for projects aimed at bolstering these. This included a centre for immigrants to Wales to learn Welsh, subsidies to children's book publishers, and the prepara- tion and publication of an Irish-English dictionary. Those who ask "why bother?" might reflect on what made multilingualism such a fundamental article in the pan-European credo. The EC was founded under the aegis of an own-goal disaster called federalism, an ecumenical ideology for which the designation of foreign or native was a central text.

TONGUE TIED

Of course, not all Europeans are such charasmatics over the border. Europe's most fluent tongue is perhaps hardly representa- tive. Two official languages are a foreign one — the so-called Luxembourgish or Volapük, on which one can speak in two or three foreign languages. In the Netherlands, 30% speak German and 44% more than one. Of those from outside the sphere, 80% of whom are Moroccan, are the Portuguese (14% one, 10% more). Of those 35% of Europeans prove enough to have mastered one or more foreign languages, speak English, 43% French, and 38% German.

In the light of such realities, the EC has commenced itself to the promotion of foreign language learning. In May 1989, the Council of Ministers will approve the 3220 million lingua project, conceived by the Commission President for Education (DG) and aimed at increas- ing both the quantity and quality of foreign language learning in EC member states (see the article on EC policy, directly following).

Individual member states are also putting language learning at the top of their lists, while the European Commission has allocated a 10% of overall foreign language, six percent percent has long been a stock issue for self- ridicule.

The UK Department of Education and Science is currently funding a network of 12 regional "learning and teaching" centres, called Ux, which provides companies with a diagnosis of their staff's language competence, and training geared specific demands.

Meanwhile, in the private sector, language training is booming, too. Language school networks such as L'interlingue (English and French) have expanded aggressively.

At Swiss-Italian schools, with 25 sites, mostly in Europe, and where the lesson load increased by 5.9% in 1989, English lessons account for 54% of the total, from French 24.5%, and German 8.5%— ratios which have remained steady over the past five years.

Perhaps there will come a day, once the United States of Europe has arrived, when we'll be truly multi- lingual.

Some advocates—such as AE's helmet Menegolli— envision a polyglot continent where, while preserving all existing languages, each region could teach the active knowledge of one, and at least understand the rest, of the five major languages: English, French, German, Spanish and Italian.

On the other hand, many will be just as strongly an- tisemit, by just as the Greeks succumbed to Vulgar Latin.

The former prospect sounds like a wishful think- ing, the latter sounds insane. In the scenario, we'll be learning language in its native land, and for the first time in the multilingual realities of 1992.

The universal ascendency of English as a lingua franca raises the question of whether European mul- tilingualism is not just a colossal waste.

As for machine translation, though still convention- ally viewed with skepticism, its use is growing. Custom- ized versions of Alphatec's translation software are installed at the Ford Motor Co. — as well as at Sanen's UK-based transla- tion operation, where System is also used. In West Ger- many, automobile BMW is currently installing Logos. And UK diesel engine maker Perkins Engines has been using Weinrich Multimat, catch to its own satisfaction, for the past three years.

Some large companies are tackling natural language processing head-on. Siemens is now marketing, as well as using, its own mini-biased Munich MT. And Philips, Resette, still in development, is planned for com- mercial release by 1991. As for IBM's two "intelligent" MT projects, under research at the company's American Thomas J. Watson Center, both are intended for eventual inhouse use. However, projected completion dates— even to the nearest decade — remain a Big Blue Secret.

roll English but where Protestant earnestness has ill- equipped their partners to turn the pursuit of theology into a homogenous industry.

Whereupon, between 700 and one billion people speak fluent English—one fifth of the world's population as first, second, or "official" language. And that growth is growing year by year. As Robert Burchfeld, chief editor of the Oxford English Dictionary, put it: "Any literate, educated person on the face of the globe is deprived if he doesn't know English."

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MENDEZ translations
WE GIVE YOU THE SERVICE YOU DESERVE
In Europe’s offices, laboratories, board rooms and science parks, not all talents are bound to be turned into polyglots.

Despite open borders and flourishing language schools, monolinguals will outnumber bilinguals, even in leading circles of business and industry. It’s this barrier that continues to threaten the Old World’s strength in the electronic age.

Of course, much depends upon your criteria for calling someone “bilingual”. But then, even fully bilingual citizens are no panacea for a multilingual Europe.

Machine Translation for the decades to come will be geared to the needs of monolinguals. Difficulties in intelligent text interpretation will be sorted out in a computer-initiated dialogue (typically with the author of the text), quickly and smoothly – and entirely in the user’s native language.

The system depicted above is being designed on the “layman user” principle. It will provide desktop communication straight across the EEC – and beyond. What’s more, it has a unique architecture consisting of easily distributed language modules built around a powerful “interlingual” concept.

**Tomorrow’s industry standard for multilingual translation.**
This system is under development at BSO/Research Labs in the Netherlands. It is called DLT (Distributed Language Translation).

As the name suggests, the actual translation process in DLT is split and distributed over the sending and the receiving parties' PCs - which may be thousands of miles apart.

This can only succeed by virtue of an excellent interlinking structure.

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It represents a perfect compromise between scientific ideals and practical requirements (of system maintenance and cooperative development) inherent in a system of international scope and extended lifespan.

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In other words, we're making our translating computer a little bit intelligent, to start with - just enough to make it an attractive partner to intelligent users.

And we know how to steadily increase the system's artificial intelligence, thereby reducing its dependence on interactive disambiguation.

DLT represents the safe route to truly automatic translation: without assistance from bilinguals, polyglots or post-editors. But meeting the quality standards of professional translators - no less.

The first DLT products can be on the market shortly after 1992.

The DLT project is supported by the Ministry of Economic Affairs of the Netherlands. BSO is a private company and a leading Dutch software house. DLT investments to date exceed 3 million ECU.

BSO/Research Laboratories
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Fax: +31 30 944048
"If I had to do it all over again, I would start with education," Jean Monnet, politically palatable alternatives. And what could be more palatable: The dear departed French knight Technology. Grandad of the European Common Market.
He drums started beating years ago. "Concerns" were expressed by the all-powerful European Council of Ministers at their 1983 Stuttgart powwow. The 1985 Mit- ten European Council repeated them. Then, in April 1988, the European Communities' executive/civil service arm, the European Commission itself, weighed itself with a communiqué on the instruction and learning of foreign languages, discussed by the education ministers at their council that year. "The free circulation and the freedom of settle- ment advocated in the Single Act will only be effective if European citizens become fluent in other languages than their mother tongue. However, in most member states, the situation as regards the teaching and learning of foreign languages is alarming." Thereafter the pace quickened.

In September 1988, "L'Assemblée des Nations d'Europe" adopted a plan on European multilingualism that was submitted to it by the French organisation Le Monde Bilingue, which called for true bilingue education in European schools.

In November 1989, Spanish conservative member of the European Parliament G. Pellicer introduced a resolution proposing that the Comm- union ensure that schoolchildren in the member countries gain practical knowledge of two foreign languages, and that multilingualism in general be promoted. Parliament approved. At the end of 1989, the European Communities' executive department in charge of employment, social affairs, and education, Directorate General V (Directorate-General V), delivered its proposals for discussion and consultation, which in a nutshell called for the spending of a lot of money — ECU 250 million in U.S. $275 million — to improve the teaching of foreign lan- guages in the Community. It called its proposal Lingua. In February, the European Parlia- ment adopted a report submitted by the Dutch liberal parliamentarian Ms. Lorsie which requested that the Commission come up with a medium-term educational program "to be fulfilled between now and the end of 1992," and calling for "the strengthening of community language teaching, so that at least two foreign languages are taught during the years of basic schooling."

And finally, corporate Europe, through its Euro- pean Round Table, presented a proposal to the Presi- dent of the Commission J. Delors for a European Ethnological Development (EURERA) program. The report proposed a "training model to be followed by the EC to improve its 'competitiveness,'" which should, amongst other things, contain the teaching of not one, not two, but three community languages.

If all is a program is born. To one's surprise, on 14 April the European Parliament approved the Lingua program by an overwhelming majority, with two significant amendments. One, the Parliament wanted member countries to not merely promote foreign language learning, but to oblige. And two, it increased the budget to ECU 300 million, and re- quired that the project include small and medium- size enterprises. At press time, the program awaits final approval from the 22 May Council of Ministers meeting.

HOW THE COMMISSION SOLVES IT'S OWN LANGUAGE PROBLEMS

SPEECH: THE EUROPEAN COMMISSION has a real need for help with its language. Before it can translate some of the important proceedings and reports it transmits to and from the member states, it has to hire an army of translators per year.

According to DG III, currently 30 people at a salary of U.S. $30,000 per year are needed to translate, in English, German, Dutch and Italian, about 100,000 words per month. This is not to mention the costs of computers, dictaphones, and so on.

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EUROFUNDING OF LANGTECH

Europe may be the most disappointing language pro-
gresser. The Commission has been funding it, but it's not
delivering. In the past few years, the Commission has
given a total of ECU 9 million to the last and speech processing area under the ESPRIT programme. The work is funded by the Commission, and the results are expected to be presented at the next conference. The results are expected to be presented at the next conference.

The project is called "EuroTalk", and it is currently in its second year. The project is expected to deliver a speech-to-text system by the end of the year. The project is funded by the Commission and the European Union, and the results are expected to be presented at the next conference.

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For more details, contact:

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at helping as many European citizens as possible overcome practical language problems. Though he believes, will have to be conquered by the use of new technologies.

Automobile workers in Italy, for example, may receive car body assembly information partly in Italian, partly in German. Should these workers be taught everything between the German-oriented and those, just to understand "Die Schrauben dürfen nicht zu fest angezogen werden!" (the screws must not be overtightened)?

According to this idea, it’s a hundred times cheaper to translate all the German these Italianians will ever need during their professional lives, rather than try to teach them German. But if only modern tools are used to do the translating. Putting some- one behind a laptop on a roof garden in the Italian sun will, probably not, do the trick.

**DISASTER**

Lingu is the first program launched by the Commission to solve the Community’s language problems, nor are Rilling’s suggestions the first step forward for higher solutions. This Community has already spent more than ECU 15 million on the very ambitious, seven-year-old Eurotra program. This program was supposed to result in the prototype of an advanced machine translation system for all new languages. It hasn’t yet, and it won’t. Indeed, Eurotra has become another of a Commission embarrassment.

On 27 February, behind closed doors, the Eurotra supervisory committee and representatives of the research ministries of all member states gathered to witness a first operational test of seven years of labor. The result? "Appalling," was the way one participant put it. The machine, unfortunately, demonstrated what one of the organizers called a "toy system," a demo that was set up to translate a few sentences from German to English, French and Spanish, as well as from Dutch to German. The model was small and primitive. Theoretically there were supposed to be no limits to the length of the sentences, but since the system was regarded as slow, it was recommended to keep them within twelve words (this sentence contains 35 words).

Also, since more than the two thousand of the different languages were implemented, grammatical limitations were imposed, such as the need for simple past participles. In other words: no "can," "may," "must," "ever," etc., and no question marks allowed.

These restrictions were respected. Still, the machine took ten minutes to translate what previously prepared sentences - on top of which it produced a poor translation. Then, when the head of the German Eurotra group typed in an unprepared sentence - in upper case - with which it produced a poor translation. Then, when the head of the German Eurotra group typed in an unprepared sentence - in upper case - the system churned away fraudulently for five minutes before being put out of its misery and saying "hello there.

The reasons for the European failure are complex. One official says Eurotra’s design is obsolete and causes enormous problems. Another official puts it that, since the design draws on an existing body of knowledge, with no new elements added, Eurotra has come to be a cumbersome engineering project.

An inside observer notes that the political considerations behind Eurotra doomed it from the outset - instead of renting one office building in Brussels, filling it with computational linguists drawn from all over the community, and then giving them the brief to create a machine translator, Eurotra funded a decentralized collection of research groups in each of the 12 member countries. A close observer points out that while member countries were supposed to match EC funding with national funding, many smaller countries weren’t, and used Eurotra funding to support university linguistics programs rather than Eurotra.

According to Rilling, one of the biggest mis- takes the Eurotra people made is that they had no national university research the specific aspects of their language, instead of searching for what these have in common. The numerous exceptions are impossible for the software to handle. "It is an inadequate strategy, and it’s too late to correct it now," he says.

In December, two months before the ill-fated demo, the European Parliament missed a golden opportunity to pull the plug on the project. Instead, it authorized another ECU 12 million to carry Eurotra into its third stage.

Nevertheless, people within the Commission are already coming up with ideas for a post-Eurotra era. The machine translation program would be put to sleep, it suggested, and turned into a research program for computational linguistics. One consultant boasted these proposals. The Bride of Eurotra. Rilling is more sanguine, suggesting a translation period from 1989 to 1992. If by some chance a useful prototype emerges, then they would evaluate a second machine translation program, and have a commercially viable translation system by 1997. Otherwise stop it," says Rilling. San:angelo.

**MESSAGE**

DG XIII is working on a high-tech answer to Lingua and alternative to Eurotra. Right now, the DG is funding a Language Industries Survey (LS), to inves- tigate the companies and institutions involved in researching, developing or producing language industry products and services around the world. This is also supposed to have an evangelical flavour - to spread the word about the DG’s interest in technol- ogical solutions to language problems, to inform corporate Europe of the solutions already available, and promote to create a language industry body.

What DG XIII is angling to do is create a new program for the 1990s that would overcome the practical barriers between European languages, as well as achieve each language, with high-tech tools. The working title for its program is the multilin- gual "life" - which stands for Language Industries for Interchangeability in Europe.

As part of its effort to inform people about, as well as build support for its activities, DG XIII has begun to organize a conference in Strasbourg on 19 and 20 June. Present at this conference will be Swedes, Swiss and Belgium officials, who have experienced language problems over time - the day they learned to talk, Commission officials, invited "decision makers" from the language industries, we as well as current and potential customers of lan- guage industries products and services.

Language industries involve will doubtless involve many managers from companies that provide Win-works, electronic publishing systems, spellings, style or grammar checkers, and machine translators. Obvious the obvious might include developers of voice recognition or optical character recognition, researchers from the natural language understanding fields, people of terminology data- bases and CD-ROM dictionaries, managers of translation services, and many more.

The Commission will propose a roads and then the most likely case will be agreed to something like the following: the DG should develop a program to encourage to the creation of new language applications. For what it is a mind here are so-called "language resources" and software for handling "non-linguistic" infima-

In other words, all Community languages should be more widely taught, according to the Commission, because of the "rich diversity of linguistic and cultural traditions in Europe." That the Community needs programs like Lingua in the first place to over- come the negative effects of these traditions is conveniently ignored.

Also, Eurotra may be the most disappointing language program the Commission has been running, 8th is its only finish. In the past few years, very little has been spent on new medium and size projects in the "first" and "second" priority fields. Ten of millions of ECU have been thrown at these programs.

What of them were reasonably successful - from a pragmatic point of view. Some have yet to wind the finish line. Some have taken long and long delays. None of them has resulted in one single product available over the counter. So, the question is whether focusing the Energy and less language- industry is likely to result in anything more useful than what the Energy attempts have for so-produced.

As for the other of these efforts did result in positive products, there is a whole list of Assurance Energy's the successful in the marketplace. As one of the "typical European products," the one was sold in the market for $200. In the future, when we create language products, we'll probably need the Japanese to sell the tools that'll shape the Common Market."
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Being a 1992 executive whose company wants to make the most of the single European market, you should start by getting localized versions of your products on the market simultaneously. With today's shorter product life cycles and cut-throat competition, the importance of on-time quality documentation is growing. The question is, really, can you afford to rely on the freelance services of conventional documentation suppliers any longer?

We don't think so and that's why INK's localization and documentation companies are there. We are specialized in documentation for the high-tech industries and we help you maintain a competitive edge by increasing product quality, lowering product cost, and reducing the time-to-market. So you see, it's not for nothing that the European Service Industries Forum - and many of our clients and competitors - consider INK to be a market leader in linguistic services in Europe.

And since INK guarantees superior quality and efficient handling of multilingual projects at competitive prices, there's no good reason why you shouldn't opt for INK's one-stop service package.

Where and how INK can help you improve your document-creation process

R & D
* Standardizing terminology
* Improving information flow
* Eliminating documentation thresholds

Manufacturing
* Streamlining documentation process
* Improving document transition process

Sales & Marketing
* Improving generation of proposals
* Improving quality and consistency of correspondence
* Reducing time-to-market

Support & Training
* Improving training for new products
* Reducing learning curve
* Enhancing end-user acceptance
INK offers Linguistic Services in the areas of:

- Writing
  - Technical writing
  - Technical and linguistic editing

Translation
- Translation of documentation from English into 10 West European languages
- Localization of software

Publishing
- Desktop publishing
- Coordination of printing services

Training
- Training of terminologists and translators

Consultancy
- Documentation management consultancy
- Corporate dictionary/terminology management services
- Language industries market surveys

Linguistic Software
- TermTracer: the complete dictionary look-up program, memory-resident, and easy-to-use

INK's European Linguistics Services Network consists of:

Corporate Headquarters
INK INTERNATIONAL
Peters Heerlinlaan 52
1829 8J Amsterdam
The Netherlands
Tel: (31 20) 664 65 01
Fax: (31 20) 79 89 71

INK MAIL SERVICE
Orange Nassaustraat 25
1075 GJ Amsterdam
The Netherlands
Tel: (31 20) 664 662 1
Fax: (31 20) 662 90 04

INK LANGUAGES
6, rue de Béziers
75839 Paris
France
Tel: (33 1) 42 78 58 62
Fax: (33 1) 42 78 51 90

INK ESPANA
Edificio Colonnas
San Bernardo, 97-99
28021 Madrid
Spain
Tel: (34 1) 515 50 95
Fax: (34 1) 446 95 12

INK NORGE
Høeghvaldsgata 1
N-0159 Oslo 1
Norway
Tel: (47 2) 73 04 00
Fax: (47 2) 73 04 01

INK DEUTSCHLAND
Rheinbogenstraße 87
20837 Parnitz
Federal Republic of Germany
Tel: (49 711) 62 70 50 60
Fax: (49 711) 61 47 45

INK TEXTTOOL: the premier software package for translators
INK Library of Dictionaries: the largest collection of ready-to-use specialized translation dictionaries
- Customized software modules and spelling dictionaries

Facts & Figures
- Over 150,000,000 words written and translated since 1981
- Offices in 7 European countries
- Documentation services in all West European languages
- More than 130 translators, technical writers & terminologists employed full time
- Major clients include IBM, Microsoft, Ashton-Tate, Linus Development Corp., The Commission of the European Communities

If you want more information about INK's linguistic services, please contact one of our managing directors at INK International or at your local INK office.
Now you can use a personal computer to increase your productivity in foreign language translation.

**Language Pairs**
- English-to-Spanish
- Spanish-to-English
- French-to-English
- English-to-Danish
- Danish-to-English
- English-to-Swedish
- Swedish-to-English

**Features**
- Operates on MS-DOS based IBM PC or compatibles (XT, AT or faster) equipped with a hard disk and 640K of RAM.
- Supports WordStar 2000 and extended ASCII file formats.
- Extensive Core Dictionary.
- LPDictionary Editor allows easy modification of both Phrase and User dictionaries.
- Each Phrase or User Dictionary has a 5,000-entry capacity.
- Number of dictionaries limited only by the available disk space.
- Supported by five years of development and customer satisfaction on personal computers.

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Each package: $985.00
Any two: $1,485.00
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**Suitable For**
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  - Proposals
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  - Invoices
  - Packing Lists
- Technical Manuals
- Banking Transactions

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**PC-Translator**
The Affordable MT Solution
DISKETTE-BASED
MULTILINGUAL DICTIONARIES
As yet, bilingual dictionaries on disk are of little practical use to the general
wordorder. Their relatively modest size
makes them unsuitable for wordreference
uses, such as the keeping of a medium-size
dictionary or a dictionary in a pocket.
However, the few disk dictionaries that have
already appeared are an interesting new
development. If a disk dictionary
works properly, it may be useful in
future years. The present review
contains a description of six
collections of disk dictionaries,
reviewed alphabetically.

Multilingual
Lexicon Software BV, Keizer Kampsloot 320-32, 1071 AV Amsterdam, Netherlands.
Tel: +31 (0)20 899.39.92

A non-modifiable bilingual dictionary and
thesaurus is to be published in the near
future in five languages: English, French,
Spanish, German, and Dutch. Six more in

The dictionary will be available in
two forms: either as a complete "professional"
version in which the entire dictionary is
reflected in a wordlist of all five languages, or in a
one-language parlance
version for one
language only. The price is $150.

IM Library Of Dictionaries
Ink International BV, Po Box 5417, 1007 AD Amsterdam, Netherlands. Tel: +31 (0)20 704.20.30
In total, 36 specialist bilingual dictionaries.

MULTILINGUAL
CORRESPONDENCE
SOFTWARE
The last two years have seen the arrival
of a new type of software that allows
interlinguistic correspondences to be
found for a new business letter. Simpler than
usual correspondence software, it
combines use-modifiable multilingual
databases which can be
used in commercial correspondences—
with
shortcuts for common groups, dates,
dates and prices — plus look-up and
request/Send facilities. As well as doing some of the work for you, this
products makes excellent teaching
tools — not only for native speakers, but
also for non-native speakers whereas foreign language skills have grown
rare. Caution: A little knowledge is a
dangerous thing. In any case, whenever you're
teaching correspondence, you'll have to
make sure that all the products are
enough knowledge of the language they're
generating to be able to make any neces-
sary modifications—quite aside from any
considerations about the desirability of
being able to understand what you're
putting your signature to.

Correspondence
A Praga, 324 bent, Richard Leiszki, 75021 Paris, France. Tel: +31 (0)20 461.77.93

A response generator for
three languages in sentences: French,
English, and German. And an
ASCII source language text, you get it immediately
build up — either in one block or target
languages — on your screen for the five.
Price: $416.

LexiconWrite
Multilingual Dictionaries, 61 Chevalet Street, Harpur
Road, London W4 1PE, UK. Tel: +44 (0)81 745.68.18

Originally based on the P&X Multilingual
Multilingual Business Software, Lexicon
Write boasts five languages: English, French,
French, German, Spanish, and Italian — and
a database of 3800 phrases. Screen menus
and messages in all five
languages, plus a
keystroke in wordlist format, enable non-
fluents to use most of the line.

TERMINOLOGY
MANAGEMENT
SOFTWARE
This is the type of software that allows
translation of technical language terms —
whether you're encoding their
voice records and index the words in
other words, the databases are
in multilingual
graphics — general, domain-specific,
proprietary or technical — it may be too
fast to start thinking
about machine translation.

Not that computers can
understand language any
more — or work in batch
mode — but they can produce
some of the necessary
functions used for help editing. Your translators will
become bilingual translators and bilingual
machine translators, checking the accuracy of
the machine's new output and smoothing out
errors, or "dirtying" up the edges of its
output. Commercial AF at it's a="intelligent"
but given the right conditions, it's just
the job for this kind of work. One of the
top translators, a French-speaking
America's seems likely to be a significant
in the localization of software. Claims for productivity
rises from 30 to 50 percent.

Aquilla
21/11 avenue Mme Staulain, BP 1674, 10412 Villefranche-sur-Mer, France. Tel: +33 (0)91.98.72.01
A Windows-compatible terminology pack-
aging system of one large glass in
which you encode your terms under the
three types of category, domain,
acronym and
company.

Superhot
Christina Software and Translation, Haegler 78, 17139 Stuttgart-Pfefferberg, FRG. Tel: +49 (0)181 491.15.51

A multilingual graphic package
system that can be used to encode and prepare
and with the same results, you can create
for two dictionary entries, each with
eight categories for four
corresponding target languages. The
dictionary comes with a "browse-mode"
window, enabling you to jump around
target language entries from your bilingual
dictionaries, automatically compiled by
Immersion (see above).

Profile
Gabriel Hostag, Gabriel Zagato 26, 75700 Neuilly, FRG. Tel: +44 (0)171 737.02 58
A RAM-resident multilingual dictionary,
allowing instant retrieval, copy and
paste. Available only in German for B500.

TEO, the Translation Editor
Ink International BV, Priez Haarlemsestraat 52-57, 1075 AE Amsterdam, Netherlands. Tel: +31 (0)20 604.60.91

A Windows-based text editing system with
borderlines and end-of-line "pulling anything
you need into your screen," which is split
to three horizontal components: the top
screen for the source language, the middle
one for the target language, and the bottom
one for the target language entries from your bilingual
dictionaries, automatically compiled by
Immersion (see above).

In the top compartment, words listed in your
glossary are highlighted, which usually
down the bottom of your domain.

As you key input your templates, the middle
component, you can paste in terms from
the bottom section using a function key, F96.

Translation Support Systems
(Thesaurus)
Achvec O.1., Inc. PO Box 200363, Providence, RI 02940-3630, USA. Tel: +1 401 770.0700
A package with two alternative levels: Au-
dtorm and TransActive. Both work with
screen output to a window in a window,
and with the Thesaurus dictionary of your
choice from the many available.

TransActive lets you create any number of
either text dictionaries, linked-up entries, and
do searches and searches within the
windows of the screen.

UK: Test Tools
International BV, Priez Haarlemsestraat 52-57, 1075 AE Amsterdam, Netherlands. Tel: +31 (0)20 604.60.91

A Windows-based dictionary which
allows instant retrieval, copy and
paste. Available only in German for B500.

Terminology:
MANAGEMENT
SOFTWARE
The borderline between terminology
management and machine translation is a
fuzzy one. In any case you can mangle the
words and phrases that you will use in
tagging, in prepation of a linguistic client.
TSS supports three types of mobile dictionary: general, industry-specific and company-specific. User entry is "easy as pie," says AVMET. Language pairs developed include combinations of English, French, Italian, German and Spanish.

The list price for the AVMET English-German is $5,920. One site license is valid for up to five workstations.

Interboard Syntax Software SA, Georgescronen- str. 38, 7800-Basel, Switzerland. Tel: +41 (0) 11 713 2500. Short for 'inter-board terminologies and Dictionary systems,' Interboard specializes in the management of large electronic terminologies. The company is based in Zurich and is highly suitable for multinational organizations. Interboard's base price in New York, Training and version fees vary.

RAM, monitors and a copy of Syntax's software, which costs $1,900.

Lugos Linguat Corp., One Petersham Place, Dedham, MA 02026, USA. Tel: +1 (617) 705 3800. Lugos Deutschland GmbH, Lannerstr. 17, D-37 Standort 31, FRG. Tel: +49 (0) 586 69 97 38. Lugos is in English-German and macromicro-based packages for those in the German-speaking countries. English-German or French-German bilinguals are in preparation. France-based La Langue is a German-French one. Lugos, the German company, has 50,000 words in each language in its databases. All three of its bilingual dictionaries are available, which is an advantage since Dictaphone for English starts with a lot of words, and the dictionary's database is over 100GB. Lugos is in English-German and English-French, and is available for a number of workstations, though the cost is high.

The output rate is split between Memory Tech., Knowle, MA 02714. Knowle is a memory technology firm that makes the MemoryTech product, which can be accessed either by a single user or via a network. Two-year English-French is now available, with two-year English-French and English-German in preparation. MemoryTech divides its dictionary costs among a number of companies and makes them available to the public.

Training and support are available both in Europe and North America. embroider results are achieved after six months of learning by both the operator and the machine.

Average output: two to three minutes per 200 words. Hardware: 3MB RAM based on a Macintosh Plus or a MacII with 4MB RAM and a 300K hard drive. Price: from $2,5000 per month for a one-year contract.

Metal Syntaxe SA, Otto Hahn-Ring, 8000 München. Tel: +49 (0) 89 600 470 70. Metal is a standard syntax-based system written in the ESPAI language, based on two microprocessors: the MS/1 or the Motorola 68020, or larger.

One language pair - German to English.
MULTILINGUAL OCR SOFTWARE
To be up to its multilingual mark, OCR software has to be able to recognize all Western European character sets and its accented characters and accents. In addition, it has to be able to handle characters and symbols from all the major writing systems in the world. Some of the packages mentioned here are capable of reading Latin and Cyrillic alphabets. Arabic, Chinese and Japanese are still beyond the capabilities of all of them.

The best OCR packages are "intelligent" in the sense that they can detect the identity of a word from its context, using a global database and local analysis to identify the word or sentence from the document.

TextPort
Ciaencia y Tecnologia Aplicada SA, Roger de Lluria 56 #08007 Barcelona, Spain. Tel: +34 (93) 214 8577

Translation: TextPort is one of the most advanced OCR packages on the market. It recognizes text in the following languages: Arabic, Chinese, Japanese, and Korean.

Teofill
Teofill SA, 3 ave. del Arte, 39013, Barcelona, Spain. Tel: +34 (3) 223 77 21

Translation: Teofill is a fast and accurate OCR package. It supports more than 30 languages and is fully automatic.

PC Translator
Linguatec Products, P.O. Box 1201, Woodside, NY 11377, USA. Tel: (718) 393 2814

Translation: PC Translator offers two-way Spanish-English, and one-way French-English. In addition, Danish and Swedish into English with prices range between $740 and $250.

MISCELLANEOUS GIZMOS

Intersoft's Cantonese Dictionary of 26 Languages in Simultaneous Translation
Intersoft Systems Corporation, 3220 S. Executive Dr., Virginia Beach, VA 23462, USA. Tel: (804) 496 5116

Translation: This dictaphone-based multilingual dictionary for the PC contains 2000 common Chinese terms, translated into 60 languages. Its reactivity and ease of use are outstanding.

Lyre String's Chinese Dictionary of 26 Languages in Simultaneous Translation
Kodak, 600 McClyde Ave, Charlotte, NC 28217, USA. Tel: (980) 898 8818

Translation: This dictaphone-based multilingual dictionary for the PC contains 2000 common Chinese terms, translated into 25 languages. It is not retranslating and fully intelligible with wordprocessors within both compatible windowing environments or in Macintosh software. On your laptop's hardline, you could turn it into a phrase book. US $49.95

The Voice
Advanced Products and Technology Inc., Santa Monica, CA 90405, USA. Tel: (213) 905 8300

Translation: The Voice is a software development company that specializes in natural language processing and speech technology.

The Vozez
London WC2U 5JH, UK. Tel: (071) 240 3630

Translation: The Vozez is a software development company that specializes in natural language processing.

Berlitz Translations
2-3 Louisa Street, Marylebone, London W1H 2UQ, UK. Tel: +44 (0) 71 632 4764

Translation: Berlitz Translations is a well-known language service provider.

Alpha 40
Worldtalks-Computer Lageschke KG, Neuenstein 1 0600

Translation: Alpha 40 is a software company that offers translation services.

TRANSLATION/ DOCUMENTATION COMPANIES

Traditionally, self-employed translators have been quite effective, but agencies that do more than hire 20-odd individuals in a row for a month to get work done, seem to have nothing to offer. However, as the need for specialized translation services continues to grow, new companies are appearing that provide high quality. Companies such as Latchex, Intersoft and Intersoft have developed the translation industry out of the cottage and given it a professional face.

Latchex International
2-3 Louisa Street, Marylebone, London W1H 2UQ, UK. Tel: (071) 632 4764

Translation: Latchex International is a well-known language service provider.

Mondos Translation Service SA
via Fondos D. Roosevelt 1 00129 Rome, Italy. Tel: +39 06 247 720

Translation: Mondos Translation Service SA is a well-known language service provider.

Leitch International Documentation Network Inc.
840 Trade Street, Chatsworth, NJ 07921, USA. Tel: (201) 490 3280

Translation: Leitch International Documentation Network Inc. is a well-known language service provider.

Sogep SRL
Via Alberti 2 04149 Milano, Italy. Tel: +39 02 34 24 67

Translation: Sogep SRL is a well-known language service provider.

Trantek Ltd
11 Adehy Road, London NW1 6JU, UK. Tel: +44 (0) 71 479 3257

Translation: Trantek Ltd is a well-known language service provider.
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MAIL TO: T-Shirt, LT/Electric Word, PO Box 3988, 1687 EL, Amsterdam, NL
We started out determined not to allow that overused expression to creep into this "1992" issue of LT/ Electric Word. Then all these harrowing examples of the localization blues started crossing our desks, and we were forced to re- consider: what we are confronted with here is truly The Tower of Babel beyond cliché.

In the following eight stories, you'll read why. You'll also read from the determined will overcome that demur—But ex- hibition—this said. Multi--cultural now plays first world. Want a taste? Paul Fisher explains why Astor Tail's diaries are hardly pro-definitely not Workbench in English. By Sylvester and why they're definitively not are in the US. But still banned.

Andrew Strecker, far behind for a boxed com- mons, weighs in with a report on how SAP's the theories of Schurzinger on Italy to state customs to find out if they "broke the leg" in an element in the risk reduction of your insurance sales bare.

Jim Kato explains why a rather new English is in Serbia-Croat may not be Sally to you. But it definitely makes SAP's little heart palpitate.

Morgan-Glasco Simons explains why Canon Europe cannot support Greek while Uni grouped it back with an eye-opening story on one branch of India that tremendously breaks with the 1992 when against Inge France. The world of well, well fans.
SOFTWARE

Ashton Tate

The goal is to localize
inside of four weeks

By Paul Fisher

In and beyond America's borders, more
than most, the company takes no chances
when it comes to adapting to Europe's
linguistic diversity. LT/Electric Word's Paul
Fisher takes a look at the pitfalls and price
of getting your message across in a multi-

lingual market.

At this moment we're in the middle of
this magazine's issue dates. It's 2-
6-89, Republic Day in Italy, so con-
gratulations there. 2/6/89 is just
another working Friday in France
and Britain, as it is in Germany. Though they'd prefer
the date written 2.6.89. In Sweden it's 26/6/2, and
for Americans, aranzioso to make business sense out
of all the minor European differences, it is 6-2-89.

Such detail must be correct if PC business
software is to appeal to the penny-wise nickel
small business people who buy it. But translating
this software and the bulky instruction manuals that
go with it has to be done in a hurry. The average
package hits just 18 months on the market, and
although European shelf lives can be stretched
longer than in the States, the Old World likes to
keep up with the New — which is, after all, where
virtually all mass-produced software originates.

ONE MONTH TURNAROUND

Ashton Tates, one of the world's largest vendors,
took just three months to rush out French and
German versions of the @BASE 4 package, which
were launched on to home territory last October. Not
fast enough for Nick Pollock, the European market-
ing manager of Ashton Tate's European Translation
Coordination Centre at Stege, near London. "Our
objective," he says, "is to do it inside four weeks."
That's going to take more cooperation and an
understanding from Ashton Tate's programmers in
Los Angeles. They are issued with an infobase
manual called the International Functional Require-
ments Document, which has chapters on national
language standards and national character sets.
That's taking care of the technical side of things, not
the more mundane issues.

American programmers are encouraged to make their programs as open as possible to any
meant. Certainly with regard to anything displayed
onscreen. Especially helpful are screen layouts
that allow space at the bottom, because translations
from English, particularly into German, tend to take
up more room. A few substitutions like unter-
streichten for "underlined" and Bildschirm for
"screen" soon defy German translators dealing with
a packed screen of English text.

The biggest problem is with the how-to-use-it
elements that always fill software manuals. There
was the IBM accounting package telling English
readers of the gardening company that "get out in
the garden." A reasonable enough idea to an Eng-
lishtmonk with some soddenness he wants to liqui-
date, but the example made more serious when the
American "out" was replaced by "out." American.
Zip codes and Social Security num-
bers are similar examples. The latter are invari-
ably abbreviated to "SS number." Zip codes sound
vaguely Latin in any other language than American,
and there can't be many Germans alive who want to
be reminded of their SS number.

LOCAL TRANSLATORS

Instead of employing inhouse translators, Ashton
Tate follows standard practice by subcontracting
translation work out to the countries where the
packages will be sold. Its main translation agencies
are led, with head offices in Amsterdam and sub-
sidaries in Scandinavia, France, Spain and Ger-
many, plus Kiefer Zander in Munich, Lisztin in
Spain, Ullsee in Italy, and 1-Micro and Team in

Sweden. "We use translation companies," Pollock ex-
plains, "in the same way that we use specialized
accounting and legal services. They're sensitive to
local requirements. Additionally, we can now see that
they employ translators with a basic knowledge of
computers."

Ashton Tate supplies its agencies with its own
Translation Kit which displayes to be altered — in
Ashton Tate's jargon, the "knowledge files." Shorter
messages are displayed with a translation box ad-
joining for immediate translation, while full-screen
windows scroll down for the full-page help screens.
The Translation Kit are guarded to avoid software
piracy, having for instance, translation companies
from access to any code that might lay Ashton
Tate's commercial secrets bare.

All aspects of a program's interface are trans-
lated or adapted except for embedded program-
matic language such as the F-Base 4. Ashton Tate
takes the line that any expert enough to dig into
this core text will be conversant enough with Eng-
lish as comprising its linguistic frame to cope with
commands like "ACTIVATE WINDOW," "CALL,"
"COPY FILE," and "SEIZE BOX." Every other bit of
English is translated.

THE RIGHT WORD

Programming Kim and well-briefed American pro-
groceries will help, but Pollard points out that event-
ually "he has to rely on a mixture of the translators' experi-
ence and sympathetic familiarity with techno-
ological terms. Take, for instance, a word like 'tool.' Before you get very far into dBASE IV, you'll get to the Con-
trol Center part of the package. This displays the main options to be followed, and on a menu bar at the top of the screen, one of the options goes under the word 'tools.' In common-or-garden English, 'tools' include chunky spades, spanners and saws. In computer-
ese, the word has been extended into a serviceable metaphore for commands such as those to list the files already in store. The metaphor doesn't work in German, where the literal translation of 'tools,' 'werkzeug,' would mean much in the working life of a Mercedes mechanic but merely the office-worker. So in the German version of dBASE IV, 'tools' are Diver-
sen, which directly translates as 'miscellaneous.' Similarly, a direct translation of 'tools' into the Italian, giusta- 
no di un po' di buona maniera but not be an Italian computer and so here after servizi (liter-
ally, 'other services') is used. The French translation is simple enough... useless, and suggests why English-speaking com-
puter experts use the words 'tools' and 'utilities' interchangeably.
Incidentally, 'tools' isn't even universal in Eng-
lish. Compilers, for example, are known as a "directory of life utilities." But 'tools' they are for Ashtons and Tates, and indeed it doesn't hurt untrained computer users to think of themselves as mechan-
ics wrenching information into a workable shape. There are further divergences. Where the IBM Structure Query Language (SQL) refers to "col-
mumns" and "row," in a full address and the ZIP Code part of it, Ashton Tate prefers "nave" and "fields." A "field" in this instance is translated literally into a German Feld, a French champ, and an 
Italian campo. If you're ever sure that computing might be a letter-day Tower of Babil, rest assured you're not the first. "

EUROPEAN H O S S

In fact, it sometimes seems that in certain cases, we shall never speak unto nation
—at least not without a good deal of hassle. And for soft-
ware experts, this adds up to an expensive inter-
mingling problem. dBASE IV was a move with transla-
tion considerations involving 3,000-page instruction man-
ual plus 1,500 new versions and 5,000 help mes-
sages. Now, the sales of the manual, says Pollard, costs
between $20 and $30, with test on the screen careg-
ning between $1 and $3 to translate. Total bill for a simple translation: $760,000. "The price of being thor-
ough," Pollard calls it.

With translations into French, German, Dutch,
Italian, Spanish, Swedish, Portuguese, Danish,
Norwegian, Finnish and Arabic, the 4.4 for just one package will be $2.5 million. Multiply that by the
20 packages that Ashton Tate has on the market, and it
's $50 million. Add to that its main competitors,
Lotus and Microsoft, and you have 150 million dollars' worth of translations for general purpose
PC software packages alone.

Although Ashton Tate has a policy of devolved translation, there are still 30 people working under Pollard at the European Translation Coordina-

Center at Slough in England's high exiting Thames
Valley, Nick Pollard, who is not a linguist aside from his fluency in market-speak, "does effortlessly on page applicators with 'language ability' and has
French, Dutch, German, Persian and Polish speakers
on the staff.

However, he'll take anyone with skills in soft-
ware project equipment and the bureaucrat's abil-
ity to cope with the nightmares of printers who won't 
binders and keyboard tem-
plates on top of documentation and the software itself.

FRENCH, GERMAN, CROAT... Joana Zambal, a project manager who works for the German distributor, li-
asen with German transla-
sors. She's the main con-
tact they have with Ashton 
Tate, as they never talk to
the programmers in Amer-
ica. She is a thoroughly modern linguist who learnt
Polish at home, is also
fluent in German and Eng-
lish and has more than a
smattering of French and Italian.
She has other languages too—dBASE, Basic, Fortran, Cobol and Assembler.
"I don't speak these though," she says. She echoes
her boss saying, "The type of people we're inter-
est in to localize our packages aren't simply straightforward local translators. They've got to understand our market and have an existing group of thes-
technology. These things are more important to us
than beautiful grammatical structure." 

There was the IBM accounting package telling English readers of the gardening company that "put sod in the garden."
A reasonable enough idea to an Englishman with some sod(omite) he wants to liquidate, but the example made more
sense when the American "sod" was replaced by "turf."

And that understanding doesn't necessarily have anything to do with either computer or human
languages. Translators, for example, keep document translation the same length as the origi-

nal English to prevent bulkier manuals bulging with 
of standard boxes. Indeed, it's the print and production problems that perplex Pollard. When asked what technical developments would improve his job, he talked of new opportunities of desktop publishing to speed up package translation times from three to one month, and even greater commitment from his colleagues in the States.

Any possibility of using PC technology to auto-
mate the business of translation? "One day," he
says, "I'm sure artificial intelligence experts will
give us serviceable automated translation tools.
Some of the English words we use have multilingual dictionaries everywhere, but the purists have their 
dreams. I have an open mind, but I suspect automa-
tion isn't going to help us for a while yet."

Paul Fisher is a London-based freelance journalist who writes for the Guardian and the Independent newspapers.
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The salesperson arrives with a laptop and a natural language interface.

Josephine

It is surprising, then, to learn that the mammoth company, which has a high rise to itself in Paris's La Defense business district, is investing in language technology to help process this enormous workload.

As territory sector operators, insurance companies such as UAP usually don't have R&D departments to help design these new products. But with the growing internationalization of markets, the pressure is on to find new solutions to gain and maintain their business. And this means, in the jargon of the industry, computer applications.

About five years ago, UAP, a state-owned corporation with an annual turnover of 55 billion francs (US $11.5 billion) realized that it needed to enter the technological age. It set up an office to solve the problem in two ways: first, by offering its top management state-of-the-art information on new technologies likely to improve business prospects and productivity; and second, by extending its traditional "technical" department to include collaborative projects with academic and other research groups.

SINGING UP SCIENTIST

So in 1983, look-ahead former UAP chairman Yvette Chaussagne instituted a scientific council composed of academics and applied scientists, whose job it would be to set policy on research and training strategy for the whole company in close collaboration with director general Roland Lestat. The council's president is Professor Michel Fruchard, an international recognized mathematician and physicist.

The executive instance of this policy was, aptly enough, called the Mission des Technologies Nouvelles. And in 1986, Eric Taffin, an assistant professor of mathematical physics at Geneva University, was given the task of coordinating its activities. One of the first fruits of its work is already at the prototype stage: a natural language interface allowing free-form text to be entered on an insurance policy document stored on one of UAP's big IBM 390's.

Swedish-born Taffin diagrams the whole interface scenario on the formula-forecasted whiteboard at the wall behind his desk.

It goes like this. An insurance salesperson arrives at your home with his laptop computer, trying to sell you your insurance. He asks you questions about your job, your medical history, and your sporting activities, allowing you total freedom in your replies. Multiple choice questions just don't work for risk calculation, so he has to enter it all by hand.

Using a modern link to a switched data network, he can send the information you've given him straight to the selling interface in the UAP processing center where it will be read off, coded and rammed straight into an expert system. Here, the insurance risk in question will be automatically evaluated, and the output profile from the ex-ae is then enter + premium-assessment module, which will provide an instantaneous costing for the policy.

This result will be returned to the origin ring, encoded into French and appalled back to the insurance man in the field. He will read off—or print out—the policy, so you can decide on the spot if you want to buy. Quick and clean, n'est-ce pas? But feasibility difficult to cohere together.

ELECTRONIC DICTIONARIES

True to their "scientific" policy, UAP have gone to the top in their choice of collaborators for the interface solution.

To get a system to process the words entered by the insurance agent, you need a set of opera-
tional electronic dictionaries and some kind of parsing machine that checks the possible combina-
tions of words. The ideal linguistic solution would be a full-bloomed French understanding, but such things are still only a dream in researcher's eyes. Who better to help out than the famous LAL (Laboratory for Automated Documentation and Lin-
guistics) team under the far-sighted leadership of one Maurice Gross? Logically enough, Gross, professor of computational linguistics at the University of Paris VII and director of LAL, was invited into the UAP scientific council in 1986, when his patiently constructed "lexi-grammatic" electronic dictionaries were pro-
posed as ready-mades for the initial interface pro-
cessing. In another move, Laurent Pivat, one of Gross's doctoral candidates, joined the UAP New Technologies team in 1986 as a linguist, knitting ever-closer ties between UAP and the university research team.

To get the rig to process the input, UAP needed not only the basic dictionaries, already developed by LAL, but also a set of specific applications dictionaries for professions, medical info and sport activities, to complete a further all in the compound areas in the three fields ("hearing engineer" or "back injury").

Stringing them together meant long hours of analyzing typical insurance contracts for formal patterns of word usage. And since the test was to be input by an error prone human being, a robust pho-
netic-form dictionary was used to help correct spelling before the heavy work of processing began; 30 percent of machine time during a run was spent on spelling correction" says Pivat.

FINITE-STATE AUTOMATA

Then came the finite part: building some kind of con-
traction to handle the restagings. That is, to predict that an en-y such as "broken left leg", is a possible element in a risk calculation, while "broken "swims-
or" or "fractured back arm" aren't. In other words, among all the possible combinations of words in the language, which are the plausible ones for the application in question?

Pivat, with Francois Brunet of the UAP com-
puter department, solved this problem elegantly, by using the theories of Paul Schenker (yet another scientific council member) on finite
state automata that generate a standardized syn-
tactic output from the language end of the auto-
matic processing of policy contracts. This output is then ready to enter the risk-evaluation ex-
ys module, which is organized around the semantic interpretation of a client's profile. "This is the first time in France that we have used in an operational natural language interface," claims Pivat.

If it would have been possible for the rig to output a UAP-dedicated semantic interpretation directly, pluging the phrase-structure automatics straight into the expert system it could have been even better. Pivat reckoned however that for reasons of main-
tenance and future development, it was best to split the language recognition and semantic interpre-
tation parts. "It leaves the language module free for other uses, since only the semantics codebook need be rewritten for another application."  

Of the three ex-ae comprising the total auto-
matic process control system, the taxels calcula-
tion program, and the "natural," being based, as Taffin says, on existing computer applications. A prototype of the risk evaluating expert system is already running on a dedicated machine, but is not yet integrated into the whole computerized actuarial system.

"It's difficult to port to the central computer," explains Pivat, "since in a territory sector activity like insurance, languages such as COBOL have been traditionally used for all accounts management work, whereas the expert system is written in Lisp. We 'york about a day to get the rewriting necessary for a full port."  

As for the natural interface itself, the prototype can be tested in a special emergeric for professors, plus a generous subset of typical medical data input by physicians. The rate of "understanding" should stabilize at 80 percent. But as Taffin explains: "Ten percent of all client data is so compli-
cated that it has to be sent to a doctor for additional detailed entry. "He predicts that in a year, the whole rig will be up and running, decentralizing insurance policy proposal management and releasing staff from the drudgery of routine paper pushing to work on the interesting contracts.

NEURAL NETS

Moshe Fritz’s scientific council and UAP Director General Lester have now anticipated the input problems faced by a brilliant but keyboard-shy insurance salesperson.

In keeping with the company’s top-end-parallel policies, UAP is collaborating with US physicist Leon Cooper, who won a Nobel Prize for work on superconductivity and now runs a company called Nestor, dedicated to neural network applications. Together, they are developing a “hand-held data input device,” which will learn to recognize— the neural way—the agent’s manuscript copy without using up computer power modelling the letters—as in wild current handwriting recognition.

Tiffen sees a profitable future for such a device, not only in insurance but in banking. How fortunate that UAP has just purchased a print development program with the Baronie Nationale de Paris, the leading French commercial bank, in the fields of insurance, credit sharing and savings management.

And UAP plans to develop and distrib-ute the product in partnership with “one of the biggest computer manufacturers”—though which.

The paperless office is a logical forerunner of the idea behind the automatic natling processor.

one remains a secret.

This UAP method of developing hittech prod-ucts with other companies has already paid off. As can be imagined, the paperless office is a logical forerunner of the idea behind the automatic natling processor. And UAP has now acquired a program that takes some of those 15,000 daily letters, digi-tizes them via a scanner and stores them for online consultation by interested departments. Philips now commercializes the device under the name "AMIROG.

Even the lowly telephone operators get a look in when it comes to UAP technology upgrading. UAP is developing another unique application of the LAD, phonetic-form spell corrector module, this time as a name-searching system for the company telephone operators.

Someone rings up and wants to speak to a staff member whose name they know but cannot neces-sarily spell. The operator will enter a phonetic approximation, and the system will produce a list of possible names held on the company books, based on the phonetic template. No doubt about its usefulness: UAP has a total staff of 27,000 on their house phonebook!

Andrew Joscelyne is LIT’s rising West European correspondent.

PROCEEDING

A NATURAL

LANGUAGE ENTRY

DICTIONARIES

An input expression will be processed on a computer using a variety of characters bounded by ideograms. The algorithm that can encode, search and compare such strings is relatively well-known. First, a recognition check will be run against the 6,500-form standard LAD (dictionary LADHAR and the 250,000-form con-temporary, language, scripts, etc. in the SELAP dictionary). This process is not to say that other inputs are not in the base.

For the special UAP application, there is an additional gramatical, spelling and dictionary committee, the result of which will go into a new, simplified, extended dictionary committee, which is in the process of being written.

SPELLING

If spelling is not in recognition, it is checked by SELAP, the electronic dictionary, with a result that is returned immediately and also a list of possible alternatives in terms of similar spelling forms.

Phonics: the speech-synthesizer technique used is a trigraph (three-letter recognition) which allows the user to speak a sequence of numbers in a variety of combinations ("a", "an", instead of "in") automatically. SELAP can re-produce combinato-ries in French—and the rule of the number of letters in the alphabet—only 15 with actually exist in lexicons. Knowing this, one is able to see what one can actually search for.

Another method is to attribute to each letter a prime number, so that when letters are combined into words, the multiplication of the primer gives a unique number to the word. Two words with the same number will then deter- mine not to be synonyms. The allowing the vagueness of synonyms is not in any way in case of non-recognition.

THE SHORT STORY OF THE LAD

Since connected input will be irrepar-ably preprocessed, the system should be docu-mented, ready for entry into the computer system, with a module containing a finite-state automaton.

Before attempting "etymology," that is, a phrase as a pathway through a possible se-quence of words, the system borrows the rule of the alphabet when the finite state reaches the final state, the phrase is accepted as possible and not given a word-valued form.

The automaton also shows the underlying relation between structurally different expres-sions for example "broken left arm" or "broken left limb", and "broken left leg", and "broken left limb", without needing to list every single expression.

The output from the automaton contains a consideration of "etymology" from alphan-abetic variation and ready to enter the expert rescheres to be translated to "etymology".

From such a "etymology", the user can then use such as "broken left arm", "broken left leg", "broken left limb", "broken left hand", "broken left foot", "broken left side", and so on. This can be done in a variety of languages and that the method is used in a virtual pre-process, is then sent to the product managers for each language and the terms for medical and surgical medicine amount.

As the German language is a language of Germany, there is a special effort to translate technical medical terminologies and that there are programs to be translated in the languages people actually need to write on their policy forms in the first place.

anon Corp.’s multilingual documenta- tion burden is an onerous one. It encompasses brochures, technical manuals and user manuals on pro ducts ranging from calculators to laserprinters—all in no less than thirteen lan-guages. And, in order, has been working on its own Inovations—like a translator’s guide for deter-mining the extent of space the work will take up, and a translate-friendly word processor that will automatically generate suitable text codes. Maria-Claire Dervin took a trip to the Japa- nese giant’s suburban (Ohio).

TWO-PRONGED

APPROACH

The entrance hall to Carol Corp.'s new European headquarters looks something like both the Forum Romanum and Stonehenge. Its message to this company thinks big and thinks European.

Here, in Amsterdam, one of the outskirts of Am-sterdam, documentation is on a vast array of con-sumers goods is produced for a large segment of the world market. Two years ago, the company decided to divide documentation production into two departments: one to handle promotional material and the other post-sales documentation. Since then, both departments have developed their own individual working meth- ods. While documentation production has been contr-olled on a European level, translation is done locally.

Product managers at Carol's local European of-fices are in charge, and most of them use regular freelance translators to do the job.

Once the translations have been returned to Amstelveen, the texts are combined with photo- graphs and other materials, edited and distributed throughout Europe, the Middle East and parts of Africa.

SALES MATERIAL

Carol's Marketing Service Department is respon-sible for the production of promotional material. Each year, it produces ten to 15 million A4 pages of brochures and related sales documentation. A lot of paper indeed, but not one page too much. "As Marketing Services manager RodriGuay de Vries puts it, "When introducing a new product, Carol normally only has one sample machine for each market. In a country like Norway for example, that's not enough to show everyone inter- ested in our product how it works. The information is based on the brochures in.

In the production of such brochures, Carol's own people are assisted by freelancers such as copywriters, translators, designers, printers and publishers. De Vries: "I'm happy to say that more and more work is being done externally. With the growth Carol is experiencing, it's impossible to do everything by ourselves and still keep the process under control."

De Vries and his staff coordinate the production of brochures, they make the selection, from their Swiss copywriter and designer produce an English manuscript. Inasmuch as in the text has been placed in its final form, is then sent to the product managers for each country, and the texts are translated into the language of the country.

This is where the problems begin. Not only does the manuscript have to be translated into eleven languages (German, French, Dutch, Norwe- gian, Danish, Swedish, Finnish, Spanish, Italian, Greek, Portuguese and Arabic), while maintaining the uniformity of style Carol wants to see in its brochures. But all these translations have to be back
OFFICE AUTOMATION

Canon's proprietary translator-friendly
wordprocessor slashes the cost of adding new languages 60%.

By Marie-Claire Dassen

In Amsterdam on a given deadline, the vagaries of local postal services notwithstanding.

TECHNICAL DOCS

The Technical Documentation Department is responsible for post-sales documentation, which includes user manuals and technical references. Like Marketing Services, Technical Documentation likes to avail itself of external expertise to keep production of some seven million A4 pages of text per year manageable.

The production of purely technical documentation such as parts catalogues and service manuals is distinctly different from that of user manuals. Since service manuals serve as training material for maintenance personnel, it's essential that they be produced as quickly as possible. As soon as Canon has an assembly line-ready prototype, training has begun.

For this reason, service manuals are developed very early in the production cycle of a new product. These manuals are aimed at technical personnel, so factors like layout and attractiveness are of secondary importance.

User manuals, however, have to be both clear and attractive, since they form part of the Canon image. Or, as an assistant general manager, Jan Hooekstra, who together with Elmer Veen, a graphical designer, oversees the production put, "A good machine is useless if its documentation is ugly."

For technical documentation, the basic manuscript is produced in the Canon head office in Tokyo. There, technical writers create first a Japanese, then an American English version of all service manuals and catalogues. This text is sent to Amsterdam, from where it is then sent to all the European distributors.

The American English manuscript is translated into a number of European languages and printed. Service manuals and parts catalogues are translated into just French, German, Spanish, and Italian. Speakers of other languages will have to make do with the English version.

During the production of end-user documentation, a lot of attention is paid to layout, illustrations and use of color. The English manuscript likewise originates from Tokyo. After being checked in the United States, it is sent to Amsterdam, together with the litographs for printing.

From that moment on, it is Hooekstra and Veen's responsibility to produce this same manual in twelve languages (those mentioned above with the exception of Arabic but including British English), without having to make new litographs, since this is the most expensive part of document production.

HELPING THE TRANSLATORS

With a well-defined deadline, the standardization of non-standardized parts and the discovery of more economical means of production, service manuals also need to be updated regularly. To keep everything up to date, Canon publishes service bulletins.

Hooekstra estimates that for a product with a production cycle of three years, an average of 100 changes will need to be made in its manual. As with the manuals, the service bulletins are first written in Tokyo, then translated, printed, and distributed by Canon Europe.

An ongoing problem is fitting the longer European texts into the layout of the original manuscript (French is notoriously problematic). Although some extra space is usually reserved when the layout is designed, a lot of word juggling still needs to be done before a text is both adequate and not too long. To make life easier for its translators, Rooydsheun van Veen's department is now developing a translators' guide which generates grids to assist translators in estimating how much space their work will require.

A new technical manual, factors like layout and attractiveness are of secondary importance.

Another typical problem faced by Canon translators is the challenge of keeping up with technical developments in their fields.

"On the other hand, if translators are too knowledgeable about the subject matter of the texts they are translating or editing, they tend to rewrite the text, instead of simply correcting it — which is what they are hired to do."

In addition to considering length and fidelity, translators must also include typesetting codes in their text. Typesetters could be misled by the bare texts and reject the required codes, but this is not a good solution, since typesetters cannot be expected to be fluent in Japanese languages, let alone type them accurately.

Hooekstra and Veen decided not to try to skirt around the problem but to eliminate it: in the last two years they have been developing a translator-friendly wordprocessor.

Canon Europe supplies the translator with the original text on a floppy disk, and the translator can simply type over the English text as it is displayed on the screen of his/her PC. The typesetting codes are embedded in the text and can be ignored. This way translators can do the job they were trained and hired to do: translate.

CANON'S OWN WP

Under Hooekstra and Veen's supervision, a Canon team took two years to develop the program. Why not use an existing wordprocessor?

Hooekstra: "The problem was that there was an enormous diversity in the working habits of our translators. One worked with two of the newest PCs — one for his source text, the other for his translation. Another of our translators, however, still wrote everything by hand and had his wife type his manuscripts.

"Both are excellent translators, but their methods of working couldn't be more different. Our job was to find a wordprocessor they and all their colleagues could work with. One that wasn't too sophisticated for the one or too simple for the other."

Unable to find what they needed, Canon decided to develop one themselves. It had to be efficient, economical, suited to translating, and run on a PC.

Hooekstra and Veen first talked to their translators and asked them what they wanted. A wordprocessing program was developed on the basis of that information and introduced last February.

The program is well received and is considered favorable.

The Canon program can be adapted to any language, including different keyboards such as the English QWERTY and the French AZERTY. The only language not supported is Greek, simply because keyboard layout has never been standardized in Greece.

To illustrate the amount of time Canon is gaining by using this program, Veen showed a printed manuscript produced from a floppy disk received just a few days after the last correction of the new wordprocessing program, it would have taken at least three to four weeks to prepare such a translated text for printing.

The economic benefits are likewise quite tangible. Calculating the cost of the original English manuscript at 100%, in the old days each additional language added another 50%. For Italian and German, this meant a total of 75%.

With the new system, each additional language costs just 10% of the original, bringing the total, for all languages, to 220%. A saving of more than 70%.

Any other hightech tools being examined? For very specific texts, namely the instructions on the copiers and printers themselves, a terminology database is being set up in Tokyo. Canon is standardizing these texts because of the very limited amount of space available.

Still, one question remains. Where does Canon keep all the questions of sheets of papers they produce each year? The answer to this question can be found not far from the classical entrance hall. In a huge warehouse. Where else?

Marie-Claire Dassen is a freelance writer living in Amsterdam. 
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MANUFACTURING

Hardware, software?

warming ways are best:

By Jutis Kaza

cent are outside Sweden. With headquarters
in Gothenburg on Sweden's west coast,
SKF is represented in 130 countries. SKF's
single largest operation is in West Germany,
followed by Italy and France. For all practi-
cal purposes, SKF is a European Community
company.

Human know-how and translation's
brains are still the core of multi-
lingual documentation activities at
SKF, according to marketing
communications manager Jan
Johnsson. Johnsson says that the company's single
most important multilingual "document" is its main
product catalogue, which covers some 1,000 pages
and is produced in 15 languages. The catalogue lists
some 25,000 roller bearing and related products
and is updated once every five years, with the
current issue coming out this year.
The five-year cycle means that the last time the
catalogue was produced, the entire Macintosh-
inspired desktop publishing revolution had not yet
been born. It also means that the next time SKF will
confront the problem will be 1994 — and what
technology will be available then is anybody's
guess.

Johnsson stresses that while most of SKF's
multilingual translators use word-processors to produce
their final product — desktops and hard copy are
sent to Gothenburg for final checking and final
formatting before typesetting
— there are no plans to break
into machine translation or
other translation assistance
software or hardware.

"The way the main cata-
logue is produced is that it is
compiled at SKF's
in Schwerin, West Germany.
It is written in German and
automatically translated into English by our techni-
cal editors. They set the terminology," explains
Johnsson. 

The English manuscript then becomes
the document from which all other translations are
made. For instance, the English proof is used by SKF
in France to do the French translation.

All subsequent translations, into a total of 15
languages, are then done by SKF subsidiaries in the
appropriate countries or regions. Aside from Eng-
lish and German, the main catalogue appears in

Italian, Spanish, Portuguese, Dutch, Swedish, Fin-
nish, Polish, Serbo-Croat, Russian, Hungarian, Chi-
nese and Japanese. The typesetting of all versions,
mainly from desktops produced on IBM PC/com-
patibles, is performed by Sybro A/S, a Danish
company that specializes in multilingual phototypeset-
tings.

DECENTRALIZING

According to Johnsson, SKF has a number of other
technical publications and invaluable specialized cata-
louges that are published with greater frequency
than the main product list. "What language and
numbers are used varies according to which countries are
interested," he says, adding that translating that translation
then done locally.

"For advertising and commercial publications, we
have a Language Manager, a British person
employed by SKF in England, who supervises the
correct use of English in all printed matter and can
also proofread in English, Spanish, French and Ital-
ian. He then contact persons in the organization
when he can to check anything suspect that's
not in English but in one of the languages he can
read.

SKF's documentation would appear to lend
itself to centralization, such as the use of a single
worldwide, work-package documentation sys-
tem, but Johnsson says there are no plans to imple-
ment anything of the kind.

"We see all business as local. So we are
decentralizing more and more. As far as termin-
ology goes, the local units can use the main cata-
logue in their language as a reference," he says.
At times, SKF has experimented with using
outside translation agencies, but this has proven
unsatisfactory, according to Johnsson. If SKF has
any language policy at all, it is that the informal

"Artificial intelligence cannot
replace the human translator. It
might be able to simplify a few
steps, but you still need the human
senior translator . . ."

Jutis Kaza is a T.S. Scandinavian correspondent
Are you getting your business ready for the new shape of the world’s largest trading bloc?

Today’s marketing maps of Europe will be unrecognisable by 1993. A company proud of having 20% of its national market in 1988 can expect, by 1993, to have only 3% of the European market, at best. And by 1998 new competition could savagely reduce even that — unless you plan and respond now.

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LAW

Skadden, Arps

A Priori, practicing law across international borders should mean confronting problems. According to the world's biggest law firm, however, language is not only not a problem, it's an opportunity. Why? Because the American law firm Skadden, Arps knows that international law has a linguistic frana (and we'll give you a hint, it's not Latin).

It's axiomatic: law forms create paper work, and big law firms create a lot of paperwork. With its mind-boggling 1000 lawyers, Skadden, Arps is the largest law firm in the United States (and hence probably the world), so one might logically deduce that it has the largest paper handling problem. And now with a presence in Europe and Asia, one might also reasonably deduce that this problem is compounded by practising law in different languages. One might further deduce that as a consequence of its American and foreign experience, Skadden, Arps would have a thing or two to teach other law firms about automating paper work, in one or more languages, and one would be right— and wrong. Right about automation, and wrong about dealing with many languages.

Headquartered in New York, and with six other US offices, Skadden, Arps provides a broad range of legal services to over one third of the Fortune 500 industrial corporations, ten of the top 15 US commercial banks, 23 of the top 25 US investment banks, and seven of the top ten Japanese banks doing business in the US; in the event the corporate raiders and the leveraged buyout is not recognized as the premier merger and acquisition practice, involved in most of the larger mergers and acquisition transactions of the last decade. Long involved in international negotiations and dealmaking, it is beginning to present a physical presence overseas, with offices in Tokyo and London.

Not surprisingly, an operation of this scale is heavily automated. An indication of just how big Skadden, Arps is can be gleaned from the fact that the word processing/document handling system installed in each of its offices, including overseas, is Atrax, which made its reputation as the largest supplier of publication systems designed to connect hundreds of journalists and editors at city and national newspapers. Skadden, Arps selected Atrax because, at the time, it offered the unique backup feature of automatically storing all documents on two separate machines. The choice of Atrax, however, was not obvious; about a dozen law firms use the system.

"What we were looking for was total redundancy," explained Earl Yaffe, Skadden, Arps managing director. "We wanted to make sure that we were never able to not produce because the system was down."

And the Skadden, Arps Attewes are never down. All Skadden, Arps offices run 24 hour word-processing operations, and extra demand is shifted around by high speed 9600 baud modems. The New York office regularly has 70,000, sometimes as many as 100,000 word-processing operators at work on the night shift, producing a staggering 25,000 double-spaced pages a day.

"Wordprocessing is very much a part of the picture," noted Vincent Locicero, director of word-processing and PC development. "Laser printers have also had a major impact as well. We already have 50 DTP specialists—we call them typesetters— on staff to design documents with charts, graphs and graphics."

Earl Yaffe describes this technology as a revolution in our ability to deliver legal services—a revolution in terms of speed, production, and service to the attorney, which means speed and efficiency to the client.

A revolution not without its doubts. The opening of Skadden, Arps office in Tokyo brought the decision to standardize on Atrax into question. Doubts about Atrax surfaced not because of any difficulties connected with transforming word processing demand back to the New York offices— London had been shifting as many as two hundred pages a night with no problems—but because of the difficulty of finding trained Atrax operators.

"We debated about whether to shift to SIM," relates Bruce Buck, senior partner in the London office. "But we decided, wisely, I think, to stick with Atrax."

Skadden, Arps is, however, involved in modifying and enhancing its Atrax system. Since Skadden, Arps selected its system, Atrax was bought by Kodak, and its legal product spinoff in-house word processing operation called Kodak Legal Systems. Skadden, Arps is currently working with Kodak to make its system more flexible and able to run on PC platforms (Atrax is mini- and mainframe-based).

"We want to make the system more flexible and easier to grow," states Earl Yaffe. "We want lawyers to be able to do Atrax on their PCs as well as a lot more."

Another level of automation at Skadden, Arps involves access to information services provided mainly by Mead Data Central. Lexis/Nexis is a legal and information database and is available in all offices, including London and Tokyo. Lexis/Nexis contains everything from Securities and Exchange Commission 10-K Yearly and 10-Q quarterly reports, to the Administrative Code to the BNA Toxic Law Daily.

"Lexis/Nexis isn't the only database used at Skadden, Arps," Bruce Buck notes. "The firm is so big, we keep a client database to make sure one office doesn't sign on clients that are competitive to clients in another office."

A firm operating with this level of document processing automation should be looking toward high tech solutions to language too, right? Writing Skadden, Arps main tool in attacking the language problem isn't machine- or computer-aided translation but another database: an inventory of language skills possessed by the firm's lawyers, paralegals and staff. For an American law firm, Skadden, Arps has a surprisingly large number of multilingual lawyers, who can speak everything from Afrikaans to Russian. And these language skills are put to use, since Skadden, Arps considers it an advantage to use local languages. The head of its Japanese office speaks fluent Japanese, for instance.

"All the lawyers are assigned to clients on the basis of language," states Bruce Buck. "It puts clients and adversaries at ease. Having said that language is important, I would point out that language is not an overriding criterion because most international legal business is conducted in English."

All major contracts are in English. All big deals are negotiated in English. Little wonder that for Skadden, Arps, 1982 doesn't seem like such a big deal.

"It's exciting times in Europe," Bruce Buck notes. "The legal situation is changing proahuthy, and change is always good business for lawyers. But 1982 itself is just another facet of the internationalization of commerce, of the shrinking of the world. It is no big problem for us, because English is still the dominant language."

As a not-so-English speaking law firm, does that give Skadden, Arps an advantage? He breaks into a smile. "Of course. All lawyers we hire, whether in Belgium or Greece, must speak excellent English. But it's also an advantage to European lawyers who speak English, and as an increasing number of them -- partly because of programs like we have at Skadden, Arps where foreign lawyers can intern at our firm -- another advantage we have, I think."

Not surprisingly, as a Skadden, Arps takes to the future, the plans call for even more automation. The next databases to become available on line to its lawyers will be Skadden, Arps internal databases. Soon lawyers will be able to access extensive information about clients, cases and negotiations.

Earl Yaffe, "As more and more younger lawyers who've been using PCs regularly get into the firm, we'll be seeing increased PC usage, and will be approaching the ultimate goal of a PC on every desk."

Levi Riz.contentOffset of LIT'S correspondence at large.
Hachette: Match

Were you among the privileged who picked up one of the 100,000 half-kilograms of pre-recycled glossy paper from your neareststand at the beginning of last December, under a name you thought you knew already — "Match" — but printed in your very own language?

NO RIFF-RAFF PLEASE

Match is now poised to strike again, having cast off its Parisian anchor — and hopefully its twin-as-monthcover photo of the late Royy Schneider — but nonetheless devised and designed in the Champs Elysees offices of the Filipacchi magazine-publishing empire and aimed at the whole of Europe. In five languages.

Your hefty number zero was revealingly called Match International in the original French. This was shortened rather unnecessarily to Match British (a rather Frankly-constructed), Match Deutsch, Match Espagnola, and Match Italia in the "translated" editions.

The money for the project was put up by Daniel Filipacchi, publisher of such glam magazines as Elle and Femmes and, US publishing giant Time-Life Inc. The editor: current Paris Match chief, Roger Théodor. While the project was still at the shank's stage, rumor had it that the pan-European weekly would be another Life, packed with news pix and interviews torqued through five different synt grasses.

What came out, though, at least in the launch number, was a top-ten Vogue clone containing stories exclusively about what the editor's lead calls: “the high achievements of grands enreurs” les grands/gros/grands/Francs — and framed by quality photographs.

An editor Théodor gushingly puts it. Match editorial policy is to focus on "the big names who advance the universe and who make the planet the place it is and who define our time and place" — and then it goes on.

This entails presenting portraits in words and images produced by the major talents of our times. So if your taste ran to sensationalist intergalactic gossip about such universe-movers as Francis Sla- cor, Kim Basinger (smoky lips by courtesy of top photogs Greg Gorman) or Theresa Berganza chez elle, then Match International (or British, etc.) is it, or might be: -- for you.

MAATI AND MAATCH IT?

If 95% of Match International’s original copy was written in French under two French editors-in-chief, the teams of translators seem to have gone overboard trying to suppress its Gallic origins. Each language version had a coordinator plus a group of four to five translators and "adaptors" to handle the work, and they’ve kept to their brief. The British edition, for example, does indeed appear to use British and not US spelling conventions, despite

MULTILINGUAL NEWS 'N VIEWS FOR EUROPE: A ROUND-UP

Biochemists’ congresses and computer engineers’ electronic mail, space technologists’ research papers and golf equipment manufacturers’ catalogues. All after living, flowers, alpine trout, English in the Fingers Granite, and English for news and medicine. So why not do the obvious and use English as your own supranational media, as the daily news or business intelligence? Some press houses have been led to a testbed of the lucrative idea of offering printed news to all these bright young Europeans born with their Volvos and until-the- next-page news to handling international English. And Robert Maxwell was an obvious candidate.

THE EURO

Thank you Cagl Bob. The larger-than-life publisher of the UK’s Mirror Group Newspapers is definitely planning to bring out his much-publicized pan-European periodical in English, though quite what from the zero-evidently successful Mirror. Early versions of this thrilling serial special of a daily paper to be printed in London (where Maxwell already has extensive newspaper interests) and Paris where he has been living as a French printer and then distributed to newsstands from Antwerp to the Caspian, selling a million copies a day.

But the European’s spring launch deadline has already come and gone. And more recent scenarios suggest that the old continent’s newspapers may rise up like a phoenix number monthly after all. The cost and complexity of pan-European circulation within hours of printing appear too demanding even for Maxwell’s deep pockets.

The potential largest readership of combining techniques costs from any of the Community countries who write English on their second language, will remain the same whatever form it takes. For the traditional American or British working abroad on the Continent or with major English-language debates, the International Herald Tribune, pub- lished by the Wall Street Journal in New York, The Times of London in Paris; and the European edition of the British business paper the Financial Times. Maxwell’s declared intention is to reach a slightly younger reader, the decision-maker of the future, the 25-40 age bracket fast-moving, or home in Glasgow or Athens. But will it be called Match? Themselves have the same chance to be as a fashion in Miroir/Euro- press, aka, EC, maidsy.

The European’s editorial policy is not to be a home-front copy. It will be interesting to see how the British edition adapts to the mass-market in general.

Will they be forced to jettison their quirky cleaner-dishwashers, the "mommy" speech of the British as trade secret? Money may be the transferee’s secret money, too.

Quite loud like the absurd thing in the Daily, according to observers, Euro-English at this sort wars.

The Guardian Weekly roundup of news for ex-pats and newcomers to English-looking for interesting material includes translated versions of articles from Le Monde sometimes from other European newspapers. Most other Euro-circulation papers try to include material from the international French news media, “copies” for telephones, for example, comes out in English, but always includes articles in French. Dutch and Swedish papers also include local events or issues, briefly summarized in English when the articles are not about the home of the press or articles by young European journalists published in Paris, which are included.

As for the successful Parisian paper in fashion magazine, it is printed in English-language publications. It is regularly included under "book of books" articles in English-language periodicals, even though these French stories are not translated for the English reader.

The editor of current Paris Match chief, Roger Théodor. While the project was still at the shank’s stage, rumor had it that the pan-European weekly would be another Life, packed with news pix and interviews torqued through five different synt grasses.
the North American presence on the editorial board.

There are no indications of plans to cater for the European minor league languages. So the Danes and the Dutch will presumably settle for the English, as, no doubt, will the Portuguese, Greeks and Irish.

The adverts, on the other hand, are not translated, appearing identically in all five versions. They also underline Euro-sterotypes about which subjects are most "naturally" expressed in different languages. So you get Rolex, Dunhill and Carter in suitably designed French, Johnny Walker, Philips, Air Force and BMW in high-tech English and nothing in Italian, Spanish or German.

However, says Thérèse, "In three to four years, advertising will be international. With our five-language formula, a major advertiser will buy space in anything from one to five versions adapting his image to the culture in question as he wishes."

LOCAL HEROES

The editorial debriefing after this pilot number, however, has already led to a number of changes in the original plan, the most extreme of which, according to the Parisian gossip-machine, is the abandoning of the whole project as a non-starter.

Down at Filipacchi's, they are less pessimistic. Yes, the Art Director is to be changed, but no one can offer the name of Albert Veiller's successor.

On a more structural note, whereas Match was originally conceived as a translated international copy accompanyed by national supplements for Germany, Italy, the UK and Spain, there is evidence that the supplements are to be abandoned. The reason probaly financial, though the large amount of secrecy surrounding the project makes it hard to know for sure.

When - and if - Match does hit the newsstands in early summer as planned, it will not - says the editor - be the European answer to Life at all. Thérèse doesn't even like the rather over burdened word "European". He and the Match public relations manager prefer the tonier moniker "pan-European".

"Match is not going to be a magazine about Europe, even though Europe will be present in it both industrially and commercially. It will be a purely internaional magazine."

Nor, surprising, then, that Filipacchi's choice of a partner is a US magazine publisher.

What, in fact, seems to be behind the Match project is an attempt to resurrect the era of America's The Picture Magazine - the weekly dream machine of the pre-TV age - aided and abetted by high-quality photography and computed magazine production technology.

Match will be a magazine for Europe, unafraid to seduce its more discerning readers with the arts of "fine paper and masterly print ing," offering them a supra-national product designed precisely to lift them above the trash values that most 1982 Euro-Americans will be offering them.

Match will be a portrait gallery of the rich, famous and beautiful, not just in the footsteps of Nice or on the seashore of Baden-Baden. But from Acapulco to the Zambesi, from Vladivostok to Toulouse, Araksson. Europe will just be the market place where this glossy multilingual package will be peddled. For F225 or £1.50 or 5000 lire or DM5.00 or 453 pence a copy. But please, no £ECUs, we're pan-European.

MCCANN-ERICKSON

THINKS GLOBAL, SELLS LOCAL.

One of the firms regularly called to assist Comex in Europe in producing its marketing documentation is McCann-Erickson (New York) which has offices in some 41 countries. Nor that McCan Erickson thinks of itself as a mere advertising agency.

"We advise our clients to use commercial communicators," is the way Keith Menke, director of the Amsterdam office, puts it. "They have to look at local tastes and trends. Maurice Rubicon, our local agency in Italy, won't use a blond woman in a TV commercial, but will use a black woman in a German advertisement. They have to be in tune with changing times. However, it's often not enough. Even a well translated text may not get the right image. Our ..McCom-Erickson's in France or in Italy, etc., know in many countries - campaign "ecos." They have a completely different personal relationship to their clients than, for example, the French." The attitude has to be adjusted to in order to produce new images. And there are other considerations - like market position. Black and Decker have a household name in the US, virtually unknown in the UK. But Jet Blower is a product which works well in Germany, where Black & Decker is less familiar. It needs a different campaign."

In each country, then, needs to own its own text, based on the advertising provided by the international coordinator. This is why McCann-Erickson some use no translators - only fluent interpreters. That may not be as sure that local sensibilities are succeeded to."

It is the international coordinator, Maurice Rubicon, explaining that the amount of text sent from New York is not 100%. "We keep 20% original and ... explain the investment in high tech tools. But more in tik, the image, the visual translation facility couldn't replace the creativity of the copywriting.

While the project was still at the thinktank stage, rumour had it that the pan-European weekly would be another Life, packed with news, photo and interviews torqued through five different sytaxes.

What came out, though, at least in the launch number, was a top-end Vogue clone containing stories exclusively about what the editor's lead calls "the high achievers/plus grands entre nous/los grandes/più grandi/Größten" and framed by quality photography.
HARDWARE

ICL used to bank at the word in English.

Surprisingly lowtech localization.

That's until the British flagship company

coder maker sensed change on the horizon

and hurried to get multilingual. Its goal:

to conquer the European single market.

In the process of localizing its software for the continental, cultural subtleties have been the least of its concerns.

aka, for example, ICL's sales brochure for its UNIX-based Office Systems range of software.

The original English drags with critical success factors—type buzzwords. The French, however, prefer their management speak cozier and stress the software's user-friendliness, or conviviality. ICL's French employees even coined the catchy convivialité—inequous to informatic— to express the joys of a friendly user interface.

In UK English manual, the style can be chatty. And that goes down well in Norway, Denmark, Benelux and Spain, too. But too much informality would be thought flip-flopped in straightforward Bavarian or German, where a precise, detached style is appropriate.

BORN AGAIN POLYGLOT

Of course, ICL wasn't always such a Euro-boy scout.

Eight years ago, the company was strapped for brass and sacked 5,000 of its employees. Three of these unfortunate were from a sales team wading multinationals, and between them they could handle Arabic, French, German, Hebrew, Hindi and Norwegian. Coincidentally, those of the team who escaped the axe were all subsequently made managers.

When one of the newly redundant souls pointed out that the company ought reject being his linguistic skills—and as a parting shot—suggested to the personnel chief that ICL should change its name to Anphone Computer—it received the unhumanly: "But you must know by now that ICL is an English speaking company."

Well, an awful lot has changed in the intervening eight years.

In April 1988, when Alan Rowan became deputy chairman of the company's newly formed European Strategy Board, his first directive was that all sales staff should be multilingual in foreign languages. The second was to persuade ICL to fund a chair at Bath University's School of Management, dedicated to the study of information technology in Europe, with input from the university's School of Languages. Russell realised that the company would be lost in the Single Market unless it shrugged off its monolingual past.

EURO-STREET-CRED

There's no shuffling, the company's determination to do so. ICL has embarked on several cooperative initiatives in Europe, and has been dutifully playing the model European for a number of years. Its previous chairman, Rob Wilmut, took part in the "IC Round Table," with representatives from other European computer companies.

It was the Round Table that urged ICL into starting the ESPRIT, BRITTE and RACE research projects. And in 1984, ICL, Siemens and Bull set up the European Computer Research Center in Munich, for the purpose of developing Fifth Generation languages for Europe.

Since 1985, ICL, too, has been a prime mover in the European drive towards a standardised environment for UNIX-based applications. In that year, the X/Open initiative was founded, dedicated to this goal.

Since translators, all of whom are native speakers, can get frightfully anglicised after too long in the UK, staff are continually rotated to and from European subsidiaries.

company and its partners were hoping to break down barriers to multilingual operating systems, IBM's LIS and IBM's own proprietary operating systems.

ICL, even with the conscious decision to "demilitarise" European sales of large mainframes running under those "closed" proprietary systems, investing its efforts instead in the "open" UNIX-based DRS range (originally called Clic) of multi-user minicomputers.

This was the first computer specifically aimed at the continental market, and provided the company with its first taste of producing documentation in all the major European languages.

NO SPEAKA IBM

In mid-1987, ICL set up its Office Power Translation Project in Backwell (North Somerset), dedicated to centralising and integrating translation into the production of user documentation.

Since then, a 60-strong team of writers, graphic designers and translators has been producing manuals in eight separate languages, using the company's own Office Power publishing software on a DRS network.

The principle of ICL's approach to integration is to use the same layout and artwork for all manuals, thus avoiding having to redesign them for each language. For this reason, the preparation of the text remains separate from the layout. And overlaying the text onto the layout is performed relatively late in the process.

In addition, to accommodate the extra space that other languages require—German and French in particular—the English original purposefully allows for large areas of "white space." Terminology management is an almost human priority in the translation process, and managing the glossary especially requires tense. Consistency in choice of computer-speak is crucial. Translators must, for example, make sure they use ICL terms— and not, say, IBM—since computer companies are almost as tough about terminology as they are about "look and feel." Translators involved are given up to six months training in company terminology and technical background, and technical writers and translators collaborate wherever possible.

COME ON EUROPE

Since Office Power has been in use, the team has written 39 separate documents and translated 1,500 pages of source code into eight languages. The time taken for individual documents varies from around two hours for a manual and one month for a sales brochure.

Since translators, all of whom are native speakers, can get frightfully anglicised after too long in the UK, staff are continually rotated to and from European subsidiaries.

The team is confident that they can tackle anything that the Single Market will throw at them.

Richard Swing is a London-based freelance writer.
TELECOMMUNICATIONS

Phlips

When the liberalization of the Bundespost's

Kommunikations Industries

sourcing regulations forced West German

by Ralf Kohrahaus

Philips Kommunikations Industrie AG (PKI)

to get serious about export, the company

wasn't slow to take its message worldwide.

he effort paid off, and the Nürn-

berg-based company, a Philips NV sub-

sidiary making transmission and

switching equipment, soon

found itself with enough foreign

orders to take on eight fulltime

to handle the accompanying translation load. But even mortals

couldn't keep pace with the new-found translation demand. So last year, PKI took the plunge and

invested in machine translation. The system they chose:

Meta. "Why Meta, and not Logos or Systran?" asked

LT's Ralf Kohrahaus. For that matter, why not for

Philips NV's own Rosetta, due to be com-

mercially released by 1981?

Imagine an intelligent mini-based hardware-

software system that can receive a German-lan-

guage paper manual in its scanner, have the com-

puter rattle off its bits, and output a perfectly tra-

slated and displaced English-language manual on a

 laserprinter. Sounds too good to be true. "But," says

Patrick Little of Philips Kommunikations Industrie (PKI) in

Nürnberg, West Germany, "it almost works that well. PKI is of a small and select band of

commercial Metal users - and a very recent convert to high volume translation.

Until eighteen months ago, our main customer was the German Post Office. Not much demand for translation there - everything was done in Ger-

man. And whatever did have to be transferred into other languages was usually given to commercial translation companies.

But as one big order - the digitisation of the German phone network was approaching comple-

tion, PKI needed reliable information that the liberalization of the Bundespost's equipment sourcing regu-

lations would mean that orders for literature manuals

would be asked from all over the EC. The days of the Bundespost's cozy arrangement with its exclu-

sively German suppliers were numbered.

PKI braced itself to hunt for orders worldwide.

And with success - especially in the developing world. Large contracts were

acquired in India and the People's Republic of China.

But rising exports meant a corresponding increase in the company's requirement to

translate manuals, contracts and
technology transfer documents.

"It was a large order from India - which gives us

about 45,000 pages into English -

which directly induced us to look into machine

translation. Our eight inhouse translators just

couldn't make the deadline." So the PKI team

started to look into the possibilities. When they

checked the available computer systems, they

found Siemens Metal the best of the bunch.

Logos, for example, will only let you lease their system for three years. You can't invest in

Logos and further develop the glossaries and source
code yourself, since the whole thing never becomes your own property. And Systran is purely online -

which gives you no control whatsoever. As for Phi-

lips Rosetta, being developed in Eindhoven, it won't

be on the market till 1981. And Little and his team

needed machine translation now.

THE METAL PEOPLE

What Metal offers is an integrated documenting

and machine translation system - which you can

buy for US$40,000, plus an extra $55,000 for the

software. So in September 1980, PKI decided to try

it out for a year. They bought the hardware, an MX-

2 microcomputer with four terminals and a Symbolis-

cus LISP machine, while the software (German-to-

English) was provided free of charge for the period of

testing. User training was taken care of by Siemens.

PKI's newly formed translation department, with a current fulltime staff of eight, received an

initial week's crash course in Metal, then worked

with the system for six weeks. This was followed by another week of training. "And when problems do

arise, there is a constant hotline to Metal's develop-

ers in Munich. Tips and improvements are passed along this line in both directions."

"We've made several suggestions for improve-

ments to Siemens," Little says, "which we are

now considering. We'd also like to see a release

version - which is supposed to be available in June this

year. When a new PMO product is to be exported, the

entire technical documentation, contracts, etc., are

handed to the people whom the office gets to call

the "Metal people" - most of them being women - who then take page after page and feed

them into a scanner. Metal then splits each docu-

ment into a text file (ASCII) and a layout file. And while the latter is stored separately, the ASCII text

is translated to the Symbolics, where Metal checks

"There's some people in Nürnberg being buried by a translation load, Man of Metal!!"

the text for unknown WORDS.

Patrick Little and his colleagues then rack their

brains, or flock through vast quantities of dictionaries,

for translations of unknown words, and key them in. The next step is Metal's automatic sen-

tence-by-sentence translation, which after proof-

reading and eventual corrections, is reunited with the original ASCII file.

Result: a perfect, ready-to-use document:

same text, same layout as the original - just another

language - all output by a preferably lost printer.

INTELLIGENT?

Theoretically, Metal could handle 200 A4 pages per

day. But reasonable output and proofreading still slow things down.

"Metal is supplied with roughly 90,000 entries in its electronic dictionary - which is a gargantuan," says Little. "But of course, it can't know all the technical expressions, names and so on that we use in our business.

We have to train its 'artificial intelligence', so that it won't translate, say, the German city of Darmstadt into 'bowal towns', or the technical term 'veredestabiliteit' ('poise factor') as 'touch-

ing relationship.'

To get the highest possible speed out of Metal, PKI has recently devised a three-step program. First, they're standardizing the terminology. Second, they're making all new texts available in machine-

readable forms. And third, since today's scanners and optical character recognition (OCR) software can't read metal-generated texts, the company's entire archives are being rekeyed on PCs. In addition, the hardware has also been improved. "We found our original MX 2/422's four terminals to be a bit slow for our demands. So we've now upgraded to a more powerful MX 20/20 with eight terminals," says Little.

The next step will be to incorporate desktop publishing, which will work well with our Sunworkstations, so that we'll be able to import text directly into Metal.

After the first six months of use, Patrick Little is impressed with his new metal colleagues. "We're looking forward to getting our hands on the next Metal program, which will allow us to work in the other direction. That is, English-to-German."

"So far, our experience has been that the more standardised a text is, the better the Metal transla-

tion will be. For example, blueprint terms are much easier to work on and need much less proofreading than specifications or marketing documents. "Text in which opinions are expressed, such as confer-

ence protocols, business reports or press informa-

tion, are still too complicated for Metal."

STAND UP LITTLE MAN

"When it comes to individuality, the human being will never be beaten by a machine," says Little. "But with every translation we do on Metal, we expand its internal dictionary, thus improving its ability to handle more and more complex texts.

"What we really like about Metal is its user-

friendliness. None of us here had had much experi-

ence with electronic dataprocessing. But even so, we didn't have too many problems. Most were of the kind that can be laughed about afterwards. For instance, during the log-in procedure, the computer asks questions and offers the answers Y, N and P.

While Y and N were obvious, we all thought that P stood for 'Perhaps'. We were a bit devilish when it turned out to stand for 'Proceed.'"

Ralf Kohrahaus is LT's new German correspon-

dent.
TRANSLATION CENTRE MANAGER

FRENCH TRANSLATION CONSULTANT

If it’s variety and challenge you’re looking for...

... you will find them both in the Language Translation Centre in ICL at Bracknell.

Central to ICL’s growing success in Europe is the translation of both paper and screen documentation for our products into a variety of European languages. The Language Translation Centre is responsible for this work for some of our most prestigious software products, for example OFFICEPOWER.

The Centre handles this work by using staff translators and contract translators and also by working with translation agencies.

Internal career progression means that we are looking both for a manager for the Centre and a consultant to handle our French translations. Both jobs offer more than just translation work. Liaison with marketing and technical staff in the UK and abroad, project planning and control, validation, document composition and finally publication are all involved.

For both positions we are looking for people who are graduates with a formal translation qualification and experience of professional translation in the computer field.

For the management position you will have a European language as your mother tongue, be fluent in English and at least one other language and have management experience.

For the Consultant post you should have French as your mother tongue and be fluent in English.

In return, we offer a highly attractive salary and benefits package and the career prospects you would expect of a leading international organisation.

In the first instance, send your CV to Clive Stokes, Personnel Manager, ICL, Lovelace Road, Bracknell, Berks. RG12 4SN. Tel: (0344) 424842

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O T H E R
30-JUNE — 38TH ANNUAL MEETING OF THE ASSOCIATION FOR COMPUTATIONAL LINGUISTICS
Reports of the death of WordStar have been grossly exaggerated. The latest upgrade (5.07) proves that the old dinosaur is still alive and kicking.

New generation computer brats might be cutting their teeth on the likes of WordPerfect, Word, and XyWrite. But your real old salts - with fond memories of a youth spent struggling to learn those whimsical control and dot commands - they've stayed faithful all along. "Cos if it hurts, it's doing good."

LT/Electric asked David J. Clark to share a few tips on getting along with Amiee WS.

1. WordStar has added newspaper column late to the game. And although they've a welcome sight for condominiums, the program's knowledge of the dot commands appears to be needed to use them successfully.

Fortunately, most people use only one or two types of page-layouts involving columns, and the process can be automated fairly easily.

The first step in creating columns is setting the left, right, and, if need be, paragraph margins for the columns.

To create a columnar rule line for two columns, use WordStar's customization program, WINCHANGE. First, type WINCHANGE WS from the DOS prompt, then select D (WordStar), A (Page layout), and then S (Sorted ruler lines).

Next, select r to edit the third ruler line (number 0-1 are useful preset ruler lines you probably want to keep), and then B (Right margin).

Subtract the gutter width you want (the space between columns) from your normal line width, and divide that figure by two, getting the result. The US is 1/2 by 1/4 inch paper, this would be 3 inches.) If you want to set a paragraph margin as well, select C and enter the same value as the paragraph indent you desire. Now save your changes and exit WINCHANGE.

The next time you need to create a column width for two columns, press the Alt-CMD-BS key.

2. To take our first tip one step farther, you can create a short macro that inserts the custom ruler line and then turns the column feature on, selecting the number of columns and the gutter width.

This step is done within WordStar.

Press Esc "Z" to create a new macro, then type 2 in the shorthand character field, then press Esc "O" again, then type "G" for gutter, then type "O", each represents a carriage return, and only "O" will be visible in the field, which should look like this:

"M R=3:2:4 M G=O:0:0 M"

Next, press Return to end the macro sequence, and then answer Y to the prompt. "Save macro changes on disk (Y/N)?" This may have seemed like a lot of work, but now all you have to do is to enter the two-column format is press Esc "Z".

One word-processing feature that is noticeably absent from the WordStar menu system is a print queue feature, which allows you to specify several files to print in ascertain order, instead of issuing a print command each time you want a document printed.

Fortunately, you can create a print-job sufficiently enough using the command field technique with the Print feature.

Open a new document and name it PRINT Máy. Type the following dot commands, taking care to press Return after each line.

A file name 2a 1name for file name 3a 7a and so on.

Putting a C after the file name will pause and allow you to change data files or page number you want to insert a new page number before the I command, using the $n format of the page number. Otherwise, all files will be numbered sequentially as you load the document.

4. If you often print documents like term letters or contracts that have headline text with only items such as names or prices changed, using the set variable dot command (SV) can save you time. Place the variable within your master document enclosed in braces, like this:

at which time the designated argument provides all amendments within 7 working days.

You can have several of these variables. For each one, type as followed by the variable name, and then the information specific to your current document. For our example, we would enter:

asn consultant, Joe Scivel

and the name Joe Scivel would appear in place of dBASEmacro throughout the document when you print.

Using a similar procedure, you can specify input in a variable as you print and eliminate the step of opening the master document. Insert variables enclosed in ampersands as in the previous tip. At the beginning of the document, insert the following dot command for each variable:

are variable

Save the file and except print the document from the Classic Opening menu or the File pull-down menu. A beep will sound and the message PRINT WAIT will appear on the screen. Select merge print again, and the first variable will appear followed by a question mark. Type in the information, and then press Return.

The next variable will appear followed by a dot command. Type in the information for the next variable and press Return again.

When data has been entered for all the variables, the document will be printed. If you want to give a cleaner prompt than just the variable name and question mark, the dot command (SV) can save you time. Place the variable within your master document enclosed in braces, like this:

5. If you consistently switch between a couple of fonts in your work, you can assign them as separate text areas and thereby save many headaches. But if the DOS prompt, type WINCHANGE WS and then select B (Print), D (Printing in character font) or B (Alternate character font), then select the text you want to print in the list displayed on your screen. Now save your changes and exit WINCHANGE.

The normal font will be the one used when typed in has been selected. The alternate font will be the one used when you press "PA" in a file; the code "ALT" will be displayed on the screen. To switch between the two fonts, simply left-click on the document text area or any other font chosen, press "PA".

If you want to make fonts that result in a new number of fonts, use the shorthand macro feature as
In discussing these areas, the authors follow the approach of taking human behavior and human interaction as the starting point for designing and evaluating conversational systems. Part One opens with a pleasant-to-read introductory chapter by John Waterworth on speech-based information technology and psychological distance. They use some examples, both particular and more general, to make their points. The second chapter presents a classification of conversational systems, and then discusses the nature of the interaction between people and computers. Part One concludes with an essay on the nature of the relationship between people and computers, and the role of the computer in society.

SUDDENLY IT'S DISCOURSE ANALYSIS

The authors present a broad overview of the field of discourse analysis, with an emphasis on the role of language in human-computer interaction. They discuss the importance of understanding the context in which discourse occurs, and the need to consider the social and cultural dimensions of communication. The authors also discuss the importance of understanding the role of language in human-computer interaction, and the need to consider the social and cultural dimensions of communication. The authors also discuss the importance of understanding the role of language in human-computer interaction, and the need to consider the social and cultural dimensions of communication. They therefore typically translate texts as if they consisted of annotated units of discourse, and then analyze the structure of these units, and the way they interact with each other. Consequently, the authors also analyze the structure of the discourse, and how it contributes to the overall meaning of the text. They also analyze the role of language in human-computer interaction, and the need to consider the social and cultural dimensions of communication. They also analyze the importance of understanding the role of language in human-computer interaction, and the need to consider the social and cultural dimensions of communication.
Remember how we all lived so easily in the postwar world? And then how things speeded up, and French philosophers told us how terribly post-modern we'd all become?

Now here comes Hans Moravec, roboticist and author of this short but mind-bending book, telling us how we'll soon be living (if that's the word) in a "post-biological" world.

The mind children of his title are the superintelligent citizens of that world - along with any humans who can take the pace.


By Wendy Jo Nelson

In 160 pages of crisp prose, peppered with personal anecdotes but shot through with the modern intensity of the controversy, Moravec takes us by
WP CHAMELEON

The software claims that Beyond Word Writer "gives you beyond writing and editing text," which is true as well as fulfilling as a competent word processor. It has some unique—albeit quirky—features. On the other hand, it slips up on a couple of surprising fundamentals.

MSW's most amazing feature is its Movie Mode, which makes it behave like other popular word processors. Just select your favorite WP, and you activate a "habits-compatible" interface immediately, enabling all your keys to function as they are accustomed to. An innovation is the bulk drive short-hand function. This lets you type standard phrases, even often-used industry-specific words, utilizing a two-letter code. The only drawback here is your (human) memory. As the list grows, you forget which two-letter stands for what.

MSW has an ingeniously named "undeleter" feature, known as a "5-Way Olgal Cookbook," which, though not unique in itself, is very comprehensive and works very well to remove accidentally deleted words, sentences or paragraphs. The package has three spellcheckers, with a 180,000-word dictionary and a user-defined personal dictionary. The word count feature counts words, sentences and "hard" words—and includes an ingenious Fog Index, or readability indicator. This way for the built-in style checker.

In the light of such relatively sophisticated logical processing, it's curious that MSW's biggest shortcoming is its less-than-glorious interface, which is incomparably steeper and more "intellectual." "Authors," "experiments," "method," "immediately," "tactics," "tactics," and "optional" words taken at random from a single text.

Another flaw is the book mark facility, which allows you to add a bookmark anywhere in your text to throw you when you last left off rendering. The missing and correcting work fine, but it's a bit disconcerting not to be able to use the bookmark screens.

Finally, when text is displayed on-screen, MSW doesn't make efficient use of the available screen width, because it's displaced to the right by an amount depending on the number of the left margin. The text should begin at the left edge of the screen, regardless of the margin setting.

Hardware requirements: IBM, PC XT, AT, PS/2 or compatible, with 32K of RAM. Price: US$199.95.

-M.R. Ratnagar

TimeWorks, Inc. 444 Lake Oak Road, Deerfield, IL 60015-4019, USA. Tel: (1-312) 848-9289

MY FIRST ENCOUNTER WITH ARTIFICIAL INTELLIGENCE

Having been hired as LI's editorial assistant, first thing I know is I get handed this typing tutorial program called "Mavis Beacon Teaches Typing," with a note that I ought to try it out and maybe review it.

I tried it at this logical juncture on my typing skills. I whack the keyboard. The machine immediately BEEPS. A typing error is intricated by this prompt response. I plunge myself into a test of my typing skills. The electronic schoolmarm teaches REEPS continuously, or at least through its self-correcting feedback.

Suddenly I'm behind the wheel of a racing car competing with British playboy racer * driver Anthony Birtwhistle-Connor. Every mistake I make gets a beep, and at my windshield gets a big red X. The machine natalizes on. It compliments me, it asks me if I'm getting tired and stops; it gives me a good sleeping pill, and to REEPS at me, it shows me graphs which will tell me I got the upper hand raw mixed.

After several lessons with Mavis, I feel like her new dog without a stomach, like a clockwise orangutan wailing to look Ms. Beacons's granite venous boots if only she'd stop REEPSing.

These depressing REEPS have conditioned me to type perfectly. And that's what Mavis Beacon is all about. But can't get the mental training, everwatching graphics drive you. Mavis's soul is growing elsewhere...yeah, right.

Versions available for Mac and PC-compatible, among others.

- Adam Keswancy

The Software Toolworks, 1355 Ventura Boulevard, Sherman Oaks, CA 91403, USA. Tel: +1 (818) 997-8759

AMI

WP FOR WINDOWS

No, Ami is not the code name for America's Amiga operating system. It's the result of a landless attempt by Soma Corp. to give something more to the Microsoft Windows than just play Revell. That is to give us a fully featured, graphically based word processor with capabilities approaching DTP.

Those of you who have joined the Windows bandwagon because you have to play Mac on your IBM clone will be sad to discover, though, that the Ami Word Processor would really have us clambering at the bit—a real honest-to-good WYSIWYG word processor—a word processor like the Windows freakish Microsoft Write or a heavy duty DTP application such as PageMaker. Price: US$299

- Marcel Brugman

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EXTENDAN.AME?

HARD DISK TUNE-UP

Well, Extend-a-Name is the kind of DOS utility that Mac-

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to use filenames longer than the eight-character-plus-

extension limitation of DOS. Of course, it’s rela-
tively hard to have your product fit an overall market
for a third party product for a fortune 500 company, so

likely it isn’t. But Extend-a-Name is one of those

<file name="extendaname.txt"/>

ILUSTRATION BY BILL HOWARD

"If this interleaves," and "data throughput" are part of your
daily vocabulary, you might be interested to know how

able analysis of your hard disk’s performance can be improved.

Through this report, Extend-a-Name was able to analyze the
hard disk’s performance and improve various "chunks" of
the data’s performance.

This tool can help you learn about your hard disk’s
performance and make adjustments accordingly.

Copyright 1987, Extend-A-Name, Inc.

REVIEWED BY COLLIN STEELE

Gizmodo Research Corp., 22091 La Canada, Laguna Hills, CA
92653, USA. Tel: (714) 832 399

Sincerely,

However, Extend-a-Name is an improved extension of
HyperCard. This is probably unfair because the two pro-
gress have different goals. HyperCard has its own
limitations, while Extend-a-Name has another.

limitations, while Extend-a-Name has another.

refers to a "chunk" of data which is usually
gathered from areas that are used to perform actions
which are not used by the application. These actions
are selected, and stats are designed to present information
in a more limited and intuitive way.

Hyper is definitely a much more slick than KnowledgePro, which could do

with a lot more work on the

type interface. But Knowledge-

Pro has more for the

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Hyper is definitely a much more slick than KnowledgePro, which could do

with a lot more work on the

type interface. But Knowledge-

Pro has more for the

<file name="extendaname-programs.txt"/>
at it from the opposite point of view—what’d be a regular structure that a computer could interpret. We tried to find an intersection of those two.

LOOKS LIKE ENGLISH
When his workers settled on an English-like syntax, an all-purpose vocabulary, and a language definition that allowed for accurate and extra natural language-like constructs and modifier terms for clarity.

Scripts are interpreted (translated line by line each time) and an integrated editor automatically builds the location of most script errors. As a result, scripts are more understandable than the same operations in a language like Pascal.

Furthermore, the group decided to avoid, wherever possible, formulations that are outside intuition of what people know from everyday experience. Winkler said that Atkinson was particularly insistent that they have out the Pascal form of the assignment statement.

Winkler: “Bill was adamant that to a beginner, X = X; it was not an assignment statement, it was a list.” Sometimes, Winkler said, those decisions made scripts longer to type. But that was a cost the design team was willing to pay.

Winkler and they also realized that people don’t learn a new language just one time. One of the things we set up in that you could build more power, enough step costs part of the price. One must be able to see it up each step was being.

A key element in that strategy was a maintenance, was his early decision that there would be reserved words in the language.

To explain, “that people writing scripts will understand all the parts of the language. They’ll just know a little bit of it to start. It shouldn’t complain if they think as a variable name something they haven’t heard of.”

That same protection, he pointed out, also benefits the professor because the HyperTalk remains well-organized and change. “I would like in the future to add new properties and functions, and I don’t want to throw out the spelling (translating) scripts,” Winkler added.

STACKS AROUND THE WORLD
The international nature of HyperCard has also proven to be a challenge. As with all Apple products, company policy dictated it should be adaptable to the different language markets where Apple sells computers.

For HyperCard, that meant not only menus and manuals in the local language, but also HyperTalk scripting.

“Then was always in the back of one’s mind,” Winkler said. “But our take on that was that we were not going to gain in power. Consequently, they settled on a structure modeled on English but a provision in the architecture that would smoothely integrate translation modules.

“You can actually say in HyperTalk but language to French,” Winkler explained. “If you do that, it will go back in resource text (part of the computer order for a "WEB" resource and load.)

Surprisingly enough, the translation module doesn’t make a one-time translation to or from the required language, Winkler said. “Scripts are always stored on the disk in English, as a script written any- where will run correctly.”

That also allows the main HyperTalk program and its parsing routines to stay constant all over the world.

Instead, said Winkler, “the translation can either be a script drive and the script editor.” As scripts are brought in from disk to the editor, they are translated into the target language. When the editing is finished, a script is translated back into English as it is stored on the disk. Consequently, the script must be bidirectional.

Winkler said he had done a simple word-for-word substituition translator, but the best efforts take into account more contextual information.

For example, he said, a Swedish translator by Martin Gamkrelid of Apple Sweden looks at the script in strings of up to three-word groups, using extracted meanings to differenciate among Swedish homonyms for different English terms.

Furthermore, because natural languages are not symmetrical, the strategies for translating from Swedish into English are not identical to the strategies for going from English to Swedish.

While he couldn’t talk about unsubmitted products, Winkler admitted that many of the same problems come up in the design of a compiler—which is, after all, a translator from HyperTalk to machine code.

Winkler pointed out that the deliberate attempt to stay close to natural language means that a HyperTalk compiler program cannot know unambiguously at translation time the precise meaning of each line of code.

AMBIGUITY
Other than in more machine-like computer languages, or C or Pascal, variables can hold different types of values (there is no "typing" of variables), and the syntax doesn’t automatically determine whether a word is an operator, a variable or an unquoted literal value.

A HyperTalk compiler would have to take that ambiguity into account by providing the code needed for each possibility, Winkler explained. That’s still a lot faster than interpreting each line of the script every time.

Compiling a script would greatly reduce the burden that this more user-friendly approach to computer language imposes, but there is still a huge execution-speed and program size penalty.

Even with all of its accessibility, popularity and inter- national adaptability, Winkler admitted that HyperTalk is still very much a specialized means of communication. “You might say that it’s still only used by a small fraction of the planet.”

But, he added with a touch of pride, “the fact that there’s a lot of people right now creating software using HyperTalk who couldn’t do it in any other language. It’s definitely touched people’s lives. It’s given them power they just didn’t have before. To me, that makes it worth the effort.”

Steve Rosenberg is a freelance computer journalist based in Berkeley, California, and a contributing editor for MacWeek magazine.
THE CAT IS DEAD, LONG LIVE THE INTERFACE

by Sara Shapiro

After a brief and checked awakening, the fabled Cat is dead, killed by a manufacturer that never quite knew what to make of it nor how to market it to its intended American audience. This ugly-looking little machine, with an unusual and provocative text-oriented interface, was built around technology licensor from Information Appliances, the company founded by computer scientist Jef Raskin, original leader of the team that created the Macintosh for Apple.

But although the departed Cat will be mourned by layers of innovative computer design, its interface seems destined to survive and exhibit the same potential for longevity as its nineties-era namesake.

LEAPING

The initial concept of Raskin's work is that searching for strings of characters is a matter no more arduous than using keys on a computer. Information Appliances has patented an algorithm for searching-based positioning that they call "Leaping".

Every use of the film's computer designs, starting with prototypes shown at the San Francisco Computer Exposition, in February, features two, special keys below, or on either side of, the center of a standard keyboard. умеет and holding them down creates a search; a search is made separately from the root node on the keyboard.

Raskin notes that though the leap key mechanism does not search the database, the user perceives it as easy and modulaire. There is none of the dialogue that characterizes searching in other computer interfaces.

Text can be highlighted by breaking from one end of a region to the other and pressing both leap keys simultaneously; the black text can then be soared, copied, deleted, printed, underlined, justified, and so on. If the highlighted black is an arithmetic formula, a text search can be calculated; if it's a program coded in either Fortran (the language in which the system was developed) or Assembler, the program can be executed.

The Information Appliances scheme is ideal for retrieving random bits of data as well as performing routine editing tasks.

The ROM-based software treats all input as an endless stream of characters, divided at the user's discretion into pages and documents; the environment is a comfortable blend of wordprocessor and graphics drawer.

The system is not troubled with the additional layer of an operating system with separate files and directories. While the expert has no need of cumbersome utilities in which to format data across the boundaries of such a structure. The Canon system is a foldable, portable, C-size printer.

The Canon Cat ceased not only the latest innovation in this software, but a trap, black-and-white bitmapped display, a 90,000-word spelling dictionary, a built-in 12,000-legal- English, 46 screens of online Help material, and a keyboard closely equivalent to that of the ubiquitous Selectric typewriter.

EIGHT LIVES TO GO

Why did this novel experiment fail to attract loyal customers? The answer lies more in how the machine was sold than in what it could do.

Canon deliberately avoided the word "computer" and famously marketed it as "something more than minimal advertising." Even a $2,000 price cut in April, 1980, to $795, reduced little interest in the machine.

Late in March 1980, Canon introduced a $940 system and shipped its remaining inventory—all the units were sold at the lower price of $985, which included both the computer and a companion desktop printer.

However, the Cat lives on in spirit. As usual, Raskin and his co-workers at Information Appliances continue to advance the ideas embodied in the Cat, funded largely by the licensing fees paid by Canon.

Their current design is a Cat-like laptop computer, sought after in concert with the Camcorder Cambridge Z88. The company is building prototypes, negotiating with possible manufacturers, and hoping to see the next generation sometime late in 1980.

For more information, write Information Appliances Inc., 158 West Sepulveda Road, Palo Alto, CA 94303.

Expo Shapiro in a Los Angeles base- bound freelance computer jour- nalist.
Language industries survey

Understanding the phonotonics

Language industries: the future of the book

Language industries: the future of the book

Introduction

This is the first in what will be a continuing series of Language Industries Surveys (LIS) bulletins, which will appear irregularly in 1:1 Electronic Word magazine. LIS bulletins will focus on the demand roles of language technology—new companies have implemented new technologies to solve various critical problems in dealing with language and computer business. Specifically, we will be examining the nature of their problem, the range of technologies currently available, and how these companies have implemented these in their own organizations. The technologies we will be examining are some of the newest and most exciting in the marketplace. They have been developed by the emerging language industries, and in-depth products which make the manipulation of word-based information, like word-processing and desktop publishing:

- new methods of inputting text (optical character recognition)
- and new technologies which apply linguistic intelligence to processing natural language—like advanced indexing devices—intelligent character recognition, grammar checker, and ultimate natural language understanding and machine translation.

Since recent estimates indicate that almost half of the labor force of industrialized countries is involved in information activities, it is obvious that these technologies are not only exciting but crucial.

Crucial to the individuals and corporations that need them. And crucial to the competitive wellbeing of the societies that develop them and foster their use.

This month we are taking a look at handling large document storage requirements through Document Image Processing.

A Little Background on DIP

In the same way that word processors and PC's revolutionized documentation creation during the 70's and 80's, DIP (digital image processing) is poised to revolutionize document storage in the coming decades. Revolutionizing the storage of documents has important implications for companies operating in the untrusted environment. Marketing in the 60's, when document storage needs were likely to be composed by the fast, big, and many documents will have to be written and output in more than one language. Advances in indexing, image processing, storage and retrieval, combined with cheaper processing power and mass storage, are readying in products which are being introduced from companies which are traditional major players of memory.

Case in point: newspaper publishers. Newspaper publishers are, since time immemorial, kept awash with the proliferation of the original format and any accompanying illustrations, a treatment which the computer: for a technical level, the indexing systems is bound with emphasis on that part of the text— is to costumers the previously scanned documents to text format. Dippings will be stored as index images to present layout and illustrations, and linked to the texts in the text-based system. A text-based system is capable of publishing CD-ROM archives, as, for example, a number of American newspapers are beginning to do. Conclusions

DIP offers a solution to many companies, confirming the problems of storing material — libraries, insurance companies, patent offices, large corporations and so forth—are valuable, considering that the volume of stored material should grow faster than normal due to multimedia documents.

The LIS Bulletin is a publication of the Language Industry Society, and is officially independently of the Commission of the European Communities. The Language Industries Survey is a research and geopolitical project intended to improve the competitiveness of the language industry and an understanding of the language industry in Europe and around the world. If you are a researcher, developer or producer of hardware or software for the language industry, please write us for a questionnaire. If you are a qualified researcher, you receive a database of public information on a yearly basis from all the respondents (expected to number over 1000), in addition to the one-year subscription to 1:1 Electronic Word.

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US: Questions—CT 13 P.O. Box 6157 1987 AL Amsterdam The Netherlands
RASKIN ON HYPERCRUD

PART 2

A FRUSTRATED USER FINDS HYPERCARD JUST DOESN'T STACK UP

by Jeff Raskin

Last issue, Jeff Raskin looked into HyperCard, Apple's programming tool, and a key part of its multimedia strategy. Here is Part Two of his analysis.

It is true that hardware performance will eventually improve, and costs will decrease again. It is less true that software in HyperCard is not really usable on today's machines, perhaps it is the wave of the future. To be sure, there are good ideas in HyperCard that will be picked up by future designers. But it will continue to be misleading, since Apple includes with every Macintosh computer is a standard goal at optimizing the limitations of a product. To hear them tell it, HyperCard does everything but cure cancer.

But the best we can say for HyperCard is that it is superior as a demonstration of a concept that is yet to become cost-effective and practical. Supporter point out that kids happily use it and can do things with it. Children are not critical observers and are especially insensitive to cost issues. They will play happily for hours with the most absurd and difficult systems; indeed HyperCard is a fine toy, just a bad toy.

But, it might be objected, wouldn't it work if the programming you беіaе in the future? The answer is yes, but what is it that would otherwise be that? Aren't the kids much easier to use? I discussed this with Apple's vice president of the application I bought. At first they thought that would be us by using HyperCard, but in the end they said that they found that they could have done a faster, more efficient implementation in about the same time if they had used Pascal. So it didn't save programming time. In fact, they felt somewhat cheated. According to them, when you try to do something well with HyperCard, it becomes just like any other programming environment: nasty, quirky, complex and in every way substandard.

Was the application easier to use for having been implemented by the software designers did a good job of understanding the stack to the needs of the user. I would guess that they would have done the same in a conventional language, or that's what. Where the user bases is in having to learn HyperCard and the application, whereas if it had been done in a programming language, the user would have just listened to the program and used it. For trivial tasks HyperCard is easier to set up, but trivial tasks are just that.

I have since looked at a number of other stacks. There is a family resemblance in their failures, some of which are caused by some flaws in the underlying concept of HyperCard. In my article "The Hyper and HyperCard: The Proposition of the First HyperCard Conference," some by the design of HyperCard, and some by the unfortunate habits of most stack designers. There may be some good stacks, others anything is possible, but I can only report on those I've seen. Then there are all the hidden commands you won't remember. For example, I was in the middle of a stack made for kids and there was no way to get out. A friend - a real pro at using Macs - was standing there and said "Use Command G," which got me out a few minutes later, as I was writing the program, I had to ask, "What that control Q, function Q, or Command Q?" Remember, by the way, that the key with the Apple and the Xtended on it is called "Command + control Q for some reason."

The problem with creating HyperCard stacks is really something like the problem of learning to play the recorder. The recorder is a simple instrument on which anyone can play a tune in minutes. It takes years of intensive effort and study to master it. But the ease of the first few steps is seductive, and thus is probably the reason why so many people play the recorder so badly. HyperCard is like the recorder. As Russell says (in the introduction to Goodman's book), "With HyperCard, virtually anyone can become a software author, producing an information-based application that looks like a professionally designed Macintosh application." And reality is exactly right. Read his words very carefully. He is not saying HyperCard is a panorama. He is saying that any duffer can make a stack that looks like a heavy duty professional, graphic Mac application. What he doesn't say is that it will take much time and effort, along with skill and experience, to make a stack that performs like a professional application. And even then, it will be slow and use disk space all-in-water.

While many people find certain stacks useful, they might give a moment's thought to the thousands of dollars of computer equipment they are collecting to support the task, and should be horrified by the cost of HyperCard. A little program on a handheld calculator or address machine might do the same job with the same cost, for $50,000 total.

You're rich, then the cost of a Mac is a hundred, and my objections are no account. Also, if you choose a cost-effective path to a solution problem, you don't have the cachet; but on your desk. But then, some people buy frank, expensive cars, and a house with the right address because they hope it will make them feel good. At a recent conference software sold that is wonderful than HyperCard sold 1 0 to it was a mess $40,850, and there could bring the wonders of HyperCard and its promise of access to informa- tion to the masses. I responded that the price of HyperCard was fine, but you still needed a multi-thousand dollar computer to run it, and I asked that given the circumstances, perhaps HyperCard should really be inexpensive.

I have complained else- where about the politics of our systems that we have to pay for, rather than get paid for (i.e., in the Computers) at Work, I cent, see Ezra Shapira's article, page 127 on "The Right of Informational Systems" suggesting trying to estimate the minimum amount of a new age of "democratic" HyperCard is just one more bland object with which to stuff our help systems. It does not. The hyperstacky application stuff, expensive, stuff that is overly complex, and stuff that uses our time and money.

While at Apple, Jeff Raskin was head of the company that designed the Macintosh. He's the guy sitting behind his desk in recognition of the fact that he's one of the top information Appliance Inc.
RESEARCHWARE FOR LINGUISTS

Computational linguists and language engineers of all persuasions often need to make sense of the gaps in their own knowledge, to make sense of the gaps in their own knowledge, to make sense of the gaps in their own knowledge. Patrick Legrand, a visiting scholar at the NRC Institute for Research In Computing, has created a tool that helps them do so more quickly.

Called Log, Legrand's menu-driven package enables words to be entered in lists and their formal contextual properties to be aligned horizontally.

CALL FOR NEW GERMANM

Don't let the Macintosh's lack of support for Japanese hamper your style, not when your friend's rich and there's Sweet Jam and KGword burning up your disk drives.

Sweet Jam, short for Japanese Aesthetic Machine, is the Mac's choice for using Japanese text. KGword is a word processor for creating and editing documents.

The package allows many different character sets to be read and styled, using standard Macintosh page description languages. KGword also supports the Mac's standard memory model and runs on any Mac.

With increasing numbers of East Europeans seeking asylum, finding their way to West Germany, has opened the door to native language speakers. The younger generation often has no German at all.

A young computer company called Klevis (Lower Saxony) has come up with an ingenious solution. The company has developed a software/hardware/teaching package for these immigrants — or at least for those whose native language is Japanese.

The package consists of a synthetic speech card and computer-based language-learning software.

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CHINESE AT (CONT.)

The present study is part of a larger project that aims to develop a comprehensive Chinese language program for non-native speakers. The project is funded by the National Science Foundation and is being coordinated by David Hymes and Jack Gardner.

The program consists of a series of modules covering basic Chinese grammar, vocabulary, and cultural aspects. Each module includes audio recordings, interactive exercises, and text-based tutorials.

LEXPERTISE (CONT.)

The Lexpertise plan seeks to release a Chinese version of MacProof for English speakers. This version will include both dictionary and grammar checking tools. The plan is currently under development and is scheduled for release in 1995.
FULL-FEATURED FORMS
A Federal Express form filler is being offered for UBS by BLOC Publishing (Commercial Graphics), Inc., as a sampler for the company's Form- fill for PC-compatible systems. The fillable form package is available free to systems with Adobe PostScript 3.0, and a full version is available for a nominal fee.

FOR EVERYONE
A new service called "MailMerge" has been introduced by MailMerge, Inc., a company that offers software for automatically merging text and graphics into forms and reports. The service allows users to create personalized forms without requiring knowledge of programming.

FUN FORBUNS Sun Microsystems has announced two new software programs for its OpenLook workstation: "FunForBuns" and "FunForBuns with Chips." These programs allow users to create and print personalized forms and reports.

CHEAP PAGES
"Cheapskates" is a new software product that allows users to create personalized forms and reports at a low cost.

ARGUE IN MORE FLAVORS
Two additional versions of text replacement software for desktop publishing are now available. Adobe 300 is a network version, supporting up to 30 terminals. A diskette version is also available, offering the same features and reporting features as the full version, without enabling the ability to modify text. For more information, contact Adobe Systems, Inc.

FIND THAT CURSOR
Custom cursors based on the menus of your DOS programs can now be obtained with the help of the Information Tap. The "ScreenCursor" system is available from Doxygen, MA. This memory software allows you to customize the look of the cursor, making it more visible.

USING WORD 6.0 HORIZON
With versions of Word for Microsoft Windows, Macintosh, and DOS, it is clearly helpful to have a more powerful format engine. The software is designed to handle 360 new font types and provides a variety of features that make it easier to create and edit documents.

COLOR POSTSCRIPT
QMS has released a new version of its PostScript software, QMS PostScript 3.0. This new version includes support for color and grayscale images, as well as improved performance and compatibility with other PostScript implementations.

MULTI-TIME EXTRAS
Multimedia Additions is offering two new software products for its multimedia applications: " Multimedia Additions" and " Multimedia Additions II." These products allow users to create interactive multimedia presentations and presentations.

UNSERIF (ARL)
UNSERIF is a new software program for desktop publishing that combines the features of a word processor and a page layout program. It is designed to be a simple, easy-to-use word processing program.

JUST TESTING
Question Mark Computing, in conjunction with Microsoft WordPerfect, has announced that a new version of WordPerfect is now available for Windows. This version includes improved features and performance, as well as better compatibility with other word processing programs.

SPEECHLUDE
Users aware of the available nature of electronic music production — the recent trend for using music in electronic publications, various contexts, etc. — are大學 wonderful to be able to produce music electronically. The software offers a wide range of features and options, allowing users to create and manipulate music in a variety of ways.

NEWSCOUCASE USE
- WINTER UNION
An OS2 version of WordPerfect is planned for the second quarter of 1989. The price has not yet been announced.

- CLASSES ON ALL TAPES
More than 1200 classes on all major applications are now available from The Software Exchange.

- STRONG BUSINESS DESIGNER
The Strong Business Designer (SBD) is a new software program for desktop publishing. It is designed to be a complete, easy-to-use word processing program.

- STRAIGHT ON TAP
Key Technologies, Inc. has introduced a new software product that allows users to print high-quality characters and symbols directly onto adhesive-backed tape. The product can be used with a variety of word processing applications, allowing users to create customized forms and reports.
MINITEL GROWS "VOCALE" CORDS

French telematic company Vidéotex has developed a speech synthesis application for Minitel-based Vodone.

Originally pitched as a CAA

Interatel's L2 staff have identified the next boom in the software industry: computer-integrated readings, already familiar to those under the title "desktop marriage." At the existing edge is an emerging software package from TIC Software, Sherman Oaks, California, the Computerized Bride Guide. The program offers the necessarily booked ability to plan all aspects of the wedding, from finding deposits and budgeting the budget to creating a guest list and planning seating arrangements. It even provides a gift and thank-you note database. Rumor has it that TIC Software will shortly be releasing other0e, containing different products. Among them: CAB—Computer-Aided Divorce. The Computerized Bride Guide costs $158.95.

LANGUAGES FOR LORDS

Westminster's Other Voice, the venerable House of Lords, now has its own custom-mixed software to assist in the preparation of legislation. The software was created in collaboration with Cambridge University's Computer Laboratory.

A small, obscure company called Coded, from Taipei, Taiwan, finally demonstrated a Mac-based tool at this year's Computer Graphics. However, the company was so tiny that its product was almost unnoticeable. In fact, it was so unnoticeable that it was almost impossible to find out more about it. The only thing that was noticeable about the tool was its price, which was relatively high.

LOWCOST OER

Saki of Budapest, Hungary, has released a new version of the Angora OEC software. The package is available in two versions: the English-language version, and the Hungarian-language version. The English version is priced at $29.95, while the Hungarian version is priced at $39.95.
SPEECH REC FOR PROS

The Libra DOS microcomputer for the blind has a 40-character tactile braille display instead of a monitor. It allows the blind to work side-by-side with sighted colleagues. By linking a conventional PC to the Libra, the blind wordprocessor can check bither sighted colleague's data, and vice versa. Price: US$11,500. From Libra (SW) Ltd., London. Tel: 011/1110-6385.

CASUAL OCR

Inovitec has augmented its line of OCR software with a program geared towards "casual" OCR users. The Paris-based firm has developed its new Readsoft EXPRESS package (prices $30 to $150). MS-DOS-based machine without additional special hardware. The software can analyse complex pages of text and images, train itself to read a wide range of fonts, allows users to guide the training process, and maintain stable formatting. It operates by first classifying the character patterns found on the page and then recognizing the classified patterns as characters. In "semi-automatic" mode, unconstrained patterns are displayed for the user and can be identified at the keyboard. In addition to the OCR software, the package includes a utility for flagging questionable OCR errors such as confusing the numeral "1" and the letter "L" and one for correcting errors in context with the aid of a built-in spell checker.


Inovitec, 3 Avenue du Centre, 28260 Montigny-le-Bretonneux, France. Tel: +33 (1) 60 47 23 11.

Radiologists can now do it while perusing their notes. Legal secretaries will be able to do it quickly without spending hours wearing out their fingertips. Maybe tax returns will even be able to do it without making mistakes. Using the new single-speaker voice recognition system developed and marketed by French software developer Profesivel, experts who need to record and print out precise data in a pre-structured format can do it without going near a keyboard. PROFESSOR, as the hand's soft package is called, consists of a speech-to-text software or a configuration (206 microphone plus 65 MB hard disk drive and a microphone and a linked to a printer). The idea is that a doctor, for example, will be able to dictate the data needed to complete a detailed medical report by having the machine offer a document template into which the information is entered solely by voice signals.

The work of generating, saving, and printing out such documents is therefore radically speeded up.

As you enter material, either from a dictating machine or a machine, a status line tells you where you are in the new file. You can skip from heading to heading in your document, speaking in the same manner and link speech to text. The rig and guide is a necessity of an hour to learn how to operate a giving a speaker's voice. And PROFESSOR claims 95% accuracy, once the process is completed. A vocabulary of 4000 typical technical texts can even be added.

Each machine can hold up to 30 separate databases for separate users, making the output profitable for a hospital in different services, from psychology to teaching, one will use the same hardware. An interesting side-effect of such length might be that report forms will gradually become standardized as a result of purely technical constraints, and - Profesivel may be able to help hospitals in health and the medical community by promoting the development of new medical laws.
Loneliness of the long-distance dictionary compiler

Text and photo by Andrew Josephy

ichel Ginguay, dean of French
English electronic data processing
(EDP) lexicographers, is preparing his new
standard bilingual reference
tome: the Dictionnaire d'in-
formatique, Français/Anglais,
1988; Anglais/Français, 1989;
plus English/Spanish and Eng-
lish/Italian versions of the
same.

Andrew Josephy, L'T's
stable surveyor of language-in-
dustrial barricades, brawled
mountains of index cards to
learn more about the man
and his dictionaries.

"I first got the itch to write dictionaries
when I was working as a transla-
tor for a shipbuilding company in the
late fifties. But it wasn't until after I'd
spent a few years translating for IBM
France that I got hands-on experience
actually compiling a dictionary.

"Then I worked for General Elec-
tric and Bull, so I got to handle a vari-
ety of terminology. My personal file
of computer terms was busting at
the seams, but there was still no bi-
lingual aid for translators on the mar-
ket.

"In 1980, Mason, my present
publisher, brought out the first edi-
tion of my English/French bilingual
EDP dictionary--it's now in its tenth
edition. At that time, I also helped re-
write Part One of the Hamp's Stan-
dard French and English Dictionary. So
I suppose I became something of a dictio-
nary junkie.

"Putting a dictionary together on
your own is a long and lonesome oc-
cupation. You need several years,
-enough money to support yourself--
and plenty of index cards. Now
what do you have to keep in permanent touch
with current usage by reading, but
then you have to be selective in
choosing the terms that will best help
your readers.

"Since my dictionaries are used mostly by translators, you know that
what they want is rapid, accurate
help with new words and abbrevia-
tions. They don't need in-depth in-
formation on etymology or whether
or not the target term is under consid-
eration by some standards commit-
tee."

THE UBIQUITOUS ORDINATEUR

"Although EDP is considered a tech-

cical field, on a par with, say, the oil
industry or engineering, it has obvi-
ously entered almost every other
area of technology—and life.

"Like cars, computers have be-
come consumer products. And they're
now so familiar to the general
public that terms wrested by non-
technical users also need to be in-
cluded in a dictionary. I try to include
words for non-technical users as
well as hackers, since they probably won't
find a large number of current terms
in a general dictionary.

"A dictionary should be abso-
lutely reliable, and if possible, ex-
haustive. If you have to choose,
thou, it's better to have a 2,000-
word glossary you can trust than a
20,000-term polyvalent collection
riddled with errors.

"In terms of actual length, my
ninth English/French edition has

THEY ARE ANGLOIDS

"Once I've listed terms from my read-
ing, I have to decide which entries I'm
going to put in my dictionary.

"I'll obviously put in clear terms
like 'ROM chip,' but I'll also include
jargon like 'Big Blue' and 'the
BUNCH,' neologisms such as 'mind-
ware' and 'remware,' and colloca-
tions like 'to cast in silicon.' I also add
expressions denoting the influence
of computers on our social life: 'de-
skilling,' 'amorph shopping,' and 'computer
warder.'

"The most useful service that I
can offer is the translation of problem
terms. And these are increasingly
compounded expressions such as
'memory hungry'—very difficult to
put succinctly in French. French com-
puter experts themselves are usually
so stuffed with Anglold jargon that
they're rarely useful as terminolo-
gists. But their explanations can help
me perceive the precise range of defi-
nition of a term, so I can more easily
find an equivalent. "Selecting trans-
lations depends on various factors.
A lot of them are just given, they're
known in the technical community
and pose no problems.

"If it's a rare or recent word, I
have to decide whether it's a nonce
expression used by a writer or jour-
nalist. Hence the need to check vari-
ous different magazines. Very rare
terms are interesting, since dictio-
naries usually forget to give them.
Other terms just have no translation.

Take 'streamer' in French. At first, I
suggested an explanatory 'dérouleur
en continu' to distinguish it from a
tape unit ('dérouleur de bande'). My
next edition, though, will show a
trend towards another translation
('unité de sauvegarde').

"Some people keep fighting of
course against calques and borrow-
ings such as 'temps réel' for 'real
time.' But however unFrench they
are, they exist. And I've got other fish
to fry than fighting naziaground ball	
to do for doomed equivalents.

"In France there are various — in
case too many — bodies concerned
with 'standardizing' the language and
defending it from anglicisms.
Most of them have no financial
means to really influence practice,
and almost never include a translator
among their members. As a result,
they rarely have any lasting effect.

YOU CAN'T WIN

"A dictionary maker is caught be-
tween two extremes. Either he tries
influence usage by proposing a ne-
ologistic transition for a term, with-
out really reflecting actual usage.
Or he borrows the term—e.g., 'bit'—
and gets badmouthed for 'linguistic
trason.'

"Waiting to see what usage pro-
duces is obviously the best policy,
but I also realize that the very existence of
a dictionary represents a sort of de
factual standard for lots of users, even
if all we can do more is to merely
reflect what people tend to say and
write.

"No doubt we'll be all using elec-
tronic dictionaries in the future; and
for a dictionary maker they will be far
easier to correct and update. How-
ever, there will be a transition period.
paper and electronic versions co-ex-
ist.

"In my view, the ideal would be a
cheap paper edition of just the rele-
vant terms I need for a given task,
extracted from a large scale terminol-
gy database. I find that an experi-
enced translator can look up a word in
a paper version more quickly than he
can type in a term for a search utility
to process.

"Unlike current dictionaries, my
ideal electronic version would have
synonyms, and definitions, and be
continually updatable. It would
probably be hard to get a pub-
lishe to look at the economics of such
a project, though. So I expect to see
my future editions still coming out in
paper covers for a while yet."
Proximity has invested 10 million dollars, 9 years and more than 300,000 man-hours in research, development and editorial partnerships to become the premier supplier of computational linguistic products.

We provide Spelling Verification, Spelling Error Correction, and Hyphenation in 12 languages. Thesauri and definition dictionaries are also available in many languages. Choice Words, our combination Merriam-Webster dictionary and thesaurus, has received Byte Magazine's award of distinction.

Our New "Text Master" Grammar System offers Word Processing users a new degree of writing assistance. Proximity linguistic products are licensed as G source code and have been ported to many different environments, so we guarantee to work within your system. We supply special optimizations for DOS, Windows, OS/2, UNIX, and Macintosh.

Proximity's 150+ OEM customers include Amicon, Tote, Adls, Clerks, Enable, Triumph-Miller, Olivetti, AEG, Olympia, Amstrad, Sun Microsystems, Informix, Unisys, Sharp, and Casio. We also provide the technology used in Franklin hand-held reference products like the Franklin Language Master.

If you produce a text processing system, a publishing product, or an OCR system, or electronic type writer and are interested in adding linguistic functions call or write:

Proximity Technology Inc.
3311 N.E. 22nd Avenue
Fort Lauderdale, Florida 33308
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