MultiLingual

Language | Technology | Business

January/February 2012

Focus: Future of Language Technology

- The automated interpreter
- Machine translation for less-resourced languages
- The translation center behind Translators without Borders
- Ten essential steps to TMS selection for LSPs
- Cross-lingual text analytics: a new frontier in linguistics
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News: Kendra Gray
Production: Darlene Dibble, Doug Jones
Cover Photo: Kendra Gray
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Advertising: Kevin Watson, Bonnie Hagan

Editorial Board
Jeff Allen, Ultan Ó Broin, Arturo Quintero, Jessica Roland, Lori Thicke, Jost Zetzsche

Advertising
advertising@multilingual.com
www.multilingual.com/advertising
208-263-8178

Subscriptions, back issues, customer service
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www.multilingual.com/subscriptionInformation

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editor@multilingual.com
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MultiLingual Computing, Inc.
319 North First Avenue, Suite 2
Sandpoint, Idaho 83864-1495 USA
info@multilingual.com
www.multilingual.com

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About the cover
Finely carved stone detail of a marker at the Mainz, Germany, museum honoring the language tech inventor Johannes Gutenburg. His far-reaching advancement of printing technology is mirrored in the advancements that language technology is currently experiencing in the twenty-first century.

Up Front

Katie Botkin

Toasting tech

Drawing the old year to a close is always a bit bittersweet, and hence the nostalgic tradition of marking the new year with a chorus of "Auld Lang Syne." And then we turn and look forward, toasting, in this case, 2012 — a leap year that happens to be eschatologically interesting, which has also been designated Alan Turing Year, after the mathematician and computer science pioneer, on the centennial of his birth.

So what better way to start out this new year of *MultiLingual* than by discussing the future of language technology? Hassan Sawaf and Jonathan Litchman start out this issue's focus by talking about advancements in one of the longtime fantasies of anyone drifting into dreamland in the world of language technology — machine interpretation. Next, Andrejs Vasiļjevs and Indra Samīte discuss machine translation (MT) challenges for less-resourced languages such as Latvian and provide a study on creating a Latvian MT system. Then Enrique Cavalitto details the new ProZ.com translation platform for Translators without Borders, which allows nonprofit clients to directly interface with volunteer freelancers with very little middle-man project management. Benjamin B. Sargent and Vijayalaxmi Hegde provide ten steps for translation management system selection, depending on your particular bent as a language service provider — who you are and what you're looking to provide. Meta S. Brown looks at cross-lingual text analytics and why businesses should care, and Talia Baruch gives an overview on localizing worldwide mobile apps.

And after all this theoretical localization using advanced management and translation tools, you may need to test your product, which is where Doron Reuveni's suggestions on crowdsourcing your localization testing could come in.

While any issue on the future of language technology might seem ripe for technology reviews, we've opted out of the implicit assertion than any one particular tool is "the future," and instead Nancy A. Locke reviews *The Interpreter's Journal*, a book showcasing a Thai and Lao interpreter's personal journeys, professional and otherwise.

In our columns, Lori Thicke interviews Will Burgett of Intel about automating multilingual chat and various other hot localization topics. Kate Edwards talks about culture and religion, and Andrzej Zydroń makes a case for cloud-based translation tools. Daniel B. Harcz's *Takeaway* covers translator database management, which wraps up what is overall a fairly techie issue.

So, happy 2012 to all our readers, whether they be reading on high-speed internet connections or from a traditional paper copy. ✷

Fiji, first to greet the new year, brings linguistic diversity to tourists

Fiji is one of the first places the sun comes up every day, and hence is one of the first nations to greet the new year, due to its near-equatorial latitude and the fact that it is located just west of the International Date Line. The Republic of Fiji is made up of a collection of more than 300 islands, which are home to various native and immigrant languages such as Kiribati and Rotuman. Many inhabitants speak Fijian as a native language. Non-native speakers often have the option of learning it in school, or of choosing Hindi, for example — Fijian Hindi is an offshoot of the Hindi dialects that were spoken by indentured laborers brought over from India around the turn of the twentieth century to work on Fiji's sugar cane plantations. Indo-Fijians make up around 37% of Fiji's population, according to the 2007 census, and their *lingua franca* borrows words from both native Fijian and Hindi. English, Fijian and Fijian Hindustani are all official languages of Fiji.

Native Fijian itself is an Austronesian language related to others dispersed through the Pacific and Southeast Asia, such as Filipino, Hawaiian and Maori. Fijian is written using the Roman alphabet (contrary to Fiji Hindi, which is often written using Devanagri script), although the orthographical representation of phonetic sound varies widely from that of English. For example, Beqa, an island located off the coast of Viti Levu, is pronounced with labial and velar prenasalized plosives, which would be written something like "mbenga" in English. There has been a push in recent years to make Fijian compulsory in schools in order to promote cultural understanding. Most Fijians over the age of 14 speak English, which often proves to be helpful in tourism. Most signs and advertisements are in English, although there is a small translation community for cross-cultural needs.

Tourism is the leading industry of Fiji, with the largest contingent visiting from nearby Australia, followed by New Zealand, the USA and the United Kingdom. Fiji is tropical, without hosting native poisonous creatures, and its turquoise-to-deep-blue waters attract honeymooners, divers, surfers, sailors and even white-water rafters. Fijians tend to be welcoming of outsiders, sharing songs and pronunciation. Much of the land for resorts and resort hotels is leased, rather than bought, since by law, much of Fiji's landmass is owned collectively by native Fijians.

Clockwise from top left: Packing up a picnic breakfast for visiting tourists on a sandbar near Beqa Island as the tide rises. A mother and child returning from church in a village on Beqa Island — almost two-thirds of ethnic Fijians are Methodist. Fishing provides a source of income and nutrition for many Fijians.

Business

Across opens special business unit

Across Systems GmbH, a manufacturer of corporate translation management systems, has established a new business unit for language service providers offering special solutions, products and services.
Across Systems GmbH *www.across.net*

Global Language Solutions expands

Global Language Solutions (GLS), Inc., a translation and interpreting company, has opened offices in Buenos Aires, Argentina, and Budapest, Hungary. The company has also expanded its European services and now offers quantitative market research.
Global Language Solutions, Inc.
www.globallanguages.com

Rheinschrift updates website

Rheinschrift Übersetzungen, a language services provider, has updated its website. Although the company specializes in localization for the German language market, it also provides translations into most other western European languages.
Rheinschrift Übersetzungen
www.rheinschrift.de

TripleInk now in The Netherlands, celebrates 20th anniversary

TripleInk, a multilingual marketing communications agency, is celebrating 20 years in business. The company has opened a branch office in The Netherlands. Cristina Segar Soudaly Alvarez will manage the new office.
TripleInk *www.tripleink.com*

Rosetta Translation updates website

Rosetta Translation Limited, a translation and language services provider, has redesigned its website and logo. The site features a blog launched earlier this year, and a quote form is available on every page.
Rosetta Translation Limited
www.rosettatranslation.com

New look and move for CONTRAD

CONTRAD, a language services provider, has rebranded the company name and logo and has redesigned its website. The company has also relocated to a new office space under supervision of Marek Makosiej, recently named managing director.
CONTRAD *www.contrad.com.pl*

Updated website and new services for YYZ Translations

YYZ Translations, a language services provider, has redesigned its website. The company has also started its own blog and has introduced new services such as over-the-phone and legal interpretation in addition to voice-overs.
YYZ Translations *http://yyztranslations.com*

Osborne relocates and rebrands

Osborne Solutions, previously Osborne Localization Services, has relocated to Rio de Janeiro, Brazil. In addition to multilingual translation and localization services, the company has expanded to offer multimedia and audio and video production.
Osborne Solutions
www.osborne-solutions.com

Quicksilver adds audiovisual department

Quicksilver Translations, a provider of translation and documentation services, has created an audiovisual department offering translation for dubbing, lip-synchronization and subtitling; subtitles for the deaf and the hard of hearing; and audio description. Verònica López has been hired to head the audiovisual team.
Quicksilver Translations
www.quicksilvertranslate.com

New website, url for Total Recall

Total Recall Software ApS, developer of the translation memory tool Snowball, has redesigned its website and changed its web address. The company has also designed Snowball Align, a document alignment tool.
Total Recall Software ApS
www.snowballtrans.com

Sajan opens Singapore office

Sajan, Inc., a provider of language translation technology and services, has opened an office in Singapore. The new office is staffed by a multilingual project management group that covers multiple areas of subject matter specialty, including travel and hospitality,

business, manufacturing, gaming and information technology.
Sajan, Inc. *www.sajan.com*

TranslateMedia acquires Central Translations

TranslateMedia, developer of the translation management workflow system STREAM, has completed the acquisition of the London-based legal and financial translation services provider, Central Translations.
TranslateMedia *www.translatemedia.com*

Hornet Design Studio relocates

Hornet Design Studio, a provider of desktop publishing localization and localization engineering services, has moved into a larger facility in Biale Blota, Poland.
Hornet Design Studio *www.hornetdesign.eu*

LSA Video

Language Services Associates (LSA), Inc., a language services provider, has formed the subsidiary LSA Video to be the new host for LSA's video remote interpreting services.
Language Services Associates, Inc.
www.lsaweb.com

People

Recent industry hires

- Latitudes, a provider of training, coaching and consulting services, has hired Raymond Reyes as chief executive officer.
- PTIGlobal, a localization, interpretation and translation services provider, has hired Jordan Bulloff as its new global project manager.
- Moravia Worldwide, a globalization solution provider, has hired Renato Beninatto as chief marketing officer.
- Argos Translations Sp z o.o., a provider of language services, has hired Rocio Cava to head its business development unit in Madrid, Spain.
- Global Lingo Ltd., a language services provider, has promoted Fiona Lindley to junior project manager.
- Andrä AG, a manufacturer of translation management software, has hired Oliver Collmann as director of business development.
- Netwire, a provider of translation solutions, has added Letícia Abreu to its quality assurance team, and Fábio Martins has been hired for project management.

Latitudes *www.latitudescoach.com*
PTIGlobal *www.ptiglobal.com*
Moravia Worldwide
www.moravia worldwide.com
Argos Translations Sp z o.o.
www.argostranslations.com
Global Lingo Ltd. *www.global-lingo.com*
Andrä AG *www.andrae-ag.de*
Netwire *www.netwire.com.br*

Resources

TAUS Tracker

The TAUS Data Association, a web-based platform for sharing language data, has launched the TAUS Tracker, a directory of machine translation, translation memory and language technology tools. The tracker is currently a beta version listing over 100 tools in 12 categories.
TAUS Data Association *www.tausdata.org*

'How to Craft a Multilingual Web Strategy'

Common Sense Advisory, Inc., an independent market research firm specializing in the language services industry, has released "How to Craft a Multilingual Web Strategy." The report uses the US Hispanic market to showcase the best and worst online ethnic marketing strategies from 12 global companies.
Common Sense Advisory, Inc.
www.commonsenseadvisory.com

Lingoport white paper and case study

Lingoport, Inc., a provider of software internationalization tools and services, has added a white paper on global keyboards and input methods to its series of reference materials.

Lingoport has also added a case study that explains the internationalization and localization efforts of Cisco TelePresence, a video conferencing system developed by Cisco Systems.
Lingoport, Inc. *www.lingoport.com*

Products and Services

Verifika

Palex Languages & Software, a language services provider, has introduced Verifika, an automated translation quality assurance tool. The tool has features that help reduce the false positive rate, provide auto-corrections where possible, and give the user the choice to ignore errors in reports.
Palex Languages & Software *www.palex.ru*

Simple Help Editor 5.0

PandaWare Company, a software products producer, has developed the latest version of its cross-platform Help authoring software Simple Help Editor 5.0. New features include support for localizing help content in multiple languages, support for Apple's Help Bundle format, and the ability to reuse help content.
PandaWare Company *www.pandaware.com*

WTIpress

Atelier Convivialité, a developer of translation software, has created the WordPress plugin WTIpress. The plugin is designed to

translate posts and pages using the Web Translate It service, a web-based translation management system that includes terminology management and translation memory capabilities.
Atelier Convivialité
http://atelierconvivialite.com

TermWiki Pro

CSOFT International, Ltd., a provider of localization, testing and software development, has launched TermWiki Pro, a secure glossary platform for freelance translators, language service providers and global businesses.
CSOFT International, Ltd. *www.csoftintl.com*

Rosetta Shanghai adds interpretation service

Rosetta Translation Limited, a translation and language services provider, has added interpretation to the list of services offered at its Shanghai, China, location.
Rosetta Translation Limited
www.rosettatranslation.com

XTRF 2.4, XTRF-QuickBooks

XTRF Translation Management Systems has upgraded its translation company management system XTRF to version 2.4. Improvements include the bundle workflow module providing project process automation.

XTRF has also enhanced its translation management system with QuickBooks, an accounting program developed by Intuit Inc. The software integration covers three main areas of data synchronization: contact data, invoicing terms and conditions, and payments and charges.
XTRF Translation Management Systems
www.xtrf.eu

Linguan

Drobnik KG, creators of web development tools and iPhone and iPad applications, has designed Linguan, a localization tool for multilanguage application development. The tool enables better communication with translators during the development stage.
Drobnik KG *www.drobnik.com*

LTC terminology management service

LTC, a provider of language technology solutions, has expanded its solutions to include a terminology management service, a process of collecting an organization's key terms, brand literature and industry jargon into an existing or recommended termbase.
LTC *www.ltcinnovates.com*

iAPPS v4.7

Bridgeline Digital, a provider of interactive business technology solutions, has introduced a localized version of its iAPPS web experience management platform. Version v4.7 supports over 100 different currency options and connections to international payment and tax providers.
Bridgeline Digital *www.bridgelinedigital.com*

SwiftKey X 2.2

TouchType, a developer of text entry software, has announced an update for its Android keyboard, SwiftKey X. Version 2.2 features improved multitouch typing support, Arabic and Hebrew languages, and enhancements to the software's Fluency prediction engine.
TouchType *www.touchtype-online.com*

MemSource Cloud updates

MemSource Technologies, a developer of cloud translation software, has released a new version of MemSource Cloud. Updates include new Microsoft Excel import options and machine translation improvements.
MemSource Technologies
www.memsource.com

Clients and Partners

ENLASO partners with Internationalization Labs

ENLASO Corporation, a provider of enterprise language solutions, has partnered with Internationalization Labs, LLC, a globalization consulting firm, adding internationalization audits, code remediation, consulting, testing and training to its list of services.
ENLASO Corporation *www.enlaso.com*
Internationalization Labs, LLC
www.i18nlabs.com

GlobalEnglish selects Cloudwords

GlobalEnglish Corporation, a developer of global business solutions, has selected Cloudwords, Inc., an online translation management platform, to assist with its corporate communications translation needs.
GlobalEnglish Corporation
www.globalenglish.com
Cloudwords, Inc. *www.cloudwords.com*

Lexcelera wins BNP Paribas contract

Lexcelera, a translation services provider, has been awarded a contract with BNP Paribas, a global banking group, for machine translation (MT) enhancements, including dictionary building and MT customization in several language pairs.
Lexcelera *www.lexcelera.com*

Verztec selected by aviance

Verztec Consulting Pte. Ltd., a provider of multilingual communication services, has been selected by aviance, Unilever's luxury division, to localize marketing materials, including iPad applications, from Thai to English, Malay and Mandarin.
Verztec Consulting Pte. Ltd. *www.verztec.com*

January

Translation Technology: Localisation e-Learning Course
January 9-March 23, 2012, online.
Imperial College London, Humanities Department
www3.imperial.ac.uk/cpd/courses/subject/other/localisation

Computer-Assisted Translation Course
January 18-21, 2012, Monterey, California USA.
Monterey Institute of International Studies
www.miis.edu/academics/programs/translationinterpretationshort

Winter School in Language and Speech Technologies
January 23-27, 2012, Tarragona, Spain.
Research Group on Mathematical Linguistics
http://grammars.grlmc.com/wslst2012

CIUTI Forum 2012
January 26-27, 2012, Geneva, Switzerland.
Conférence Internationale Permanente d'Instituts Universitaires de Traducteurs et Interprètes, www.ciuti.org

February

ITA 2012 International Conference
February 13-15, 2012, Jerusalem, Israel.
Israel Translators Association
www.ita.org.il/index.php?cnt=_conferences

Outsourcing World Summit
February 20-22, 2012, Lake Buena Vista, Florida USA.
International Association of Outsourcing Professionals
www.iaop.org/Content/23/154/1099/Default.aspx

Intelligent Content 2012
February 22-24, 2012, Palm Springs, California USA.
The Rockley Group, www.intelligentcontentconference.com

March

Content Strategy Applied
March 1-2, 2012, London, UK.
eBay, contentstrategyapplied.eu

GDC Localization Summit
March 6, 2012, San Francisco, California USA.
IGDA Game Localization SIG, gdconf.com/conference/gls.html

Conference for Software User Assistance
March 11-14, 2012, Memphis, Tennessee USA.
WritersUA, www.writersua.com/conference/index.html

Going Global 2012
March 13-15, 2012, London, UK.
British Council, http://ihe.britishcouncil.org/going-global

AIIM Conference 2012
March 20-22, 2012, San Francisco, California USA.
Association for Information and Image Management
www.aiim.org/Events/AIIM-Conference

GALA 2012
March 26-28, 2012, Monte-Carlo, Monaco.
Globalization and Localization Association
www.gala-global.org/conference

April

WWW 2012
April 16-20, 2012, Lyon, France.
IW3C2, Université de Lyon, www2012.org

TMS Inspiration Days
April 19-20, 2012, Krakow, Poland.
XTRF, www.inspirationdays.eu//index.php

TAUS Tokyo Executive Forum
April 19-20, 2012, Tokyo, Japan.
Translation Automation User Society, www.translationautomation.com/executive-forums/taus-tokyo-executive-forum.html

TAUS Asia Translation Summit
April 24-25, 2012, Beijing, China.
Translation Automation User Society, www.translationautomation.com/conferences/taus-asia-translation-summit.html

2012 LTTC International Conference
April 28-29, 2012, Taipei, Taiwan.
The Language Training & Testing Center
www.lttc.ntu.edu.tw/conference2012_eng/index.htm

May

ELIA Networking Days Munich
May 3-5, 2012, Munich, Germany.
European Language Industry Association
www.elia-association.org/index.php?id=123

Confab 2012
May 14-16, 2012, Minneapolis, Minnesota USA.
Brain Traffic, http://confab2012.com/index.php

2012 ALC Annual Conference
May 16-19, 2012, New Orleans, Louisiana USA.
Association of Language Companies
http://alcus.org/education/conference.cfm

First International Conference on Non-Professional Interpreting and Translation
May 17-19, 2012, Forlì, Italy.
SSLMIT, SITLeC, http://npit1.sitlec.unibo.it

TechComm Summit
May 20-23, 2012, Rosemont, Illinois USA.
Society for Technical Communication, http://summit.stc.org

LREC 2012
May 21-27, 2012, Istanbul, Turkey.
European Language Resources Association
www.lrec-conf.org/lrec2012/lrec2012.htm

The Interpreter's Journal

Reviewed by Nancy A. Locke

Personal story shows enthusiasm and commitment for the profession

The Interpreter's Journal: Stories from a Thai and Lao Interpreter by Benjawan Poomsan Becker might be more aptly entitled *An Interpreter's Journal* because it describes the unique experience of one interpreter, from her relatively humble beginnings in Isaan (Thailand) and study abroad experience in Japan, to her trials, personal and professional, in her adopted homeland (the United States), marriage and divorce, business ventures and burn out, concluding with professional and personal success.

The Interpreter's Journal: Stories from a Thai and Lao Interpreter by Benjawan Poomsan Becker. Paiboon Poomsan Publishing, 2011. 230 pages, $15.74.

An annotated table of contents clearly sets out the book's main themes: the author's personal story; social commentary that focuses on "Thai-Western relationship stories"; and the author's professional experience as an interpreter, which might be most interesting to aspiring or working interpreters. A quick tabulation of these annotations reveals that 45% of the book is devoted to personal memoir, and 23% relates to Thai-Western relationship stories, while the remaining third relates to interpretation. There is a fair amount of crossover between personal memoir and professional experience.

The emphasis on personal memoir is not surprising since the author seems most at ease and animated when writing about her family and her life. As the blurb on the back cover promises, the anecdotes are indeed "engaging." In a disarmingly guileless voice, the author describes her hard-working, no-nonsense mother; her lazy and spoiled brothers; her father's professional peregrinations, ill-fated vegetable farm venture and long absences while he worked in the Middle East to send home money; and her encounters with *farang* (foreigners) who would profoundly influence her personal and professional life choices.

Some of the stories are very funny — for instance, to supplement the familial income, the author's mother opens a small unnamed fast-food restaurant. She learns of a secret, rather pungent-smelling ingredient that seems to be all the rage at other restaurants. She finds the ingredient at the local market and adds it to her recipes with excellent results. Problem: the secret ingredient is *ganja* (marijuana, for the uninitiated), and within a matter of months it is banned by the municipality.

Despite her measured narration of it, Becker's first day in the San Francisco area must have been quite disorienting. In addition to overdosing on slang ("What's up, dude?"), she must have been in a state of culture shock aggravated by jet lag when, as she relates, she "saw naked men walking along Telegraph Avenue." The Thai temple and grocery in Berkeley, however, softened the transition and made her feel "comfortable about the idea of maybe living" in the Bay area.

The voice doesn't change when the author embarks on a description of her professional experiences as an interpreter. For example, having passed the exam to become "the first registered Thai and Lao interpreter in the court system in California," Becker enthuses about the "host of wonderful places like the county jails, state prisons, and mental health facilities" to which she will now have access.

The narrative style dictates the organization of the information. Through personal anecdote, readers learn that the California court system requires its interpreters to complete 30 hours of continuing education courses every two years; has qualified interpreters for over 200 languages; that navigating complex ethical issues forms an important part of court interpreting; that court attire varies greatly depending on culture; and that depending on language pair workloads can be overwhelming ("Spanish and Chinese can easily have more than ten cases per day.").

One chapter ("Thai & Lao Language Services") takes the reader out of the courtroom and into some equally interesting interpretation contexts, and provides an opportunity to explain the difference between consecutive and simultaneous interpretation. Becker describes working as a translator and cultural coach for the television series *King of the Hill*, working on the DVD transfer of the movie *The Sting*, providing phone interpretation for emergency services and,

Nancy A. Locke is a writer and translator living in Montreal.

back to court, interpreting for a Thai drug-smuggling kingpin.

Chapter 18, "Mistakes and Misinterpretations," again written in a personal and anecdotal style, drives home the importance of quality interpretation and qualified interpreters. Becker describes how a mistake translating a Thai expression as *unconscious* instead of as *unaware of what was going on* "could have changed the nature of the case from one of self-defense to attempted murder." She describes a host of challenges that an interpreter faces: people who speak too quickly, people who mumble and people who are emotionally or psychologically unhinged. Add colloquialisms, neologisms and specialized terminology, and environmental issues to the mix, and the complexity of the interpreter's profession becomes apparent. Becker writes: "Even a chair squeaking or paper rustling can be a distraction. Most people don't notice these little sounds, but they can make the interpreter miss certain crucial words, especially the word 'not'. Now that's an important one you don't want to miss."

Becker dons a sociologist's hat when she describes Thai-Western relationships. Aside from relationships per se, the chapters devoted to the topic contain interesting information about the modern history of Thailand, the diverse cultural and language groups in the region, reflections on culinary matters, the modern penchant for Western-inspired nicknames ("Ball, Win, Boy, Mickey, Bank, Ice, Cream, Cake, Crystal") and intergenerational friction caused by emigration. Invariably, the cultural issues resonate in the courtroom where long, difficult-to-pronounce names, the lack of significance attached to surnames, the penchant for nicknames and frequent name changes motivated by astrology or the advice of a monk create confusion and sometimes, particularly in a Western context, suspicion. Different approaches to transliteration leave even our intrepid Becker stumped at times.

The Interpreter's Journal is not a handbook or how-to for interpreters. Despite efforts to keep the three themes separated, well-organized and clearly identified, there is a great deal of overlap. For instance, there's a helpful (if short) bibliography on page 74 in a technically "personal" chapter that a reader might miss if he or she keeps to the chapters identified as "interpreting" chapters.

In addition, the chapters on relationships seem out of place in an "interpreter's journal." The romantic aspirations of Thai "ladies" (according to an informal survey of Western men, "good housewives and good cooks," "feminine" and "sexy") and "the allure of the handsome foreigner" (read: Western) left me a little cold, as did descriptions of Thai men as inveterate drunks, gamblers and philanderers. Some reflections just made me sad: "Thai society has the idea that Eurasian kids are cute and will grow up to look like movie stars. Such kids are always in demand for advertisements and TV shows, and many do indeed go on to become celebrities, regardless of talent."

Despite an attempt to put a cheery gloss on it, the author's own sadness pervades the chapter entitled "Trips to Thailand": "I can't say that people today are any happier than when I was growing up. Years ago we didn't have much beyond the basics, but we didn't feel deprived. Everyone was in the same boat. Now, with the ubiquitous and gratuitous marketing everywhere, all villagers want to have what they see presented on the television. Their role models are the picture-perfect family [sic] they see portrayed in commercials for the latest clothes, washing machine, or skin-whitening product."

The book could do with more rigorous editing. Transitions from one subject to another are sometimes abrupt and disconcerting. Occasionally, tense shifts are ambiguous, which is not surprising, since as Becker explains, "[In Thai, v]erbs in the past tense and present tense are the same, but adverbs of time are used to differentiate them." There are also some glaring spelling errors ("Nancy Pelozi"; "when I worked on the movie *The Sting*, staring Robert Redford . . .") and typos ("I look at the audience to find the person I'll interpreter for.")

That said, there is a good deal of information to be found amid the anecdotes. Becker's descriptions of diverse courtroom situations and brief accounts of conference interpreting paint a vivid picture of the professional reality. Her enthusiasm and commitment to the profession, to the Thai community and her new home in the United States are palpable and contagious. M

Column

Enterprise Innovators

Lori Thicke

Automating Intel's multilingual chat

In Intel, the world leader in silicon innovation, develops technologies, products and initiatives to continually advance how people work and live. Founded in 1968 to build semiconductor memory products, Intel introduced the world's first microprocessor in 1971. Today, Intel has over 82,000 employees globally. Based in Hillsboro, Oregon, Will Burgett is the product manager for Translation Innovation & Services in Marketing Solutions at Intel.

Will Burgett, Intel.

Thicke: Intel is truly an innovator in this space. How is it that Intel was already deploying machine translation (MT) while others were just talking about it?

Burgett: I actually started to look at MT options in 1997 when I was a manager in Intel's International Product Development organization. But at that time, the better-performing, higher-quality MT systems were still on mainframes, which were extremely expensive with a negative return on investment (ROI). It was only much later, in 2007, through involvement with the Translation Automation User Society (TAUS) that we encountered promising and affordable statistical-based MT solutions.

Thicke: When did you first start using MT, and for what kind of content?

Burgett: We started using statistical machine translation (SMT) in 2007 and developed a pilot system for Latin American Spanish. We integrated that system into the Intel customer support website to deliver and publish raw translation (no human edit). The support knowledgebase was so huge that with just a human translation option, we had only budget enough to translate a moderate percentage of the English into the different target languages. Today, of the ten languages on the Intel customer support site, we deliver fully automatic useful translation in five of those languages: Latin American Spanish, Brazilian Portuguese, Russian, Simplified Chinese and Korean. Fully 97% of those languages are done by MT, while 3% is done by human translation on content for legal, safety, warranty and some new products to increase translation memory (TM). We also have the MT system integrated with our translation management system for MT plus post-edit.

Thicke: What were the gains of using MT? What kind of savings resulted?

Burgett: The most important gain was giving customers access to all the customer support information in their languages. Even if it isn't always perfect translation, it gives them a more consistent experience so that they aren't navigating and browsing first in their language and then back into English. We have a number of methods to measure customer satisfaction with machine translated content, and those satisfaction rates compare well with the baseline English measures. In some MT languages (such as Simplified Chinese) we even show higher levels of satisfaction than with the English. Bottom line, our customers are happy to have all the content in their language, and they are able to get their information and solve their problems.

The second benefit is the huge cost avoidance and cost savings. We're able to output three times more translated content at half the budget.

And last but not least, a project cycle for customer support used to take ten business days, and now our project cycle for the MT languages is on an automated 24-hour cycle where any new content added to the customer support knowledgebase is

Lori Thicke is cofounder and general manager of Lexcelera, cofounder of Translators without Borders and a member of the MultiLingual *editorial board.*

automatically translated and published with no human intervention.

Thicke: But if this process is all automated, don't you worry about random errors and really bad translations?

Burgett: Oh, yes, definitely; we still maintain good quality control and assurance practices. We conduct periodic inspections of our MT sites to look for problems, and we have our product support engineers in the different geographic regions looking for issues and submitting them to a bug-tracking system for investigation and fixing. We also have a mechanism in place for our customers who know some English, which easily lets them toggle back and forth between the translated and English pages.

Thicke: Software and products, especially global consumer products such as cell phones, may be localized into 10, 20 or 30 languages, but the online content that supports global clients is traditionally not localized into the same number of languages. That may mean whole markets that don't have access to support content in their language. Why is that?

Burgett: It's a universal problem for anybody who develops international products. Money! For some products, the margins may be so small, the competition fierce, or the volume of content too great to be able to afford human translation and still make a profit. That's why translation automation is so critical. For example, the customer support site has 10,000 files that have to be translated, and without MT it would cost many millions of dollars more. It is also why organizations such as the TAUS Data Association (TDA) are so vital. Sharing TMs through TDA helps us train and customize MT engines, increase leveraging and reuse of translations, and improve translation quality by finding the right terminology.

Thicke: Can we as an industry determine precisely the percentage increase of sales that result in a market when support content becomes available in the local language?

Burgett: That's certainly the Holy Grail for us GILT folks. Research by industry analysts points out that internet customers prefer buying from sites localized in their languages; developers favor buying from companies that deliver localized software tools and documentation; and most customers want their troubleshooting and support information in their language. Software companies can, and many do, measure the ROI on localizing their products for their target locales and the resulting increases in sales. Intel develops and delivers hardware, software, services and innovative solutions. In such a rich product ecosystem, with so many market and technology influences, it is a challenge to separate out the revenue impact of localization from all the other influences in that ecosystem. There are so many environmental variables that drive sales; it's a challenge to isolate just the impact of support — and much more so the impact of localized support — from all the other variables and influences. But we are working on some ideas and techniques that may help us make those kinds of measurements in the near future.

Thicke: So now Intel is once again pushing ahead. Multilingual chat strikes me as the next great frontier for MT. What business drivers are behind Intel's interest in automating multilingual chat?

Burgett: In general, chat is a contact medium that has seen tremendous growth in recent years. Customers seem to be more satisfied with chat than with other kinds of contact mediums, including phone and e-mail. Chat is also much less expensive, and a good agent can handle three or more customers at the same time. One of the biggest challenges using chat on a global scale is the ability to support different languages in a 24x7x365 mode and find the talented people who can speak all the key languages and have the technical skills. Of course, these are also very expensive resources. Multilingual chat can greatly enhance global flexibility and give us more options on where those resources are located geographically.

Thicke: What are the challenges you faced in developing an MT solution for chat?

Burgett: Of course there were a number of challenges, some technology-based, some human-based. Good integration between two very different applications is always a challenge, and such was the case with the MT system and the chat application. Neither was designed with the other in mind, so you have to come up with some creative solutions as well as some less desirable workarounds. In the chat application you have both the client and agent sides of the application, and both have to see the text in their native language as well as the translated language. In addition, we wanted to add a feature that allowed a reverse translation for real-time feedback on the quality of the translation. On the human side of the equation was the wide range of opinion on what quality is and what is good enough for the purpose of reasonable communication. We put a pretty good rating system in place to help our evaluators

and quality assurance (QA) team score the quality of the real-time translation, but people still have widely varying opinions based on their likes and dislikes.

Thicke: Tell us about the pilot you ran.

Burgett: Our objective was to research the quality, performance and usability of using MT to deliver multilingual interaction capability for both customer support and sales. We developed three prototypes using different MT systems, but the same chat application. Our test languages were English < > Latin American Spanish and English < > Simplified Chinese. The team created eight different chat scenarios, for a total of 4,000 chats. Using a Likert system to evaluate the quality of the multilingual chats, we first did a baseline evaluation using our localization QA team. For the full evaluation, we recruited support agents from the Latin American Call Center and the People's Republic of China. These agents played the roles of both customers and agents who scored the chats based on the Likert scale. Besides quality, we also collected data on performance and usability.

Thicke: What key metrics were you measuring? Were they the right metrics?

Burgett: Using the Likert scale for the quality scoring, we used 1 to 5, where a score of 1 meant that the translation was "Not Understandable" and 5 indicated the translation was "Understandable and Actionable, most text translated accurately." Using some good data analysis techniques, we crunched the numbers and came up with a variety of different ways to look at the data. Lastly, we had all the participants fill out a survey and feedback form to get more detailed opinions, experiences and sentiment. I think for the most part these were all good metrics to use, although I think we could have used some automated measurements such as BLEU and NIST to get some contrasting measurement perspectives.

Thicke: In our work with rules-based engines, we find it pretty easy to make the leap to customer support content when the engines have already been customized on product terminology. With SMT for chat, were you able to use essentially the same engines you built for support? Or did you have to create new engines?

Burgett: Actually, we used a broad range of training methods and found that we got good results from all three of our prototypes.

Thicke: What were the results of your pilot?

Burgett: Our conclusion was that yes, indeed, we can get good results integrating MT into chat and that the performance and quality are good enough for customer support type environments. We also feel that the quality levels would work well in other environments, such as sales. But more needs to be tested specifically in that specific environment.

Thicke: Are you planning to also translate community content?

Burgett: We're interested in multilingual collaboration and interaction opportunities of all kinds. Translating social media and dynamic content in real time is the big wave of the near future. Whether it's Facebook, Twitter, communities or blogs, people want to communicate and to share opinions, ideas and experiences. They want to collaborate, debate and define, and they want to do it globally. User-generated content is infinite, valuable and ephemeral. Only translation automation in real time can tackle this tsunami of content. And far from putting human translators out of work, I think it's going to create a whole new universe of business opportunities for them.

Thicke: What is the importance of community content to Intel?

Burgett: Social media, including communities, can build relevance in a message because it involves the audience and a voice of many over the voice of a few. We are building loyalty and brand sentiment through our communities by better understanding our customers' needs that help us find the innovative products and solutions. Communities are "the big ear" to customer value, and we must be able to do that listening and communicating in their language.

Thicke: Do you intend to do any normalization of source text to transform abbreviations such as *LOL* and just plain idiosyncratic spelling so that an MT engine can better recognize the words?

Burgett: Ah, yes, this kind of unstructured, Wild West content has many perils for translation automation. Short answer: yes, we need to work on it using multiple techniques, including normalization.

Thicke: So, what's the future for multilingual collaboration and real-time translation at Intel?

Burgett: Paul S. Otellini, our president and CEO, has said that "Intel has arguably an audacious vision: This decade we will create and extend computing technology to connect and enrich the lives of every person on earth." And we will connect and enrich those lives in their languages. Translation automation will play a growing role in that vision. **M**

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Column

Off the Map

Kate Edwards

Comparative cultural values

Whenever we travel to or experience other cultures, our ever-comparative brains look for similarities and differences and then weigh those against any potential emotions, memories and ideas we may already possess about a specific culture. The fact that we all do this is completely natural, and it's built upon an innate sense of curiosity that we all possess in childhood and hopefully carry into our adult lives.

Most of us absorb these observations and store them away as interesting, entertaining or enlightening pieces of knowledge that help us appreciate the diversity of human culture while helping us reflect upon our own. Unfortunately for some people, such observations are a means to judge, divide and create hierarchies of "us versus them," "haves versus have-nots" and so on. Throughout history, some of the worst aspects of human nature have revealed themselves from this perspective.

So what does this have to do with content production and localization? Quite a bit, actually. Our keen ability to observe and compare is the same force that can really open doors to localized and culturalized content or very quickly close them. The core issue is that of expectations and values, and how one's set of cultural expectations is automatically compared against any kind of information. We make a value judgment in terms of what aspects of that information do or do not fit with our personal and broader cultural norms. When the assumptions contained in the content are juxtaposed with our cultural expectations, it's often easier to perceive how certain information or cultural norms in one context may conflict with the expectations for what fits in another. Thus, if a product or batch of information contains content that doesn't fit with a person's or culture's expectations and is blatant enough to disrupt the intended experience, then the stage is set for potential problems.

When we produce content for global distribution, we must be keenly aware of this human propensity for value judgment, as it can certainly influence the effectiveness of our information. I'd like to illustrate this point with a couple of examples, particularly ones where Western culture tends to differ from much of the rest of the world.

One of the preeminent issues of Western culture of late has been the ongoing debate over the degree to which systems of faith and belief should or should not be integrated with systems of government and public administration. In the United States, this embroiled discourse is labeled "the separation of church and state," and it has continued to polarize segments of the population. Indeed, this has also been a discussion echoed in many other Western nations. However, my interest in this example isn't the debate, but rather how the interaction of faith and government may affect content development and distribution.

As I've mentioned previously, we as content creators and localizers must be especially sensitive to the underlying dynamic forces of the cultures into which our products and services are distributed. If a certain culture has a more obvious faith-based approach to its daily activities and public administration, then the guidelines regarding acceptability will be different from a culture based on a more secular approach. Generally speaking, a society based on faith tends to be less flexible to the context in which information appears because there is a higher standard to which it is adhering. In such cases, if something potentially problematic appears in any context, there is higher potential for local backlash.

This whole issue came to mind once again on a recent trip I took to Thailand. During my extended stay there, I was fascinated to observe how this notion of the division between faith and government stands in sharp contrast to the debate raging in Western countries. In Thailand it doesn't hold much meaning. To provide more context, Thailand's population is approximately 95% Buddhist while the country has historical influences

Kate Edwards is a geographer and the principal consultant of Englobe, a Seattle-based consultancy for geocultural intelligence and content strategy. Previously, Kate spent over 13 years at Microsoft as a geographer and its senior geopolitical strategist.

Figure 1: A statue depicting the god Vishnu riding on Garuda.

Figure 2: The Thai government's official seal depicting Garuda.

from Chinese and regional folk beliefs. Buddhism manifests itself overtly in Thai society, with a great many temple complexes around the country and the prevalence of large stupa monuments — mound-like buildings containing Buddhist relics. On a local level, nearly every household and business maintains a *san phra phum* or spirit house, which is meant to serve as a shelter for the building's guardian spirit, usually known as *Chao Thi* or *Phra Phum*. Offerings of flowers and food are often given at the small shrines, which are typically located near the front of the property.

Faith is overt and pervasive in Thai society, but it also extends to the government as well; it's not just a cultural institution but one that has become entwined in political life. In actuality, there was a movement in Thailand as recent as 2007 to revise the country's constitution so that Buddhism is established as the official religion. However, this defeated proposal was quite controversial and ignited a significant debate that even garnered the attention of Queen Sirikit, who expressed her concerns against it.

Nonetheless, the government is infused with aspects of Buddhist belief. One example is the use of the figure of Garuda. Garuda is a bird-like humanoid figure in Buddhist and Hindu beliefs that serves as a vehicle for the god Vishnu (Figure 1). This character of Garuda can be seen in many religious contexts, but it's interesting in Thailand that Garuda has a political connotation (Figure 2). The figure, which is known locally as the *Krut Pha*, can be seen on the exterior of many businesses bearing a royal endorsement, and it is also used on all official documents issued by Thailand's government. As a Westerner, this blatant mixing of religious imagery with government function was surprising to see as my own cultural context doesn't maintain this expectation.

Another example from the Western perspective is the concept of "diversity," as related to ethnicity. In the United States and many Western countries, diversity is a critical consideration in many areas of life and work. Sometimes it has been taken to extremes in either direction, but most people accept the need and value of both cultural and ethnic diversity in our societies. And yet, this concept can be pretty foreign in non-Western locales — let's consider Japan as a case study. The Japanese population is 98.5% ethnic Japanese, leaving a small 1.5% minority of non-Japanese, about 1% of which is Chinese and Korean. With such an unsurprising dominance of ethnic Japanese given the geography and history of the country, it's reasonable that such a culture hasn't had to deal with the issue on a grand scale.

This isn't suggesting that Japan is free of diversity issues or that the subject is ignored — far from it. The country has long dealt with issues of internal gender diversity as well as social class disparities, and in more recent times it's had to confront the issue of ethnic and cultural diversity as its shrinking population growth requires increased immigration to maintain a competitive economy, a trend many Western countries are facing as well. In the West, diversity has become such a fundamental element of modern business and society (not without its complications still), while in other locales such as Japan it's slowly emerging as an issue requiring broader consideration.

In 2009, Microsoft was criticized over an image used to market its business productivity tools. The image included three figures in the United States — an Asian-American man, an African-American man and a Caucasian woman. However, in Poland, the African-American man's head was sloppily replaced with that of a Caucasian man. Once this difference was discovered, a debate over diversity ensued and accusations of racism arose. Was it racism or the adapting of content to fit local expectations, when Poland, like Japan, is dominated by one ethnic group (96% ethnic Poles)?

It's easy for Western cultures to make assumptions about other locales and impose our values, especially when certain aspects of our societies have become so ingrained or polarized. While we can't help our propensity for comparison, the development and the distribution of content require us to step beyond our personal context and find some level of objectivity. Our function is to observe the differences and then out of respect for local expectations to adjust our strategies without making a value judgment, unless a company is intending to make a point of imposing its own cultural values, which usually doesn't go over well. In the course of localizing and culturalizing content, we need to be mindful of these differences and address them sensitively and appropriately. **M**

Column

Perspectives

Andrzej Zydroń

Cloud computing, SaaS and translation tools

Over the past 20 years we have seen substantial progress in the field of computer-assisted translation (CAT) tools and technologies, and with the advent of cheap desktop computing and the internet we have seen the barriers to entry drop. To start a localization company, all you need is a PC, an internet connection and a list of potential customers and translators. Currently, over 80% of the global translation market is run by small to medium-sized enterprise (SME) organizations.

This fragmentation, however, has in many ways acted as a barrier to CAT tools adoption. Large translation companies can afford to build automated workflows and CAT tools or could buy them from their competitors, but for many SMEs this is less feasible. By and large, SMEs have to rely on desktop CAT tools.

Although these can be attractive as solutions for SMEs, they nevertheless force them into an ever-increasing dependency on the tool providers. The PC licensing model means that customers are on a constant treadmill of upgrades that may add little in terms of improving the usability of the tools. There are a number of other issues with desktop CAT tools. For language service providers (LSPs), there is the problem of how they provide access to these tools for their translators. Since most translators are subcontractors and are usually located geographically far from the company, it can be difficult to provide them with the necessary CAT tools. This often means that the translators have to buy the tools themselves.

Let's establish some fundamental principles here. LSPs do not translate; they project manage translation and localization jobs. Translators and reviewers should not have to pay for CAT tools. They should have the necessary translation memory (TM) matching, terminology identification and so on prepared for them in advance and have the necessary tools provided for them for free. Any such tools should be completely intuitive and learned within 15 minutes.

The other thing that has characterized the CAT tools industry is the lack of support for standards. Take word counts as an example. There are as a many different word counts as there are CAT tools, although a standard called GMX/V has existed since 2007. Some companies even had different products that produce differing word counts.

Things are about to change dramatically. In my 21 years working in localization I have never ceased to be amazed at how inefficient the traditional desktop paradigm is for a highly collaborative environment such as translation. E-mailing files backward and forward, shifting work from translators to reviewers and then possibly back again all introduces delays and potential points of failure. Google, SalesForce.com, Twitter and Facebook have shown the future is not on the desktop, but on the internet. In the last ten years we have seen a tremendous improvement in internet bandwidth and technology. Ten years ago, I was using a 54Bbps modem, and I am currently connecting at 40Mbps using FTTC technology. Browser technology, standards and software have also progressed dramatically over this period, and this trend will no doubt continue. In 2010, we saw the introduction of a new breed of CAT and translation management system (TMS) based on the SaaS (software as a service) model.

Benefits of SaaS

One of the great benefits of a SaaS solution is that it does not involve a major one-off purchase of a software license. You pay monthly and should not commit to more than a one-to-three month subscription. Full support and maintenance are included in the subscription price. A proper SaaS implementation will allow customers to vary their licenses from month to month. As we all know, translation work comes in peaks and troughs, so you should only pay for the number of licenses required per month.

With a true SaaS you should get at least three to four software updates automatically during a year, insuring that you get

Andrzej Zydroń has been working in IT for 35 years, 22 of which have been in localization-related systems at Xerox, Ford and Oxford University Press.

all of the improvements to the software in the subscription price. SaaS systems, due to the nature of the development process associated with server-based systems, can benefit from a constantly improving environment with regular updates. There is no two-to-four years' wait for the latest version of the software, and you are guaranteed access to the latest version.

In addition, you are supplying your translators with tools that require no licenses on their part and that do not require installation and training. Issues such as having to split up large files into smaller units for translators or joining very small files together to form a viable translation package cease to be an issue. A well-architected SaaS solution will be able to handle files of infinite size — just try putting a 500-page word file through a desktop CAT tool or join multiple small files into a viable package size for translation. Such a system will be able to handle multiple translators working on the same file at the same time as well as reviewers and correctors.

Major LSPs that provide TMS and CAT solutions say that they do not make any money from software sales and that this is merely a component of their strategy. However, they may nonetheless try to force subcontractors to use and pay for using their software. The situation gets much worse with any SaaS solution offered by a major LSP. Locking in all of your linguistic assets with a competitor is a dubious strategy at best. You not only effectively hand over all of your translator information but also your TMs and terminology. You become a mere vassal of your competitor and are not only forced to give them vital information, but also have to pay them for the privilege.

A proper SaaS TMS/CAT solution will allow you to integrate a customizable web-based ordering and payment system into your own website so that customers can upload, get quotes, pay online and initiate the workflow for translation jobs. This gives small and medium-sized LSPs some of the same advantages that large LSPs have. With a SaaS solution, you can also use advanced technology to integrate your SaaS instance directly with customers' content management or workflow systems.

Open Standards systems, especially those implementing the OAXAL architecture, allow users to safely migrate their assets from system to system without fear of lock-in. This is critical as the industry still suffers from this proprietary mentality. Even Open Standards are "extended" or so badly implemented by some tool providers as to make moving data as difficult as possible. With a properly implemented Open Standards system, these issues do not arise.

With a browser-based environment, the support and asset sharing issues associated with desktop packages disappear — unless, of course, your internet goes down or you live in an area with spotty service. As a last resort, if bandwidth is a problem, you can always download the translatable file in a standard format such as XLIFF and work offline, but you lose the benefits of interactive real-time sharing.

In addition, the SaaS support staff have direct access to any problems that might arise and are able to provide a level of support unimaginable in a desktop-based package. An added advantage is that multiple translators can work on the same file at the same time, obviating the additional onerous task of cutting up files into smaller multiples and then the equally difficult task of trying to stitch them back together again after translation and review. Having a browser-based server centric system also means that there is no need to send files via e-mail with all of the associated problems, such as files being incorrectly marked as spam. With a SaaS solution, all the assets are updated and shared in real time, and the data remains securely on the server.

Another interesting feature of browser-based user interfaces is that the design tends to be much cleaner and functional than with desktop packages. The translator can concentrate on what he or she has to do: translate, rather than having to be a filter or obscure package feature expert.

A well-implemented SaaS browser-based platform will support all major browsers, thus allowing translators who use MacOS or Linux to be able to use their existing platforms to translate online. Small and medium-sized LSPs can now compete on an equal footing with the industry giants. They can have access to even better technology and tools than the industry leaders all for a modest monthly outlay. SaaS TMS and CAT tools have created a completely new environment that will change the localization marketplace ecology for good. This is indeed a pivotal moment in the industry and one that will mean more competition, better tools and the ability to take on the challenge of an ever increasing workload as the demand for translation constantly increases. **M**

The automated interpreter

Hassan Sawaf & Jonathan Litchman

Earlier this year on *Jeopardy*, IBM's Watson won over $77,147 and showcased the latest advances in speech recognition and language technology with its answer to the Final Jeopardy question, "William Wilkinson's 'An account of the principalities of Wallachia and Moldavia' inspired this author's most famous novel" with "Who is Bram Stoker?"

iPhone's much-discussed Siri is not only the virtual assistant to millions, but she is fending off marriage proposals with a simplicity and grace that belie the technology's sophistication: "My End User Licensing Agreement does not cover marriage. My apologies." In addition to processing long voice commands and synthesizing a response, Siri is interpreting the meaning of language.

Automatic speech recognition (ASR) has been advancing rapidly, hitting the consumer market at full force and making a case for being the hottest technology of 2011 and possibly 2012. Today, the most sophisticated consumer and enterprise machine translation (MT) engines have fully integrated ASR technology for speech-to-speech and speech-to-text translation capabilities. Simply put, ASR is a game changer with far reaching implications for businesses, consumers, translators and the language service industry. Imagine traveling abroad and holding conversations without having to learn the language. Machines are breaking the language barrier and enabling cross-lingual conversations. The technology is here, after more than 40 years of development and research.

Many people are surprised to hear that at its core, ASR technology is actually fairly old – ancient in technology years. In fact, in the 1970s ASR was first applied by Faceplate manufacturers and FedEx in parallel with the Defense Advanced Research Project Agency's project SUR that ultimately resulted in a system that could recognize about 1,000 words. The earliest versions of ASR were able to understand digits and simple words and were precursors to the automated systems employed by airlines and banks today, with which many of us have become all too familiar: "If you would like to speak to a customer representative, say *representative*."

ASR took another big step during the IT revolution of the 1990s. In 1991, Philips launched the VOICE System 4000, which was capable of longer, more complex dictation and quickly became standard in hospitals. Dictation systems were also popular in law offices, hospitals and other industries where paperwork and forms dominated. The government was also developing and utilizing ASR systems for security and monitoring applications.

In combination with the vast increase in computational power, the internet played a large part in fueling the latest breakthrough in today's ASR technology. ASR technology is now able to gather more context for the input it receives and is able to use statistical probability to determine the most likely output. In other words, the computer is now thinking and interpreting the user's meaning. However, challenges remain.

Context challenges

While ASR and MT both use computers to interpret meaning, ASR is much more sensitive to incorrect use. The main reason for this is because there are many additional variables that influence the quality of ASR. These variables can include the positioning of a microphone, background noise, accents and speech patterns.

When translation enters the picture, the obstacles facing ASR multiply exponentially. The largest challenge by far is a lack of context. For example, if the user would like to translate an English sentence into Arabic, the automated interpreter does not know if it is addressing a single male or a group of females, for example. This knowledge is critical for the machine to translate the sentence correctly, as some languages use gender and number to generate the correct form of a term. An unwitting mistake can offend the addressee, as the linguistic differentiators have significant cultural meaning.

Hassan Sawaf is the chief scientist for SAIC's linguistics and cultural intelligence operation.

Jonathan Litchman is a senior vice president at SAIC and leads the company's linguistics and cultural intelligence operation.

A lack of context is also to blame for the classic MT mistake when a word has multiple meanings and the machine does not know which to select. For example, in translating "How do you get to the bank?" the user could be referring to the financial institution or the river, depending on the location and whether he or she has a checkbook or a fishing pole in hand.

This is why, even with the multiple approaches and variables that impact ASR and translation quality, the accuracy of a system correlates highest with the amount of effort and time spent tailoring the machine for a specific context. In the advertising world, *copy* will refer to the text in an advertisement, whereas in most industries the intended meaning is *to duplicate*. This leads to misconceptions regarding the quality of MT in the translation community, as many are unfamiliar with tailored, more accurate systems.

Approaches to MT

ASR and MT were two very divergent fields until the 1990s, when there was a move toward integrating the two technologies. ASR was housed in the engineering and signal processing disciplines, while MT was a focus of the linguistics, literature and art fields. With speech being central to language and human communication, this integration was only a matter of time, but the internet, with its large amount of video and audio data, drove the integration of ASR and MT.

Integrating ASR and MT into a single platform is important to ensure there are no errors in translation that occur when one engine's corpus has a word the other does not. This is cutting-edge technology, and there are few fully integrated products available.

The type or approach of the MT engine is a significant factor in the successful integration of ASR. For those unfamiliar with MT technology, there are three main approaches: rule-based (RBMT), statistical (SMT), and hybrid (combining rule-based and statistical).

RBMT applies hand-crafted rules used to analyze and translate one language to another. Because languages are filled with irregularities, words with multiple meanings and phrases with meanings beyond their literal translation, RBMT on its own might miss some semantic meaning and can be less accurate — or just more difficult to read — than other approaches. Siri is an example of a rule-based language-comprehension system behind statistical ASR.

SMT involves the use of previously translated content to determine which words and phrases have the highest probability of conveying the correct meaning. However, this requires a significant amount of electronic translated data for the complex algorithms to be effective. Watson is an example of a statistical-based language-comprehension system behind statistical ASR.

A true hybrid approach integrates rule-based and statistical methods into a single engine. This has several advantages for MT, ASR and their integration. In 2006, the National Institute of Standards and Technology's Open Machine Translation Evaluation revealed hybrid approaches to have the highest accuracies, especially on noisy data (speech and inaccurate text input). Also, combining the two systems allows the system to do more with less. Hybrid systems can translate phrases or sentence fragments, as well as develop new languages faster and with less training data. In other words, hybrid systems use the best of both worlds to overcome the context challenges human language technology faces.

With ASR technology advancing rapidly and becoming fully integrated into MT, its impact on businesses competing in an increasingly global marketplace promises to be immense. ASR is not likely to be used for formal or important cross-lingual business matters such as speeches or board meetings. However, it will enable informal cross-lingual communication on a scale where human interpreter involvement is impractical. This is not an insignificant achievement. Human interaction and communication form the core of business and real-time meetings, which are often where real work is accomplished.

Over the years, technology has become easier to use, less cumbersome and more personalized, which will further extend ASR's impact on the business world. For example, the early days of video conferencing featured a plethora of bulky equipment including heavy monitors and large cameras. It was thought to be unlikely that this equipment was going to be mobilized for anything but important, large meetings.

Today, most desktop computers, laptops and even phones have video conferencing capabilities enabling small, informal and impromptu meetings to be held on an unprecedented scale. ASR and MT will allow these meetings to be held across borders and languages so that businesses can be better coordinated and more efficient. Just as video conferencing became the

industry standard the more user friendly it became, ASR and MT technology are on the same trajectory.

In addition to the vital role ASR and MT will likely play in internal communications within the enterprise, they will have an external role as well. ASR and MT will be able to help businesses cross the language divide to communicate with their customers.

For example, the New Jersey Department of Health is currently issuing tablet devices with speech translation programs to health care workers in clinics across the state so they can better communicate with patients who do not speak English. While the program is in its early stages, so far it has been deemed a success and illustrates that the regular use of ASR for translation services in the workplace is not in the distant future, either; it is here today.

Future consumerization

ASR technology has made and will continue to make waves in the consumer marketplace. Smart phones have utilized ASR for years, with Siri being the latest, most advanced example. While it remains to be seen if ASR will be used for lengthy tasks or processing documents, ASR holds tremendous promise to add productivity to people's everyday lives by more quickly accomplishing small tasks throughout the day.

Integrated ASR and MT consumer applications are another story. The technology is still very advanced for the consumer market. While there are multiple consumer applications for speech translation available for smart phones, in reality they are just different user interfaces utilizing Google Translate as the main speech translation technology. There are even phone commercials urging people to rethink the possible by showing an English speaker using his phone to translate his sentence for an elderly Italian man, despite the company not having the technology in-house. In other words, the consumer technology is not as widespread as commercials or the smart phone app market would lead you to believe.

However, other technology companies are developing competing offerings for consumers. The next generation of consumer speech translation applications will be tailored for a specific purpose or industry, such as travel. This will provide greater accuracy by contextualizing the environment or purpose for which the technology will be deployed. Also, consumers will be able to utilize these applications when they do not have an internet connection, which is not always available when traveling.

ASR and MT will not likely be used in formal situations or for long communications such as lectures, but rather it will enable informal conversations at a level where the expense of a human translator doesn't make sense. No longer will travelers have to flip through an English-to-Spanish dictionary to ask a Madrileño where they can find the nearest bathroom. The automated interpreter will enable natural conversation in real time, but human translators and interpreters need not worry. MT has quickly developed from a novelty to a technology that has redefined the language service industry. Today, most language service providers (LSPs) use some form of MT to increase the efficiency of their human translators. Even freelance translators have adopted MT to a stunning degree. A survey presented at ProZ.com's Great Translation Debate revealed that 25% of freelancers used MT three years ago compared to the 60% who do so now.

ASR does not increase efficiency of translation like MT does, and so it is more likely to enable translation on a more informal level and meet unmet demands rather than redirect business or modify translator work processes. ASR combined with MT will potentially increase business opportunities for translators and LSPs, even though it is unlikely to affect the interpretation business. The increase of multimedia content on the web increases the opportunity for translation if the speech is converted into transcripts. Many of these transcripts will need to be post-edited and will increase the demand for human post-editors. Sheer volume makes it impractical for the vast amounts of multimedia online to be translated by humans alone.

ASR may also reinforce a concept for translation services that MT has already introduced – the idea of "acceptable inaccuracy." Businesses will continue to determine the level of accuracy needed for specific purposes and will seek the most cost-effective offering at that level of translation. Automated translation and inaccuracies may be acceptable in an internal chat, whereas human translation and full localization will be required for an ad campaign. In other words, businesses will want to control the level of translation they need and pay accordingly.

Both ASR and MT technology advances will move from word-to-word translation toward advancing the art and meaning of communication for businesses and individuals. More languages will be able to be translated. It's entirely possible and even plausible that the language barrier will disappear within the next decade. The translations will become more accurate as the technologies are able to gather additional context from inputs outside of speech, such as GPS or optic technologies.

The applications for the technology in the immediate future are numerous as well. The technology could be used to automate closed captioning across languages and the implications for the traditional business supply chain are tremendous. It's promising technology, even if it's not quite Star Trek's Universal Translator yet. **M**

Machine translation for less-resourced languages

Andrejs Vasiļjevs & Indra Sāmīte

We have been witnesses to the evolution from human to machine-assisted translation. This is a propitious time for rapid advances in language technologies. We now have enough computing power to support the complex algorithms that drive statistical machine translation (SMT) and powerful open-source tools like Moses. In recent years, SMT has become a major developmental breakthrough by providing a cost-efficient and fast way to build and use machine translation (MT) systems.

However, even recent advances fall short of fulfilling expectations regarding MT systems. The quality of an SMT system largely depends on the size of training data. Obviously the majority of available parallel data has been generated by major languages. MT works by statistically comparing the parallel corpora of two languages and calculating the probabilities that are used to generate the most likely translation. As a result, SMT systems for the most widely used languages are of much better quality than systems for less-resourced languages.

This quality gap is further broadened by the linguistic structure of many smaller languages. Languages such as Latvian, Lithuanian and Estonian, to name just a few, have a complex morphological structure and free word order. To learn this additional complexity from corpus data by statistical methods, proportionally much larger volumes of training data are needed than for languages with a simpler linguistic structure.

Another drawback preventing wider implementation of MT is its general nature. Although free web translators provide reasonable quality for many language pairs, they perform poorly for domain and user-specific texts. Current free systems cannot be adjusted for particular terminology and style requirements. For example, Google Translator currently provides MT for more than 50 languages. However, for smaller languages such as Latvian or Estonian, translation quality is quite poor, particularly for domain-specific texts.

While large languages have the benefit of large markets that successfully amortize investments in proprietary systems, smaller languages also suffer from smaller consumer markets and lower overall translation volumes. Many producers of goods and services supply content mostly in larger languages because the cost of human translation into smaller languages is prohibitively high and the quality of existing MT solutions is insufficient. In the localization and translation industry, huge pools of parallel texts in a variety of industry formats have been accumulated, but the application of this data has not yet been fully utilized in modern MT. At the same time, this industry is experiencing unrelenting pressure on efficiency and performance. Clients expect more to be translated in nearly real time at lower prices.

Presently, integration of MT in localization services is in its early stages and is mostly the realm of large agencies working with the large languages. The cost of developing specialized MT solutions is prohibitive to most players in the localization and translation industry, while the quality and confidentiality afforded by the free generic MT offerings are not sufficient to reap substantial efficiency gains in the professional localization industry setting.

MT has been a puzzle in the area of natural language processing since its inception in the early 1940s. Historically, three main MT strategies have been prominent: direct, interlingual and transfer. The rules-based transfer MT strategy with a rich translation lexicon has returned good translation results and found its application in many commercial MT systems, such

Andrejs Vasiļjevs is the cofounder and chairman of the board of Tilde, a European language technology and localization company involved in several pan-European R&D projects.

As the business development director at Tilde, Indra Sāmīte drives innovation in language technologies at Tilde to serve the needs of less-resourced languages.

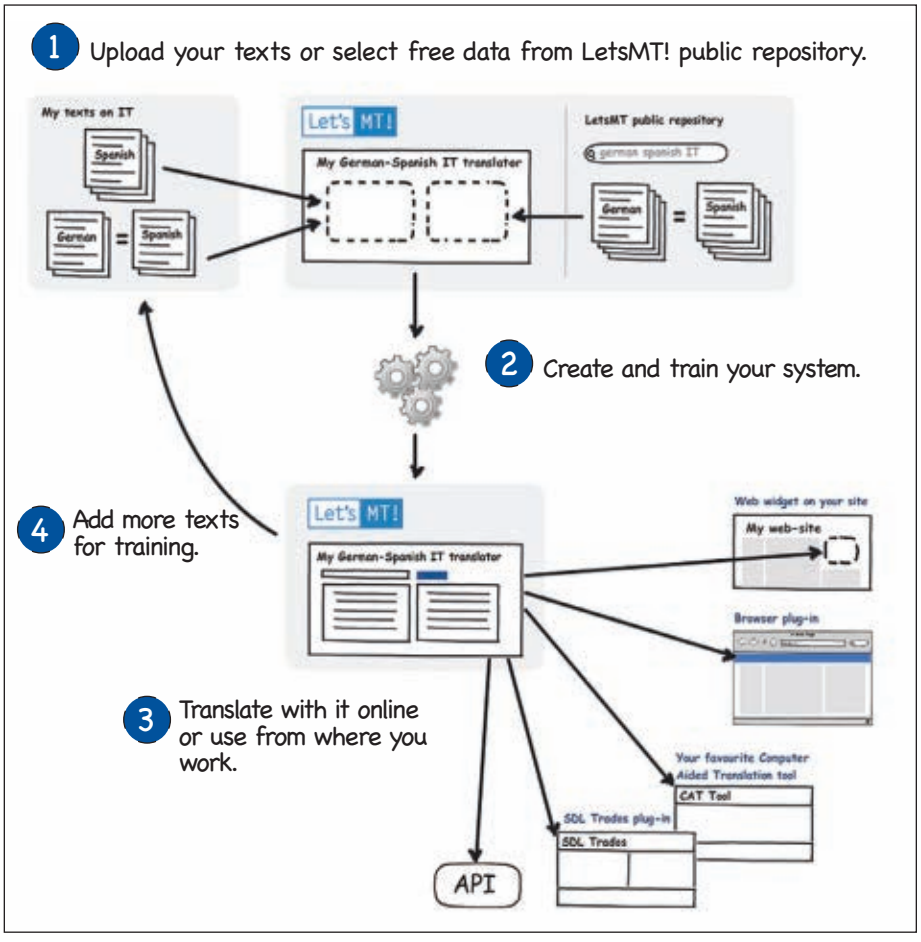

Figure 1: Conceptual workflow of the LetsMT!

as SYSTRAN, PROMT and others. However, this strategy requires immense time and human resource investments to incorporate new language pairs or to enhance translation quality. The more competitive SMT approach has been getting ever-growing traction since the first research results in the late 1980s with the Candide project at IBM for an English-to-French translation system. The SMT strategy, first suggested in 1949 by Warren Weaver and then abandoned for several decades until the late 1980s, has proven to be fruitful approach to foster development of MT. Cost-effectiveness and translation quality are the main reasons the SMT paradigm has become the dominant current framework for MT theory and practice. With the advent of the web, the wide availability of data in digital form and the cost reductions experienced in the computing power have made this approach the most potent. In a majority of cases, SMT research and development activities have focused on a dozen of widely used languages, creating a technological gap for "smaller" under-resourced languages.

The rules-based approach requires a large investment in developing elaborate supporting tools such as morphology analyzers, syntactic parsers, extensive dictionaries, and a complex set of hundreds of interrelated rules for analyzing, transferring and generating output sentences.

Platform for SMT development

Building an MT system is a complicated task that requires expert knowledge and the necessary infrastructure. We thought that it would be possible to create an online MT factory that would simplify MT development for smaller languages and specific domains. This concept started our work on a cloud-based platform.

What are the characteristics of a good platform for the SMT development? It must be easy to use, with no complicated code. It must process and store your data, taking care of a variety of formats and alignment of parallel sentences. SMT training should be a few mouse clicks away, and then you should be able to access and use the results in a familiar tool whenever and wherever you need to translate. It would be great to have someone do the heavy lifting and collect additional corpora to improve quality.

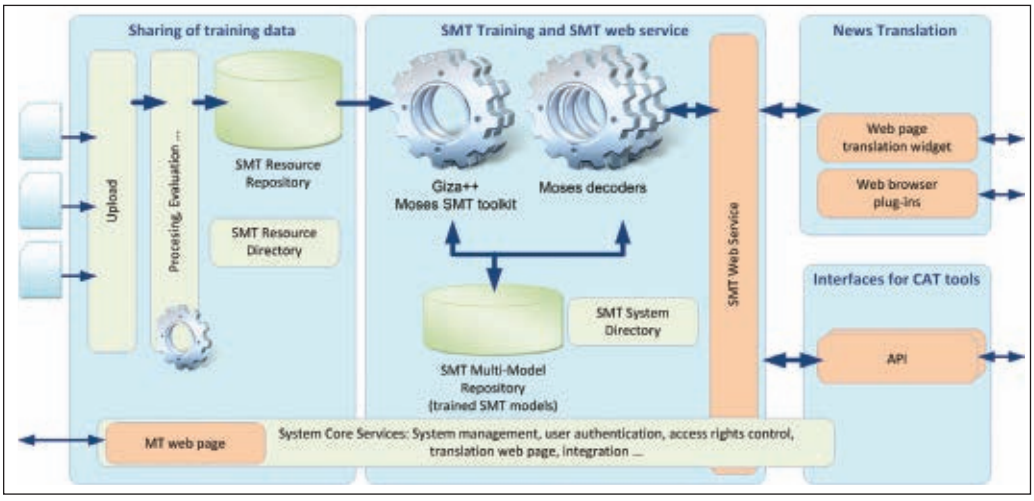

Figure 2: LetsMT! architecture.

In order to continue its commitment to reducing the technology gap for small languages we became involved in the European Union-supported LetsMT! project. In its quest for both language diversity and facilitating cross-border communication, the European Union (EU) is supporting projects that can use easily accessible, affordable technologies to bridge the language divide in a multilingual world. The LetsMT! consortium includes the project coordinator Tilde, Universities of Edinburgh, Zagreb, Copenhagen and Uppsala, the localization company Moravia and the semantic technology company SemLab.

The aim of the LetsMT! is to take advantage of the huge potential of existing open-source SMT technologies to develop an online collaborative platform for sharing data and building MT systems (Figure 1).

LetsMT! provides a simple interface to step you through the process of creating your own MT engine. The volume of open-source parallel resources is limited, which is a critical problem for SMT, since translation systems trained on data from a particular domain, such as parliamentary proceedings, will perform poorly when used to translate texts from a different domain, such as news articles. To attack the most difficult problem for small languages – the lack of training resources – the core concept of the platform is to share resources. The platform provides a repository of data collected by project partners and by the users of letsmt.com. You take your data, supplement it with the data already provided on the platform and generate your MT engine (Figure 2).

Although the project is endeavoring to accumulate large collections of parallel texts in a variety of industry formats, languages and domains, the most successful data collection effort is the online repository of translation memory (TM) data by the TAUS Data Association (www.tausdata.org). TAUS is a visionary pioneer in the data collection give-and-get approach. To further advance benefits provided by the TDA, LetsMT! is working on the integration of its MT generation services with the TDA data repository. The uniqueness of the LetsMT! platform lies in its commitment to the privacy of data. Although you may use publicly available data and share your own, other users cannot see the content of the corpora or download them out of the platform. It can be used only for the generation of MT engines. If you chose not to share your data, it cannot be seen or used by other LetsMT! users. All categories of users – public organizations, private companies, individuals – can upload their proprietary

resources to the repository and create a tailored SMT system trained on these resources. The latter can be shared with other users who can use them further on. To ensure scalability of the entire system, LetsMT! is hosted in the Amazon Web Services infrastructure, which provides an easy access to on-demand computing resources. LetsMT! services for translating texts can be used in several ways: directly through the LetsMT! web portal, through a widget on a user's web page, through browser plug-ins, or through integration in computer-assisted translation (CAT) tools and different online and offline applications. Localization and translation industry businesses and translation professionals can access LetsMT! services in their production environments, typically involving various CAT tools.

To create our own English-Latvian system, we used the Giza++ and Moses SMT toolkits for data alignment, training of SMT models and translation (decoding). The total size of the English-Latvian parallel data used to train the translation model was 5.37 million sentence pairs.

The parallel corpus includes publicly available DGT-TM (1.06 million sentences) and OPUS EMEA (0.97 million sentences) corpora, as well as a proprietary localization corpus (1.29 million sentences) obtained from TMs that were created during localization of interface and user assistance materials for software and user manuals of IT&T appliances. To increase word coverage, word and phrase translations were included from bilingual dictionaries (0.51 million units). We used a larger selection of parallel data that was automatically extracted from a comparable web corpus (0.9 million sentences) and from literary works (0.66 million sentences).

The monolingual corpus was prepared from news articles from the web and the monolingual part of the parallel corpora. Total size of the Latvian monolingual corpus was 391 million words.

Since Latvian belongs to the class of highly inflected languages with a complex morphology, numerous inflectional forms of words increase data sparseness. For this reason the SMT system was extended within the Moses framework by integrating morphologic knowledge. We introduced an additional language model over disambiguated morphologic tags in the English-Latvian system. The tags contain morphologic properties generated by a statistical morphology tagger. The resulting system was evaluated with an automated metrics BLEU score of 35.0.

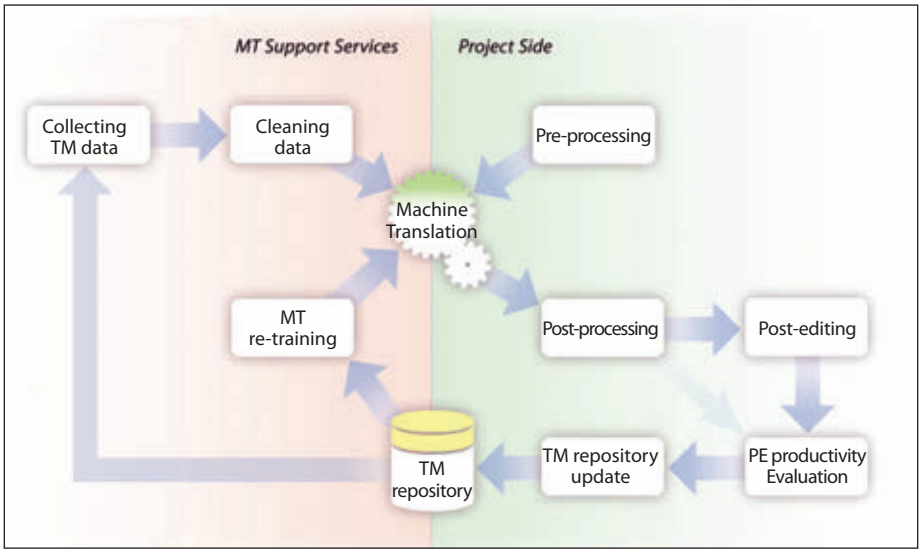

Figure 3: Integration of MT in the localization process.

MT for localization

The localization industry is experiencing unrelenting pressure to provide more efficient services, particularly due to the fact that volumes of texts that need to be translated are growing at a greater rate than the availability of human translation, and translation results are expected in real time.

For several decades, the most widely used CAT tools in the localization industry have been TM systems. Since TMs contain fragments of previously translated texts, they can significantly improve the efficiency of localization work in cases when new text is similar to previously translated texts. However, if a text is from a different domain than the TM or in the same domain from a customer using different terminology, benefit is minimal.

Developers of CAT tools have recognized the benefits from integrating MT into their TM systems (Figure 3). For example, SDL Trados Studio 2009 supports three MT engines: SDL Enterprise Translation Server, Language Weaver, and Google Translate. ESTeam Translator and Kilgray's memoQ are other systems that also support the integration of MT.

Although the idea to use MT to optimize the localization process is not new, it has not been explored widely in the research community. Different aspects of post-editing and machine translatability have been researched since the 1990s. Increasing the efficiency of the translation process without degradation of quality is the most important goal for a service provider.

In recent years, several productivity tests have been performed in the translation and localization industry settings at Microsoft, Adobe and Autodesk. The Microsoft Research trained SMT on MS tech domain was used for three languages for Office Online 2007 localization: Spanish, French and German. By applying MT to all new words, on average a 5%-10% productivity growth was obtained.

In experiments performed by Adobe, about 200,000 words of new text were localized using rule-based MT for translation into Russian (PROMT) and SMT for Spanish and French (Language Weaver). Authors reported an increase of translator's daily output by 22%-51% (Flournoy and Duran, 2009). At Autodesk, a Moses SMT system was evaluated for translation from English into French, Italian, German and Spanish by three translators in each language pair (Plitt and Masselot, 2010). For measuring translation time, a special workbench was created to capture keyboard and pause times for each sentence. Plitt and Masselot reported that although all translators worked faster when using MT, the proportion varied from 20% to 131%. They concluded that MT allowed translators to improve their throughput on average by 74%. Tilde also evaluated the results of the LetsMT! platform for using an English-Latvian SMT integrated into TM in a localization workflow. We chose a simple method and measured the change in performance of translators working with and without MT using a platform integrated plug-in for SDL Trados 2009. A quality assessment was also performed according to a standard internal quality assessment procedure.

Evaluation scenarios and results

We wanted to evaluate how usable our English-Latvian MT system was for localization tasks and based our evaluation on a measurement of translation performance. Performance was calculated as the number of words translated per hour.

For the evaluation, two test scenarios were employed: a baseline scenario with TM only, and an MT scenario with a combination of TM and MT. The baseline scenario established the productivity baseline of the current translation process using SDL Trados Studio 2009 where texts are translated unit by unit. The MT scenario measured the impact of MT in the translation process when translators are provided with not only matches from a TM (as in the baseline scenario), but also with MT suggestions for every translation unit that does not have a 100% match in TM. Suggestions coming from the MT were clearly marked for translators to treat them carefully.

Typically, translators trust suggestions coming from a TM, and they make only small changes if a TM suggestion is not a 100% match. Translators usually are not double-checking terminology, spelling and the grammar of TM suggestions, relying on the fact that TMs should contain quality data. However, translators must pay particularly careful attention to suggestions coming from MT, as it may be inaccurate or ungrammatical.

In both scenarios, translators were allowed to use whatever external resources were needed (such as dictionaries), just as during their regular work. Five translators with different levels of experience and average productivity expectations were involved in the evaluation.

The quality of each translation was evaluated by a professional editor in the standard quality assurance process of the service provider. The editor was not made aware whether the text was translated using the baseline scenario or the MT scenario. An error score was calculated for every translation task. There are 15 different error types grouped in four error classes: accuracy, language quality, style and terminology. Different error types influence the error score differently because errors have a different weight depending on the severity of an error type. For example, errors of comprehensibility – an error that obstructs the user from understanding the information – have a weight of 3, while errors of omissions/unnecessary additions have a weight of 2. Depending on the error score, the translation is assigned a translation quality grade: Superior, Good, Mediocre, Poor or Very Poor.

The test set for the evaluation was created by selecting documents in the IT domain from the tasks that have not been translated by translators in the organization before the SMT engine was built. This ensures that TMs do not contain all segments of texts used for testing. Documents for translation were selected from the incoming work pipeline if they contained 950-1,050 adjusted words each. Each document was split in half, and the first part of it was translated as described in the baseline scenario; but the second half of the document was translated using MT. The project manager ensured that each part of a single document was translated by a different translator so

that the results are not affected by familiarity to a translated document.

Altogether, 54 documents were translated. Every document was entered in the translation project tracking system as a separate translation task. Although a general-purpose SMT system was used, it was trained using specific vendor TMs as a significant source of parallel corpora. Therefore, the SMT system may be considered slightly biased to a specific IT vendor or a vendor-specific narrow IT domain. The test set contained texts from this vendor and another vendor whose TMs were not included in the training of the SMT system. We will identify these texts as narrow IT domain and broad IT domain for easier reference in the following sections. Approximately one-third of the texts translated in each scenario was in the broad IT domain.

The results were analyzed for 46 translation tasks (23 tasks in each scenario) by analyzing average values for translation performance (translated words per hour) and an error score for the translated texts. Usage of MT suggestions in addition to the TMs increased productivity of the translators on average from 550 to 731 words per hour (32.9% improvement). There were significant performance differences in the various translation tasks; the standard deviation of productivity in the baseline and MT scenarios was 213.8 and 315.5, respectively. At the same time, the error score increased for all translators. Although total increase in the error score was from 20.2 to 28.6 points, it still remained at the quality evaluation grade Good. We have not made a detailed analysis of reasons causing an error score increase, but a possible explanation could be a higher rate of error in translated segments originating from MT than in translations made from scratch. There were significant differences in the results of different translators, from performance increase by 64% to decrease by 5% for one of the translators. Analysis of these differences requires further study, but most likely they are caused by working patterns and the skills of individual translators.

Synchronicity and challenges

There are several other exciting developments increasing the quality and accessibility of MT to less-resourced languages. Among those that promise to improve quality is the EU-funded research project ACCURAT, which aims to find, analyze and evaluate innovative methods to acquire more corpora from the web. The premise is to use not parallel (word-for-word) translations, but to use content from different languages with similar content and to research how to extract parallel data from this comparable corpora. This could help get more data in smaller languages and narrow domains for MT development.

Another valuable initiative is the establishment of the META-NET network. Recognizing that data is the equivalent of other natural resources, the EU has committed to involve language research institutions and commercial entities in a network to find, catalog, standardize and make publicly available those language resources that are currently being held in companies and universities across Europe. These initiatives are significant steps to help diminish the digital divide between small languages and large, and make the world of knowledge universally accessible.

For the industry as a whole, it would be useful to address several problems that are detrimental to the continued progress of MT. Development costs would lessen if in the name of interoperability APIs of different systems would be developed in a standardized way. The other challenge in data-driven MT development is population of the web with a raw machine translated output. When automatically collected and included in the corpora used for MT development, it greatly diminishes the quality of resulting MT system. Therefore, we would like to rally the industry behind an effort to tag machine-translated content. We envision a world where speakers of small languages will have the same access to information and services as large language speakers, no matter where in the world they are and no matter where the necessity arises. Translation will be available on-demand in real time, delivered on your smart phone, TV, refrigerator and work desk, where MT will merge seamlessly with voice technologies. We intend to continue to be a part of this exciting frontier of technology. **M**

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The translation center behind Translators without Borders

Enrique Cavalitto

A new, fully-automated translation center means that Translators without Borders can donate ten times as many translations to support humanitarian work around the globe. Translators without Borders is an independent nonprofit association dedicated to helping non-governmental organizations (NGOs) extend their humanitarian work by providing free, professional translations. The funds saved through the use of volunteer translations can then be used by the NGOs in the field, enabling them to extend the scope and reach of their humanitarian work.

While the objectives are different, the operational procedures of Translators without Borders are not dissimilar from those of a translation agency. The company must select the right clients, in this case the humanitarian NGOs, in order to ensure that their translation needs are in line with the organization's scope, and it must select the right translators as well. Due to the nature of humanitarian work, Translators without Borders can only accept experienced professional translators since in most cases there is no time for reviewing the translations. Also like a translation agency, Translators without Borders matches the translation needs of the clients with the abilities, availability and willingness of the translators in the pool of service providers and provides a workflow based on solid processes to maximize the deliverance of translations with a minimum of overhead.

When the Haiti earthquake brought an unprecedented number of volunteers from the translation community, Translators without Borders' screening mechanisms were overwhelmed. To help it respond rapidly to the crisis, ProZ.com created a platform for screening translators and for posting jobs among the translators in the pool. This screening center proved useful, and the recruiting operation was substantially streamlined. However, the coordination of projects was still a demanding task, and this limited the scalability. Scalability is crucial because the contributions provided by Translators without Borders and the dedicated teams of volunteers, even if much appreciated and welcomed by the humanitarian NGOs, are but a drop of help in an ocean of need.

With this in mind, a new and improved platform was made available to Translators without Borders by ProZ.com in mid-2011. The new translation center (http://twb.translationcenter.org/workspace) incorporated the clients as active participants in their translation projects and thus brought the whole translation workflow into a shared environment. This NGO involvement allows a "self service" operation where clients can post their own translation jobs, interact with the translators and retrieve the translated files. Project management is needed only when one or more files require formatting or when exceptional circumstances arise.

"Technology was the piece we were missing as we tried to meet the need for translations in support of humanitarian work," says Lori Thicke, cofounder of both Translators without Borders and its sister organization Traducteurs sans Frontières, established in Paris in 1993. "On the one hand we had an enormous pool of motivated volunteers, and on the other, we had more NGOs asking for help than we could handle. Our obstacle was the project management. Now that most project management tasks have been automated, our role is simply to facilitate the relationship between the translators and the NGOs that need their help. This is what will allow us to truly ramp up our capacity."

Technology and community

To give an idea of the scale that the new translation center is making possible, Translators without Borders donated around one million words to charities in 2010. After less than a year using the translation center, it is currently translating the equivalent of four million words per year for humanitarian NGOs such as Médecins Sans Frontières (Doctors Without Borders), UNICEF, Partners In Health and Oxfam. Within a few months Translators

A telecommunications engineer, project management professional and translator, Enrique Cavalitto currently acts as the translation coordinator for Translators without Borders.

Figure 1: Creating a work order is a simple process designed with end clients in mind.

Figure 2: Top section of a work order page including tabs for overview, source files, supporting material, client information and project information.

Figure 3: Notified translators find information on the client and project and may accept or decline available tasks.

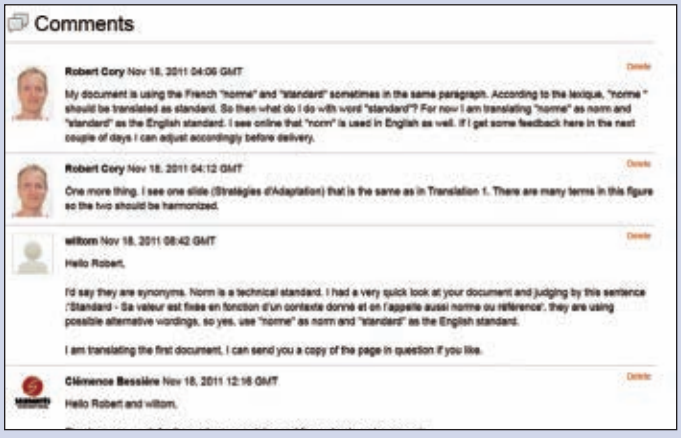

Figure 4: The comments section of the workflow page enables communication among translators, the client and the project manager.

without Borders expects to add enough volunteers and NGOs to increase this figure to ten million words per year – significant, considering that every dollar saved is another dollar available for caring for people at risk. Operations have expanded not only in volume but also in linguistic diversity, evolving from a few Eurocentric language pairs into more than 50 language pairs, including translations into Swahili, Yoruba, Tigrinya, Bengali and Haitian Creole.

One remarkable project was the localization by volunteers of GoodPlanet's web page (www.desforetsetdeshommes.org), which involved over a quarter of a million words into 27 target languages (TLs), including Persian, Slovenian, Indonesian, Japanese, Finnish and Yoruba.

These results, of course, can't be explained by technology alone. The real power behind the translation center lies in a vibrant community of volunteers who have responded to every request for help from the humanitarian NGOs. The ProZ.com community has been populating the Translators without Borders pool of professionals at a rate of more than 50 new translators every month. In particular, ProZ.com's Certified PRO Network environment of screened professionals has been a major source of volunteers, particularly helpful when new language pairs are urgently needed to respond to a crisis. Since the screening process used in this program is similar to the one adopted by Translators without Borders, volunteering certified PROs are immediately accepted into the pool.

The end results are much appreciated. Nand Wadhwani of The Mother and Child Health and Education Trust, India, says, "Thank you for the English to Hindi translation. I was very happy with the speed and efficiency in which the whole process took place. Our HealthPhone project aims to provide vital health messages and information for mothers, other caregivers and communities to save and protect the lives of children and help them develop to their full potential. Translation is at the heart of our communications strategy. We need to be able to communicate these health messages all over the world. Thank you, again."

Design

A key concern in the design was that, even though the translation center was powered by ProZ.com, Translators without Borders is the real force behind the whole operation, and the organization's identity had to be carefully preserved. To this end, a "white label" philosophy was followed in the design of the platform in such a way that all players or visitors to the translation center see the logo and colors of Translators without Borders, and the whole experience looks and feels like a part of the organization's web page.

This is also a design consideration for future applications since the translation center has the capabilities to serve as a tool for organizations or agencies to manage translation projects with minimum overhead. As in the current application, jobs are posted by end clients and delivered by translators with minimal project

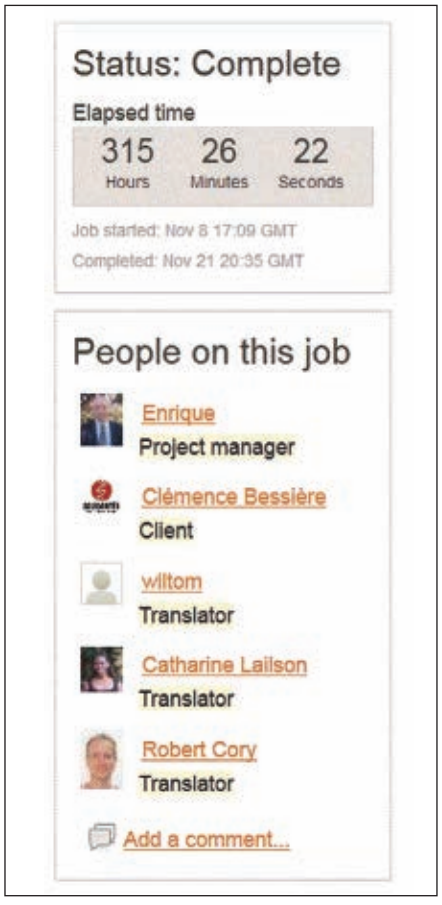

Figure 5: Panel displaying status, time information and people on the job.

management involvement. White labeling means that the whole operation will be perceived by all participants as an integral part of the managing organization.

Since the NGOs served by Translators without Borders are end clients with little or no translation experience, the translation center has been designed to be extremely simple to use. To post a project, someone from the NGO simply logs in to the translation center and then navigates to the page for the creation of a new work order (Figure 1). The first element to be entered is a project that will provide the framework to one or more translation orders. Displayed in the work order and partially included in the notifications sent to translators, this informaiton helps the client identify projects he or she can relate with and improves the matching between project and provider.

Next, the client uploads the files to be translated and indicates language pair, deadline, field of expertise and notes or special instructions for the requested translation. Additional files to support the work, such as glossaries, translation memories (TMs), dictionaries and templates, can also be uploaded. At this point, the work order has been created Figures 2 and 3), and the client will be notified when translators involved in the project post questions or comments in the corresponding workflow page (Figure 4). The client will be able to reply in the same page.

From the client point of view, the process involves filling out a form and uploading some files, answering any questions from the translators and waiting for the final notification that will let them know that the translated files are ready to be downloaded. The NGOs have found the interface easy to master. "I love the website. Easy to use, fast turnaround, user friendly," says Griselda Garibay, Vincentian Family Administrator at Zafèn.

Multiple contacts within client organizations are supported. Experience with new clients shows a surprisingly fast learning curve, with work orders posted on the same day they were given access to the translation center and with little or no requests for help to the support system. "We have been extremely pleased with the translations that we've received from Translators without Borders volunteers, and we consider that the process of submitting and managing work orders is very well designed and user friendly," says Stephen Volante, Communications Coordinator at Partners In Health.

Simple work orders involving one or more documents of less than 2,000 words each (a size appropriate to the work of volunteers) are automatically processed by the translation center without any intervention from a project manager, except for routine supervision. These direct cases represent a significant proportion of all posted jobs. In more complex work orders, the project manager will prepare the source files before they are offered to the translator. The main task is to split large files into volunteer-ready sections, but a general review is also usually performed before launching the notifications to the queue of valid translators.

Beyond this point the project manager should basically have a look at the evolution of the work order and take action only in the presence of exceptional events, such as a translator falling behind schedule. At the end of the project, the project manager could be asked by the client to reassemble a split file and deliver the final file in the TLs, but in general the client NGOs manage this last stage by themselves.

To quantify the project management savings of the translation center, in a

single month Translators without Borders managed a third of a million words translated in 20 language pairs for 21 clients by 131 translators. The whole operation was coordinated by a single project manager who spent only a few hours per working day on these activities. Even this minimal intervention time shrank even further when almost 100% of the projects became posted directly by the clients themselves.

The first stage in the workflow is sourcing. After the work order is posted, the platform identifies the subset of the pool of translators who are enabled for the assignment, depending on their language pairs and domain specialization. Once the valid translators have been identified, they are ranked in accordance with a predefined criterion and notified in small batches separated by fixed delays. Default values are batches of five translators separated by 15-minute delays, but both parameters are configurable.

These notifications include a link to a project page, with optional descriptions of the client, the particular project, plus the file to be translated as well as any special instructions. The translator can review the offered file and all the information before deciding whether to accept it or not (Figure 3). When one of the notified translators accepts a task, it immediately becomes unavailable to all other translators. Once all tasks in a work order have been accepted, no further notifications are sent out. This approach minimizes the "spamming" effect on translators by sending as few notifications as possible to have the tasks assigned.

The second stage is translation: The individual files have been assigned to providers for their translation. The most important feature at this stage is the comments section where translators and the client can exchange questions, answers and project information (Figure 4). A panel on the top-right side of the workflow page present from top to bottom the status of the work order, time information, the people associated with the job (project manager, client contact and translators) and some action links for the work order (Figure 5).

When translators end their assignments, they can upload their translated files and report the task as completed. The upload mechanism can be used also to exchange glossaries and TMs among the translators in the project. The last stage involves delivery. Once all the sections have been uploaded and declared as complete by the individual translators, a notification is sent out to the client reporting that the job is complete and ready for download. Feedback and other end-of-project messages are also exchanged at this point.

The path ahead

Some additional translation center features are already on the drawing board, besides the continuous improvements based on feedback from the field and on usage patterns. Features in the pipeline for future commercial operations include all issues related to quoting and billing in normal, paid translations; additional and more complex mechanisms for filtering the pool for a project and for sorting the translators within this pool; and the ability to integrate project information with the administrative systems in the managing organization.

One important modification is already well advanced. An optional layer of proofreading services in the workflow will improve the consistency of files split and translated separately and also implement the full workflow of organizations that include proofreading in their quality policies. This will also enable the implementation of mentor and apprentice relationships needed by Translators without Borders to build local translation capacity in less-resourced areas of Africa and Southeast Asia, an urgent preoccupation of the organization, given the dire need for people in the world's poorest regions to be able to access information in their own languages.

The translation center designed for Translators without Borders is by no means the only solution available for automating project management tasks in a web services model, though it is the only one integrated with the 80,000 active ProZ.com members. There are, in fact, a number of sophisticated platforms on the market today, some offering TM and machine translation capabilities that the translation center doesn't yet offer. Platforms may be for internal use within a language service company or, at the other end of the spectrum, may constitute a translation marketplace where buyers and sellers of language services interact online.

"Our experience with the translation center is showing us that automated systems for community sourcing is the future of the industry, whether for commercial or humanitarian work," says Thicke. "Going direct to the translator opens up huge opportunities for us to be able to help more NGOs in more languages. It is giving us the capacity to find a scalable solution for the problem of people who can't access global knowledge because they don't speak the right language." **M**

Ten essential steps to TMS selection for LSPs

Benjamin B. Sargent & Vijayalaxmi Hegde

Companies adopt a translation management system (TMS) to address an array of challenges, but the selection process can be challenging in itself. It generally involves developing selection criteria, making a shortlist, identifying best-fit solutions using weighted business and technical requirements, and undergoing a proof-of-concept before making a final decision. This article provides a simple ten-step model for language service providers (LSPs) to use when selecting technology vendors for shortlisting.

Create a shortlist of available technology choices

Companies need to eliminate choices that do not match the basic criteria in their business or technical requirements. In 2010, we visited or interviewed 31 companies based in 16 countries and devised a rubric for classifying styles of technology adoption among technology-savvy LSPs. We determined that what distinguishes an LSP as being "technology-savvy" is not the style or where it sits on the adoption continuum, but rather how closely its adoption style matches the business strategy of the company and by extension the interests and proclivities of its owners or operators. TMS selection by LSPs should start with a frank assessment of the organization's technology adoption style based on the tech-savvy typology. To challenge any assumptions about where your company sits in the typology, we suggest the following exercise: Select the base-level paradigm below that best characterizes your ideal market positioning as a tech-savvy LSP.

Paradigm A: Automation within our proprietary production environment is vital. In this archetype, viewing process and efficiency as internal issues for your company has led to a singular, hyper-efficient production model. Companies of this type build a unified system for producing all client work — a single conveyor-belt that delivers superior results as measured by price and volume.

Paradigm B: No qualms about customizing for specific client requirements. At your company, the idea of process efficiency applies at the client or project level. Your company views each customer as unique and deserving a customized solution. Your company has no interest in being a price leader, seeking instead a premium for value-added operations. Big projects and large customers are the norm for your company, and the goal of automation is to advance efficiency in the client environment.

Paradigm C: Can't we just agree on a single toolset? Your company makes no distinction between client and LSP production environments, seeking instead a limited number of tools that work efficiently with the maximum number of client opportunities. In fact, your company would prefer if the technology question would just disappear. Who cares? Your company wants to be an LSP, not an IT services firm.

Here is how the typology will affect your company's TMS selection (Figure 1): If you wholeheartedly embrace Paradigm A, your company will be building your own TMS — not selecting a commercial TMS. Dream Machine Builders may consider but rarely adopt specific components into an otherwise proprietary stack. Technology is your company's differentiator, so it can't justify buying a commercial system used by other LSPs.

If your company falls between Paradigm A and Paradigm B, you may be a Super Servicer. Your company is happy to buy individual components as long as they serve their purpose and

Benjamin B. Sargent is a senior analyst at the independent market research firm Common Sense Advisory (CSA). His primary focus areas include website globalization and TMS.

Vijayalaxmi Hegde is a research associate at CSA. Her primary focus areas include multilingual search and emerging markets.

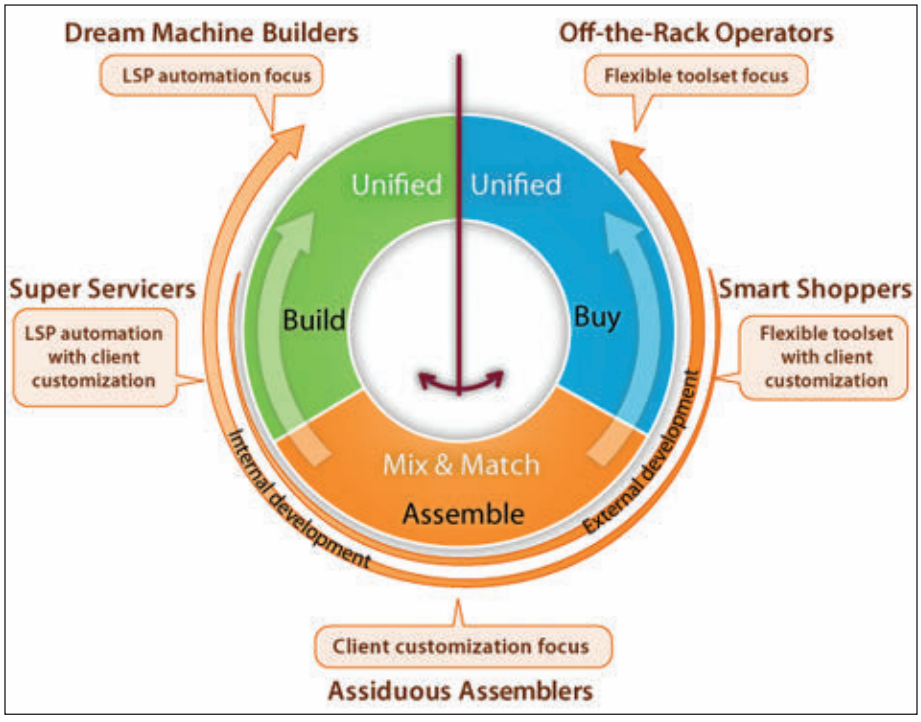

Figure 1: Intentions behind LSP adoption behaviors.

Source: Common Sense Advisory, Inc.

integrate seamlessly with existing components. As comprehensive TMS solutions improve, consider whether adoption of a commercial system could reduce costs without loss of productivity. Consider solutions that would improve the speed of integration with client systems.

If your company fits Paradigm B like the proverbial glove, then it won't be looking for a single TMS. Your company may already have several. Your company may be tempted by ideas such as federation ("one TMS to rule them all"), but interoperability issues argue against that. Assiduous Assemblers should eventually expect to replace proprietary business information management modules with commercial business-oriented TMS solutions.

If your company can relate to both Paradigm B and Paradigm C, it is a prime candidate for adopting a TMS. The problem is, which one? Unlike Off-the-Rack Operators, Smart Shoppers want to demonstrate competence in multiple systems. On the other hand, they aren't willing, like Assiduous Assemblers, to buy a new system for every pretty client that waltzes in the door. We recommend distinguishing the business information management from language processing needs.

If your company is on board with Paradigm C, it should choose a single system that works for all its clients. Traditionally, this meant buying Trados licenses and managing your company with Excel spreadsheets. Today, companies are more likely to adopt a business-oriented TMS to replace the spreadsheets. And while many still opt for SDL Trados, increasingly we see Off-the-Rack Operators looking at language-oriented TMS, and especially cloud-based solutions.

Your second step is to decide on a translation management orientation. To make a shortlist, first determine which orientation your company needs (Table 1). If your company already has adequate coverage for either business information management or for language processing from your existing systems, then look for systems with the other orientation. If your company is looking to beef up its capabilities in both areas at the same time, then your company should be shortlisting

Are current systems adequate?	Business	Language	Build shortlist from systems in this orientation
All systems go	Yes	Yes	No TMS needed
Happy with business applications	Yes	No	Evaluate language-oriented TMSs
Happy with language applications	No	Yes	Evaluate business-oriented TMSs
Replace the whole lot	No	No	Evaluate comprehensive or paired TMSs

Table 1: Simple logic for determining required TMS orientation.

Source: Common Sense Advisory, Inc.

Technology Vendor	Product	Year Introduced	Orientation
]project open[	]project open[	2003	Business
Advanced International Translations (AIT)	Projetex	2001	Business
Agile Web Solutions	LTC Worx	2007	Business
LSP.net	Online Translation Manager	2008	Business
Plunet	BusinessManager	2003	Business
Silverink	Espresso	2007	Business
XTRF	XTRF Enterprise	2004	Business
Atelier Concicialitá	Web Translate It	2010	Language
Cloudwords	Cloudwords	2011	Language
Kilgray	memoQ	2004	Language
Lionbridge	Translation Workspace	2009	Language
MemSource	MemSource Cloud	2010	Language
SDL	SDL TMS	2001	Language
XTM International	XTM Suite	2002	Language
Across Systems	Across Language Server	2003	Comprehensive
Andrä AG/Ontram, Inc.	Ontram+	2008	Comprehensive
MultiCorpora	MultiTrans Prism	2000	Comprehensive
Sajan	GCMS	2003	Comprehensive
SDL	SDL WorldServer	1998	Comprehensive
STAR Group	STAR CLM (Corporate Language Management)	1990s	Comprehensive
Text United	Translation Hub	2008	Comprehensive
Translations.com	GlobalLink	2003	Comprehensive
Welocalize	GLobalSight	1997	Comprehensive
Western Standard	Fluency Enterprise	2009	Comprehensive
Wordbee	Wordbee	2009	Comprehensive
Clay Tablet	Clay Tablet	2005	Middleware

Table 2: Commercial TMS solutions sorted by orientation. Components of comprehensive systems may also be available as point solutions, for instance, Prism Flow from MultiCorpora.

Source: Common Sense Advisory, Inc.

comprehensive solutions (Table 2). An alternative is to look for matchups that pair complementary systems with different orientations. Business or language orientation options are point solutions, in this context.

Step three is to choose between best-of-breed and comprehensive solutions. There is an age-old argument about whether it's best to string together a set of point solutions for specific functions, or adopt a unified platform that already has multiple functions pre-integrated. There is no one answer beyond the classic "it depends."

LSPs face significant risk in swapping out their business information system, upon which they conduct the day-to-day operations of running their company. Adopting a comprehensive TMS pushes this risk into the red zone because the production model is now also affected. We recommend that LSPs opt for point solutions so that they can replace one piece while other keeps going in business-as-usual mode. To adopt a comprehensive TMS, treat it first as a point solution on the language side and fold in the business modules gradually after the production line is up and running smoothly.

Unless your company has development resources waiting around for something to do, the expense and headache of marshaling the resources required to integrate and maintain point solutions will be an issue. The cost of integration and maintenance is justified when the point solutions are a "best-fit" for your organization or, as noted above, to avoid undue business risk. We recommend adopting a comprehensive solution for organizations with constrained resources.

Comprehensive systems come with unified reporting, at least in theory. First-time adopters may have fuzzy requirements in this area, but for advanced users the analytical and business process management functions of a single end-to-end system create a notable benefit.

Step four is to list your cloud options and understand them. Cloud entrants now include LSP.net, Text United, Atelier Concicialitá and Wordbee. Meanwhile, the existing players in the market have learned to sell their wares using cloud-related buzzwords. Most vendors now offer hosted, software-as-a-service (SaaS) or cloud-architected variants. Because

cloud can mean many things, here are the variants as we define them:

Hosted. We use this word to designate dedicated instances located at and managed in a remote data center operated by the vendor or a third party where the buyer has purchased the software.

SaaS. We use this acronym to designate dedicated instances hosted in a remote data center operated by the vendor or a third party where the buyer rents the software, paying by the month or through usage charges. SaaS may be single tenancy (a dedicated instance of the software) or multi-tenancy (a shared application instance but typically with secure, segregated data).

Public cloud. In this model, cloud-ready software is purchased but deployed into a public cloud, such as the Amazon Elastic Compute Cloud (EC2).

Private cloud. In this model, cloud-ready software is purchased and deployed into a private cloud, operated on premise or through a third party.

There are variations of all of these models, but buyers should be prepared to decide among these four approaches before establishing their shortlist. Of course, good old-fashioned on-premise installations are still an important option for companies with existing IT resources ready and willing to manage a new piece of complex software.

Future-proof your selection

During the requirements definition phase, perhaps the most challenging aspect is to identify and assess future needs. What follows is an assembly – no doubt incomplete – of some of the hot issues that buyers should be sure to account for in their planning documents. In addition to quantifying reuse, buyers should also benchmark systems for performance – size of memories, processing times, and throughput for various content and file types. As we suggested in our most recent report on machine translation (MT), planners should also imagine radical growth as throughput often doubles every 18 to 24 months.

Step five is to insist on interoperability. All TMS shoppers should aggressively pursue the issue of interoperability. Translation supply chains represent an exceedingly heterogeneous operating environment. Any TMS buyer could reasonably expect that downstream partners may use a variety of translation environments requiring slightly different prepackaging of project files. Ideally then, the TMS your company purchases would exchange project data and content with other TMSs. Buyers must start demanding this capability. Today, the most you can expect is the ability to prepare files for processing by multiple toolsets.

Companies buying a TMS can also reduce or eliminate one of the biggest challenges of translation management and organizational transformation–mergers and acquisitions. For LSPs and translation buyers alike, when that moment arrives for buying or getting bought by another company, interoperability at the TMS level will soften what is otherwise a potential train wreck.

In the sixth step you should plan for hyper-utility of linguistic assets. In addition to pre- and post-processing to prepare files for translation or for delivery to the client, the centralized TM modules will soon be expected to include tools for scrubbing and purging memories, and also for selecting subcorpora for the purpose of training project or product line-specific MT engines.

TMS deployments increasingly combine translation memory (TM) and terminology management with MT so that segments not matched in the TM can be routed for pretranslation in MT. This technique replaces every segment during pretranslation, thereby leaving no source language content except for reference purposes.

In the seventh step you should learn from the companies that have gone before you. Talk to other practitioners about what they've experienced since their initial deployments. Here are some of the things we hear when we ask, "What do you wish someone had told you beforehand?"

Once the system is up and running, your company will want to bring in more groups, offices, departments and business units, so look at the acceptability to new groups. Will your system be adequate for

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those needs? When a single department adopts a technology, there is no corporate mandate, and there will be potentially insufficient funding to encompass the needs of the entire organization. This can lead to the selection of departmental solutions that won't scale, causing pain and frustration later. You should also look at adaptability with new systems. Planners must think about what's in the pipeline and what industry trends might indicate for future investment. Take advantage of industry research to learn where the market is going.

For LSPs, the jumble of systems and work methods makes reporting a time-consuming activity forcing a bare-bones approach. For enterprises the lack of a system today means reliance on what suppliers tell you. TMS opens access to data that executives will start asking for, and your company will want to provide as evidence of your team's effective management. Plan for this by anticipating new reporting demands.

Completing the process

So, your company has determined the type of system you are looking for, organized your business requirements, checked with IT for technical requirements, and made your shortlist. What's next? Every organization may have specific technology selection procedures, but here is what you can expect, in general.

Step eight is to weight your selection criteria. The more detail in your criteria, the better, at least to start with. After completing the collection phase, the winnowing begins. At this stage, combine and compress the descriptions as much as possible. The tighter your descriptions and the more crystallized the thinking gets, the easier it will be to prioritize. Vaguely worded and overlapping requirements will get you nowhere. Initially, divide things into three categories:

Must-have: Limit the show-stopping must-haves to as small a number as possible. These are critical requirements that preclude any system that cannot meet a single must-have item. This list has to be tiny. After the first pass at prioritization, you may start with 20 or 30 items here. Move most of them into the "Need-to-have" category.

Need-to-have: This is the category you will assign the weighting to. Keep it as small as possible. Most of the items you start with here should be pushed down to nice-to-have, in order to make room for the things individual stakeholders claim are must-haves for them. Ideally, you can keep the actual weighting to about 30 items.

Nice-to-have: These are all the remaining needs that it would be really cool if the system can do it. Realize that if you do a good job with the must-have and the need-to-have categories, you'll end up with a system that in fact takes care of many of these items. Don't clutter up the weighting by trying to include them all. It only defocuses your process and makes the decision less obvious.

Step nine is to choose one or both proof-of-concept models. There are two approaches to proof-of-concept testing, and we recommend doing both. First is the proof-of-concept demo. Invite the top three scoring vendors to present their solutions in person after giving them your detailed requirements. Ideally, this is a live demo using your actual content samples. The second is piloting. When it's feasible, progress to using the best-fit system for a live project. This will require dedicating resources and may involve extra costs. The payoff is a deeper understanding of how the system performs and, more importantly, how your team responds to the particulars of one or more systems in a production context.

The final step is to calculate the total cost of ownership. Consider the three-to five-year cost of licensing and maintenance, infrastructure for on-premise deployment, customization and integration services, training, plus internal tariffs for IT resources and administration.

By shortlisting properly and future-proofing your requirements, your company will only have best-suited applications in your final pool of candidates, and the chances of making a mistake will be greatly reduced. But don't be shy about asking for assistance from your peers and industry experts wherever you find them. More opinions in this case will likely mean better opinions for your company to choose from. **M**

Cross-lingual text analytics: a new frontier in linguistics

Meta S. Brown

In Atlanta, a brand manager needs to know what consumers are saying about soft drinks in Thailand. In Washington, D.C., an intelligence agency analyst wonders if an international terrorist group is using twitter to organize a bombing. In Tokyo, electronics engineers want to better understand quality problems that are leading to product returns in North America. These diverse professionals share common concerns. Each of them needs information that is locked in some form of text, such as posts to a social network, e-mails or web form submissions. The volume of text involved is large, and the person who needs the information doesn't understand the required language.

These professionals have different problems, roles, languages and cultures to explore, but one shared solution: cross-lingual text analytics. Market pressure and global competition drive demand for cross-lingual text analytics, and the technology is advancing to meet the challenge. Cross-lingual text analytics is where the action is and will be for years to come. Information about analytic methods and their use in business has been widely available throughout the past century, yet there has been a rapid rise in interest over the past few years. A confluence of changes in technology and economic climate has created both opportunity and pressure for businesses to initiate or expand their use of analytics.

Once requiring tedious hand calculation, statistical analysis has become cheaper and easier with the widespread availability of computers and improvements in software. The rising use of computers has also brought a rise in the volume of the raw material for analytics – data. At the same time, global competition and a weak economy put growing pressure on businesses to improve their practices; they must adapt or they will die.

Text is a form of data and, on the one hand, a rich source of information. On the other, it is bulky, difficult to analyze and often ambiguous in meaning. A number's a number, but a piece of text might be in any one of a myriad of languages, further complicated by the education, personal style and even the mood of the individual writer. Text analytics centers on converting text into some more easily usable form of data. Cross-lingual text analytics makes this process possible when the end user of the data doesn't speak the language of the original text. Cross-lingual text analytics enables business people to find order and meaning amid massive quantities of otherwise incomprehensible text.

Data analysis yields value only when those with influence and the power to make decisions choose to put that analysis to use. The cleanest data, most powerful computers and shrewdest analysts do no good if the analysis is ignored or regarded as a mere conversation piece. Predictive analytics methods, such as statistical hypothesis testing and modeling, data mining and operations research, examine relationships among variables and reveal the ways in which elements of a system influence one another. Cycles of data gathering, analysis and field testing provide meaningful information appropriate to guide decision-making. What's more, a worthwhile analytics program is planned with an eye to providing actionable information, not just interesting insights. Text analysis methods, which center on converting unstructured text into categories based on subject matter and sentiment, convert the rich but largely unmanageable resource of text data into categorical data. Organized into categories, text data can be

Meta S. Brown is general manager of analytics at LinguaSys. She is a frequent writer and speaker on advanced analytics applications.

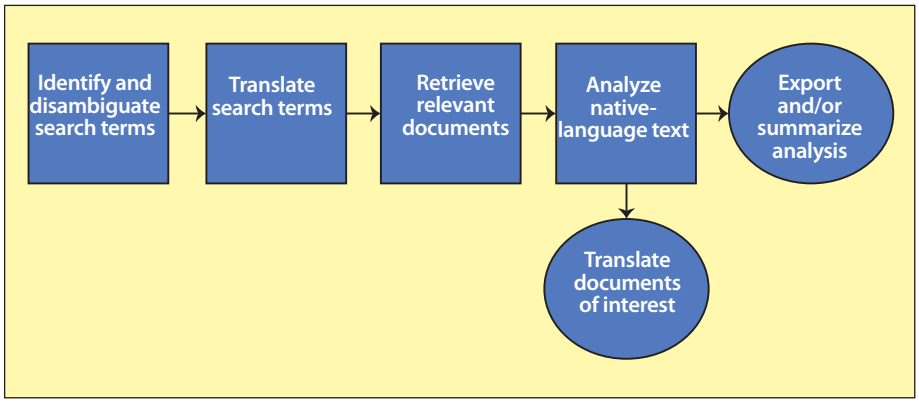


Figure 1: The cross-lingual text analytics process.

exploited in analytics processes using traditional techniques.

It's important to note that the term analytics, in this context, goes far beyond the simple summaries commonly used in reporting, such as totals, averages, bar and pie charts. Those methods are descriptive; that is, they provide a description of the data, but no insight into mechanisms, or how one element of a system influences another. Most techniques and tools promoted as business intelligence or online analytic processing are extensions of these descriptive methods — separating data into myriad segments, but providing no more depth of analysis than ordinary reports. Reports summarize what has happened, whether in the distant past, recently or just milliseconds earlier. Although these summaries may provide a sense of the current state of the business, they do not provide meaningful guidance for action. Reports leave decision makers without information about the influence of one variable on others and without information about likely effects of alternative decisions. The decision maker is left to rely only on experience and intuition.

Historically, the resources for extracting information from text data amounted to your resources of skilled human beings. Your ability to get useful information from text was as great as the size and skill of your team for translating, scanning and summarizing the text. No access to skilled translators amounted to no ability to use foreign-language sources. A small team meant that large sources of text would go unused.

Cross-lingual text analysis takes on the issues of language and volume in dealing with text (Figure 1). New processes enable an investigator to enter a search topic in his or her native language, enhance the definition of the search with tools for identifying synonyms and related terms and for disambiguation (selecting the specific meaning desired for terms that have several meanings, as in Figure 2), then automatically translate the search terms into another language, returning only relevant material. Documents returned in the cross-lingual search can be organized by applying linguistic technology directly to the text in its original form. Finally, categorized data is returned to the investigator for use in analysis, along with any required translations.

An important element of cross-lingual text analytics is that analysis steps, such as categorization based on subject matter and sentiment, can and should be performed within the original language of the text. Bulk translation prior to text analysis is often attempted, usually because of a lack of proper tools for the original language of a particular body of text. However, text analysis on translated text consistently yields unacceptable results.

Text analytics in coming years

The popularity of social media and similar applications creates a large and growing body of text data. The volume of potentially useful text is so great, in fact, that neither the business community nor governments have sufficient resources to address it with human interpretation alone, but they are highly motivated to find viable alternatives. Knowledge that text holds clues to such valuable discoveries as sales opportunities, terrorist plots or safer medical practices is driving exploration and investment in technological alternatives and aids to human reading and analysis.

The expanding mass of computerized text is something like a mountain, or rather a range of mountains, rich with precious minerals. The value is there, its presence no secret, but a mere mortal alone is no match for a mountain. Extracting minerals from the rock requires a combination of brute force, because there is a huge volume of material, and sophistication, because the desirable material is a tiny fraction of the whole and not simple to separate from the bulk. The same can be said for text analytics. Organizations that succeed in assembling the right combination of mass scale and accuracy will enjoy a significant competitive advantage.

Cross-lingual text analytics offers unique opportunities to support business growth. Modern communication and transportation enhance the opportunity for doing business all over the world and also bring competition from all over the world. Language limitations translate to limitations of business opportunity and weakness in the face of competition with superior language skills. What's more, lack of ability to interpret foreign languages inhibits competitive intelligence, which is the ability to monitor and understand the activities of competitors and the market's response.

Cross-lingual text analytics enables us to extract meaning from communications in languages we may not personally understand. The brand manager in the United States needs to know what consumers are saying about soft drinks in Thailand and Malaysia, and the engineer in Japan needs to understand the comments on warranty claims from the United States and Mexico, but both are held back, not only by language, but also by the sheer volume of irrelevant material. This is an even more pronounced problem in government intelligence applications where the stakes are high and the messages are often intentionally disguised.

Translation alone is not sufficient to bridge the language gap for business information. Translating irrelevant content wastes resources, drives costs up and still leaves the user with an untenably large mass of text, plus the effects of translation errors. Because of the errors and ambiguity introduced in translation, analytics such as content and sentiment analysis are seriously inaccurate when performed on translated text. For accurate results, text analytics must be performed within the original language of the text. Cross-lingual technology makes

it possible to define the relevant information in the user's native language, automatically translate search terms into the target language(s) and perform a more accurate search with lighter resource demands.

So is it possible to obtain clear value from imperfect technology? We're often surprised to discover that others interpret our written words in ways different than what we intended when writing. The human brain is the best tool for generating and interpreting language, but it is not perfect. A given segment of text is not interpreted consistently by a single human on multiple occasions, let alone by multiple humans. Since there is no empirical method for determining intended meaning, the baseline for benchmarking software performance is always comparison to a modest sample of human interpretations of text, a rather fuzzy basis for evaluation and improvement. Linguistics technology is consistent, but otherwise not nearly as effective as humans at interpreting language. How are we to put language technology to use when the results are so often incorrect?

Many applications simply don't require perfection or anything close to it. Consider the everyday practice of direct marketing, appealing directly to individuals to make a purchase or contribution. Most direct marketing solicitations end up in the trash — real or virtual. The direct marketer can accept this because the values of a few positive responses more than offsets total costs. The most successful practitioners are constantly testing the effects of small changes to the process, perhaps a new envelope for a traditional mailing or a new subject line in e-mail, in the quest for optimum returns.

Internet communications are awash with similar opportunities, and online business powerhouses such as Amazon and Google are continually testing elements of offers and presentations. The offers presented to an individual consumer take into account whatever information the advertiser has available. This may include past behavior, such as purchasing and browsing history; demographics, such as gender and age; and information not specific to the customer, such as weather, date or time of day. Advances in linguistics, coupled with the latest in dynamic advertising tools, open the door to adding new and valuable information to that mix.

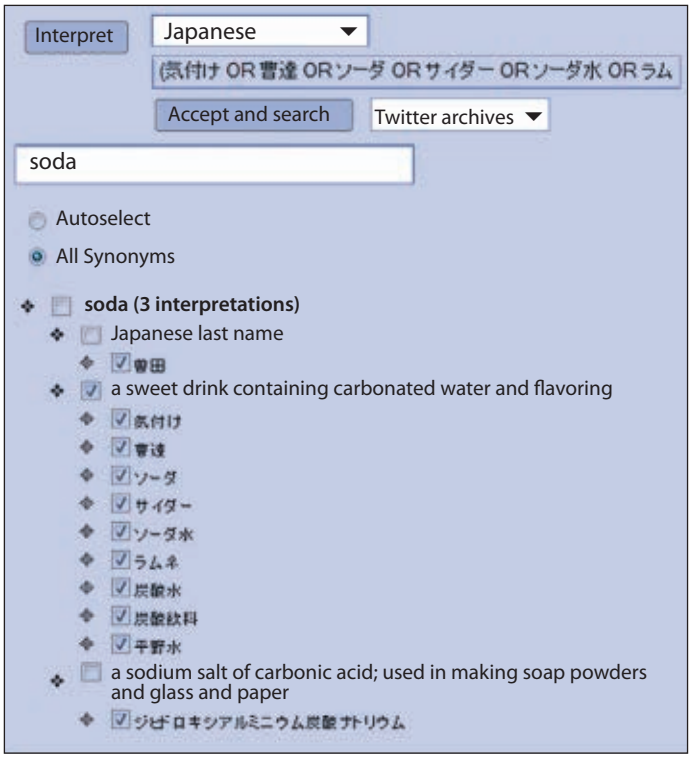


Figure 2: Disambiguation of a search term.

Consider this example of an existing online advertising model. Businesses pay to place their ads in front of users of a social networking site. These advertisers can tailor the selection of users who see the ad by a number of elements that are known from the user's profile, such as age, gender and city of residence. Further, they can specify that ads be presented in response to certain keywords so that a shoe retailer might specify that an ad be displayed in response to a user mentioning a specific brand of shoes, while a dentist might select terms such as *toothache* and *gums bleed*.

But terms often have several meanings, and the context in which terms are mentioned speaks to the intent of the user. The person who posts "I'm saving up for a pair of Manolo Blahniks" is in a shoe-shopping frame of mind. The one who posts "What kind of fool would save for Manolo Blahniks?" is not, or not for that particular brand. To the extent that linguistics can differentiate these meanings, it adds value for everyone involved in the process. Publishers adopting linguistics for ad targeting will have happier and more loyal customers and may command higher advertising prices; advertisers will see better returns through improved targeting; and users will view advertising more appropriate for their interests.

Organizations ignoring foreign language text are leaving an important market and competitive intelligence resource untapped, giving the advantage to language-savvy competitors. Bulk translation of textual data is unnecessarily slow and expensive, and yields poor quality results. Cross-lingual text analytics yields fast, accurate text analysis and cost-control as well. **M**

Localizing worldwide mobile apps

Talia Baruch

The urban nomad sounds familiar, almost like someone we've transformed into. We're on the go, and we demand instant information anytime, anywhere. The urban nomad in us is never bound to one place. Wherever we are, across oceans and continents, our carry-on mobile device is our port of communication with the world around us. We pull it out to check our calendar, to interface with our connections, to play games, to purchase goods or just to slide-flick through our menu bar while we're trapped in the elevator, trying to avoid the other occupants. In 2012, smart phones and tablets will become our principal devices, surpassing the usage of PCs.

Mobile web traffic is already surpassing PC-based traffic. According to ABI Research, by 2015, mobile commerce will have reached $119 billion worth of goods and services purchased via mobile phone. In the less developed world, mobile phones will play a central role in e-commerce, as they are often the only pathway to the internet. This means that companies are quickly planning their mobile commerce strategy to get to the forefront and stand out within this dominant market. Mobile storefronts now fit into companies' broader multichannel outreach to consumers. Therefore, when we examine pipeline paths for the localization industry, it is the mobile vertical that waves frantically for our attention.

One of the hurdles localization vendors face in the mobile vertical is the conceptual method of budgeting localization accounts. In most other verticals, reaching markup revenue goals is largely determined by word count volumes. In the mobile arena, however, text is minimal, and language service providers (LSPs) need to transition their work scope budgeting to a different ballgame model. Typical features in mobile localization include short user interface (UI) strings; multiple target language (TL) simship releases; focus on layout design; and compatibility with a variety of platforms. Culturalization plays a role in mobile localization, by adapting the usability and design elements to enable a native look and feel for each market. But remember, it's the strings that interface with the user. If they aren't localized properly, your entire localization enterprise effort will have been in vain. Our objective is to avoid stop-ship bugs during testing. Therefore, we need to include the developers, UI designers, technical writers and marketers in the frontline internationalization and localization planning during the product development stage. It costs 30 times more to fix internationalization bugs during testing than up front. Multiply that by the number of TLs and you're looking at a serious cost creep. Steve Jobs once said, "Design is a funny word. Some people think design means how it looks. But of course, if you dig deeper, it's really how it works."

Talia Baruch is an independent localization and culturalization consultant with 15 years' experience optimizing companies' international outreach. She founded Copyous, which develops and manages localization programs.

Localizing apps

Mobile applications follow the same system internationalization principles we practice for software localization. Highlights are isolating text from code; prepping resource bundles for translation; creating a locale-independent architecture, thereby preserving locale-specifics requirements; and cultural settings. The local API controls the locale formats: date/time/currency and so on.

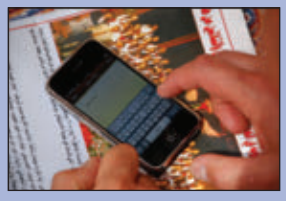
Running a pseudo-localization test at project outset saves time and money during the build testing phase. It verifies that the application is supportive of your TLs and locale requirements: double-byte characters for East Asian languages; bidirectional display for Middle Eastern languages; and diacritics for Central and Eastern European languages. It is also a helpful process for developers to identify any need for redesign of the UI elements to accommodate for expanded text. Pseudo-localization can also be used to determine the actual character space

restriction for different UI strings within the application.

When products are first designed for mobile applications and then transferred to desktop, source text is composed to fit in small screen space and in constrained dialog boxes/buttons. A common issue in those scenarios is when an English source string is a short abbreviation, as in *H2,* representing "second home phone number." In most languages it will be impossible to find an equivalent translation for a two-character word, or even a standard comprehensible abbreviation conveying the same meaning. In languages where verbs have a feminine and masculine conjugation, such as Hebrew, it is important to identify whether the UI string command relates to the system – open, close, clear – or to the user. If the command is for the system, the verb will remain in masculine singular form. However, if it addresses the user, the company needs to make a conscientious decision on whether to apply masculine, feminine or both formats. In Hebrew, the feminine verb conjugation is formulated by adding the letter *yud* to the base masculine format. A company that elects to endorse the politically correct approach and represent both genders would add a back slash followed by the letter *yud* for every user command in the UI. The downside is multiple bugs during functional testing and loss of "personal touch" in the user experience with the handheld.

Right-to-left text for Arabic, Hebrew, Farsi and Urdu and vertical text for Asian script require a different UI layout. Right-to-left UIs will display image inversion from right to left on the screen. Asian script is double-byte vertical and takes up more screen space, thereby changing the layout displayed in the source English mobile version. Mobile applications with Arabic UI are increasing rapidly as the use of smart phones in the Arabic market is vastly growing. It is projected to have reached 50% of market share by 2015. Most popular mobile devices used in the Arab world today are RIM BlackBerry (50%) and Apple iPhone (30%). The number-one mobile broadband community in the world is Saudi Arabia. That said, most mobile applications today do not support right-to-left text. It is best practice to avoid use of italics or bold font type for digital screens. It affects the readability of special character languages. It is also advised to apply simple interface fonts that support non-Roman characters and enable uncorrupt rendering of special characters, such as fadas in Irish, umlauts in German and cedillas in French.

Mobile localization hurdles



- User vs. system command
- Mixed language strings
- Text expansion
- Right-to-left and vertical text
- Concatenation
- Contextual reference

Brand names typically stay in English. Therefore, strings that incorporate brand names will have mixed English and TL text. For example, brand name terms such as Mobile Me, iPhone and Apple Store will remain as-is, embedded within the translated words in the same string. For bidirectional languages, this introduces multiple bugs during testing. Usually, there's no issue if the string begins with an English word. However, when an English word appears in the middle of a string in between Hebrew words, for example, we'll see word inversion issues. Apple developed a tool that identifies problematic strings upfront and flags them for translators at the outset. In many programming languages, string concatenation – joining strings end to end – is a binary infix operator. For example, the string *Turn and switch* will be concatenated with *to the run position.* Commonly, name and address strings are joined. The word *by* is often tied with a name on the author's page. Programmers love to concatenate strings because it allows for cleaner back-end support, reducing input of the same strings.

English is a language that tolerates concatenation because the word order is predictable. However, in German, for example, word order varies depending on syntax and tense. A verb appears at the end of a sentence in split verb structures. Another language challenging concatenation is Thai where there's no space between words. Concatenation is localization's worst enemy. The isolated concatenated strings are translated separately, out of context. Once they're compiled in the build, they often form messed-up sentence structures in the TL.

French, Spanish and German expand by 30% from the English. Therefore, the localized UI would get truncated in the

dialog boxes. Furthermore, unlike English, German is a language that doesn't tolerate abbreviated nouns, and German nouns can get shamelessly long. These are often truncated on buttons. Hebrew, in contrast, is a language that contracts by 70%-80% from the English. Asian languages have lower character count, but require larger font size for clear readability on the small screen. It is best practice to design large text boxes for the source English UI. Clearly, due to the very small screen size in mobile, text abbreviation is common. Another growing trend triggered by the character space limitation is the use of graphics or icons instead of text. This also generates a more international look.

One of the greatest challenges translators face in mobile localization is receiving isolated, contextless UI strings for translation. Sometimes the resource bundles for translation would have isolated single words representing a command button in the UI. The translators would need to identify what part of speech it is representing, such as a verb or a noun. One of the ways Apple provides contextual reference to the translators is by batching the iPhone source UI application strings for translation per the different feature components. All UI strings pertaining to the camera, calendar or clock would each get batched separately. Apple and other companies also enable the translators to view a mock-up of the application for added context within the layout. Developing linguistic assets is mandatory – a glossary of approved key terminology with corresponding definitions and instances in the UI, and a style guide defining messaging, voice and formats.

Localized content for mobile devices is pre-installed in the client-side devices, whereas some other messages related to services, for example, are routed through a server and hence follow a separate localization workflow. The challenge is to produce error-free localized text embedded into the devices. It is easier to fix bugs in desktop products by simply applying a patch in the next release.

Remember that sorting rules vary even within Roman alphabet languages. Czech, Slovak, Romanian, Polish and Hungarian use Roman characters, but these Central European languages also include characters that do not appear in Western European languages. In Czech, for example, the digraph *ch* is sorted after *h* and before *i*. Accented letters also follow different sorting rules compared with English.

Testing and marketing

Another challenge introduced by mobile is the need to test compatibility with different operating systems: iOS, Android, BlackBerry and Windows OS. Several testing elements need to be performed on the device itself. Software emulators can't replicate all functional instances or UI screens. When the application's localization is in multiple languages, it isn't feasible to send the device to every in-country tester. This is not the case for desktop applications, where in-country testers can download and install the software for remote testing.

Mobile applications target the general public, as opposed to certain software applications or corporate websites that may target industry professionals. Content localization should correspond to the content type and style: more colloquial translations for the former, as opposed to the more formal tone translations appropriate for the latter.

Launching a mobile localization adventure doesn't end with the application localization. There are additional pieces of affiliate content that will consecutively require localization as well: associated marketing copy, application description and localized screenshots for the app store.

When you explore new market opportunities for your application performance, research what types of applications are popular in the target markets. We often customize the application performance, usability and functionality to the locale culture and usability. Another consideration is determining dominant mobile operating systems and carriers in the target markets. For example, China Mobile is the leading carrier in China. In the Arab world, BlackBerry is still the leading device, while Apple iOS takes the second-place trophy. Switzerland is an example for a challenging mobile market, featuring three spoken languages: French, German and Italian; three dominant operating systems: iOS, BlackBerry and Android; and three major carriers selling these operating systems: Swisscom, Sunrise and Orange. This translates into a total of 27 test instances, all for one market locale.

The early nomad would travel in search of fresh pasture. The urban nomad travels in search of fresh opportunities. His or her modular, fast-paced lifestyle demands multiple adjustments in the relocation from one place to another. It is the little lit screen flickering in the back pocket that keeps the humdrum aligned, centralized in cyberspace – the home away from home. **M**

Crowdsourcing your localization testing

Doron Reuveni

Congratulations! If you're trying to find the best way to test your web and mobile products for localization, it means your application was popular enough to warrant expansion into multiple markets. The need for localization testing is a mark of true success. Unfortunately, it's also among the most difficult quality-related challenges to solve since it requires highly specialized skills from software-savvy native speakers who live in-market.

Most web, desktop and mobile apps are used under unpredictable, real-world conditions — well outside the sterile confines of any testing lab. And because every country's language, culture, currency, taxes and standards are different, in the realm of localized apps it's imperative for companies to prepare their applications to survive in ever-changing foreign markets. With a company's users being distributed all around the world, it's crucial that a portion of a company's app testing and validation is distributed around the globe, too.

This calls for a better way to test, one that meets the "in-the-wild" demands of localization. Enter crowdsourcing. By using a community of diverse and talented professionals, crowdsourced testing provides companies with native speakers worldwide to run complete localization, verifying accuracy and context across currency conversions, dates, special characters and static content.

Doron Reuveni, CEO of uTest, cofounded uTest in February 2007. Prior to uTest, he was the senior vice president of technology at Enigma, Inc. He has more than 20 years of experience delivering software applications to Fortune 500 companies and startups.

Localization testing challenges

Let's say, hypothetically, that you've just launched a Mandarin version of your mobile app. Like the rest of your applications, this one was developed and tested using in-house resources. But for this assignment, you need a native Mandarin speaker to confirm that nothing was lost in translation. Luckily, Peter in the marketing department speaks, reads and writes Mandarin — problem solved, right?

Not so fast! While translation validation is indeed part of the localization process, it's not the only part. First, is Peter fluent enough in Mandarin to fully understand metaphors, similes and slang? Will Peter be pulled from his day-to-day job to validate content revisions, and can he vet every part of your localized application, including your mainstream app content, your error messages and the system-generated e-mails your app sends? If Peter is really going to oversee ever-changing content such as comments, message boards and ratings, it sounds like Peter's got himself a new full-time job. And what about when the app is launched in German, French or Portuguese (in their various country-specific iterations)? Are you really going to become Rosetta Stone's best customer in order to keep up?

Assuming you (or your CFO) have already rejected the idea of solving this solely through in-house linguists, what other options do you have? Free translation tools, while innovative, are too often overtly literal and ill-equipped to handle localization on such a huge scale. Other options include outside consulting services specializing in localizing your content, but these often lack an effective third-party mechanism to validate their own work. Putting aside matters of expertise, cost and personnel, there's still that small matter of localization testing criteria, which includes:

- Content. Both static and dynamic content, such as catalogs, search results and metadata.
- Dates. Is the date January 1 or 1 January?
- Characters. Différent länguages have ðifferent setʃ θf characters.
- Character display. Arabic and Hebrew languages display right to left, which wreaks havoc with the way some browsers display your content.

- Postal codes. In some countries, postal codes contain letters.
- Phone numbers. There are different formats for different markets.
- Direction. Some languages are written left to right; others are right to left.
- Currency conversion. This is especially important for internet retailers.
- Tax calculation. VAT, sales tax and other fees vary from country to country.

So now that you have a better idea of what you're up against, how can you expect to build an in-house staff of software-savvy linguists? Answer: Most companies can't, at least not without some serious investments in both money and time. But what you can do to overcome the challenge of localization is to leverage a crowdsourced community — one that includes native speakers who live in-market all around the globe.

Traditionally, decision makers had two basic options for completing assigned tasks: through an in-house staff or with an outsourcing firm. With the introduction of crowdsourcing, there's now a viable third option that's much less costly and time consuming. Here's the formal definition of the term, as coined by journalist Jeff Howe in his book, *Crowdsourcing: Why the Power of the Crowd Is Driving the Future of Business*: "[Crowdsourcing is] . . . the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call." What's the significance? Well, for one, it enables you to make decisions on a per-project basis, which comes in handy with localization projects since they are often too infrequent to warrant building out an entire staff of linguists. The opportunity for executives today is to get the most bang for their buck by building in-house strengths around key employees and core competencies, while also tapping into variable resources like crowdsourcing.

Crowdsourcing tips

First, start with why. In many ways, testing is about finding and potentially fixing what doesn't work. Testers seek out problems because nobody wants to use or sell buggy software. But with localization testing, there's an added reason for testers to care: You're protecting the very things that are valuable to an entire culture of people. Cultural identity is an extraordinarily important component of who we are, and bugs that impact cultural identity can often be the most frustrating. For example, take the Cherokee tribe of Native Americans. Like many Native American tribes, their community was displaced by the advancement and settling of Europeans. However, one of their members, a man named Sequoyah, had the foresight to invent a written system for the Cherokee language. With that system, the Cherokee were able to keep detailed records of their history and communicate with other members of their tribe who were now spread across the country.

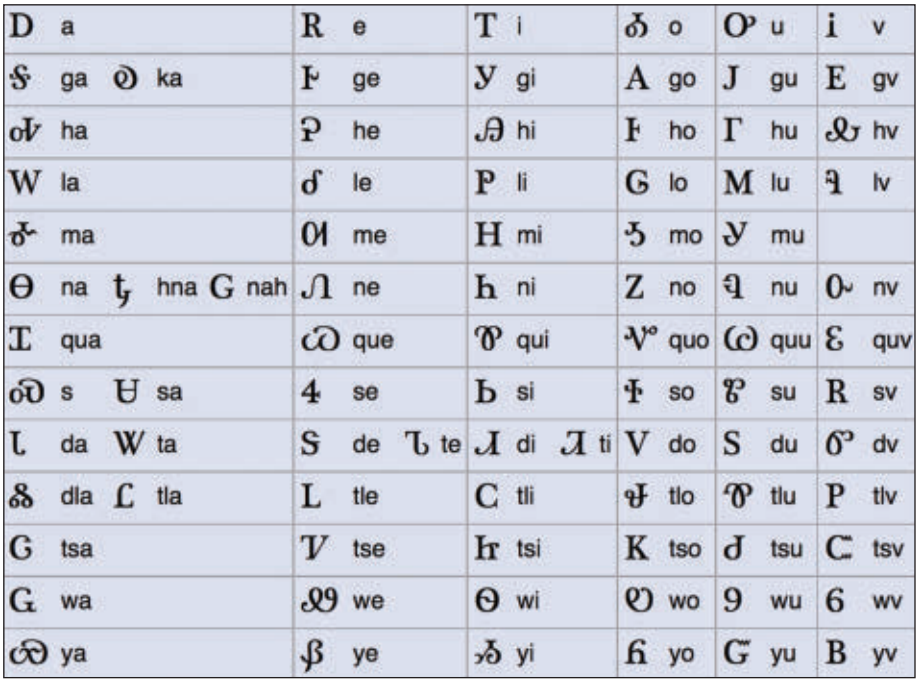


Figure 1: A chart of Cherokee syllabary using Unicode encoding.

Today, Cherokee is spoken by thousands of people in the United States and still uses Sequoyah's complicated writing system. It's possible for Cherokees to communicate in their language using any modern communication device, including iPads and iPhones. This is because Unicode includes support for the Cherokee syllabary (Figure 1), and any modern device with good Unicode support can handle the Cherokee language.

Second, build a team that matches your product, your task and your users. The best online communities of professionals serve as a perfect complement to in-house teams. Build a team that blends the strengths of your full-time employees (brand, reputation) with those of the community (flexibility, cost-effectiveness, testing coverage across locations, languages). Having this blend of staffing allows you to scale your resources up and down in a fluid manner, meeting tight deadlines during peak periods of development and testing, while controlling costs during slow periods. The end result of this scalable community-driven workforce is faster time-to-market.

This is more an observation than a tip, but independent thought is the lifeblood of creativity. With a diverse community of professionals that transcends location and background, you can avoid the group-think that often stifles internal teams. When a community is following a lead, no matter how large the crowd, it will simply reflect the one leadership voice. The consensus view from inside your company can drown out objections and alternate points of view. This is often an unintended byproduct of strong leadership. Again, a global community brings diverse opinions and experience, as well as fresh eyes, which can result in more complete testing coverage.

Also, to get the most out of crowdsourcing, find communities that enable community members to build their online reputation. This increases accountability and performance by rewarding good actors and punishing bad behavior. Performance ratings and recognition levels enable your firm to choose the right professionals, and promote the desired behavior with members of the community.

Use crowd diversity to mirror real-world conditions. Forget the fact that you are paying these people to write test cases or find bugs. While that's the primary job to be done, a secondary but powerful benefit is that your product is being validated in the hands and minds of real-world users in real-world conditions. Select the members of the community to best match your customer base, by location, language and expertise. The community working on your app should match the users you hope to target.

Remember that not all crowds are created equal. When selecting a community to work on your products, choose wisely. Some communities tend to be noisy, with lots of opinionating, but not much actual productive work. Choose a community that has proven success and showcases the past performance and reputation of community members. Also look for those communities that can point to clear, demonstrable wins — other customers they've worked with to solve real business problems. An important measurement for community sites is whether they include tools that help you manage the ongoing process. It is easy to build a marketplace website that connects an employer with a freelance worker, but this alone does not provide ongoing community-building.

However, you still need to call the shots. Crowdsourcing does not change a fundamental truth of software testing: Effective, detailed communication and project management are both key to any successful project. This is true in managing in-house resources or outsourced partners, and crowdsourcing is no exception. Assign an internal project owner to keep the information flowing and to manage the process.

Though crowdsourcing may be thought of as a solution for startups and small businesses, we find that many large organizations are also turning to the crowd for localization testing. As Google's senior engineering director Patrick Copeland says, "our global customers have different demands of our products. We want products to 'feel local,' and we need to support features that may be unique to specific markets. For instance, in Indic-based languages, using a standard keyboard is difficult, so we develop strategies like virtual keyboards or category browsing for search. As we specialize our products for certain markets, it introduces more challenges for testing. When we can't

find internal talent, community-based testing is an interesting solution to this challenge."

Mozilla's quality assurance (QA) director, Matt Evans, also has some thoughts on the subject: "I think the biggest misconception is that it is all lumped under one label and that crowdsourcing is done according to some crowdsourcing manual or standard. It isn't correct to have crowdsourcing and community-driven projects under the same umbrella. Strict crowdsourced projects tend to be targeted toward tasks that are discrete and distributed in nature. Community-based approaches tend to be longer lived and are typically for public benefit. Membership is considered a privilege, and betterment of the community as a whole is usually at the top of the list of shared goals among the members of the community project. In addition, you find the rise of leaders within community projects that drive the project forward. Community citizenship and passion for the project have been the key success factors for Mozilla's success, in my opinion."

When ReviverSoft localized its website and product into 22 languages, the company chose a major localization services company to do the translation work. After the website and product had been localized, Mark Beare, the company's founding partner, needed a way to test the accuracy of these changes. He decided on an independent third party to validate the accuracy and completeness of its localization efforts.

Beare adopted crowdsourcing to find native speakers who live in-market to ensure the company's apps were ready for localized success. "We really needed native speakers for this assignment. These are the countries where we're selling our products, so it was extremely important that the material was accurate and made sense."

With the help of his dedicated project manager, Beare and his team assembled diverse testers in terms of language and location. With the setup complete, this team of experts spent the next several days reviewing the various localized sites, with a particular focus on the German, French, Danish and Japanese versions. "We had been sending a lot of long files to the translators, so you never know when text is going to be cut off in certain areas of the site, since length often varies," says Beare. "We needed to make sure that the text rendered correctly, and we needed to know where text should be changed to make it more relevant."

Within a matter of days, Beare and his team had received complete feedback on all of their recently translated versions. "What we found was that, for the most part, testers were able to use the software with the translations provided, so that was good confirmation. We did, however, find a few issues where the text was not rendered correctly and where certain content needed to be changed completely."

As ReviverSoft expands into more locations around the globe and as the young company grows in number of employees, Beare expects to continue crowdsourcing its localization testing.

Numerous benefits can be achieved when adopting crowdsourcing for localization testing, including cost containment. Crowdsourcing allows managers to use lower-cost outside support without being tied down by the long-term commitments of outsourcing firms. On a monetary sidenote, companies that venture into localization often have trouble retaining users outside of their home market. Users who feel that they have a hand in the success of a product will have a stronger emotional commitment to the product and the company, creating powerful connections and a potential army of fans.

Today's customers, no matter where they are, tend to expect apps to be complete and functional from day one. The era of beta-testing in foreign markets as a substitute for QA is long gone. Since localization testing tends to occur during the latter phases of the product's life cycle, a time when deadlines are fast approaching, crowdsourcing can alleviate delays that often stifle companies around peak release times. **M**

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Associations

Globalization and Localization Association

Description The Globalization and Localization Association is a fully representative, nonprofit, international industry association for the translation, internationalization, localization and globalization industry. The association gives members a common forum to discuss issues, create innovative solutions, promote the industry and offer clients unique, collaborative value.

Globalization and Localization Association *23 Main Street, Andover, MA 01810, 206-329-2596, Fax: 815-346-2361, E-mail: info@gala-global.org, Web: www.gala-global.org*

TAUS

Description TAUS is a think tank for the translation industry, undertaking research for buyers and providers of translation services and technologies. Our mission is to increase the size and significance of the translation industry to help the world communicate better. To meet this ongoing goal, TAUS supports entrepreneurs and principals in the translation industry to share and define new strategies through a comprehensive program of events, publications and communications.

TAUS *Oosteinde 9-11, 1483 AB De Rijp, The Netherlands, 31-299-672-028, E-mail: info@translationautomation.com, Web: www.translationautomation.com*

Authoring Tools

Congree Language Technologies

Languages English, German, French ***Description*** Congree provides the leading technologies in the area of authoring assistance. It combines authoring memory, terminology, and rule-based quality and style control into integrated products. These distinguish themselves through their outstanding linguistic intelligence, support for all editors, and their availability optionally either in real time during text creation or for after-the-fact checking routines. Congree's products are available in various stages of expansion, and they can be scaled at will, from the individual workstation license to the company-wide client/server solution.

Congree Language Technologies *Im Stoeckmaedle 13-15, 76307 Karlsbad, Germany, 877-922-7677, 49-7248-92545-0, Fax: 49-7248-925-444, E-mail: info@congree.com, Web: www.congree.com*

Conferences

Localization World

Description Localization World conferences are dedicated to the language and localization industries. Our constituents are the people responsible for communicating across the boundaries of language and culture in the global marketplace. International product and marketing managers participate in Localization World from all sectors and all geographies to meet language service and technology providers and to network with their peers. Hands-on practitioners come to share their knowledge and experience and to learn from others. See our website for details on upcoming and past conferences.

Localization World Ltd. *319 North 1st Avenue, Sandpoint, ID 83864, 208-263-8178, Fax: 208-263-6310, E-mail: info@localizationworld.com, Web: www.localizationworld.com* ***See ad on page 17***

Enterprise Solutions

Across Systems

Multiple Platforms

Languages All ***Description*** Across Language Server is the world's leading independent linguistic supply chain technology. It provides a central software platform for corporate language resources and translation processes. The all-in-one enterprise solution includes a translation memory, a terminology system, and powerful PM and workflow control tools. It allows end-to-end processing so that clients, LSPs and translators collaborate seamlessly. Open interfaces enable the direct integration of CMS or ERP solutions, among others. Across clients access the Language Server via LAN, WAN or web, or as a hosted service. Across customers include Volkswagen, HypoVereinsbank, SMA Solar Technology and hundreds of other leading companies.

Across Systems GmbH *Im Stoeckmaedle 13-15, D-76307 Karlsbad, Germany, 49-7248-925-425, E-mail: international@across.net*

Across Systems Inc. *Glendale, CA 91203, 877-922-7677, E-mail: americas@across.net, Web: www.across.net* ***See ad on page 4***

MultiCorpora

Multiple Platforms

Languages All Unicode languages ***Description*** As language technology experts since 1999, MultiCorpora is exclusively dedicated to providing language technology software solutions to enterprises, language service providers and governments. Its flagship product, MultiTrans Prism, offers an innovative and complete turn-key translation management system. MultiTrans Prism is an enterprise client-server application that consists of four core components which together, or individually, enable communications in more than one language; they are business management, project management (workflow), advanced translation memory and terminology management. RR Donnelley, Nomura, the Translation Bureau of Canada, UNESCO and many others rely on MultiTrans to manage their mission-critical translation operations.

MultiCorpora *102-490 St. Joseph Boulevard, Gatineau, Quebec, J8Y 3Y7 Canada, 819-778-7070, 877-725-7070, Fax: 819-778-0801, E-mail: info@multicorpora.com, Web: www.multicorpora.com* ***See ad on page 27***

STAR Group

Multiple Platforms

Languages All ***Description*** STAR Group was founded in Switzerland 27 years ago with the exclusive focus of facilitating cross-cultural technical communications in all languages. The company has grown to be the largest privately held multilingual information technology and services company in the world with 42 offices in 32 countries. Its advanced technology developments have propelled STAR to its current market position. Core services: information management, translation, localization, publishing, on-demand printing, consulting. Core technologies: Transit (translation memory), TermStar/WebTerm (terminology management), GRIPS (product information management), MindReader (context-sensitive authoring assistance), STAR CLM (corporate language management), STAR CPM (corporate process management), i-KNOW (competence management), and SPIDER (Interactive Electronic Technical Manual).

STAR Group *Wiesholz 35, 8262 Ramsen, Switzerland, 41-52-742-9200, 216-691-7827, E-mail: info@star-group.net, Web: www.star-group.net* ***See ad on page 10***

Localization Services

ADAPT Localization Services

Languages More than 50 ***Description*** ADAPT Localization Services offers the full range of services that enables clients to be successful in international markets, from documentation design through translation, linguistic and technical localization services, prepress and publication management. Serving both Fortune 500 and small companies, ADAPT has gained a reputation for quality, reliability, technological competence and a commitment to customer service. Fields of specialization include diagnostic and medical devices, IT/telecom and web content. With offices in Bonn, Germany; Stockholm, Sweden; and Barcelona, Spain, and a number of certified partner companies, ADAPT is well suited to help clients achieve their goals in any market.

ADAPT Localization Services *Clemens-August-Strasse 16-18, 53115 Bonn, Germany, 49-228-98-22-60, Fax: 49-228-98-22-615, E-mail: adapt@adapt-localization.com, Web: www.adapt-localization.com* ***See ad on page 40***

Alliance Localization China (ALC)

Languages Major Asian and European languages ***Description*** ALC offers document, website and software translation and localization, desktop publishing and interpreter services. We focus on English, German and other European languages to and from Chinese, Japanese, Korean and other Asian languages. We use TRADOS, CATALYST, SDLX, Transit, Wordfast, memoQ and other CAT tools, as well as DTP tools including CorelDRAW, FrameMaker, FreeHand, Illustrator, InDesign, PageMaker, Photoshop and QuarkXPress. Our customer-oriented approach is supported by strong project management, a team of specialists, a large knowledge base and advanced methodologies. We always provide service beyond our customers' expectations at a low cost and with high quality, speed, dependability and flexibility.

Alliance Localization China *Suite 526, Building B, No.10, Xing Huo Road, Fengtai Science Park, Beijing 100070, P.R. China, 86-10-8368-2169, Fax: 86-10-8368-2884, E-mail: customer_care@allocalization.com, Web: www.allocalization.com*

Binari Sonori

Description Binari Sonori is a leading provider of international media localization services since 1994, with a unique team of project managers, studios, engineers and selected linguists spread over 30 countries worldwide. Solid procedures and transparent relationships with clients guarantee high quality of text, audio and video, timeliness and flexibility. We are accustomed to working for global companies that need to reach a broad range of markets with their media and entertainment products. Specialized support available for any media localization activity, from effective audio localization to international content creation. Highly professionalized one-stop shop supporting today's media localization projects.

Binari Sonori S.r.l. *Viale Fulvio Testi, 11, 20092 Cinisello Balsamo, Milano, Italy, 39-02-61866-310, Fax: 39-02-61866-313, E-mail: translate@binarisonori.com, Web: www.binarisonori.com* ***See ad on page 28***

EuroGreek Translations Limited

Language Greek ***Description*** Established in 1986, EuroGreek Translations Limited is Europe's number one Greek localizer, specializing in technical and medical translations from English into Greek and Greek into English. EuroGreek's aim is to provide high-quality, turnkey solutions, encompassing a whole range of client needs, from plain translation to desktop/web publishing to localization development and testing. Over the years, EuroGreek's services have been extended to cover most subject areas, including German and French into Greek localization services. All of EuroGreek's work is produced in-house by a team of 25 highly qualified specialists and is fully guaranteed for quality and on-time delivery.

EuroGreek Translations Limited
London *27 Lascotts Road, London, N22 8JG United Kingdom*
Athens *EuroGreek House, 93 Karagiorga Street, Athens 166 75, Greece, 30-210-9605-244, Fax: 30-210-9647-077, E-mail: production@eurogreek.gr, Web: www.eurogreek.com* ***See ad on page 49***

iDISC Information Technologies

Languages Spanish (all variants), Portuguese (European and Brazilian), Catalan, Basque, Galician, Valencian ***Description*** iDISC, established in 1987, is an ISO-9001 and EN-15038 certified company based in Barcelona with branches in Argentina, Mexico and Brazil that focuses on localization into all variants of Spanish (European, Latin American, USA and Neutral), Portuguese (European and Brazilian) and the other languages spoken in Spain (Catalan, Basque, Galician and Valencian). Specialization fields are websites, software localization, technical documentation, business, automotive and marketing materials. All commercial tools are available. Internal tools help reduce management costs and increase quality, consistency and on-time deliveries. Continuous support to the client achieves the best project results and establishes long-term, honest partnerships.

iDISC Information Technologies *Passeig del progrés 96, 08640 Olesa de Montserrat, Barcelona, Spain, 34-93-778-73-00, Fax: 34-93-778-35-80, E-mail: info@idisc.es, Web: www.idisc.es*

E-C Translation Ltd. is now EC Innovations, Inc.

Languages All ***Description*** E-C Translation Ltd., the technology-driven language services company with a mission to provide high-quality localization solutions, is pleased to announce the rebranding of its business to EC Innovations, Inc. Over the past 14 years, EC Innovations, an ISO 9001:2008 certified organization, has grown to over 200 full-time employees, providing multilingual and interdisciplinary services worldwide. The new name and image are a reflection of our completeness as a full-fledged localization solutions provider. Hereafter, EC Innovations will continue to focus on providing our customers with the highest quality of language and technology solutions while maintaining our reputation for being a customer-centric organization.

EC Innovations, Inc. *501 Silverside Road, Suite 105, Wilmington, DE 19809, 617-775-3506, Fax: 508-762-5304, E-mail: info@ecinnovations.com, Web: www.ecinnovations.com*

Future Trans

Languages All Middle Eastern and African languages ***Description*** Future Trans is an ISO 9001:2008 certified language service provider and the leading translation and localization agency in the Middle East and Africa. We've been in business since 1994 and currently employ more than 90 in-house professionals, with branches in Egypt, the US, Turkey and South Africa. We have developed extensive industry specific expertise in IT, telecommunication, automotive, financial, medical, legal and many other fields in translation and localization. Currently we provide translation in all Middle Eastern and African languages. Future Trans offers translation, typesetting, technical writing, localization, multilingual project management, audio production, consulting and testing.

Future Trans LTD *10th Abdul Rahman El-Rafie St. Dokki, Giza 12311, Egypt, +202 33350040, Fax: +202 37608966, E-mail: egyptinfo@future-trans.com, Web: www.future-trans.com* ***See ad on page 13***

The Greek Partner

Languages English, German, Greek ***Description*** Intertranslations Ltd. is a leading Greek translation and localization service provider, established in 1995, with extensive experience in medical and pharmaceutical products and equipment, legal, financial, mechanical, automotive, engineering, electrical, technical, software, media and marketing, tourism, health and nutrition, the food industry and so on. Among the tools used to ensure the quality of our projects are TRADOS, Transit, SDLX and other CAT tools and for DTP, InDesign, PageMaker, Photoshop, QuarkXPress, Illustrator, CorelDRAW and FrameMaker. We have proudly acquired ISO 9001:2000 and DIN EN 15038:2006-08 certifications and are members of ATC and GALA. We provide free samples upon request.

Intertranslations Ltd. *El. Venizelou 4, 176 76 Athens, Greece, 30-210-92-25-000, Fax: 30-210-92-25-500, E-mail: xynos@intertranslations.gr, Web: www.intertranslations.gr*

Janus Worldwide Inc.

Languages 80 and growing ***Description*** Janus is a leading provider of language solutions to the world's most global companies. Our flexible, scalable and proven approach enables our team to deliver services with top-quality results both on-time and on-budget. Industries we serve include IT, telecom, life sciences, energy, financial and automotive. Some of the services we offer are: functional and linguistic testing; software, website, and multimedia localization; and technical, e-learning, and marketing translation. Our processes are backed by the ISO 9001:2008 quality certification and our clients include Microsoft, IBM, Siemens and Volkswagen. We have nine offices in Asia, Europe and the US to facilitate communication globally.

Janus Worldwide Inc. *Derbenevskaya nab., 11B, Office B208, Moscow 115114, Russia, +7-495-913-66-53, US 855-526-8799 Fax: +7-495-913-66-53, E-mail: info@januswww.com, Web: www.januswww.com*

LinguaGraphics — Multilingual DTP; Web, Flash and Software Localization; Engineering

Languages All, including Arabic, Bengali, Chinese, Farsi, Greek, Hindi, Hebrew, Japanese, Khmer, Korean, Lao, Punjabi, Russian, Thai, Turkish, Urdu and Vietnamese ***Description*** LinguaGraphics is a leading provider in the area of multilingual desktop publishing and web/software/Flash localization engineering. Our seasoned DTP professionals and localization engineers are working with the latest tools on top-of-the-line equipment to produce a wide range of projects in InDesign, FrameMaker, QuarkXPress, Photoshop and Flash. We specialize in typesetting high-end marketing and communications-type material in difficult and rare languages at very competitive rates. For a quote on your next project, please visit us at www.linguagraphics.com. You have our word that we will never compromise on quality and do the utmost to make your project a success.

LinguaGraphics, Inc. *194 Park Place, Brooklyn, NY 11238, 718-623-3066, 718-789-2782, E-mail: info@linguagraphics.com, Web: www.linguagraphics.com*

Logrus International Corporation

Languages EE, EA, ME, WE, rare languages ***Description*** Logrus offers a full set of localization and translation services for various industries, including top-notch software engineering and testing and DTP for all languages, including bidirectional and double-byte ones. The company is proud of its unique problem-solving skills and minimal support requirements. The company offers all European and Asian languages as well as many rare languages through its offices and established long-term partners. With its production site in Moscow, Russia, Logrus provides a winning combination of quality, experience and affordability. With over 14 years in business, the company has received multiple awards for excellence from its long-time customers, including IBM, Microsoft, Novell, Oracle and others.

Logrus International Corporation *Suite 305, 2600 Philmont Avenue, Huntingdon Valley, PA 19006, 215-947-4773, Fax: 866-241-3633, E-mail: ceo@logrus.ru, Web: www.logrus.ru*

Moravia Worldwide

Languages All ***Description*** Moravia Worldwide is a leading globalization solution provider, enabling companies in the information technology, e-learning, life sciences and financial industries to enter global markets with high-quality multilingual products. Moravia's solutions include localization and product testing services, internationalization, multilingual publishing and technical translation. Hewlett-Packard, IBM, Microsoft, Oracle, Sun Microsystems and Symantec are some of the companies that depend on Moravia Worldwide for accurate, on-time localization. Moravia Worldwide maintains global headquarters in the Czech Republic and North American headquarters in California, with local offices and production centers in Ireland, China, Japan and throughout Europe. To learn more, please visit www.moraviaworldwide.com.

Moravia Worldwide
USA *199 East Thousand Oaks Boulevard, Thousand Oaks, CA 91360, 805-557-1700, 800-276-1664, Fax: 805-557-1702, E-mail: info@moraviaworldwide.com, Web: www.moraviaworldwide.com*
Asia *86-25-8473-2772, E-mail: asia@moraviaworldwide.com*
Europe *420-545-552-222, E-mail: europe@moraviaworldwide.com*
Ireland *353-1-216-4102, E-mail: ireland@moraviaworldwide.com*
Japan *81-3-3354-3320, E-mail: japan@moraviaworldwide.com*
See ad on page 38

Full-service Translation, Localization and Multilingual Testing

Languages Over 60 ***Description*** Net-Translators provides turnkey translation, localization and multilingual testing services and customized strategy-to-deployment localization solutions. For over ten years, they've helped technology companies and medical-device manufacturers prepare their products and services for global markets. For software applications (GUI, online help and documentation), marketing materials, websites and more, Net-Translators' customer-focused, professional teams deliver consistent, accurate results in compliance to international regulations. Their one-of-a-kind Multilingual Testing Center is specially equipped and staffed to offer the ultimate testing environment for localized products. ISO 9001:2008 and ISO 13485:2003 certifications and a long-standing reputation for quality have earned Net-Translators the trust of industry leaders worldwide.

Net-Translators
USA *Cupertino, CA, 800-320-1020, E-mail: salesusca@net-translators.com*
USA *Marlborough, MA, 617-275-8128, E-mail: salesuseast@net-translators.com*
Europe *London, England, +44-20-3393-8385, E-mail: saleseu@net-translators.com*
Middle East *Or Yehuda, Israel +972-3-5338633, E-mail: salesil@net-translators.com*
South America *Posadas - Misiones, Argentina, +54-3764-487029, E-mail: salessoutham@net-translators.com*
Web: *www.net-translators.com* ***See ad on page 59***

Greek Localization Experts Since 1983

Language Greek ***Description*** Founded in 1983, ORCO S.A. is a leading translation and localization service provider, specializing in software localization and technical translations (IT, telecommunication, medical, automotive, engineering, marketing, financial). ORCO deals primarily with English-into-Greek projects, although translation from several other European languages can be taken aboard. With its experienced in-house personnel, ORCO offers all language services at the highest quality level, including localization, product testing, engineering, DTP and so on. Our client list includes many IT companies such as Google, HP, IBM, Microsoft and Oracle, as well as international corporations such as Abbott, Ford, Nokia, Sony, Kaeser and Hitachi.

ORCO S.A. *6, Vas. Sofias Avenue, 106 74 Athens, Greece, 30-210-723-6001, Fax: 30-210-7249124, E-mail: info@orco.gr, Web: www.orco.gr*

Pangeanic & PangeaMT

Languages Spanish (all variants) and all Spanish state official languages, EN/FIG/other EU languages, all other languages including Asian ones on demand ***Description*** Pangeanic is an independent Spanish LSP with sister offices in Tokyo and Shanghai working for the global enterprise market (major accounts in the electronics and computing fields) as well as for smaller organizations, MLVs and cross-national institutions. We offer a wide range of GILT services always adhering to stringent quality standard procedures — EN 15038 and ISO 9001. Pangeanic has an experienced team devoted to MTPE (post-editing of machine translation output). PangeaMT, our customized open-source SMT technology, enables us to offer domain-specific MT engines that are fully tailored to the clients' needs, helping them become more productive cost-effectively and rapidly.

Pangeanic *Trade Center, Profesor Beltrán Báguena 4, Suite 106, 46009 Valencia, Spain, 34-96-338-5771, Fax: 34-96-338-5772, E-mail: central@pangeanic.com, central@pangea.com.mt, Web: www.pangeanic.com, www.pangea.com.mt* ***See ad on page 21***

PTIGlobal

Languages All commercial languages for Europe, Asia and the Americas ***Description*** PTIGlobal is committed to developing ongoing, long-term partnerships with its clients. This means a dedication to personal service, responsiveness, high-quality output, and sensitivity to clients' cost goals and timelines. Backed by over 30 years of experience in technical translation, PTIGlobal provides turnkey localization services in 30 languages simultaneously for software, web applications, embedded devices, wireless applications and gaming technology. Projects employ our expertise in end-to-end project management; internationalization consultation; glossary development; native language translation; multilingual web content management; translation memory maintenance; localization engineering; linguistic and functionality testing; desktop publishing; complete multilingual video and audio services; as well as onsite managed services.

PTIGlobal *4915 SW Griffith Drive, Suite 200, Beaverton, OR 97005, 503-297-2165, 888-357-3125, Fax: 503-352-0729, E-mail: info@ptiglobal.com, Web: www.ptiglobal.com*

Localization and Globalization Partner

Languages 50 languages including English, Chinese, Japanese, Korean ***Description*** Saltlux was founded in 1979 as the first localization and globalization service provider in South Korea. With over 30 years of accumulated experience and know-how, Saltlux is an ideal and esteemed global technical communications partner. We specialize in multilingual translation and DTP, technical writing services, software localization, web globalization and so on. We provide our clients with a one-stop production line, starting with the authoring of documents and going on to localizing, designing and editing, digital publishing, two-way electronic manual production and database establishment. With this business direction, we are striving to grow into and excel as a leader in global technical communications.

Saltlux, Inc. *5~7F, Deokil Building, 967 Daechi-dong, Gangnam-gu, Seoul 135-848, South Korea, 822-379-8444, Fax: 822-379-5996, E-mail: tcsales@saltlux.com, Web: www.saltlux.com*

TOIN Corporation

Languages Japanese, Traditional and Simplified Chinese, Korean, Malay, Thai, Vietnamese and European languages ***Description*** TOIN is a solidly established Asian MLV with more than 45 years' experience. Our services encompass translation, localization engineering, DTP, MT post-editing, workflow/process consulting and project management. TOIN offers global reach and exceptional strength in Asia, with headquarters in Tokyo and additional operations in the United States, Europe, China and Korea. The company has been helping Global 1000 companies in industries such as automotive, IT, telecommunications, life sciences, e-learning, computer software/gaming, semiconductors and consumer products.

TOIN Corporation
Japan *Shiba 1-chome Building, 1-12-7 Shiba, Minato-ku, Tokyo 105-0014 Japan, 81-3-3455-8764, Fax: 81-3-3455-6514, E-mail: toshihito-hattori@to-in.co.jp, Web: www.to-in.co.jp*
North America *Minneapolis, MN, 612-926-0201, E-mail: aki-ito@to-in.co.jp, Web: www.to-in.com*
Europe *London, United Kingdom, 44-20-8644-8685, E-mail: michael-stephenson@to-in.co.jp, Web: www.to-in.com*
China *Shanghai, P.R. China, 86-21-3222-0012, E-mail: shen-yi@to-in.co.jp, Web: www.to-in.com*

transcript GmbH & Co. KG

Languages All ***Description*** transcript is a leading provider of translation services specializing in technical translations and software localization. The company's specific focus is on business and ERP software, and it has a diversified customer portfolio. Thanks to our global partner network, we are equipped to handle both large-scale projects as well as smaller speciality items. With our permanent staff of experienced in-house specialists plus a carefully-selected and maintained pool of freelance translators, transcript has earned itself the reputation of being a reliable and flexible business partner. The deployment of state-of-the-art CAT tools ensures efficient translation cycles with high throughput, and it also guarantees consistent terminology.

transcript GmbH & Co. KG *Beethovenstrasse 8, 50674 Köln, Germany, 49-221-272738-10, Fax: 49-221-272738-11, E-mail: contact@transcript.de, Web: www.transcript.de*

Ushuaia Solutions

Languages Spanish (all varieties), Portuguese (Brazil) ***Description*** Ushuaia Solutions is a fast-growing Latin American company providing solutions for translation, localization and globalization needs. Ushuaia Solutions is focused on being creative and proactive to meet tight time frames with a high level of quality and a cost-effective budget. Customizing its processes, Ushuaia assures project consistency and technical and linguistic accuracy, thus reducing clients' time-to-market. Ushuaia combines state-of-the-art technology with top-notch experienced native translators, editors and software engineers. Our mission is to work together with our clients, thereby creating a flexible, reliable and open relationship for success.

Ushuaia Solutions *Rioja 919, S2000AYK Rosario, Argentina, 54-341-4493064, Fax: 54-341-4492542, E-mail: info@ushuaiasolutions.com, Web: www.ushuaiasolutions.com* ***See ad on page 34***

VistaTEC

Languages All ***Description*** VistaTEC is a leading provider of globalization services and specializes in the localization and testing of enterprise, mobile and desktop applications. VistaTEC provides translation, technical consulting, engineering and testing, language review, transcreation and brand integrity services during the design, development and marketing cycles of client's products.

VistaTEC
Europe *VistaTEC House, 700 South Circular Road, Kilmainham, Dublin 8, Ireland, 353-1-416-8000, Fax: 353-1-416-8099*
USA East *2706 Loma Street, Silver Spring, MD 20902, 301-649-3012, Fax: 301-649-3032*
USA West *1800 West El Camino Real, Suite 108, Mountain View, CA 94040, 408-898-2357 Fax: 408-898-2362*
E-mail: info@vistatec.com, Web: www.vistatec.com
See ad on page 43

WhP International

Languages All European and major Middle Eastern and Asian languages, including local variants ***Description*** Since 1994, WhP International has offered a set of linguistic and technologic solutions, dedicated to each client's needs. WhP has become for several years a renowned actor in the translation and localization world. By placing clients' needs at the forefront and by carrying out huge efforts and best practices for each individual client, WhP has gained the loyalty of international accounts (such as Oracle, Dell, IBM, Crossknowledge, Total, Amadeus and HP) in the fields of software, online applications, training and e-learning, video games, and so on. WhP maintains its headquarters in France with local offices and production centers in China and Slovakia.

WhP *Espace Beethoven BP102, F06902 Sophia Antipolis Cedex, France, 33-493-00-40-30, Fax: 33-493-00-40-34, E-mail: enquiry@whp.net, Web: www.whp.net*

Xlated Ltd.

Languages Italian, French, Spanish, Portuguese, German, Russian ***Description*** Xlated is a young and dynamic localization service provider, founded and managed by translators with 15+ years of specialization in software localization. Thanks to a proven knowledge of internationalization and localization processes, a team of highly skilled and motivated professionals, and an intelligent use of the most recent translation technologies, we offer a wide range of multilingual services for small to large and complex software localization projects. Services include terminology management, translation of GUI and user documentation, linguistic and functional quality assurance, engineering, multiplatform DTP and consulting.

Xlated Ltd. *Riverbank, Kells Business Park, Kells, Co. Meath, Ireland, +353-(0)46-9250005, E-mail: info@xlated.com, Web: www.xlated.com* ***See ad on page 50***

Localization Tools

SDL

Description SDL, the leader in Global Information Management, enables companies to engage with their customers throughout the customer journey – from brand awareness, to sales and after-sales support – across languages, cultures and channels. SDL's best-of-breed web content management, eCommerce, structured content and language technologies, combined with its language services drive down costs of content creation, management, translation and publishing to increase conversion ratios and customer satisfaction. Learn more at www.sdl.com.

SDL *Globe House, Clivemont Road, Maidenhead SL6 7DY United Kingdom, +44-1628-410-100, E-mail: kshauger@sdl.com, Web: www.sdl.com* ***See ad on page 60***

Nonprofit Organizations

The Rosetta Foundation

Languages All ***Description*** Access to information is a fundamental right. We want to relieve poverty, support health care, develop education and promote justice through access to information and knowledge across the languages of the world. The Rosetta Foundation supports the not-for-profit activities of the localization and translation communities. It works internationally with those who want to provide equal access to information across languages, independent of economic or market considerations, including localization and translation companies, technology developers, not-for-profit and non-governmental organizations.

The Rosetta Foundation *Unit 13 Classon House, Dundrum Business Park, Dublin 14, Ireland, +353-87-6736414, E-mail: info@therosettafoundation.org, Web: www.therosettafoundation.org* ***See ad on page 29***

Translators without Borders

Languages English, French, Spanish, German, Italian, Portuguese, Dutch, Russian, Arabic, Chinese, Swedish ***Description*** Translators without Borders is an independent registered nonprofit association based in France that assists non-governmental organizations (NGOs) by providing free, professional translations. Founded by Lexcelera in 1993, Translators without Borders has provided over two million dollars worth of free translations. Thanks to the funds saved, NGOs are able to extend their humanitarian work.

Translators without Borders *Passage du Cheval Blanc, 2 rue de la Roquette, 75011 Paris, France, 33-1-55-28-88-09, Fax: 33-1-55-28-88-09, E-mail: twb@translatorswithoutborders.org, Web: www.translatorswithoutborders.com* ***See ad on page 30***

Translation Management Systems

Projetex: Translation Management System

Version 8.5, Windows

Languages English, Arabic , Bulgarian, Simplified and Traditional Chinese, Croatian, Dutch, Estonian, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Polish, Brazilian Portuguese, Portuguese, Romanian, Russian, Serbian, Slovenian, Slovak, Spanish, Turkish, Ukrainian ***Description*** Twelve years ago Projetex was the first translation management system around. Now it is the most comprehensive translation management software for translation agencies, with over 250 distinct features developed from 1999 to 2011. By using this translation management system, you can double the productivity of your project managers. Let them work regular office hours without the need for overtime. Make them more happy and motivated by establishing a clear workflow and reliable collaboration platform. Built-in AnyCount word count software and CATCount. Used by 750 translation agencies in 59 countries worldwide. Live chat support. Multiple testimonials and business cases. Special discount for *MultiLingual* readers.

Advanced International Translations *Arhitektora Gorodetskogo 11b, Kiev 01001, Ukraine, +380-44-221-24-01 Fax: +380-44-221-24-30, E-mail: support@translation3000.com, Web: www.projetex.com*

MultiCorpora

Multiple Platforms

Languages All Unicode languages ***Description*** As language technology experts since 1999, MultiCorpora is exclusively dedicated to providing language technology software solutions to enterprises, language service providers and governments. Its flagship product, MultiTrans Prism, offers an innovative and complete turn-key translation management system. MultiTrans Prism is an enterprise client-server application that consists of four core components which, together or individually, enable

communications in more than one language; they are business management, project management (workflow), advanced translation memory and terminology management. RR Donnelley, Nomura, the Translation Bureau of Canada, UNESCO and many others rely on MultiTrans to manage their mission-critical translation operations.

MultiCorpora *102-490 St. Joseph Boulevard, Gatineau, Quebec, J8Y 3Y7 Canada, 819-778-7070, 877-725-7070, Fax: 819-778-0801, E-mail: info@multicorpora.com, Web: www.multicorpora.com* ***See ad on page 27***

Plunet BusinessManager

Multiple Platforms

Description Plunet develops and markets the business and workflow management software Plunet BusinessManager — one of the world's leading management solutions for the translation and localization industry. Plunet BusinessManager provides a high degree of automation and flexibility for professional language service providers and translation departments. Using a web-based platform, Plunet integrates translation software, financial accounting and quality management systems. Various functions and extensions of Plunet BusinessManager can be adapted to individual needs within a configurable system. Basic functions include quote, order and invoice management, comprehensive financial reports, flexible job and workflow management as well as deadline, document and customer relationship management.

Plunet GmbH *Prenzlauer Allee 214, D-10405 Berlin, Germany, 49-30-322971340, Fax: 49-30-322971359, E-mail: info@plunet.net, Web: www.plunet.net*

Text United

Windows

Description Text United is an innovative translation platform covering all of your professional translation needs. Our unique approach to terminology and in-country review allows you to protect the core of your brand, while letting it shine in different colors on foreign markets. Text United platform can be used by in-house staff, external translators and by in-country reviewers. It facilitates collaborative and transparent translation processes and provides advanced language technologies such as translation memories and terminology management, deployed centrally and automatically. Thanks to transparency of the supply chain, Text United helps reduce cost of translation by 25%. Available on subscription, with no up-front costs.

Text United GmbH *Attemsgasse 7/D20, Vienna, Austria, 1220, 43-660-735-7355, E-mail: welcome@textunited.com, Web: www.textunited.com* ***See ads on pages 9, 39***

Wordbee

Enterprise Version, Multiple Platforms

Languages All Unicode Languages ***Description*** Wordbee provides you with all the features and functionality found in traditional enterprise TMS products, combined with real-time team collaboration and flexible, intuitive workflows, project management environment and an intuitive user interface. Implementation is remarkably straightforward, with no servers to purchase, complex migration steps or consultants needed for implementation. No need to integrate and pay licensing for multiple translation and workflow tools! If you need to improve control and efficiency or want to support collaboration within your teams – consider Wordbee.

Wordbee S.A. *66 rue de Luxembourg, L- 4221 Esch-sur-Alzette, Luxembourg, +352-54-55-80-875, E-mail: info@wordbee.com*

Wordbee USA *1631 NE Broadway, #251, Portland, Oregon 97232, 503-287-0023, E-mail: usa@wordbee.com, Web: www.wordbee.com* ***See ad on page 45***

XTRF Translation Management Systems

Multiple Platforms

Description XTRF is a global management system for translation agencies. With built-in cutting-edge Java technology, XTRF is a flexible, customizable and web-based software, enabling web access for a company's suppliers and customers. It's designed to help translation companies to streamline all of their daily activities, and it guarantees smooth management of the company while reducing administrative costs. Project management, invoicing, quotations, ISO 9001 reports and CRM are the main fields covered by the system. Designed by translation and localization professionals and created by the best IT team, this powerful tool will reduce the time spent on repetitive tasks and increase a company's effectiveness.

XTRF *ul. Walerego Sławka 3, 30-653 Kraków, Poland, 48-12-2546-126, Fax: 48-12-2546-122, E-mail: sales@xtrf.eu, Web: www.xtrf.eu*

Translation Services

Arcadia Translations

Languages English, Spanish (all variants), Brazilian Portuguese ***Description*** Arcadia Translations, a translation agency based in Argentina, provides translation and localization services from English into Spanish and Brazilian Portuguese. We value quality, words and communication, and we offer integral linguistic solutions that include a wide range of services such as translation, editing and proofreading of documentation, software localization, web solutions, voice-over and DTP services. We have an experienced in-house staff who guarantees our high standard of quality. Our values as a company are cost-effectiveness, responsiveness, customer-oriented service, reliability and fast turnaround.

Arcadia Translations *Marcelo T. de Alvear 1671 piso 8 dpto 50, Buenos Aires 1060, Argentina, 5411-5353-3390, Fax: 5411-5353-3395, E-mail: info@arcadia-t.com, Web: www.arcadia-t.com*

BENEXtra Korea

Languages Chinese, Japanese, Korean ***Description*** BENEXtra Korea, one of the top quality localization/translation vendors in Asia, enjoys an excellent reputation and wide recognition among world-class players such as Dell, IBM, Microsoft, CA, Google, Autodesk, Cisco and the California state government. With our hands-on, practical experience in IT marketing collateral translation, software localization, Asian language localization, and our accumulated expertise in audio translation, we are ready to work together with you, helping you sustain growth and create and capture new value.

BENEXtra Korea *Second Floor, Gukdong Building 1163-7, Gaepo-Dong, Gangnam-Gu, Seoul 135-960, Korea, 82-2-572-4987, Fax: 82-2-3462-4987, E-mail: info@benextra.com, Web: www.benextra.com* ***See ad on page 24***

Choose Us and Speak With the World

Languages 37 languages ***Description*** Biro 2000 is located in the heart of Europe (Slovenia). We've been in business since 1992. Our clients come from all areas of industry, but for the past few years our work priorities have concentrated on the following areas of expertise: life sciences, legal, IT, cell phone, automotive and technical industries. Our work has focused on Eastern European languages. We're ISO 9001:2008 and EN15038:2007 certified. We utilize the following programs in our work: memoQ server, Trados SDL Synergy, Across Language Server and Transit XV.

BiroTranslations (Biro 2000 d.o.o.) *Stegne 7, 1000 Ljubljana, Slovenia, +386-1-513-18-20, Fax: +386-1513-18-21, E-mail: biro2000@biro2000.com, Web: www.birotranslations.com* ***See ad on page 8***

Diskusija – Translation and Localization

Languages Central and Eastern European languages ***Description*** Founded in 1993, Diskusija specializes in technical translation and localization services from Western European languages into all Central and Eastern European languages with a strong focus on Baltic languages (Lithuanian, Latvian, Estonian). Our experienced team is able to handle projects of any complexity. We guarantee a professional and personal approach to our clients' needs, the use of state-of-the-art industrial technology, quality management at all stages of a project, on-time delivery, competitive rates and flexibility. We have extensive expertise in the following industries: IT, software, hardware, telecommunications, medical equipment, medicine, pharmacology, accounting, finance, automotive industry, electronics, legislation and EU documents.

Diskusija *Seimyniskiu g. 1A, LT-09312 Vilnius, Lithuania, 370-5-2790574, Fax: 370-5-2790576, E-mail: diskusija@diskusija.lt, Web: www.diskusija.lt*

Follow-Up Translation Services

Languages English, Brazilian Portuguese ***Description*** For 22 years, Follow-Up has been one of the best single-language translation companies in Brazil. We're equipped with a large network of professional translators, effectively trained project managers and state-of-the-art technology resources. We're capable of working locally and on the cloud. Our areas of expertise include IT, finance, medicine and marketing, among others. Follow-Up's main partner and founder, Luciana Lavôr, is now a certified localization professional by California State University. Another partner at the company, Ana Beatriz Fernandes, has recently become an official public sworn translator. Therefore, under her supervision, we also have a legal translations department.

Follow-Up *Rua Visconde de Pirajá, 351, Sala 815, Rio de Janeiro, RJ 22410-003 Brazil, 55-21-3553-7223, Fax: 55-21-3553-7223, E-mail: info@follow-up.com.br, Web: www.follow-up.com.br*

ForeignExchange Translations

Languages 42 languages and growing ***Description*** ForeignExchange is the global leader in providing translation services to life sciences companies. We work with many of the biggest pharmaceutical companies, medical device manufacturers, biotech companies and CROs. Our proprietary Multilingual Compliance Process combines expert linguists, best-of-breed technology and measurable translation quality in a process that is both robust and completely scalable, ensuring your projects are finished on time and within budget. For more information on how we can help meet your translation requirements or for a quote on your next translation project, please contact us directly or visit our website at www.fxtrans.com.

ForeignExchange Translations *1001 Watertown Street, 3rd Floor, Newton, MA 02465, 617-559-9760, Fax: 617-559-9764, E-mail: getinfo@fxtrans.com, Web: www.fxtrans.com*

LIDO-LANG Technical Translations

Languages All ***Description*** LIDO-LANG Technical Translations, based in Poland, is one of the leading translation companies in Central Europe. Having the capacity to offer services in virtually all world languages, we specialize in Central and Eastern European languages. LIDO-LANG specializes, above all, in technical translation, but thanks to our network of over 2,000 translators specializing in different branches, we also work in IT and telecommunication; advertising and marketing; economics and finance; law; technology and industry; medicine and science. The quality of our services is enhanced by over 50 years' experience in the translation sector and by the quality certificates of ISO 9001 and EN 15038 standards.

LIDO-LANG Technical Translations *ul. Waleregio Sławka 3, 30-653 Kraków, Poland, 48-12-2546-123, Fax: 48-12-2546-122, E-mail: office@lidolang.com, Web: www.lidolang.com*

LinguaLinx Language Solutions, Inc.

Languages All ***Description*** LinguaLinx is a leading provider of global content and language intelligence to organizations around the world. The content experts at LinguaLinx help manage and localize messaging to enhance efficiency and provide consistency across all forms of communication. With offices around the world, LinguaLinx provides organizations with localization solutions that fit their needs including: translation and interpretation, marketing communications and website localization, translation memory deployment, multilingual SEO, translation readiness assessment and global content management. Unify your global organization with a customized content intelligence strategy and ensure that your messages resonate across borders with language intelligence. To learn more, visit lingualinx.com.

LinguaLinx Language Solutions, Inc. *The LinguaLinx Building, 122 Remsen Street, Cohoes, NY 12047, 518-388-9000, Fax: 518-388-0066, E-mail: info@lingualinx.com, Web: www.lingualinx.com*

Medical Translations Only

Languages 45, including all EU languages ***Description*** MediLingua is one of the few medical translation specialists in Europe. We only do medical. We provide all European languages and the major languages of Asia and Africa, as well as translation-related services to manufacturers of devices, instruments, *in vitro* diagnostics and software; pharmaceutical and biotechnology companies; medical publishers; national and international medical organizations; and other customers in the medical sector. Projects include the translation of documentation for medical devices, surgical instruments, hospital equipment and medical software; medical information for patients, medical students and physicians; scientific articles; press releases; product launches; clinical trial documentation; medical news; and articles from medical journals.

MediLingua Medical Translations BV *Poortgebouw, Rijnsburgerweg 10, 2333 AA Leiden, The Netherlands, +31-71-5680862, Fax: +31-71-5234660, E-mail: simon.andriesen@medilingua.com, Web: www.medilingua.com* ***See ad on page 49***

Neotech

Languages From major European languages into Russian, Ukrainian, Kazakh and Azeri ***Description*** Neotech is the largest translation company in Russia and CIS countries, offering a full range of linguistic services to global corporations. Neotech is the first translation company on the Russian market that has certified its quality management system to international ISO 9001:2000 standards. Neotech's key areas of expertise are in the oil and gas industries, auto manufacturing, medical, information technologies and telecommunications. The business techniques introduced and applied by the company currently serve as the best practice within the translation industry. Neotech is leading the drive to continuously develop translation market standards and to implement new levels of business and interpersonal communications into the translation industry within Russia and abroad.

Neotech *23/1 Matrosskaya Tishina, 107076 Moscow, Russia, 7-495-787-3331, Fax: 7-495-787-1189, E-mail: sales@neotech.ru, Web: www.neotech.ru* ***See ad on page 15***

PTSGI

Languages English, Traditional and Simplified Chinese, Japanese, Korean, Thai, Malay, Indonesian, Tagalog, Vietnamese, Arabic, Farsi, Russian, German, French, Italian, Spanish, Dutch, Czech, Polish, Hungarian, Turkish, Greek, Norwegian, Danish, Hebrew, Irish, Finnish, Swedish, Luxembourgish, Romanian, Urdu, Ukrainian, Nepali, Latin, Latvian, Slovak, Slovenian, Bengali, Hindi, Pashto, Tamil, Punjabi, Singhalese, Marathi, Hmong, Khmer, Lao, Burmese, Mongolian, Somali Afrikaans, Armenian ***Description*** For over 45 years, PTSGI remains the largest language service provider in Taiwan providing multilingual translation, website and software localization, interpretation, desktop publishing, technical writing, game software and online translation into more than 100 languages. Our expert teams are skilled in a wide range of software that includes Trados, SDLX, Transit, CATALYST, RC-WinTrans, Idiom, Across, Multilizer, Passolo, RoboHelp, FrameMaker, QuarkXPress, PageMaker, InDesign, Photoshop, Adobe Acrobat, CorelDraw, Illustrator, Freehand and Dreamweaver. We view our projects from the customers' perspective and in turn gain the trust of our clients, steering our commitment to provide not just translation services but complete solutions.

PTSGI *6F, #23 Section 6, Min-Chuan East Road, Taipei City 11494, Taiwan, 886-2-8791-6688, Fax: 886-2-8791-7884, E-mail: market@ptsgi.com, Web: www.ptsgi.com*

Rheinschrift Übersetzungen, Ursula Steigerwald

Language German to/from major European languages ***Description*** Outstanding localization requires world-class experience. Rheinschrift gives your business a native voice in the German-speaking world. We offer more than 20 years' experience providing translations and localizations for software and hardware manufacturers as well as for the sectors of business, technology, legal matters and medicine/medical applications. Our services also range from glossaries, post-editing, project management and desktop publishing services to many other related services. Rely on Rheinschrift to deliver the most competent translations and meet your deadline, whatever it takes.

Rheinschrift Übersetzungen, Ursula Steigerwald *Rolshover Strasse 99, D-51105 Cologne, Germany, +49-(0)221-80-19-28-0, Fax: +49-(0)221-80-19-28-50, E-mail: contact@rheinschrift.de, Web: www.rheinschrift.de* ***See ad on page 36***

Translation and localization into Polish

Language Polish ***Description*** Ryszard Jarża Translations is an established provider of Polish translation, localization, marketing copy adaptation and DTP services. We focus primarily on life sciences, IT, automotive, refrigeration and other technology sectors. Our in-house team is comprised of experienced linguists with medical, engineering and IT backgrounds. We guarantee a high standard of quality while maintaining flexibility, unparalleled responsiveness and reliability. Our services are certified to EN 15038:2006.

Ryszard Jarża Translations *ul. Barlickiego 23/22, 50-324 Wrocław, Poland, 48-601-228332, E-mail: info@jarza.com.pl, Web: www.jarza.com.pl* ***See ad on page 49***

Skrivanek s.r.o.

Languages All, with a focus on Central and Eastern Europe ***Description*** Skrivanek is a world leader in providing a wide range of language services, specifically translations spanning a multitude of languages and the effective localization of products on international markets. Established in 1994, Skrivanek has managed to dominate the European translation market, creating a network of 53 branches covering 14 countries. Its well-stocked staff of professional translators, experienced project managers and dedicated software engineers and DTP specialists has enabled Skrivanek to provide outstanding quality translation and localization services in any conceivable language and volume, creating an enviable clientele representing major leading corporations in various industries. Skrivanek's quality of service is backed by EN ISO 9001:2001 certification.

Skrivanek s.r.o. *International Project Management Centre, Na Dolinách 22,147 00 Prague, Czech Republic, 420-233-320-560, Fax: 420-241-090-946, E-mail: info@skrivanek.com, Web: www.skrivanek.com* ***See ad on page 26***

SpanSource

Languages Focus on Spanish and Portuguese, other language combinations through partners ***Description*** SpanSource provides translation, localization and related services from Western European languages into all regional varieties of Spanish as well as other language combinations through our network of select SLV partners. Our domain focus is on health care and life sciences, software and IT, heavy machinery and automotive, legal and financial, oil and gas, corporate training and educational materials. Our comprehensive service portfolio also includes unparalleled desktop publishing and multimedia localization engineering support for e-learning materials. Our in-house staff of 25 includes project managers, senior linguists, desktop publishers, software engineers and graphic designers, which prove to be fundamental in SpanSource's centralized, customer-centric approach.

SpanSource SRL *Santa Fe 1264, 1°B, Rosario, S2000ATR Argentina, 54-341-527-5233, Fax: 54-341-527-0035, E-mail: info@spansource.com, Web: www.spansource.com*

Synergium

Languages Eastern European with focus on Baltic and CIS languages ***Description*** Synergium is one of the leading integrated language service providers in the Baltics with representative offices and in-house teams of expert project managers, translators, editors and software engineers in Lithuania, Latvia, Estonia, Russian Federation and Ukraine. The company has more than six years of experience in translation and localization services covering main technical industries such as automotive, environmental, EU, financial, IT, legal, medical and telecommunications. Due to its cutting edge technologies, individual and thoughtful approach, Synergium has been recognized by world-renowned companies such as Google, Microsoft, Philips Healthcare, GlaxoSmithKline, and many others.

Synergium *Žalgirio 88-404, 09303 Vilnius, Lithuania, 370-5-275-26-56, E-mail: marketing@synergium.lt, Web: www.synergium.eu*

TripleInk Multilingual Communications

Languages All major commercial languages ***Description*** As a multilingual communications agency, TripleInk has provided industrial and consumer products companies with precise translation and multilingual production services for audio-visual, online and print media since 1991. Our experience in adapting technical documentation and marketing communication materials covers a wide range of industries, including biomedical and health care; building and construction; financial services; food and agriculture; high-tech and manufacturing; and hospitality and leisure, as well as government and nonprofit organizations. Using a total quality management process and state-of-the-art software and equipment, our team of foreign language professionals delivers the highest quality translations in a cost-effective and time-efficient manner.

TripleInk *60 South 6th Street, Suite 2800, Minneapolis, MN 55402, 612-342-9800, 800-632-1388, Fax: 612-342-9745, E-mail: info@tripleink.com, Web: www.tripleink.com*

Zinacle

Languages All, with a focus on Central and Eastern Europe ***Description*** Like most other companies in the translation sector, we have been in business for over 20 years. We are also a leading supplier of translation services, as are most of our competitors. We offer top quality translations in all the world's main commercial languages, at competitive rates, just like the rest. And, like almost all the others, we work to tight deadlines. But . . . we are different! Do you want to find out why? Our USP is our flexibility in solving any unexpected issues that arise during projects. We have the creativity to find solutions, the professionalism to deliver impeccable work, and the reliability to fulfil our commitments.

Zinacle *Zurbarán 23 1, 06002 Badajoz, Spain, +34-924-205605, Fax: +34-924-205-604, E-mail: info@zinacle.com, Web: www.zinacle.com* ***See ad on page 33***

Translation Tools

Kilgray Translation Technologies

Windows

Languages All ***Description*** Kilgray Translation Technologies is the world's fastest growing provider of computer-assisted translation tools. In 2005 the company launched the first version of memoQ, an integrated client-server translation environment designed to facilitate interoperability and teamwork. All of Kilgray's products — memoQ, the memoQ server, qTerm and the TM Repository — optimize productivity and control of the entire translation process and environment. Rated #1 by Common Sense Advisory among translation-centric TMS systems, and used by thousands of translators, language service providers, and enterprises throughout the world, memoQ and other Kilgray tools are accepted and appreciated as premiere translation technologies.

Kilgray Translation Technologies *P.O.B. 7, H-1255 Budapest, Hungary +36-30-383-9435, Fax: +36-1-312-6019, E-mail: sales@kilgray.com, Web: www.kilgray.com* ***See ad on page 6***

MadCap Lingo

Windows

Languages Unicode support for all left-to-right languages ***Description*** The leaders in technical communication bring you MadCap Lingo, an XML-based translation memory (TM) tool designed to improve translation efficiency, eliminate redundancies and reduce project costs. MadCap Lingo offers an easy-to-use interface, Unicode support for all left-to-right languages, and a rich list of features for assisting translators throughout the localization process, including support for the major industry TM systems. MadCap Lingo also includes tracking and organization capabilities to support large, single-source, multichannel publishing projects. Through its strategic partner Microsoft Corporation, MadCap delivers solutions optimized for Microsoft Windows, Visual Studio, and the .NET environment. Free trial downloads are available at www.madcapsoftware.com.

MadCap Software, Inc. *7777 Fay Avenue, La Jolla, CA 92037, 858-320-0387, 888-623-2271, Fax: 858-320-0338, E-mail: sales@madcapsoftware.com, Web: www.madcapsoftware.com* ***See ad on page 2***

SYSTRAN

Multiple Platforms

Languages 52 language combinations ***Description*** SYSTRAN is the market leading provider of machine translation solutions for the desktop, enterprise and internet. Our solutions facilitate multilingual communications in 52+ language pairs and in 20 domains. SYSTRAN Enterprise Server 7, our latest achievement, is powered by our new hybrid MT engine which combines the predictability and consistency of rule-based MT with the fluency of the statistical approach. The self-learning techniques allow users to train the software to any specific domain to achieve cost-effective, publishable quality translations. SYSTRAN solutions are used by Symantec, Cisco, Ford and other enterprises to support international business operations. For more information, visit www.systransoft.com.

SYSTRAN Software, Inc.

North America *4445 Eastgate Mall, Suite 310, San Diego, CA 92121, 858-457-1900, Fax: 858-457-0648*

Europe *Parol Nord - La Grande Arche, 1, Parvis la Défense, 92044 Paris La Défense Cedex, France, 33-825-80-10-80, Fax: 33-1-46-98-00-59, E-mail: info@systransoft.com, Web: www.systransoft.com*

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Takeaway

Daniel B. Harcz

Managing a translator database

Ever since I founded my small translation business around 1997, I have managed my agency's freelancer database. I have always been proud of it, thanks to the fact that it contains the details of several thousand native freelancers representing a total of over 250 languages.

However, by the time you feel your translator database is complete and well-functioning, and everything appears to be running smoothly and efficiently, some of your translators are bound to have gone out of business or decided to raise their rates to a level you cannot afford. Or perhaps the quality of their work will have deteriorated due to personal problems or a shift in interest. This necessitates a constant inclusion of new freelancers in the database and the filtering out of the inactive ones included at an earlier point in time. There are basically two ways a freelancer or vendor can gain entrance into my database: either by my invitation through a campaign in a given country, job posting or direct contact at a translation portal; or by the freelancer finding my company on the internet and subsequently sending me an application by e-mail. The former is typical of representatives of rare, exotic languages, while I receive applications from major language translators by the bucketful every day. It takes considerably more effort to locate capable exotic-language translators, agree on a mutually acceptable rate with them, test them and eventually include them in my database than to secure a reliable Russian, Spanish, Chinese or Arabic translator, for instance. However, the extra amount of effort is rewarded by higher-paying projects and much less fierce competition, which means that once I have an exotic-language freelancer in place, I can expect monetary and reputation-based results, although not always instantly.

When a freelance translator finds my agency on the internet and submits an application for inclusion in my database, I weigh several factors. Some of these I apply consciously, some others automatically. I read translators' motivation letters and résumés, search for mistakes in their English and in general do my best to establish whether they are flexible, accurate, empathic and professional enough to deserve a chance. When I deem the candidate appropriate, I start talking to him or her and discuss the possibility of a cooperation. I use instant messaging programs for this purpose, as I believe that interactivity yields better results than off-line conversations. When a mutually acceptable rate is agreed upon, I have the candidate complete a short test in his or her specialty, and if he or she passes the test, which is evaluated by one of our well-established native speakers of the same language, I send out our two-page nondisclosure agreement to sign and return. The process is similar when I get in touch with a given translator myself instead of waiting for an application, except for the initial trust that in such cases is already established from my side — but which can be lost pretty easily, too, at such an early stage.

When I contact translators, it often happens that they are not yet familiar with the way international cooperation takes place, and in such an event, I am more than happy to explain the ins and outs of our profession. I conducted a major campaign in Iceland in the summer of 2001, and 37 native Icelandic people responded and expressed an interest in providing English into Icelandic translation services. I soon decided in favor of one who exhibited all the traits of a reliable translator. He had never done any translation work before, but had a university degree and a strong interest in getting engaged in freelancing, and his communication skills were excellent. I taught him the basics of the profession and started sending jobs his way. He has been working for my company for ten years now, completing at least 1,000 Icelandic projects for us without a single complaint ever being received of the quality of his output. His appreciation for the regular assignments I send him is attested to by the fact that to this day, I have been his only client.

I have always enjoyed communicating with translators and editors, thereby getting to know their ways of thinking and their cultures, and this constant communication is one of the things that keeps me moving ahead. **M**

Daniel B. Harcz has been running Harcz & Partner Ltd. since 1998.

To offer your own Takeaway *on a language-industry issue, send a contribution to editor@multilingual.com.*

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