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Published in the United States by Jane Zorrilla

SPOTLIGHT on the NEWS

Lernout & Hauspie Acquires GMS

[Press release]
BURLINGTON, Mass., May 27 -- Elevating its position in the translation market, Lernout & Hauspie Speech Products (Nasdaq: LHSPF) (L&H) today announced that it has acquired all of the stock of GMS (Gesellschaft für Multilinguale System GmbH), a Munich-based machine translation service provider. L&H, an international leader in speech and language technology

and services, will combine GMS' expertise in machine translation with its own multi-lingual speech technology to accelerate its efforts to bring to market multi-lingual Internet translation services.

L&H acquired GMS for approximately $14.7 million, $10.7 million of which is in cash and $4 million in newly issued shares of L&H common stock.

The acquisition is part of L&H's long-term strategy designed to strengthen its position in the translation market and help it fulfill its goal of quickly bringing to market a multi-lingual Internet translation service offering. Earlier this year, L&H signed an agreement with the Brussels Translation Group for the development, over the coming two years, of translation services in multiple languages for the Internet and intranets. In support of that effort, L&H plans to create a translation group of more than 100 linguists and engineers. These combined resources give it the opportunity to take a leadership role in the translation market.

L&H chose to acquire GMS in large part because its technology, Tl, is based on a well-known, highly reputable, robust machine translation technology platform derived from Metal. T1 provides the same linguistic competencies found in Metal but is better-suited for the Internet/intranet and a variety of other platforms because GMS re-wrote it in C++ to run on Windows NT and Windows 95.

"L&H and GMS are in a unique position to deliver quality machine translation over the Internet. With GMS, L&H acquired a group of 55 highly experienced machine translation engineers and linguists, as well as multi-lingual natural language processing technology," said Gaston Bastiaens, president and CEO of L&H. "These skills, combined with Mendez's human translation expertise will enable L&H to quickly build new machine translation databases that improve substantially the quality and efficiency of machine translation as a whole."

"This merger provides GMS with an excellent opportunity to further L&H's efforts dedicated to the Internet," said Peer van Driesten, GMS' president and CEO. "We will be able to provide L&H with the necessary tools to quickly develop additional language pairs and market a product for Internet translation."

L&H plans to offer a pilot of its Internet/intranet translation service by the end of this year for professional and business users for (Spanish-English) and (German-English) language pairs. The company is also planning to roll out commercial services in the beginning of 1998. Other language pairs including French, Italian, Chinese, Japanese and others are expected to be introduced in the course of 1998.

Lernout & Hauspie can be found on the World Wide Web at www.lhs.com. GMS can be found on the World Wide Web at www.gmsmuc.de.

METEO celebrates 20 years service

[Press release]

Montreal, may 24, 1997. – Twenty years ago today, the first machine-translated weather forecast in the world was produced in Canada by the METEO system. This event is being celebrated today by John Chandioux Consultants Inc., who lease METEO to the Government of Canada.

John Chandioux, the Director of Applications for the TAUM Group at the University of Montreal for several years, subsequently moved to the private sector and developed the commercial version of the METEO system. METEO has eveolved over the years, migrating from the 1977 super computer (Control Data's Cyber 7600) to a UNIX system (Cromemco) in 1983 and, ultimately, to an IBM-PC network (under Novell) in 1991.

METEO provides weather forecasts in French and English for the whole of Canada.

Starting at 7,500 words a day in 1977, the system today translates more than 80,000 words a day or close to 30 million words a year. A complete computer-assisted translators' work centre, the current version of METEO incorporates two fully automatic translation modules and two machine-assisted manual translation modules, as well as communications and administrative support functions. METEO now performs 91% of the workload of Environment Canada's translation team in Ville saint-Laurent, Quebec.

In 1996, the U.S.National Weather service selected METEO to ensure that all forecasts, watches, warnings and advisories issued for the Atlanta Olympic Games were available in French. METEO 96 translated more than 305,000 words in 16 days with better than 93% accuracy, a task which would have taken a human translator seven and a half months. Output was edited by three bilingual Canadian meteorologists.

With a trun-around time of approximately four minutes per text, METEO and METEO 96 ensure that vital weather information is rapidly available to keep the general public weather-wise and weather-safe.

For more information: Annette Grimaila, Vice-President, John Chandioux Consultants Inc., 1253 McGill College Avenue, suite 450, Montreal, Quebec H3B 2Y5, Canada (Tel: +1-514-877-4201, Fax: +1-514-877-9890; Email: 104213.451@compuserve.com.

Globalink Enters Brazilian Market

[Press release]

(Fairfax, VA) -- Globalink, Inc. (AMEX: GNK), the leading provider of language translation technology, announced in April the launch of its first Portuguese language translation products to the Brazilian software market. The Company's two new Portuguese programs, Globalink Web Translator and Globalink Power Translator Pro, are the only translation software products available on the Brazilian market to offer document, e-mail, Web page and conversational translations while integrating with major word processing packages.

Globalink has chosen Expoent Negocios Internacionais and MSD Multimidia as its primary in-country channel distributors, allowing Globalink to reach consumers at major retail chains such as Brasoftware, Liveria Saravia, and Plug & Use. At present, major Brazilian corporations including Petrobras and Itautec - Philco are evaluating Globalink's technology for corporate site licensing.

The Company has signed an agreement with Dialdata, a leading Internet service provider to develop an on-line store for Globalink's Portuguese software products and a Web site localization service for Brazilian companies wanting to reach English-speaking customers.

Globalink's translation software products have also received positive reviews from the Brazilian press, not only in their market appeal but for their practical application as business communications tools. John Thrall, editor of the English-language division of *Investnews*, a division of *Gazetta Mercantil*, Brazil's leading financial daily newspaper said, "We've been using Globalink Power Translator Pro 6.2 on an evaluation basis in our newsroom and have found that it delivers fast draft translations of Portuguese language news stories which we are able to conveniently convert into English."

Globalink's Philippe Kuperman, Executive Vice President of Sales & Marketing commented, "Brazil already has over 400,000 Internet users, the largest on-line population of any Latin American nation. This is a technologically-sophisticated market where consumers immediately appreciate the need for Globalink's translation software."

Systran announces deal with Ford

[Press release, March 1997]

Systran Software Inc. (SSI) has announced that Ford Motor Company/Vehicle Operations Division has acquired multiple custom software licenses of its natural language translation software. The software, which will be imbedded directly into Ford's system, will enable Ford employees to translate English into Spanish, German, Portuguese and Dutch. Incorporating 28,000 customer-specific terms in four languages, the customized multi-user system will be a dynamic multi-lingual instruction generator.

Systran translation software is the culmination of three decades of research for the U.S.intelligence community. Other Fortune 500 companies using the software in their globalization efforts include Xerox Corporation and Dow Corning.

With a Pentium processor, a Systran user can translate text at more than 650 pages per hour. It provides the most language pairs, the highest translation accuracy (as determined by the Department of Defense's Advanced Research Project Agency) and the largest dictionary coverage (including domain-specific topical glossaries for 20 different industries) of any machine translation software.

Systran Software Inc. develops natural language translation software for multinationals, small companies and home users, having developed 29 language pairs during the past three decades. SSI also offers translation services for all languages and software development of new language pairs at its world headquarters in La Jolla, Calif. SSI's home page is <http://www.systranmt.com>

ILE Proposes Open Standard for Localization Data

[Press release, February 28, 1997

International Language Engineering Corporation, a leading software localization firm, today announced a proposal for an open standard for data interchange within the localization industry. By launching the OpenTag Initiative, ILE is seeking to establish a working group in which both localization customers and their suppliers can participate in defining a standard that will support open data encoding methods during the localization process, and permit robust data interchange between suppliers and customers.

As part of the OpenTag Initiative, ILE will contribute a draft specification of the format, sample files, and reference materials, all based on previously proprietary ILE information and technology, to facilitate adoption of the initiative by the localization industry. This proposed standard itself relies on the international open standards of XML/SGML and Unicode.

"Many of our key customers have expressed support for this initiative," said Bernard Gateau, Chairman of ILE. "Translation data encoded in the OpenTag format will be portable among localization tools. Clients rightfully want to reuse these existing translations, or potentially share them as an asset among localization suppliers, and a standard like OpenTag can cost-effectively support that." ILE often uses these types of technologies, Gateau asserted, when providing localization services to its clients, a roster of which includes many leading software and hardware companies.

"Through reliance on this open standard," Gateau continued, "global companies can gain efficiency when localizing products, especially when using translation memory tools. Unfortunately, the promise of easy reuse often falls short because of reliance on proprietary formats."

Gateau said that OpenTag could reduce dependence on proprietary formats, and thereby

boost the ability of localization companies to reuse these translation assets. With OpenTag, translated text can now be marked up in a uniformly abstracted manner, regardless of the original file format from which it is parsed. This process distills the actual translated words into a common format that can easily be reused among different components of product, such as among an application's menus and dialog boxes, its online help systems, and its documentation. By leveraging previous translation work, Gateau explained, companies can also gain consistency and reduce redundant translations when updating current products or releasing future products.

ILE is currently pursuing discussions with other companies, and expects to announce the founding supporters of the initiative in the coming months. The first meeting of the working group will be scheduled this spring once membership is finalize. Additional information regarding the OpenTag format and the initiative can be found on the ILE web site (http://www.ile.com/opentag/).

International Language Engineering Corporation is a leading ISO 9001 certified software localization and internationalization firm headquartered in Boulder, Colorado. It also is a developer of innovative localization tools and technologies. Founded in 1984, its 160 employees service many leading software, hardware, telecommunications, and medical technology companies from its Boulder location as well as from offices in Boise, Idaho and Santa Clara, California.

Information: Walter Smith, Publishing Technologies Manager, ILE, 303-546-8209; Bernard Gateau, Chairman, ILE, 303-447-2363

PEOPLE

Eduard Hovy, President of AMTA

In Montreal, Canada, at the AMTA-96 conference, Eduard Hovy was elected President of the AMTA. Eduard brings his rich background and extensive knowledge of the MT field to his new role as President.

Eduard Hovy was born in Johannesburg, South Africa, where he attended school and university, finishing with a bachelor's degree in Mathematics and Computer Science. Having had enough of studying, he spent 18 months in Europe, working in England and Switzerland as an apprentice gear-cutting machinist, sandwich maker (in the Ministry of Agriculture in London), translator (for nuclear power plant specs built in Argentina), bookkeeper (in a brewery), and at various other jobs. He then worked for a few months for an oil exploration company in South Africa, which included a trip to an oil rig off the coast of Namibia. But then the study bug bit again.

On being accepted for graduate studies at Yale University, he moved to the USA in 1981, where he completed a Ph.D. in Computer Science (focusing on automated language generation) in 1987. He then joined the Information Sciences Institute of the University of Southern California in Los Angeles, where he has been leading the Natural Language Processing projects since 1991. He has written one book and co-edited two others, and has published articles in several directions of research, including machine translation, text planning and generation, automated text summarization, multimedia presentation planning, and knowledge representation. He has served on the Executive Board of the Association for Computational Linguistics and is currently President of AMTA.

According to Eduard, a nice aspect of his job is the possibility of seeing interesting events and people in different parts of the world, including visits to Moscow and Tbilisi (tanks outside parliament!) in 1991, Soweto in 1994, and Shanghai and Beijing in 1996. When at home, he enjoys hiking, choral singing (Gregorian chants, too), playing the cello, and playing soccer

with colleagues every week.

PRODUCTS and SYSTEMS

Globalink and Uni-Verse Create Multilingual Chat Room with Real-Time Translation

[Press release]

(Fairfax, VA)- Globalink, Inc. announced in March the joint development of the Internet's first translation-enabled chat room with Uni-Verse, LCC. Globalink's proprietary Barcelona technology, in conjunction with Uni-Verse's proprietary chat software, has made it possible for any Internet user to participate in live chat in any combination of six different languages with people from around the world.

Using Globalink's advanced machine translation engine, the Uni-Verse server enables instant analysis and translation of each new line of text into English, Spanish, French, German, Italian or Portuguese. Users are provided with a variety of chat rooms and interfaces, where they select the language in which they wish to submit their message and the language in which they want to read their own message and messages from other users. Regardless of the language in which the message was originally submitted, each chat room participant can read draft translations of all messages in their native language. Uni-Verse's multilingual chat room with Barcelona technology can be found at http://www.uni-verse.com.

Richard S. Fenning, CEO of Viking Group International, Uni-Verse's parent company, commented, "The Internet exists to serve people through communication – people of the world of all cultures and countries. Uni-Verse's server combined with Globalink's translation technology has come to the aid of the currently monolingual Internet. Translation technology allows anyone to communicate in a multilingual setting regardless of their knowledge of foreign languages."

Globalink's Chief Technology Officer, Brain Garr said, "People using Uni-Verse's multilingual chat rooms will quickly learn how to write for the machine translation environment, by simply remembering that this technology is intended to translate *grammatically correct* human language. In doing so they can ensure that their message is received as a coherent draft translation while communicating that message in six languages at once. This is truly the start of a new era of communication in the information age."

Real-Time Chat Language-Translation System from Intermedia Inc.

[Press release]

PALO ALTO, Calif. -- Instantaneous-language translation will be available on the Internet with Intermedia, Inc.'s new Multi-Lingual Chat Server Technology. With the new technology, the MT industry will be able to reach a wider audience and create a new way of communicating.

Based on an open architecture, Multi-Lingual Chat Server Technology easily ports MT engines to Internet servers by means of Application Program Interfaces (API). These APIs and Intermedia's technology are now available to the MT community.

"The Internet will soon provide another way to help break down language barriers," said Marco Gonzalez, vice president of business development, Intermedia, Inc. "By marrying the MT

industry and the Internet, Intermedia's technology will truly open new channels of communications to the millions of online users worldwide."

The technology integrates an MT engine with an Internet chat server. The server allows persons of different languages to communicate in real-time at Internet chat rooms, open forums of instantaneous online conversations.

For example, with the Multi-Lingual Chat Server Technology a 6th-grade class in Spain can experience a live conversation through a computer with a 6th-grade class in the U.S. When a Spanish student types in a question in his/her native language, the meaning is automatically translated into English, so the American student can easily respond.

Formed in 1993, Intermedia, Inc., is an Internet tools development company based in Palo Alto. To visit the company web site, go to http://chat.intermedia.net. The company's goal is to advance the evolution of communications through new and innovative Internet products.

Contact: Marco Gonzalez, Intermedia Inc. Tel: (415) 424-9935; Email: marco@intermedia.net

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New Japanese products for the Internet

Recent issues of the *AAMT Journal* have announced the launch of a number of new Japanese systems for the Internet. Four more companies have joined this growing market: Sharp, Toshiba, NEC, and Fujitsu.

The *Fujitsu* product for the Web is their **"Translation Surfin' 1.0"** (*AAMT Journal* no.15, June 1996). Operating on Microsoft Windows 95, this provides English-Japanese translations using Netscape Navigator; the original layout is maintained. The MT engine is the 32-bit Atlas English-Japanese system (originally designed for a mainframe computer), with a basic dictionary of 136,000 words augmented by 1,000 terms frequently used on the Internet.

The product offers four translation modes: link translation (on-line to WWW home pages), batch translation (off-line), partial translation, and title translation. The system can be adapted to user needs, by creation of a user dictionary and access to 24 optional Atlas technical dictionaries, and by changing translation styles. The requirements are: Windows 95, 16MB RAM, 31MB hard disk space, Netscape Navigator 1.1 or later. Price: 12,800 yen. Further information: Software Sales, Client Server Div., Fujitsu Ltd. 2-15-16 Shin-Yokohama, Kohoku-ku, Yokohama, Kanagawa Prefecture (Tel: 045-475-1956)

From the *Sharp Corporation* come two English-Japanese software modules for its **Mebius** notebook computer (PC-A 400 series) and for its **Shoin** word processor MR-1 (reported in AAMT Journal no.15, June 1996, and no.17, December 1996, respectively). Both products combine facilities for translating English home pages from the Internet, and for scanning English documents and translating them into Japanese.

Individual words, sentences, paragraphs or whole documents can be selected for translation by the touch of a pen from a screen display. The basic English-Japanese dictionary contains over 100,000 words; an additional 40,000 can be added to an easily retrieved and updatable user dictionary. Dictionaries can also be accessed independently of the translation function. The PC-A400 series is equipped with a 28.8 kbps modem and the Netscape Navigator software for browsing. Both products can also be used to translate text from word processing software (WordPad or Microsoft Word). In addition, the MR-1 has a built-in scanner which recognises some 1,000 fonts. The PC-A400 specification is: Pentium processor at 120 or 133 MHz, 16MB RAM, 1 GB hard disk, quadruple CD-Rom drive, 28.8 kbps modem, Windows 95, Netscape Navigator. The standard price for the PC-A400 is ¥550,000.

The MR-1 requires a JIS standard keyboard, an optical pen, 28.8 kbps built-in modem,

Easy Internet, colour printer, 29 Super-Outline Fonts, and 540 MB hard disk. The standard price for the MR-1 is ¥260,000.

For further information contact: Product Planning, OA Systems Sect., Information Systems Dept., Sharp Ltd. Tel: +81-7435-3-5521)

The *NEC* product is **"Translation Adapter 2"** (*AAMT Journal* no.16, September 1996). This software offers a bidirectional English-Japanese and Japanese-English system for word processors with an interface for browsing and translating Web pages and electronic mail. Its functions include translation, dictionary consultation, example retrieval, and format retrieval. Translation and dictionary consultation are activated by cursor marking and single-key operation, either for display in a 'translation box' or for direct entry into a text file. The example and format retrieval functions provide templates and model sentences for helping Japanese to write business and other letters in English. The software comes with 90,000 basic dictionaries for both directions. Users can compile their own dictionaries (no size limitations), and there is a wide range of optional terminology dictionaries available in 31 subject fields (up to 600,000 words). System requirements are: NEC PC-9821 or IBM PC/AT compatible, 66MHz CPU, 16MB or more RAM, at least 20MB hard disk space, and Windows 3.1 or 95. It is sold at ¥9,800 yen.

Further information: EC Promotion Center/General Applications Div., NEC Daito Tamachi Bldg., 4-14-22 Shibaura, Minato-ku, Tokyo, 108, Japan (Tel: +81-3-3456-8343; Fax: +81-3-3456-6348)

Toshiba have announced (*AAMT Journal* no.17, December 1996) a version of its popular ASTRANSAC for the Internet. It is marketed as inexpensive translation software for translating English-language home pages. **"ASTRANSAC for Internet"** provides automatic Japanese translation without changing the original Web page layouts. As it can even access linked pages in Japanese, users can browse without knowing any English.

The basic dictionary contains an impressive 190,000 words. The software and hardware requirements are: PC/AT compatible or NEC PC-9800 series (with Intel 486DX2, DX4, Pentium, or Pentium Pro, minimum of 16MB RAM and at least 20MB hard disk space) and fitted with the Japanese versions of Windows 95 or Windows NT 3.51. The standard price is ¥12,800 (CD-Rom) or ¥16,800 (diskette).

Further information: Computer & Communication Network Dept., Toshiba Ltd. (Tel: +81-3-3457-2725). For technical information: ASTRANSAC, Software Product Dept., Tokyo System Center, Toshiba Ltd. (Tel: +81-423-40-6891).

Other Japanese products

NEC and Fujitsu have announced other new products. The *NEC* product is a version of its software for helping Japanese to write in English, which is being marketed as a separate product under the name **"Japanese/English Dictionary Consultation (Simple Sentence Translator)"** [AAMT Journal no.17]. The software provides an interactive interface that differs from conventional MT. It comes both already installed on NEC's "CanBe", "ValueStar" and other products, and also as an individual package (2,000 yen for the Windows 95 version), which can be easily combined with users' favourite word processors. Basic requirements are: NEC PC-9800 series computer, Windows 95 Japanese version, i486SX 20MHz or more, at least 2.5MB RAM memory and at least 25MB hard disk space.

For further information: PC-9800 Series Sect., NEC Personal Computer Information Center, Aqua-City Shibaura Bldg., 4-16-23 Shibaura, Minato-ku, Tokyo, 108, Japan (Tel: +81-3-3452-8000).

Fujitsu are selling their dictionary resources in conjunction with their **"Denjikai V2.0 for Windows"** software for English-Japanese and Japanese-English dictionary consultation. There is a basic dictionary of 320,000 words (1.5MB in size), priced at 24,000 yen, and further technical dictionaries (totalling 3 million words): information and computer science, science and technology, mechanical engineering and transportation, medical and pharmaceutical terms, business and economics (each ¥50,000).

In addition, Fujitsu is selling for the same software the EDR dictionary 2.0 (730,000 words, 114MB) at ¥50,000. All products are supplied on CD-Rom. Minimum requirements are: Windows 3.1 or 95, 4MB RAM memory, 20MB hard disk when in use, Netscape Navigator 1.1 or later.

Further information: Software Sales, Client Server Div., Fujitsu Ltd. Nikko Fudosan Bldg., 2-15-16 Shin-Yokohama, Kohoku-ku, Yokohama, Kanagawa Prefecture, Japan (Tel: 045-475-1956).

CONFERENCE REPORTS

EAMT Workshop
Copenhagen, 21-22 May 1997

John Hutchins

Copenhagen was the place to be this spring -- not for the weather which was unseasonably cold and wet, but at the University of Copenhagen for EAMT's workshop on **Language technology in your organization?** Organised by Bente Maegaard (Center for Sprogteknologi) and Viggo Hansen (Hofman-Bang A/S), this year's workshop attracted over 40 participants from all sectors of the MT and MAT community in Europe. With users and developers in the majority, the workshop was characterized by lively discussions and question-answer sessions throughout.

Doris Marty-Albisser got us off to an excellent start with a fascinating and informative breakdown of the economics of installing and using translation tools at the Swiss Bank Corporation. Its Corporate Language Services was set up two years ago as a customer-oriented self-sufficient provider of translation and other language services. The focus has been on the use of translation memory software and building up the terminology database. While maintaining quality and staff enthusiasm the service has succeeded in increasing productivity and making a profit. The detailed figures demonstrating unequivocal cost savings were a stimulus to others contemplating the introduction of translation technology in their organisations.

Walther von Hahn from the University of Hamburg, described the development of a prototype knowledge-based terminology tool -- the languages are German, Bulgarian and Russian, but the knowledge base is language independent -- and illustrated how research founded on a thorough evaluation of actual translator needs can lead to practical tools. He was followed by Dimitri Theologitis of the translation service of the European Commission, who outlined the background of EURAMIS and the new tools being introduced for translation support: full-text retrieval systems, terminology management, translation memories, and machine translation itself. The rich resources available from the termbank EURODICAUTOM and from Systran are being integrated into a powerful and sophisticated workstation designed for seamless workflow in a complex environment.

The next two speakers addressed a central theme of the workshop: when tools should not be used and why organisations do not use them. Terence Lewis has developed his own MT system at Hook & Hatton for translating Dutch technical documents into English (initially in the field of chemical engineering), adopting a realistic and pragmatic approach to the use of

computer aids. He could speak with authority on when translation tools were inappropriate: terminology input may be wasted if texts are too short, MT output may be useless if too much post-editing has to be done, and translation memories may regurgitate old versions when what is needed is something fresh and spontaneous. Hanne Fersöe (Center for Sprogteknologi) summarised the reactions she has encountered when talking to organisations about MT and other translation tools. The reasons were many and various: 'human translation is better', 'translation tools are too expensive', 'there is no time to look into automation', 'the tools do not fit into our workflow', 'they are incompatible with our technology', etc. Translators tend to be conservative and passive members of staff, and not themselves aware of the value and costs of their present services. Among managers there was ignorance of their own translation needs and widespread disbelief that computer aids could save money and improve customer services.

As the last speaker of the first day, John Hatley described developments at Logos, in particular the introduction of the client-server system. Like many of the older mainframe systems, Logos was adapting quickly and successfully to the network environment and to the need for integrating translation memory and terminology management facilities and providing new software platforms (Windows NT, Solaris, Unix). Logos has agreements involving XL8, the Eurolang Optimizer, Trados, and STAR Transit. For the development of new language pairs, Logos is entering into contracts with other groups - both academic and company - e.g. for Scandinavian languages. At present Logos does not intend to offer an unedited MT service on the Internet, but it will cooperate with multinational companies for translation services on intranets.

The theme of the next morning was the place of translation tools in the workflow of a document production environment. The first speaker was Tim O'Donoghue of Canon Europa, who described the complexity of localisation into 25 languages; a major problem was the PageMaker format of the documentation received from the Japanese technical writers. Conversion into the SGML format suitable for publishing in different European languages introduced substantial delays in the workflow. The unit employs a variety of tools: its own bespoke translation memory (Adroit), the Transit workstation used as an editor not as TM tool, and the TermStar terminology manager. Since the English texts translated from Japanese serve as new source documents for translation into other languages, great care is taken to ensure terminology consistency and quality control. To conclude, he spoke about the Open Tag initiative from ILE, with which Canon is involved [see elsewhere in this issue of MTNI], which may result in a de facto standard for localisation processing.

He was followed by Dirk Lueke speaking about the localisation procedures at SAP AG (Munich). This is now a self-supporting service within the company (the MLT group), employing 9 staff. The successful use of a variety of MT and TM tools (METAL, Logos and Trados) has been widely reported. A new application at SAP is the translation of 'error messages' and requests for assistance from customers of SAP software. Texts are often fragmentary, incomplete, using non-standard language and unusual abbreviations. The MT system (METAL) is used to translate, and the translation memory is used for composing responses (since there is a high level of repetition). On average, replies are sent within 8-9 hours, and the next goal is a turnaround of 4-5 hours. Without MT and TM the service would not be possible, and it is providing high customer satisfaction.

The final presentation at the workshop was from Herman Cayers, who described the success of LANT since its foundation in 1993. With the purchase the development rights of METAL technology from Siemens and the acquisition of the CASL project of General Motors (Detroit) in 1996, and with the acquisition of Eurolang Optimizer from Sonovision in 1997, the LANT company has emerged as one of the principal European players in the field of multilingual documentation and communication. An emphasis of the LANT approach is

controlled language, for which has been developed the LANTMaster tool, oriented specifically towards the improved translatability of texts (reduction of verbosity, semantic complexity, elimination of ellipsis and indirect speech, avoidance of nominal styles, etc.) As a result, MT systems can achieve high accuracy (95%). About to be launched is also LANTscape, a multilingual routing, messaging and accounting software service for the translation of electronic mail, Web pages and attached electronic files using MT systems and translation agencies.

In this account it is not possible to convey the atmosphere of enthusiasm and cooperation, coupled with a willingness to discuss openly mutual problems, that permeated the whole of this workshop. If any proof were required that translation tools are a commercial success then this meeting will have convinced any doubtful participants. The only regret is that there were not more representatives from reluctant companies who could have been persuaded to enter the field.

The proceedings of the workshop will be produced within the next few months, and details of availability will be publicised in the next issue of MTNI.

Evaluation of Translation Tools for Localisation

LRC Workshop, Dublin,
Newman House, 17 April 1997

Reinhard Schäler

The Localisation Resources Centre welcomed more than 50 participants to the second Workshop on Evaluation of Translation Tools for Localisation. As with the first workshop in October 1996, this workshop was organized by the Localisation Resources Centre in co-operation with the Software Localisation Interest Group (SLIG) and the European Association for Machine Translation (EAMT).

The workshop was probably the only major event of its kind in Europe this year and was attended by participants from Ireland and overseas (Germany, Switzerland, the U.K. and the Netherlands) who had not only a successful workshop but also sufficient time to enjoy their stay in Dublin, the world's centre for localisation (music, entertainment and good company!).

The aim of this workshop was to follow up on discussions and issues raised by the participants at the October workshop:

* How are translation tools being evaluated, introduced and used in the localisation industry (case studies)?
* What methodologies, tools and resources are available for the evaluation of translation tools?
* What evaluation projects have been undertaken in other countries and industries and what can we learn from them?
* Can a tool be developed to help localisation managers decide whether a translation tool (e.g. a translation memory system) should be used for a particular project?
* What are the needs of users of translation tools in the localisation industry and how do developers respond to these needs?

During the workshop, these questions were addressed by individual speakers, coming from different backgrounds and organizations (researchers, developers, software publishers and localisation service providers). Among the individual speakers were John Hutchins, president of the European Association for Machine Translation (EAMT) on MT Today, Sandra Manzi (ISSCO, Geneva) on the European EAGLES Project, Reinhard Schäler (LRC, Dublin) on the European DiET Project, Darren Hogan (LRC, Dublin) on Automating Evaluation - A Prototype Application, Sharon O'Brien (ITP, Dublin), Ralph Schories (Edition Aum GmbH, Germany), and Catherine Gavin (Berlitz, Dublin) on Using Translation Memory Technology for a Large Scale

Localisation Project. The organisers left ample time for discussions to give the participants the opportunity to contribute to the success of the event. In particular, the Workgroup Sessions in the afternoon were designed to encourage the active participation of all.

Workgroups: Participants received a full set of proceedings and additional background information for the afternoon workgroup sessions containing an overview of the results of the 1996 Workshop on Evaluation and a proposal for the afternoon discussions.

OTELO User Group Meeting

Hosted by Lotus Development Ireland (Dublin)
16 and 17 December 1996

OTELO is a collaborative effort between the European Union and a consortium of industrial partners to design and develop a comprehensive automated translators' environment. OTELO was initiated in 1994 by Prof Allan Ramsay and Reinhard Schäler at University College Dublin with support from the Irish National Software Directorate. A consortium was put together which included researchers, industrial users and developers of translation technology tools. A proposal was submitted by the consortium under the first call of the Language Engineering section of the 4th Framework Programme which was accepted. During subsequent negotiations with the European Commission, academic researchers at the University of Essex and University College Dublin as well as other industrial subcontractors and associated partners were asked to leave the consortium, which now includes Lotus Development Ireland (co-ordinator), SAP Germany, Logos Germany, CST Denmark (all original consortium members) and GMS Germany and Gecap Germany (new consortium members).

The aims of OTELO are to:

* Define standardized common lexical resource and text-handling formats, and adapting some NLP systems to accept these formats
* Provide a range of tools to increase the quality and the efficiency of machine translation
* Develop a network infrastructure to make translation tools more accessible
* Integrate the access to OTELO into a groupware framework

The purpose of the first user group meeting was to help finalise the design of the OTELO client which is focused at improving the online and printed document localisation process. During the meeting, issues such as the integration of translation memory, machine translation and other productivity tools into the localisation process were discussed, in particular, the detailed process by which files are processed by the OTELO client as well as the OTELO client user interface. The results of the OTELO user survey were presented by SAP while the OTELO terminology model was introduced by GMS.

It emerged that OTELO will be particularly strong in assisting user to manage complex translation projects and provide some very useful tools to manage updates, file handling and version control - all central issues in localisation. The integration of TM and MT will focus on AmiPro as the editor with LOGOS and the Translation Manager as the translation engines (all these systems are being developed and in use by members of the consortium). This will be a welcome addition to other integrated approaches already in place (e.g. Word, LOGOS and TRADOS Translators' Workbench). The effort to reach an agreement on a common format for terminology interchange is to be welcomed and seems to be well advanced and co-ordinated with other, similar initiatives (e.g. MARTIF). There was some constructive criticism on the OTELO user interface which still seems to need a lot of work. The consortium needs to make sure that it does not lose the opportunity to design a good, user friendly UI, based on the requirements of a wider user group. Another problem area might be the developers' focus on RTF which will

probably be completely replaced by other file formats such as HTML in the very near future.

The idea of a general translation environment for a variety of translation memory, machine translation and other productivity tools is fundamental to the future success of companies in the localisation industry and other, similar industrial sectors. The OTELO concept addresses some of the central issues involved in the creation of such an environment. We will have to wait until the next User Group Meeting to see how the consortium implements the concept into a working environment.

All publicly available OTELO documentation and material, including the results of the user survey and presentations given at the meeting, should become available on the OTELO web site (http://www.otelo.de).

Arbeitskreis "Maschinelle Übersetzung"

6-7 February 1997

John Hutchins

The twelfth meeting of the Working Circle for Machine Translation met in the Jean Monnet Building of the European Commission in Luxembourg. This informal group of (mainly) German-language users and developers of MT systems and translation tools has become in recent years one of the principal forums within Europe for the exchange of experience and discussion of current developments. Meetings are chaired by its founders Hans Billing and Ursula Bernhard.

In his introduction Billing reported a new initiative by the Federal Ministry for Education, Science, Research and Technology (BMBF) and the Federal Ministry for the Economy (BMWi) for promoting language technologies, including restricted MT, in support of access to foreign language information in industrial processes. The first presentation at the meeting was an outline by Jan Roukens of the Commission (DG XIII) of the Multilingual Information Society (MLIS) initiative for the promotion of linguistic pluralism within the European Union, in which the development of advanced multilingual resources, support tools and in particular automatic translation will play a crucial role. The Commission is fully committed to the automation of translation for all languages of the Union as a matter of political, economic and social necessity, while recognising that optimal systems may not appear for 50 or 100 years. Mr Roukens concluded by outlining the forthcoming calls for proposals.

The rest of the morning was devoted to developments in the Commission. Dimitrios Theologitis described the general situation within the Translation Service, its present use of translation aids, the current MT facilities and the service's future strategy. The service is to assume responsibility for the Systran operational systems (16 at present) from the DG XIII. Dorothy Senez reported on the results of an MT feasibility study recently completed; the study covered user's opinions, legal implications, a market survey, and a cost-benefit analysis [see the item by Dorothy Senez elsewhere in this issue of MTNI.]

Pierre Thillen described how Telindus undertakes the development and maintenance of Systran systems on behalf of the Commission, including the monthly updates of dictionaries and the introduction of improved software. The work is based on analysis of the texts actually translated (some 230,000 in 1996, of which half involved English and French). Rosemarie Sauer outlined the evaluation methods used in the Translation Service to monitor improvements (or otherwise) in Systran; the aim is to set targets for the developers and to assess goal achievements. Comparisons are made of randomly selected texts translated before and after the installation of new versions. There were admitted to be weaknesses in the methodology, but as a general indicator it served its purpose.

Jean Marie Leick described the basic idea and general aims of the EURAMIS workstation (European Advanced Multilingual Information System), which is currently under

development: a major objective is the integration of the translation and language resources, both corporate and individual, within the Commission. Finally, Achim Blatt gave a demonstration of EURAMIS in its present status and as will be gradually introduced to the Service in the next months.

The afternoon began with an overview by Roger Havenith (DG XIII) of the projects supported by the Commission within the context of the various EU programmes (LRE, MLAP, LE, etc.), from the end of Eurotra to the current projects. He outlined the next call for proposals, which will emphasise market globalisation and technological convergence, deregulation, the Internet and intranets - for MT this means user-oriented applications for integration in work situations. This was a valuable and instructive presentation for all those present who were interested in participating in current and future EU programmes.

Next we had Martin Volk (University of Zürich) who described his evaluation of several commercially available PC-based systems for German-English translation, particularly regarding their suitability for businesses and practical usability. In general he concluded that most offered poor comprehensibility of output and inadequate usability.

Wilhelm Weisweber (Technical University Berlin) presented his ideas of a future technology for MT based on open distributed processing, object management architecture and common object request broker architecture (COBRA), which could provide the basis for an 'open distributed MT' with integrated MT architectures, reciprocal use of linguistic and database knowledge, the testing of new NLP processes, and an open system for system competition.

Venkatakrishnan Srinivasan (Univ. Mainz) described TERMBASE, an online terminology database for translators claimed to be simple and straightforward to use and maintain.

The day was rounded off with four reports on current and planned system developments at Logos (by Friederike Bruckert), Systran (Dimitri Sabatakakis), GMS (Gregor Thurmair), and TRADOS (Daniel Brockmann).

The second day began with an account by Adriane Rinsche of her company's evaluation of various translation tools (principally 'translation memory' systems) for a software localisation application; in the subsequent discussion, a number of participants doubted the wide applicability of translation memories for many service environments. Hans Haller (IAI Saarbrücken) described the aims and achievements so far in the MULTILINT project, a multilingual documentation tool for the BMW car manufacturing company. Daniel Grasmick (SAP) described the successful use of METAL and Logos at SAP, and outlined future plans; in particular the collaboration in the OTELO project for a uniform user-friendly interface access to multiple translation tools.

Jörg Schütz (IAI Saarbrücken) gave us a vision of future network-based MT services, the tools and facilities which will be needed in order to achieve the cooperation of MT services and translation brokers in providing users with the most suitable and cost-effective translation services. Whereas Weisweber's talk of the previous day had focused on the technological prerequisites, Schütz emphasised the structural frameworks required.

Finally, Gregor Thurmair (GMS) spoke about the aims of the ambitious AVENTINUS project, which will enable police in a number of European countries to access databases and exchange information using their own languages: the first application area will be drug control and enforcement.

The meeting demonstrated the vigorous and rapid development of translation technology in Europe and the inestimable value of bringing together those involved on all sides (researchers, vendors, developers and promoters) in fruitful, and regular exchanges. The informality of the Arbeitskreis fulfils this function admirably and will doubtless continue to do so in future years.

SERVICES

European Language Resources Association

[Press release]
It is now possible for non-European organisations to become subscribers to the European Language Resources Association.

As part of its policy of opening up its impressive catalogue of Language Resources to research and commercial organizations outside its core operating area, ELRA is pleased to announce that during a meeting held on 30 April 1997, its Board decided to offer non-European organizations the opportunity to become non-voting ELRA members.

Subscribers will benefit from discounts similar to those offered to ELRA members on the prices of language resources, as well as other services available only to members. These include discounts on publications related to language engineering activities, summaries of market surveys, a newsletter published quarterly in English and French, legal consultancy regarding intellectual property rights and copyrights, etc., manuals for the validation of language resources, special pages on the Web entitled "For members only".

The annual subscription fees are: ECU 1,000 for non-profit organizations and ECU 5,000 for commercial organizations. The subscription form can be downloaded from the ELRA Web site.

ELRA, a non-profit association registered in Luxembourg, was established in 1995. Its mission is to promote the development and exploitation of language resources (monolingual and multilingual lexica, text corpora, speech databases and terminology) within the language engineering field. ELRA receives financial support from the European Commission and national governments in Europe. Although its prime focus is on Europe, it also seeks active cooperation and exchange of resources with the global language resources community.

For further information: ELRA/ELDA, 87 Avenue d'Italie, FR-75013 Paris France (Tel: +33 01 45 86 53 00; Fax: +33 01 45 86 44 88; Email: info-elra@calva.net; Website: http://www.icp.grenet.fr/ELRA/home.html

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WebSites

IAMT on the Web

In recent months the regional associations of IAMT have set up the following Websites:

AAMT home page:
http://www.jeida.or.jp/aamt/index-e.html
The AAMT Journal (English version):
http://dumbo.ai.kyutech.ac.jp/nomura-ken/AAMT/aamt-e.html

AMTA home page:
http://www.isi.edu/natural-language/amta.html

MT Summit VI:
http://www.isi.edu/natural-language/mtsummit.html

EAMT home page:

http://www.lim.nl/eamt

From the last mentioned page there is also access to a Website for *MT News International*, which lists the contents of recent issues.

Each of the sites includes links to other MT related pages on the Internet. In the course of time it is expected that IAMT itself will have its own Web pages.

USERS and RESEARCH in EUROPE

Report from the European Commission

Dorothy Senez

The Translation Service and DG XIII of the European Commission are ready to step up their cooperation in the field of machine translation. Having worked side by side over the last twenty years on the development of the Commission's machine translation system for the exclusive benefit of officials working within the institution, their respective roles in the field of MT have recently been redefined.

The success of the Commission's MT system within the institution since the beginning of this decade has meant that DG XIII, whose mission is to fund research in telecommunications and language engineering, stepped out of the development of a system which had decisively entered into the daily office life of Commission administrators.

Following the announcement by DG XIII that it intended to phase out further developments, the Translation Service of the European Commission carried out an extensive feasibility study, demonstrating to its satisfaction that MT directly and indirectly benefits not only the Translation Service itself but also the Commission as a whole. In the light of the successful outcome of the study, the Translation Service is taking over sole responsibility for running and maintaining the Commission's existing MT system with a view to meeting the internal requirements of the EU institutions. Plans are going ahead to conclude a contract for computational linguistic services for the maintenance of the system. A call is due to be published in June of this year, with opening of tenders scheduled for September.

The Commission's MT system is based on the WTC Systran system, for which certain rights were bought by the European Commission in 1975 and developed since then for internal needs. The following 17 language pairs are covered: English-French, English-Dutch, English-German, English-Greek, English-Italian, English-Portuguese, English-Spanish, French-Dutch, French-English, French-German, French-Greek, French-Italian, French-Spanish, German-English, German-French, Spanish-English and Spanish-French. Machine translation at the Commission is accessed via the internal e-mail system and is available to some 20 000 officials within the Commission itself and, potentially, a further 15 000 officials in the other institutions of the European Union. During 1996 the service was actually used by some 5,400 of the Commission's staff and some 230.000 pages were processed.

Having 11 official languages with which to contend already creates serious problems. Faced with the prospect of adding several more to the list with the arrival of the applicant eastern European countries, the Commission is considering the possibility of making additional languages available in machine translation. It is keeping a close eye on developments on the commercial market and will shortly be issuing a call for tenders with a view to taking on new language pairs to fill some of the gaps in its own system or even replacing those language pairs whose quality is considered to be less satisfactory.

DG XIII, for its part, is turning its attention to the needs of the Member States in the area

of multilingual communication. An increasing volume of information is being exchanged between European citizens, the Community institutions, the Member States and other regional administrations, particularly as a consequence of economic integration and the freer movement of people. Language barriers inevitably hamper these communication channels. Action line No 3 of the Multilingual Information Society Programme (MLIS) has been designed to alleviate some of these difficulties by promoting the use of advanced language tools throughout the Community's public sector.

This shift in emphasis in the responsibilities of the two Commission departments in no way augurs a parting of the ways for the Translation Service and DG XIII. On the contrary, they will be required to cooperate even more closely. The MLIS programme aims to exploit existing experience and knowledge of multilingual issues and solutions and the Translation Service has acquired unique experience in the use of translation technology as well as a vast set of multilingual resources and tools. Hence, the Translation Service will play an active role in Action line No 3 and will be submitting a global expression of interest in its capacity as a public administration in its own right. By transferring the experience acquired by the Commission's language service in the various fields of Community activity to the administrations in the Member States, thereby sharing the language resources which each produces, it will be possible to achieve economies of scale and reduce the cost of multilingual communication. In addition to being an active participant in the programme, the Translation Service will be taking a keen interest in the outcome of MLIS Action line No 3 and will be looking out for promising applicants. It would make very good sense for the Translation Service to join forces with DG XIII for certain language pairs in the MT system - and for other tools, for that matter - to avoid duplication of effort in any calls for new combinations. For the moment it is too early to say how events will unfold. Much will depend on the initial results obtained during the preparatory phases and the timing of the actual calls.

It goes without saying that the various initiatives currently in the pipeline will have direct consequences for the machine translation market. The private sector will have an essential role to play in shaping future strategic directions. The importance of the private sector in these efforts is such that, legal constraints permitting, it is intended to provide access to the Communities' resources. Under this user-driven MLIS programme cooperation is essential.

USER EXPERIENCE

Using PARS and Polyglossum to Translate Technical Texts from Russian into English:
Experience of a Professional Translator

Olga Bezhanova

In this paper I would like to tell the readers of MT News International about my recent experience in the application of the Russian-English MT and MAT systems developed by Lingvistica '93 Co., Ukraine, and ETS Publishers Ltd., Russia, to translate a large portion of technical texts in the field of aircraft building. The texts were presented in the form of lectures for Iranian students who were coming to study at Kharkov Aviation University. I shall not describe the Polyglossum dictionary-support system and the PARS MT system as they have been discussed by Dr.Michael S.Blekhman in several issues of MT New International. You may also read his paper in "Expanding MT Horizons. Proceedings of the 2nd Conference of the AMTA. 2-5 October, 1996, Montreal, Canada". My task is different: to give you my view of using MT to translate technical texts.

As it always happens, the work was "awfully urgent": it was initiated not long before the

beginning of the academic semester, and, according to the contract, I had very little time.

Initially I tried to attain both high quality and the required speed, but very soon I understood that a certain degree of perfection of the output texts was to be sacrificed as I needed a lot of time for finding translations of specific technical terms, and there was very little time left for polishing the style.

Manual translation using an MAT system

The first batch of the texts (about 250,000 words) came in "traditional" (though traditions are changing quickly!) paper form. Because of the low quality of the printed copies (they had been typed on an old typing machine), I could not scan the texts for subsequent running them through a computer translation system. At the same time, I was supposed to present the translations as electronic text files: no typing machines will be used any longer.

There texts contained some words (5-7%), mainly special technical terms, such as "boss", "extension line", "hairline" (the English equivalents are given), which I couldn't find in any general-usage Russian-English dictionary. The task was made easier due to the application of the Polyglossum set of electronic dictionaries, in which all the unknown terms were found. The mathematical (75,000 entries) and polytechnical (300,000 entries) dictionaries were of the most helpful.

It seems necessary to mention that, apart from the problems with technical terms, there were also difficulties with the syntactic structure of some of the Russian sentences, especially in the readings on technical maintenance, safety, and storage requirements. These texts, written in a rather unusual style never used in every-day life, were very hard to translate. Some sentences had to be reread several times before their meaning was grasped and grammatical structure understood - even though this may sound rather strange for me to say as I am a native speaker of Russian!

The problems in comprehending the text definitely slowed down the translation process, but this is always the case with the translation of manuals: you can spend a lot of time and effort trying to understand the grammar, especially if the author's mind-set differs drastically from your own.

It should also be noted that one of the requirements was that the terminological system used at the Aviation University be followed. Implementing this requirement was rather difficult because there were 25 translators working on the task and for purely organisational reasons we were unable to cordinate our work properly.

The source texts could be divided into four groups according to the subject areas. The first group consisted of purely technical texts - for example, "Loft-Template Method of Manufacturing Machine Parts". The texts in the second group were descriptions of special computer systems used in airplane design. Technical guides for special devices composed the third group. The fourth group, which was the easiest to translate from the lexical point of view but the most difficult one in termsa of grammar, consisted of readings on the general requirements for technical documentation - for example "The Order and Rules of Manufacturing Certification".

It became quite obvious that different dictionaries and dictionary combinations had to be used for translating these text groups. Thus, the first group required the mathematical and polytechnical Polyglossum dictionaries. When translating the second group, I used another pair of Polyglossum dictionaries: programming (25 word-entries) and polytechnical. As for the third and fourth groups, their terminology was covered by the polytechnical dictionary only.

Depending on the degree of difficulty of the source texts, the average time needed for the manual translation of 15 K using Polyglossum was 3,5 hours.

Post-Editing Machine Translations

The second batch of texts (about 650 K) was presented in the from of WinWord and DOS text files. These lectures were translated by the PARS machine translation system and then post-edited. I used both PARS for Windows and PARS for DOS. The following PARS dictionaries were used in various combinations:

general - 40,000 word-entries;
technical - 77,000;
space - 60,000;
aviation - 7,000;
computers - 25,000;
mathematics - 75,000.

At this stage, I had even less time to do the work. The original Russian texts of 20-30 pages were given to me in portions, usually at noon, the request being to "please translate it not later than tomorrow morning! The Iranians are coming!".

The situation being so tense, sacrifices as to the stylistic purity of the end-translations had to be made in order to submit translations as soon as possible. The idea of my post-editing was to make the texts grammatically correct and understandable, omitting a number of stylistical details, such as repetition of several "of"-clauses, misuse of articles in those cases where this did not affect understanding, etc.

This allowed me to come up with translations that were grammatically and lexically correct though stylistically far from ideal in a number of cases. Here are two examples of machine translations left as they were, without any post-editing:

Requirements to the execution of the outlines of modern airplanes and assurance of inter-changeability of their aggregations".

"This advantage is especially noticeable on the larger level of loading".

Once again, technical terms were the main difficulty, but the problem was solved due to using Polyglossum were PARS failed to translate a term: the time needed to find in Polyglossum a word not translated by PARS and paste it into the text is, as a mathematician would say, negligibly little. Besides, all the new terms were immediately entered into the corresponding PARS dictionaries by Lingvistica '93 dictionary officers, which made PARS "cleverer" with each text translated.

At the same time, there were also some sentences generated by PARS that had to be changed completely, as, for example, the following one:

After switching-on pumping station, if via 5 with pressure is not is heaved above 8 Pa actuates signaling table ABORT.

If all or most of the sentences had been translated so poorly, post-editing would have been much more difficult, which would have made MT quite or almost useless. However, it only took me about 2-2.5 hours to post-edit 30 K of texts using PARS, and, what is very important, the work itself was not so boring and tiresome as manual translation. In other words, MT helps me make more money and get less tired.

Well, although it is obvious that the translations made in such a way were of stylistically lower quality than those which I translated myself, the main task was solved: informationally adequate translations were made within a very short period of time. I hear that professional translators are very severe as to machine translation. They say that computers cannot compete with them. Well, PARS does not compete with me. It helps.

PUBLICATIONS RECEIVED

Journals

AAMT Journal *no.18, March 1997* In Japanese only.

Computational Linguistics *vol.22 no.4 (December 1996)*.

ELRA Newsletter *vol.1 no.4 (December 1996)*. Contents include: Computer-based translation systems and tools (John Hutchins). -- AVENTINUS: a multilingual information system for drug enforcement (Thomas Schneider). -- EAGLES: a brief progress report (John McNaught).

Elsnews *vol.5 no.4 (December 1996); vol.6 no.1 (February 1997); vol.6 no.2 (April 1997)*

Language International *vol.9 no.1 (February 1997).* Contents include: Dictating progress to machines (Andrew Joscelyne). -- Language and the Internet (James J.Romeo). -- Interview: Rose Lockwood.

LISA Newsletter *vol.6 no.1 (March 1997)*. Contents include: Defining multimedia localization (David Murdock). -- Localization: R.I.P.1999 (Alex McDonnell). -- Building machine translation on a firm foundation (Alan K.Melby). -- Only connect: multilinguality, information management and language services (Deborah Fry). -- Translation quality: the customer makes the difference (Yann Meersseman); *vol.6 no.2 (May 1997)*. Contents include: Language fever (John Freivalds). -- The future of the localization industry (Roger Jeanty). -- Little fish and large blue chips (Robin Bonthrone). -- Language professionals and telematics in the new economy (Gideon Strauss). -- Other things being equal, choose the best: the localization business in Korea (Tai Young Kwon). -- Korean localization standards (Christopher Chung). -- The Mainz Forum summary, 5-7 March 1997.

Literary and Linguistic Computing *vol.12 no.1 (April 1996)* Contents include: English-to-Korean machine translation and anaphor resolution (R.Mitkov, K.H.Lee, H.Kim and K.S.Choi).

Localisation Ireland *vol.1 no.1 (March 1997)*

Machine Translation *vol.11 no.4 (1996)* Contents include: Parameterizing lexical conceptual structure for interlingual machine translation. A review of "Machine translation: a view from the lexicon" by Bonnie Dorr (Douglas Arnold). -- Book reviews. -- Indexes to vols. 1-10.

Multilingual Computing *vol.8 no.1 (1997).* Contents include: Languages on the World Wide Web (Isa Gucciardi). -- Building language technology bridges [ELSNET] (Colin Brace). -- Translation software in the new age (Mark Miller). -- Internationalizing the Web (Vartan Piroumian). -- S-Tagger converts between FrameMaker & Workbench [TRADOS] (Sharon O'Brien and Robert Barany). -- Localization bibliography (Emmanuel Uren); *vol.8 no.2 (1997)*. Contents include: Tango Multilingual Browser (Edward Cherlin). -- Who owns translation databases? (Mark Berry). -- Tips for preparing your document for translation (A.R.Jones). -- Localizing Lotus Notes applications (Thierry Mayeur)

Natural Language Engineering *vol.2 part 1 (March 1996)*. Contents include: Efficient generation of random sentences (Mark-Jan Nederhof). -- Distribution of content words and phrases in text and language modelling (Slava M.Katz). -- On some applications of finite-state automata theory to natural language processing (Mehryar Mohri); *vol.2 part 2 (June 1996)*. Contents include: Fuzzy network model for part-of-speech tagging under small training data

(Jae-Hoon Kim and Gil Chang Kim). -- Unsupervised learning of part-of-speech guessing rules (Andrei Mikheev). -- An automated system that assists in the generation of document indexes (Julia Hodges, Shiyun Yie, Ray Reighart and Lois Boggess). -- NL-OOPS: from natural language to object oriented requirements using the natural language processing system LOLITA (L.Mich).

Books

Eynde, Frank van, and Allegranza, Valerio (eds.): **Semantics and discourse: an NLP perspective.** Luxembourg: European Commission, 1995. 192pp. (Studies in Machine Translation and Natural Language Processing, vol.9)

Somers, Harold (ed.): **Terminology, LSP and translation: studies in language engineering in honour of Juan C.Sager.** Amsterdam/ Philadplphia: Benjamins, 1996. xi,249pp. (Benjamins Translation Library, vol.18). ISBN: 90-272-1619-3; 1-55619-700-4.

Carr, Silvana, et al. (eds.): **The critical link: interpreters in the community.** Papers from the First International Conference on Interpreting in Legal, Health, and Social Settings, Geneva Park, Canada, June 1-4, 1995. Amsterdam/Philadelphia: Benjamins, 1997. 322pp. (Benjamins Translation Library, vol.19). ISBN: 90-272-1620-7; 1-55619-701-2.

Reports

Localisation Resources Centre. Yearbook 1997. Dublin: Localisation Resources Centre, 1997. v,332pp. I£100.00 [Available from Localisation Resources Centre, Campus Innovation Centre, Roebuck Castle, UCD, Belfield, Dublin 4, Ireland. Fax: +353-1-2830669; email: LRC@ucd.ie]

Lying in wait at the heart of the Web. Language Technology Overseas Technical Expert Mission to Japan, September 1996. Editor: Nicholas Ostler. [London: Linguacubun Ltd., 1997.] 47pp.

Conference proceedings

EAMT Machine Translation Workshop, TKE'96, Vienna, Austria, 29-30 August 1996. Proceedings. [Geneva: EAMT, 1996] 159pp.

Items for inclusion in the 'Publications Received' section should be sent to the John Hutchins at the address given on the front page. Attention is drawn to the resolution of the IAMT General Assembly, which asks all members to send copies of all their publications within one year of publication.