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Industry Focus:

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About the cover:
Indigenous fiber art celebrating abundance, created from plant materials wound into cord and pressed into a wax base. On display at the Museum Rio Cuale (Archaeological Museum) in Puerto Vallarta, Mexico.

Katie Botkin

Taglines and target demographics

Sometimes I think that the lessons we learn in localization management should be applied in just about every aspect of business — namely, learning the shortest, most efficient route to connecting with customers in a way they can understand.

I was recently talking with someone who was asking for advice about an ad he wanted to put in a publication local to North Idaho, specifically about whether the term "Forest Bathing" would get across the message he wanted to convey. He was referring to a practice that he said was popular in Japanese culture, going out into the forest on a leisurely therapeutic walk. This is supposed to counter the effects of hectic city living. In Japanese, the practice is called *Shinrin-yoku*, and was first proposed in 1982 by the Forest Agency of Japan.

I told my friend that in rural Idaho, using "Forest Bathing" as a tagline would be sure to evoke the image of taking a bath in the forest — which locals have been known to do on hikes, scrubbing themselves down with moss or a nice pinecone for good measure. I sincerely doubted that anyone would think of the Japanese practice of spending time in nature to readjust and calm oneself. To begin with, being surrounded by mountains and lakes on every side, we don't need all that much readjusting.

More importantly, if I hadn't interpreted his catchphrase correctly, it was very unlikely the average citizen of Idaho would. He didn't like this response, and sent me several links explaining what Forest Bathing was. "I think it's very clear," he said.

So here I was, explaining to someone who had lived in the United States his whole life that grabbing a cultural practice from a foreign locale didn't exactly ensure that it resonated with his target demographic in the United States. The discussion had nothing to do with localization management, and yet it seemed similar enough that I had to laugh.

In this issue, we have five articles on localization management. They cover subject matter experts, computer-aided translation tools, online security, key performance indicators, collaboration — a veritable smorgasbord of corporate catchphrases to feast your eyes upon. We are also introducing *Localization Business School*, a new column from Andrew Lawless. It seemed fitting for this issue.

As for my friend, he hasn't decided what his new ad tagline is going to be. I think I've convinced him not to use "Forest Bathing," however.

Microsoft celebrates International Mother Language Day with tech announcements

In celebration of International Mother Language Day on February 21, Microsoft announced its support of linguistic diversity and multilingualism with technologies such as Chekov, Translator Hub and Universal Shaping Engine.

The Chekov tool is used to write and record a dynamic eBook, which can be used by learners worldwide to develop their literacy skills anytime, anywhere and in any language.

Microsoft Translator is releasing Yucatec Maya and Querétaro Otomi in an ongoing effort to further language preservation. The automatic translation systems for Mayan and Otomi were built using the Microsoft Translator Hub, and are available free of cost.

Additionally, Microsoft announced the release of its Universal Shaping Engine, a script-rendering technology that allows Windows 10 to correctly display any script that has been encoded in Unicode.

New university course gives Finnish students insights into translation management

A group of seven translation companies and four developers of language technology software have come together in Finland to offer a brand new course to the translation students at the University of Helsinki. Industry professionals from Finnish language service providers AAC Global, AranchoDoc Nordic, Delingua, Lingsoft, Maris Multilingual and Semantix as well as technology experts from Kilgray, Memsource, Plunet and SDL will cover different portions of the course content. The course will run as an independent regional project with affiliations to both GALA's Global Talent program and Elia's Exchange initiative. The curriculum for the course was created by Anu Carnegie-Brown of Sandberg Translation Partners Ltd.

The course, which started on January 5, 2015, and will last until May, consists of three weeks of classroom-based learning as well as independent self-study exercises. The topics cover the global translation market, job opportunities in the translation industry, language technology including computer-aided translation and quality assurance tools, translation management systems and machine translation solutions, as well as a project management workshop and two books written by industry practitioners.

During one of the course's intensive day-long sessions, Peggy Grafe, head of implementation at Plunet, and Katja Virtanen, CEO of translation agency Delingua, will present the daily operations of a professional language service provider implementing modern translation management technology. The session will cover what actually goes on in translation agencies, including hands-on learning with Plunet BusinessManager, and gain insight into the work environment of a translation agency. A closing workshop will give the students the opportunity to gain some hands-on experience as project managers, as they will get the chance to simulate a full translation workflow in Plunet BusinessManager.

While preparing the students for the workplace and managing their expectations, the project aims higher than merely complementing gaps in translator training at one particular university. It sets out to create best practices for the global translation industry and demonstrates that commercially viable win-win partnerships can be established through altruistic, voluntary knowledge sharing.

Featured Reader Profile

John Kohl, SAS Institute, linguistic engineer, Fort Wayne, Indiana.

How did you get started in this industry?

I started as a technical writer, but I was hired partly because of my background in foreign languages and linguistics, and because I had a good understanding of how to write for a global audience. It was fortuitous that the hiring manager and the lead writer had both spent a significant amount of time in Germany (as I had).

How long have you worked in the industry?

For 22 years, all in the publications division at SAS.

What do you do in your spare time?

I spend time with family, exercise, enjoy the outdoors, meditate, as well as play piano and accordion.

Why do you read MultiLingual*?*

My focus is on controlled authoring and on developing detailed "global English" guidelines, but I also want to stay current in my awareness of tools, processes, business drivers and geocultural issues that play a role in communicating effectively with a global audience. *MultiLingual* is a great source of information about those diverse topics. I especially enjoy the columns by Kate Edwards, John Freivalds and Lori Thicke, as well as the occasional articles that explain the unique localization challenges that pertain to specific target languages. Whenever I speak at conferences or to college classes, I always recommend subscribing to *MultiLingual*.

John Kohl

Business

Acquisitions

■ Moravia, a globalization solutions provider focused primarily in the IT and life science industry sectors, has announced that Clarion Capital Partners, LLC, a private equity firm, has acquired a majority interest in the company. Moravia's 2014 revenues exceeded $100 million.

Moravia *www.moravia.com*

■ In Every Language, a provider of language solutions, has been acquired by Los Angeles-based Paragon Language Services, a translation provider focused on medical device and pharmaceutical companies.

Paragon Language Services *www.paragonls.com*

■ Textminded, a language services company and developer of Sustainable Communication and the MindLincs platform, has acquired House of Stengard, a Swedish-based provider of localization solutions.

Textminded *www.textminded.com*

■ A consortium of Japanese companies has signed a definitive agreement to acquire SDI Media Group, a localization company serving the media and entertainment industry. The consortium is led by Imagica Robot Holdings Inc., and includes the Cool Japan Fund and Sumitomo Corporation.

SDI Media Group *www.sdimedia.com*

New locations

■ Translators Family, a translation services company with a focus on English, German, Russian and Ukrainian languages, has registered the company in Poland as Translators Family sp. z o.o. with an office in Warsaw.

Translators Family *www.translatorsfamily.com*

■ YourCulture, a provider of localization, translation, interpreting and cultural communication services, has hired Marie Norquoy as sales assistant for its new office in Durban, South Africa.

YourCulture *www.yourculture.co.uk*

■ TransPerfect Translations, Inc., has opened an office in Taipei, Taiwan.

TransPerfect Translations, Inc. *www.transperfect.com*

Redesigned websites

■ Localization Care, a translation and localization agency specializing in the languages of the CEE and FIGS regions, has redesigned its website.

Localization Care *http://localizationcare.com*

■ Language Solutions Inc., a provider of linguistics services, has redesigned its website. The company focuses on plain language and health literacy and has established its own Health Literacy Division.

Language Solutions Inc. *www.langsolinc.com*

■ HansemEUG, Inc., a provider of solutions for content development, translation and localization, has started a blog focused on content issues, UX and industry-related topics.

HansemEUG, Inc. *www.hansemeug.com*

■ Technolex Translation Studio, a Ukraine-based localization and translation services provider, has redesigned its website.

Technolex Translation Studio *http://technolex-translations.com*

■ Translata, a provider of translation and interpretation services, is celebrating its tenth year in business. The company has also redesigned its website, adding German and English localization.

Translata *www.translata.eu*

Global Language Translations and Consulting rebrands

Global Language Translations and Consulting, Inc. (GLTaC, Inc.), a technical translation service company that provides customer service for industries such as chemical and automotive, as well as state and federal governments, has introduced a new corporate identity with a redesigned corporate logo and supporting materials.

Global Language Translations and Consulting, Inc. (GLTaC, Inc.) *www.gltac.com*

People

Recent industry hires

■ Localization Care has hired Edyta Kosek to assist with human resources and vendor management.

Localization Care *http://localizationcare.com*

■ e2f translations, inc., a provider of

language services, has promoted Caroline Jacob to COO.

e2f translations, inc. *https://e2f.com*

■ Ciklopea d.o.o., a provider of translation, interpreting, localization and consulting services, has hired Miloš Matović as project manager for its recently opened Belgrade office.

Ciklopea d.o.o. *www.ciklopea.com*

■ L10n People, a recruitment solutions company for the localization industry, has hired Julie Molierac and Tia Paraurahi as business development managers for its Ireland office.

L10n People *www.l10npeople.com*

■ MCIS Language Services, a provider of language services, has hired Lester Korbely as the director of sales and marketing.

MCIS Language Services
http://mcislanguages.com

Resources

Digital Corpus of the European Parliament

The European Language Resources Association (ELRA) has added a new digital corpus of the European Parliament comprised of a variety of document types, from press releases to session and legislative documents related to the European Parliament's activities and bodies.

ELRA has also added the deL1L2IM corpus composed of 72 dialogues. The interactions have undergone linguistic analysis.

European Language Resources Association
www.elra.info

White paper on avoiding anti-corruption miscommunications

Merrill Brink International, a provider of language solutions, has published a white paper on translation solutions for preventing violations and satisfying regulatory requirements. The paper provides insights by Tom Fox, a legal expert and author of several books on anti-corruption compliance programs.

Merrill Brink International
www.merrillbrink.com

Reports on translation scenarios and building sustainable funding models

Common Sense Advisory, Inc., an independent market research firm specializing in the language service industry, explored scenarios for translation automation in a continuum from reactive to tailored to fully architected systems. Based on interviews with technology managers and executives at 15 enterprises, "Enterprise Translation Automation" offers numerous user cases and specific recommendations about what companies can do to automate translation and localization workflow.

Common Sense Advisory also conducted interviews with managers and directors responsible for translation and localization budgets at 37 global companies in ten industries in eight countries. The results are published in the report "Take Command of Your Translation Budget" and show that localization managers must use a variety of budgeting and alliance building techniques to be successful with their funding strategy.

Common Sense Advisory, Inc.
www.commonsenseadvisory.com

White paper explains basics of translation management systems

Across Systems GmbH has published a white paper that explains the basic modes of operation and central modules of translation management systems, including components and functions such as the translation memory, the terminology database, project management and quality assurance modules.

Across Systems GmbH & Inc *www.across.net*

Products and Services

MadCap Flare 11

MadCap Software, Inc., a multichannel content authoring company, has released MadCap Flare 11. Updates include the ability to merge multiple multilingual PDF files into a single document, dictionary and spell check enhancements, and frameless HTML5 responsive web output.

MadCap Software, Inc.
www.madcapsoftware.com

TranslatorHQ

TranslatorHQ is a new online marketplace for translation and interpreting services intended to bring together clients and freelancers from around the globe.

TranslatorHQ *https://translatorhq.com*

Natural Language User Interface Server

LinguaSys, Inc., a provider of multilingual human language technologies, has created a Natural Language User Interface (NLUI) Server to enable developers

to make their own artificial intelligence (AI) NLUIs. The server allows developers to write an AI interface once and have it accept input in all LinguaSys supported languages.
LinguaSys, Inc. *www.linguasys.com*

KeyStone

Centrum Lokalizacji C&M Sp. z o.o., a language service provider, has developed KeyStone, a proprietary tool designed to offer computer support for translation editing using a terminology verification system.
Centrum Lokalizacji C&M Sp. z o.o.
www.cmlocalization.eu

dictindustry

Techni Translate, a provider of textbook and technical documentation translation, has compiled a technical dictionary in cooperation with customers from the industrial field. dictindustry is an online translation dictionary and is currently available in 19 languages.
Techni Translate *www.techni-translate.com*

Lokalise

Lokalise is a new online service for the management and editing of strings and translations of an app, game or website in over 70 languages. Built for developers, it includes original features such as export webhooks and custom archive bundle structure.
Lokalise *https://lokali.se*

Textomate.com

Zentaly, a provider of enterprise solutions with a focus on backend programming and cloud systems, has launched Textomate.com, a word counting website for translators, allowing word counts in most file formats.
Zentaly *http://zentaly.com*

Sitelingo

Advanced Language Translation has launched Sitelingo, a translation proxy service designed to translate a corporate website into multiple languages using human-prepared versus automatic translation.
Advanced Language Translation, Inc.
www.advancedlanguage.com

Connect Survey

Confirmit has partnered with translation services provider Language Connect to create Connect Survey, a translation solution designed to coordinate the translation of multilingual voices of customers and market research programs such as surveys.
Language Connect *www.languageconnect.net*

Post-editing translation API

tauyou, a provider of machine translation and other natural language processing tools for the translation industry, has released a post-editing machine translation application program interface (API) service.
tauyou *www.tauyou.com*

Clients and Partners

Waters Corporation chooses SDL

Waters Corporation, a developer of analytical technologies such as hardware, software and chemistries in a variety of sectors, has chosen SDL Knowledge Center to organize, manage and localize its technical content and documentation.
SDL *www.sdl.com*

MadCap partners with Metaio

MadCap Software, Inc., a multichannel content authoring company, has partnered with Metaio GmbH, a provider of augmented reality research and technology. The combined solution enables writers to create content elements that users can scan with mobile devices to access other content sources such as audio, video, 3D models and animations.
MadCap Software, Inc.
www.madcapsoftware.com

Korean Air selects Translations.com

Translations.com, a provider of language services and translation-related technology products, has been selected to provide localization support to Korean Air for its newly released website in ten languages.
Translations.com *www.translations.com*

ZOO Digital selected by BBC Worldwide

ZOO Digital Group, a provider of global media production services, has been selected by BBC Worldwide, the wholly-owned commercial subsidiary of the BBC, to provide a subtitling and captioning solution for its global operations.
ZOO Digital Group *www.zoodigital.com*

Certifications

Language Arts & Science ISO 9001:2008 certified

Language Arts & Science, LLC, motor vehicle subject matter experts and providers of translation services to the entire automotive industry supply chain, has received ISO 9001:2008 certification.
Language Arts & Science, LLC
http://languageartsandscience.com

April

MadWorld 2015
April 12-14, 2015, San Diego, California USA.
MadCap Software, Inc.
www.madcapsoftware.com/events/madworld

LocWorld27 Shanghai
April 13-15, 2015, Shanghai, China.
Localization World, Ltd., www.locworld.com

Elia Networking Days Lyon
April 16-18, 2015, Lyon, France.
European Language Industry Association
www.elia-association.org/Networking-Days

TCeurope Colloquium
April 17-18, 2015, Brussels, Belgium.
STC-France, www.tceurope.org/colloquia

10th EUATC International Conference
April 23-24, 2015, Lisbon, Portugal.
European Union of Associations of Translation Companies, www.euatc.org/conference

ITI Conference 2015
April 23-25, 2015, Newcastle upon Tyne, UK.
Institute of Translation & Interpreting
http://iti-conference.org.uk

International Congress on Medical Interpreting
April 23-26, 2015, Rockville, Maryland USA.
International Medical Interpreters Association
http://imiaweb.org/conferences/2015conference.asp

6th Language Creation Conference
April 25-26, 2015, Horsham, UK.
CONLANG, http://conlang.org/language-creation-conference/lcc6

Riga Summit 2015
April 27-29, 2015, Riga, Latvia.
Tilde, Meta-Net, LT-Innovate, http://rigasummit2015.eu

Thailand Translation & Interpretation Conference
April 28-30, 2015, Bangkok, Thailand.
Association of Asian Translation Industry
http://translation-interpretation.org/conference

May

EAMT 2015
May 11-13, 2015, Antalya, Turkey.
European Association for Machine Translation, www.eamt2015.org

LRC Localisation Summer School
May 18-20, 2015, Limerick, Ireland.
Localisation Research Centre, www.localisation.ie/summer

World Wide Web Conference
May 18-22, 2015, Florence, Italy.
WWW, W3C, www.www2015.it

Workshop on Multilingual Web Access
May 19, 2015, Florence, Italy.
MWA, www.multilingualwebaccess.org

memoQfest International
May 20-22, 2015, Budapest, Hungary.
Kilgray Translation Technologies
http://memoqfest.com/home-int

Localization Project Managers Round Table
May 20-22, 2015, Berkeley, California USA.
The Localization Institute, www.localizationinstitute.com/event/2015-localization-project-managers-roundtable

TAUS Quality Evaluation Summit 2015
May 28, 2015, Dublin, Ireland.
TAUS, https://events.taus.net/events/conferences/taus-qe-summit-2015

Dutch National Translation Conference
May 29, 2015, Amersfoort, The Netherlands.
Teamwork, www.teamwork-vertaalworkshops.nl/events/evenement.php?id=99

June

TAUS Industry Leaders Forum
June 1-2, 2015, Berlin, Germany.
TAUS, https://events.taus.net/events/forums/taus-industry-leaders-forum-2015

LocWorld28 Berlin
June 3-5, 2015, Berlin, Germany.
Localization World, Ltd., www.locworld.com

UA Europe 2015
June 4-5, 2015, Southampton, UK.
UA Europe, www.uaconference.eu

5th InterpretAmerica Summit
June 12-13, 2015, Monterey, California USA.
InterpretAmerica, LLC
www.interpretamerica.com/interpretamerica-summit-5-welcome

Localization UnConference
June 18-19, 2015, Munich, Germany.
Localization Unconference Team
https://sites.google.com/site/localizationunconference

Evolution of Technical Communication
June 19, 2015, Sofia, Bulgaria.
tekom Bulgaria http://etc-conference.eu/about

Technical Communication Summit 2015
June 21-24, 2015, Columbus, Ohio USA.
Society for Technical Communication http://summit.stc.org

ABBYY SmartCAT

Reviewed by Jost Zetzsche

Promising new contender not quite where it should be for a fully-released tool

If you didn't know any better, a cursory examination of the translation technology landscape, particularly in regard to translation environment tools (CAT tools), might easily convey the impression that there's already plenty to choose from. You might even think that the market is flooded with tools.

Price: The cloud-based SmartCAT Freelance version comes with free registration, with the first 100 pages of OCR and/or MT included for free. Cloud-based SmartCAT Corporate starts at $37 per month, per license. Server-based Corporate solutions available upon request.

After a second, closer look, however, it would become apparent that there is always room for new solutions.

Why? Well, compared to ten or 15 years ago, the market is a lot less homogenous. While SDL's products still take up a large share of translation technology products, other vendors such as Kilgray and Smartling continue to chew away at SDL's previously almighty position, opening the market to their own products as well as others.

In addition, the translation exchange format XLIFF has had more of an impact on the concept of exchangeability than other previous standards, making workflows a lot less tool-centric.

Finally, the general notion of faster response times, real-time collaboration through the cloud, and minimal onboarding has taken hold. Cloud-based tools such as Memsource, XTM, Wordbee, and – more recently – MateCat are well established, and tools such as memoQ and Across are including an all-cloud-based approach as well.

Oh, yes, and then there's the free market where many want a piece of the pie.

In the past few years I've consulted for a good number of developers (often former translators) who have hatched ideas on how to garner one of those pieces of the pie. With a small number of exceptions, I ended my consultancy after a meeting or two because I could not see how a) the technology they envisioned was all that different, b) their business plan was sustainable and c) support and development could be maintained in the long run. If even one of those items was in place, I usually continued talking to them.

But when a company such as ABBYY – with more than 1,200 employees worldwide, a proven track record in language technologies (ABBYY FineReader, PDF Transformer, Lingvo, Aligner, Compreno) and past investments by the Russian government – enters the translation environment tool market, it's time to sit up and take notice.

ABBYY, by the way, is Proto-Tibeto-Burman and means "keen eye." ABBYY SmartCAT was officially launched a few months ago, though before that it had been in use for some time by ABBYY Language Services, ABBYY's language service arm, in particular for the ongoing massive volunteer crowdsourcing project of Coursera MOOCs into Russian. As a result of this and other projects, approximately 5,000 active users are presently using the tool.

Figure 1: Original graphic file in GIF format, screen captured from the *Multilingual* website.

Jost Zetzsche is an ATA-accredited English-to-German translator, a consultant and a writer on technical solutions for the translation and localization industry. He earned a PhD in the field of Chinese history and linguistics from the University of Hamburg in 1996.

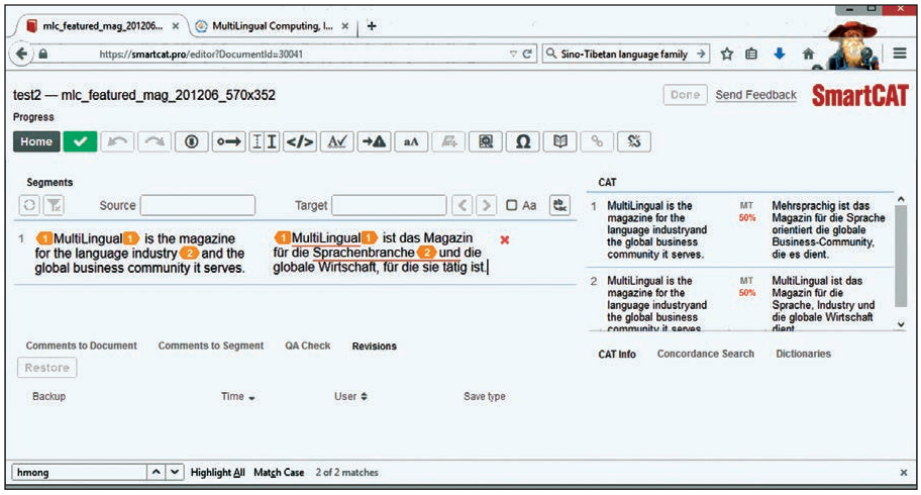

Figure 2: Graphic file directly imported into SmartCAT and translated.

Figure 3: Exported into an interim Word format.

What is SmartCAT? It's a completely cloud-based translation environment tool with a wholly browser-based interface. Files are uploaded to a server where they are processed and presented to the translator in the typical tabular translation interface (source on the left, target on the right). ABBYY uses Microsoft Azure servers in Ireland and the United States and its own servers in Moscow; it's also possible to install SmartCAT on your own servers.

The supported file types presently include Microsoft Office files (of the -x variety as well as the earlier format), OpenOffice/LibreOffice files, PDF, text, Trados TTX, XLIFF (including SDLXLIFF), and a huge variety of graphic formats. Since ABBYY already owned a sophisticated optical character recognition (OCR) solution, it integrated that right into SmartCAT. This means that graphic files can be internally OCRed and turned into Word documents, and PDF files can be read no matter whether they are text- or image-based.

SmartCAT's solution is most likely the best PDF workaround offered among translation environment tools. Of course, this doesn't mean that you won't have to do some amount of formatting to the resulting Word document when finalizing it, but you can expect the quality that you're already familiar with if you've used ABBYY's stand-alone OCR and/or PDF conversion tools in the past.

The recognition of graphics works fine when regular fonts are used (see Figures 1-3), and not so great when very creative fonts are involved, which is not surprising.

While it's impressive that PDF files and graphic files can be processed, some other important formats are not yet supported. It's especially relevant that HTML and XML are missing, and neither InDesign, FrameMaker nor any other software development formats are supported. All of those are in the works (HTML is already being beta-tested), but these omissions show that SmartCAT is not quite where it probably should be for a fully-released tool.

Other things that are missing and are on the roadmap for the next few months include support for the termbase exchange format TBX (the translation exchange format TMX support, on the other hand, is well established), offline processing through XLIFF, good productivity metrics, an application programming interface to embed SmartCAT into corporate environments and a lot of work on vendor management capabilities.

For the so-far relatively bare-bones project management in SmartCAT, users are organized in groups to which different rights are given. Once the project manager sets up and starts a workflow, it becomes largely automated by alerting the different assignees.

Anna Sidorova of ABBYY noted that the interest language service providers (LSPs) have in SmartCAT is "largely due to collaborative translation, machine translation (MT) integration and OCR," but I imagine that once some of the features mentioned above are indeed implemented (well), that interest should expand beyond those features she lists, particularly since other tools currently offer them as well (aside from OCR).

Freelance translators have different reasons to like SmartCAT. It's very intuitive, requires a short learning curve, and it's largely free. In fact it was completely free until recently, when some pricing was introduced for the OCR and MT capabilities. The first 100 pages for the processing of both technologies combined is free for a new user account, and from then on you pay between $.0001 and $.00014 per machine-translated word and $.025 to .035 per OCRed page.

As far as (MT), it's a different model than most of ABBYY's competitors, which

typically leave the per-character usage fee of engines such as Google Translate, Bing Translator and Yandex Translate up to the individual translator or LSP. ABBYY requires payment of these fees to ABBYY, and then pays the big MT providers in turn. ABBYY claims that it wants to make things as easy as possible for the translator, so the company has inserted itself as a middle man of sorts, but I suspect that ABBYY's own engine being supported along with the three MT engines mentioned above is part of the reason for that (see the January/February 2014 edition of *MultiLingual* for an article about the ABBYY MT engine).

The pricing for LSPs is on a project manager basis and ranges from $31 to $37 per license and month, making it very competitive with most of its rivals.

According to Sidorova, much like Across in its early days, the most important market for SmartCAT will be translation buyers with translation departments that will in turn encourage their vendors — LSPs and freelancers alike — to buy the tool as well. I spoke to Sergey Muratov, localization manager for language learning app developer Easy Ten (easyten.ru), who used SmartCAT to localize their tool into ten languages, with ABBYY Language Services as their service provider. He was happy with the performance of the tool, though he did mention the lack of graphics to provide translators with supporting materials such as screenshots — an item that is on the roadmap for SmartCAT as well.

One aspect ABBYY probably needs to emphasize when promoting this tool is the synergy between it and the other products ABBYY offers. The linguistic abilities the company assembled when developing its OCR solutions, which range from the Lingvo dictionary product to morphological recognition in three dozen languages, are all embedded into SmartCAT, making it uniquely valuable beyond its OCR capabilities. While these are features that most directly impact the translator, advanced ways of measuring productivity could expose savings in time and an increase in quality to all stakeholders.

I spoke with Logrus's Serge Gladkoff who has been following ABBYY's efforts with SmartCAT, and while he noted that it's still premature to completely evaluate SmartCAT due to the ongoing development efforts, he had the following to say: "ABBYY is a serious competitor for existing tools providers, merely based on the fact that it is a global software development company that has already managed to become number one in the world in the very competitive field of OCR software — a sector that is not very far from the language industry. In fact, ABBYY is the owner of a whole bunch of very high-tech linguistic technologies. I would be worried if I was SDL. Something to watch, most certainly."

I'm not sure that ABBYY's move should worry SDL (I can think of other dangers that should be at least as worrisome to SDL, if not more so), but I agree with Gladkoff that ABBYY's forays are something to watch, most certainly. M

Andrew Lawless

Accounting for better translation quality

Buyers of localization services know this phenomenon: the quality of your translations suddenly deteriorates even though the translation vendor appears to manage quality well. No matter how hard the vendor seems to be working on improvements, nothing changes. What happened?

The answer might not be found in linguistic quality control. The root cause for low translation quality may lie in accounting. How fast and reliably a localization service provider (LSP) pays its freelance translators is as relevant to translation quality as their internal quality management practice.

Here is the logic: the best freelance translators have the widest choices of companies they can work for. Market pressure dictates word rates, so most vendor companies pay their freelancers comparable rates. If it isn't income that makes the difference, then it's the relationship, and the morale created by prompt payment shapes the perception of the quality of a business relationship.

Freelance translators who get paid late will gravitate to business partners that pay faster and on time. If you want to check how your LSP performs, you only need three numbers: direct cost, number of days in a year and accounts payable.

To calculate the average payment period, determine the average cost per day. From the annual profit and loss statement, divide the number in line "direct cost" (or cost of goods sold) by 365 days. From the annual balance sheet for the same period, take the number in line "accounts payable" and divide it by cost per day (Figure 1).

For example, a fictional LSP called Quasi Trans has the following imaginary data: a direct cost (or cost of goods sold) of $2,809,145 for a fiscal year. Divide this number by 365 (or 366 for a leap year). The company's average direct cost (or purchases) per day computes to: $2,809,145 / 365 = $7,696 (Figure 2).

$$\text{Average direct cost per day} = \frac{\text{direct cost}}{\text{number of calendar days}}$$

$$\text{Average payment period} = \frac{\text{accounts payable}}{\text{average direct cost per day}}$$

Figure 1 (above). Figure 2 (below).

$$\text{Average direct cost per day} = \frac{\$2{,}809{,}145}{365} = \$7{,}696$$

$$\text{Average payment period} = \frac{\$754{,}721}{\$7{,}696} = 98 \text{ days}$$

In the line item "accounts payable" in the liabilities and equity section of the corresponding balance sheet (Figure 3), the company shows a liability of $754,721. Quasi Trans' average payment period is $754,721 / $7,696 = 98 days (Figure 2).

In other words, Quasi Trans pays its vendors on average three months after submission of an invoice.

Ask yourself: If you were a capable translator and had a choice between a customer that pays within 45 days, and Quasi Trans, which pays after 90 days with an equal pay rate, which one would you chose?

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35	LIABILITIES & EQUITY		
36	Liabilities		
37			
38		Accounts Payable	
39		Accounts Payable	$754,721
40		Total Accounts Payable	$754,721
41		Credit Cards	
42		Credit Card 1	$16,708
43		Credit Card 2	$1,126
44		Total Credit Cards	$17,834
45		Other Current Liabilities	
46		Bank Lease	-$1,410
47		Accrued Payroll	$25,608
48		Deferred Revenue	$1,002,410
49		Payroll Withholding	$592
50		Accrued Commissi	$21,620
51		Accrued Rebates	$4,844
52		Bank Loan	$728,353
53		Loan Payable-1	$39,000
54		Total Other Current Liabilities	$1,821,018
55		Total Current Liabilities	$2,593,573
56			
57	Equity		
58		Common Stock	$240
59		Retained Earnings	$433,755
60		Distributions	-$116,298
61		Net Income	$181,814
62	Total Equity		$499,510
63	TOTAL LIABILITIES & EQUITY		$3,093,083

Figure 3: Liabilities and equity from sample balance sheet.

1	P & L Quasi Trans, LLC		
2	Income		
3		Interpretation	$1,870,325
4		Translation	$3,112,346
5	Total Income		$4,982,672
6			
7	Direct Cost		
8		Interpreters (freelance)	$850,651
9		Translators (freelance)	$1,450,457
10		Translators (inhouse)	$464,028
11		Other	$44,010
12	Total Direct Cost		$2,809,145
13			
14	Indirect Cost		
15		Project Management	$525,671
16	Total Indirect Cost		$525,671
17			
18	SG&A		
19		Training	$1,860
20		Travel	$195,379
21		Interest Expense	$30,830
22		Sales	$392,736
23		Rent	$119,258
24		Other Operating Expense	$261,874
25		Management Overhead	$390,023
26		R&D	$22,290
27	Total SG&A		$1,414,251
28			
29	Profit / Loss		$233,605

Figure 5: Sample profit and loss statement.

$$\text{Dependency on suppliers for finance} = \frac{\text{accounts payable}}{\text{direct cost}}$$

$$\text{Dependency on suppliers for finance} = \frac{\$754{,}721}{\$2{,}809{,}145} = 27\%$$

Figure 4

$$\text{Average sales per day} = \frac{\text{revenue (or net sales)}}{\text{number of calendar days}}$$

$$\text{Average collection period} = \frac{\text{accounts receivables}}{\text{average sales per day}}$$

Figure 6

When hiring an LSP, make sure the vendor's payment practice enables translation quality. The longer it takes a company to pay its translators, the less likely it is that they will retain the ones who deliver the best quality.

Remember that it's a two-way street – the faster and more reliably a buyer pays an LSP, the easier it will be for them to deliver quality. Which leads us to the next money matter that counts in translation quality.

LSP dependency on suppliers

LSPs, of course, do not pay late because they do not care. They are just managing their financials in a way that enables them to stay in business. LSPs often pay freelance translators only after the benefitting customer pays the LSP's bill first. That's one effective way of ensuring that more money comes in than

1	ASSETS		
2			
3	Current Assets		
4		Checking/Savings	
5		Checking account	-$1,303
6		Savings Account	$4,706
7		Paypal	-$4,518
8		Petty Cash	$1,500
9		Total Checking/Savings	$385
10		Accounts Receivable	
11		Accounts Receival	$2,339,730
12		Total Accounts Receivable	$2,339,730
13		Other Current Assets	
14		Work in Process	$23,318
15		Shareholder Loan	$518,902
16		Total Other Current Assets	$542,220
17	Total Current Assets		$2,882,335
18			
19	Fixed Assets		
20		Leasehold Improvements	$6,622
21		Computer Equipment	$255,452
22		Computer Software	$238,931
23		Video Equipment	$11,165
24		Furniture & Fixtures	$55,380
25		Office Equipment	$20,364
26		Vehicles	$69,108
27		A/D - Furniture & Fixtures	-$48,183
28		A/D Leasehold Improvements	-$4,184
29		A/D - Office Equipment	-$20,364
30		A/D - Computer Equipment	-$182,602

Figure 7: Assets section from sample balance sheet.

is going out — also known as positive cash flow. That's important for an LSP, because if more money goes out than is coming in (negative cash flow), the company will need to borrow money. LSPs do not always need to go to a bank for that — many just borrow from their freelance translators at no additional cost, such as those annoying interest fees. They simply pay their freelancers after they get paid themselves to achieve positive cash flow. You can determine how much an LSP makes use of this practice as follows:

Divide "accounts payable" in the liabilities and equity section of the corresponding balance sheet (Figure 3) by the line "cost of goods sold" (or direct cost) in the company's profit and loss statement.

In the case of Quasi Trans, the dependency on suppliers for finance is 27% (Figure 4). This is not unusual for the localization industry.

Average collection period

In the case of Quasi Trans, the main reason for having to rely on their translation freelancers for finance, however, lies solely in the customers' paying morale. The customers need an average of 171 days to pay invoices. You can calculate the average collection period by first determining the average sales per day. From the annual profit and loss statement (Figure 5), divide the number in line "net sales" (or revenue) by 365 days. From the annual balance sheet for the same period, take the number in "accounts receivable" and divide it by "average sales per day," (Figure 6).

For example, Quasi Trans shows net sales (or revenue) of $4,982,671.65 for the fiscal year. Divide this number by 365 (or 366 for a leap year). The company's average sales (or revenue) per day computes to: $4,982,671.65/ 365 = $13,651.16. In the line item "accounts receivable" in the assets section of the corresponding balance sheet (Figure 7), the company shows unpaid invoices of $2,339,730. Their average payment period is $2,339,730 / $13,651.16= 171 days (Figure 8).

$$\text{Average sales per day} = \frac{\$4,982,671}{365} = \$13,651$$

$$\text{Average collection period} = \frac{\$2,339,730}{\$13,651} = 171 \text{ days}$$

Figure 8

Quasi Trans has no option other than to pay its freelancers late, which in turn motivates the best translators not to work on their clients' projects, but for someone else instead. The clients' own late payments to their LSP limits their ability to secure the best resources. Paying on time can be more effective than adding another quality assurance cycle to the project.

You will notice that Quasi Trans pays its vendors within 98 days, while its own customers pay after 171 days on average. At this rate, Quais Trans not only has a quality issue, it is going broke.

If you are an LSP, then you might consider reminding your customers earlier about their late payments. This is not rude, but necessary to ensure the best service to your customer — and everybody wins. Clients get better quality, LSPs run their business in a timely fashion and freelancers are happy. **M**

Column

Macro/Micro

Terena Bell

Manufacturing associations

Last November, I attended an international workforce development event organized by the National Association of Manufacturers (NAM), the US-based lobbying and trade association for American manufacturers. Regardless of the exact session topic, a theme that came up in every panel was how misperceived the manufacturing industry is. This misperception has led to a decline in American youth who seek manufacturing as a career.

Personally, my father and his mother did everything they could to steer me away from manufacturing. My grandmother worked the line in a hosiery mill, then later in a plastic box factory. It ruined her back and her hearing, and both she and my father made it quite clear that she did this work so that when I graduated I wouldn't have to.

Today's manufacturing, though, is an entirely different breed than Dorthy Bell's backbreaking labor. "Today's manufacturing is cutting edge, integrating technology that demands the best of a productive and talented workforce," says Haley Stevens, associate director of Workforce Development & Education Outreach for the Digital Manufacturing and Design Innovation Institute — a Chicago-based center funded by President Obama's National Network for Innovation program. Manufacturing today no longer wants your body, it wants your mind, requiring, as Stevens puts it, "a class of innovation workers contributing anywhere from the design to the production and delivery phase of manufacturing."

This disconnect between what manufacturing is and what young professionals believe it to be is interesting enough on its own. Translators no longer sit around with French-English dictionaries and typewriters and haven't for quite some time. Nor do "translators" sit in booths at the United Nations with headphones over their ears. Every profession has its incorrect stereotypes, its misperceptions in the public eye. Nurses are not all female, many lawyers are underpaid and schoolteachers often do not get summers off.

The link between manufacturing and translation, for the purposes of this article, isn't that the nuts and bolts of both industries are misunderstood by society today. It's whether we have the capabilities to fix our misunderstanding.

NAM panelist Greg Bashore, human resources director for Global Primary Products at Alcoa, commented during the conference that the ability to create change is inherently dependent on having an infrastructure that supports it. In other words, individual manufacturers are not capable of changing the image of manufacturing alone. Public perception change comes from industry infrastructure out.

If you think about it, this is logical. I have said for years, both in and outside of this column, that translation client education can never effectively be done by the translation company. From where the client sits, we stand to profit. The company is, after all, trying to sell something, and we do, at the end of the day, make money for our services. An example would be how any article labeled "sponsored content" is generally dismissed by readers as advertising, regardless of whether its content is better written or more accurate than articles in the same magazine.

To the skeptical, one company calling another company's behavior substandard is not client education — it's competition. It's only through the unified front of professional associations and lobbying organizations, which do not favor one provider over the next, that clients come to take the information provider at its word. A professional association can be trusted because it does not upsell the end client. In fact, it stands to make no money directly from the end client at all.

But, again, I've said this for years — this is the part we all

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know and why we have the American Translators Association (ATA), the Association of Language Companies (ALC), the Globalization and Localization Association (GALA) and others — so things that must be said have someone to say them.

But just because an infrastructure exists doesn't mean it's strong. According to *USA Today*, over 63,000 bridges in the United States are in need of repair. Yes, those bridges exist, but are they strong enough for you to drive your children over them? Our industry has an infrastructure. But is it strong enough to drive your business into the future?

According to Common Sense Advisory, there are over 26,000 translation companies in the world today. ATA has 747 company members, GALA has 400, and ALC only 150. So again I ask, is our infrastructure a strong one?

Strength is not exclusive to large numbers. Even from smaller groups, large change can be made. Christ had 12 disciples; there are 2.18 billion Christians in the world today. The Declaration of Independence had just 56 signers, but now 320 million Americans are free from British rule. Rosa Parks was one woman alone on a bus. You do not have to be large to affect change — only mighty.

I dare not dream, however, that anyone would ever use the word mighty to describe this industry called translation.

I only wish we could settle on the word *focused*. The translation industry does not need to conquer the world. We only need to be able to work in it and to be appreciated for the work we do, something all humans yearn for. But we are not even agreed on our cause much less focused on it, and this lack of organization is what keeps our infrastructure from becoming strong enough to make a difference for us all. We do not need large numbers, but we do need those few involved to focus.

It's tough. I've served on both the ALC leadership council and the GALA board, as well as been an active member of ATA. And one thing all three organizations' leadership had in common was constantly having to decide whether to do what was best for the individual organization or for the industry as a whole. And many times this answer is unfortunately not the same.

But you cannot deny that there are issues — large, irrefutable, profit-blocking issues — such as public ignorance as to who is qualified to translate and the fact that rates are plummeting below minimum wage, and these affect the members of every industry trade association.

But try getting all the trade associations to acknowledge that these are the problems worth fighting! At the ATA's most recent Translation Company Division meeting, the chosen discussion was how to make your first hire, a lesson that any company, translation or not, could get from a nonindustry chamber of commerce. GALA has the potential to be strong, but it struggles with one identity crisis after the next. It started out for vendors only, then included clients, then focused sessions exclusively on vendors, and is now refocusing on both vendors and clients — and don't forget throwing the interpreting industry in the mix now too. As for ALC, well, when I was a council member, only a minority of conference attendees even showed up for sessions. The rest just hung out and played tennis or golf.

Am I rude — am I controversial — am I demanding to want more?

I do know one thing I am, and it's envious. I am envious of my friends in manufacturing who are able to take my grandmother's world of hosiery mills and storage box assembly lines and turn it into one of 3D printed cars and Star Trek-style replicators. Like much of the translation industry, the manufacturing industry has been able to transition into the twenty-first century, technological and other advancements moving full-steam ahead. But unlike translation, they are able to come together and publicize the message that this is where they are going.

If we want the world to know where we are — where translation is going — then our infrastructure has got to get its head straight. It's time to step off the tennis court and step into the court of public opinion. Our infrastructure is not large enough to squander any resources on distractions. It's time for the translation industry to get laser sharp in our focus — as sharp as the beam on a modern manufacturer's tool. **M**

Column

World Savvy

John Freivalds

Bonjour tout le monde

As I travel around the United States I am amazed at the number of French named cities and towns. Nine state capitals are French words or are of French origin: Baton Rouge, Boise, Des Moines, Juneau, Montgomery, Montpelier, Pierre, Richmond and next door to me, Saint Paul, Minnesota. And the suffix -*ville* from the French word for city is affixed to innumerable towns throughout the United States.

I lived for 33 months in insular Dubuque, Iowa, and few cities in the United States can claim to be surrounded by as much French history as Dubuque. The city itself was named after a Frenchman and is surrounded by French history: Des Moines is to the east, Bellevue is to the south and Prairie du Chien, La Crosse and Wisconsin's Boscobel are to the north. Yet if you were to ask the average person living in these cities what languages they spoke besides English, few if any would say French.

Around the world French has a different story. French is either the eleventh or thirteenth most spoken language in the world, depending on your sources, with roughly 80 million native speakers worldwide. French is still the second most commonly taught language in the world (after English) and thus is always useful somewhere. You can find an Alliance Française in most major cities — there is even one in Topeka, Kansas.

But French is rapidly fading from public consciousness and public schools and, at least in the United States, is being replaced by Spanish and increasingly Chinese. This even though many of us would still much rather go to Paris in the springtime than to Beijing or México City.

Nothing against the growing usage of Mandarin, but I like to say *je t'aime* (I love you) in French to my wife Linda instead of 我爱你 (Wo Ai Ni) in Mandarin. And admit it, most of you would probably rather have filet mignon than chop suey.

Figure 1: La Toilette, created circa1891 by American artist Mary Cassatt.

John Freivalds is managing director of the marketing communications firm JFA and the marketing representative for his native country, Latvia.

Word	Meaning in France	Meaning in US
Affluence	Crowd of people	Wealth
Petite	Short	Small in a chic way
Potpourri (pot pourri)	Rotten pot	Assortment, usually of dried, naturally fragrant plant material used to make a room or linen closet smell nice
Touché	Touched	You got me
à la mode	In style	Food with ice cream
Au revoir	Until next time	Goodbye
Preservative (preservatif)	Condom	Preservation agent in foods and products

Figure 2: Same French word, different meanings in France and the United States.

Figure 3: Sold as a "Corsage en soie," (Silk shirt) this corsage has nothing in common with American corsages.

Even though we Americans love French culture, the French countryside, French wines and fashion, the love of the French language has fallen to the wayside. But its "fading" does create an interesting linguistic conundrum.

The practice goes back for centuries, but if you intersperse your American English with a few French words you tend to sound sophisticated: *art nouveau, carte blanche, blasé, au jus, voilà*. About 28% of the English we speak is of French origin, much of it dating back to the Norman conquest of England in 1066. Interestingly enough, however, if you as an American actually speak French and use it consistently, you may be considered stuck-up and potentially even unpatriotic. One individual I know from Nebraska goes out of his way to mock French by pronouncing *merci beaucoup* as "mercy buckets." I have always felt that you need to study French in order to really understand English, but maybe that's just me.

The American attitude about French became public most recently in regard to our Secretary of State John Kerry. Since there isn't much of a French lobby in the United States, the French and their language are easy proxies for whatever foreign bogeyman a politician wishes to scare up. Roger Cohen of *The New York Times* reported that during the 2004 US presidential campaign, his detractors carped that Kerry "looks French" and has "a fondness for brie and Evian water." Tom DeLay, the Republican House majority leader at the time, liked to begin speeches along the lines of "Good afternoon, or as John Kerry might say, *bonjour*."

But where Kerry was once criticized by Republican detractors for having gone to an elite Swiss academy and having strong ties with France, he now is lauded (at least a little bit) for being able to speak French fluently — really fluently — as Secretary of State. On his first official trip as Secretary of State, Kerry took the stage with the French foreign minister. *The New Yorker* magazine's Lauren Collins reported it this way: "In a scratchy baritone, Kerry said, in French, that he'd just finished a delicious lunch. He concluded by saying, 'And now I'll speak in English, because otherwise they won't let me return home.' The French press swooned."

Americans don't often take their "knowledge" of French too seriously, as there are many *faux amis* or false cognates to be wary of; words that look similar but have different meanings, which can get you in trouble. Here are a few: in French *médecin* means doctor, *la médicine* is the practice of medicine and medicine (the kind you take) in English translates to *medicament*. In French *la toilette* means not only the toilet, but anything related to toiletries, such as fixing your hair or freshening up — hence all those paintings of nude women getting ready for the day (Figure 1).

Thus, you need to be very careful when you go to Paris or Geneva that you don't use certain French words you've heard in the United States, or you might commit a *faux pas*. Some of these misleading homophones and homonyms can be found in Figure 2. Another, slightly more complicated one: for the big event men buy a corsage for their sweetie, a little bouquet of flowers to be worn around the wrist or possibly pinned on the dress. But in France, *corsage* refers to a woman's chest from shoulder to waist and by extension, the part of a woman's garment that covers this area (Figure 3). But the biggest annoyance that the French will experience when they come to the United States is probably going to be, unsurprisingly, in restaurants. On American restaurant menus, *entrée* is used to describe the main course, when in France it means the appetizer. *Quelle horreur, mais c'est la vie*. **M**

Column

Off the Map

Kate Edwards

Culture and censorship

Censorship — it's considered such a strong, polarizing word in the English language and particularly in the United States where the concept of "freedom of speech" is one of the highest held principles and is enshrined in the nation's Constitution. Censorship is typically defined as the suppression of information that could be perceived as offensive, sensitive, politically incorrect or potentially harmful. This determination is most often made by the institutions that govern a particular locale, such as governments, media and other local institutions such as the faith system or citizens' groups.

Most of us clearly understand the notion of censorship and would likely all agree that it's an unwelcome part of any society, especially in today's plethora of virtual spaces where the flow of information is not only expected but is being perceived as a fundamental human right. Yet over the course of history, institutions have long wielded their power to censor — which essentially means to suppress, alter or enhance information in ways meant to protect the institution's existence and/or continue to reinforce a particular reality or worldview considered most beneficial to the populace.

Censorship usually implies intention, in that certain pieces of information are being enhanced or suppressed for a specific purpose. Whereas propaganda is focused on emphasizing a specific message in order to influence opinion in a desired direction, censorship is almost the opposite: removing a specific piece of content to avoid influencing perception in a certain negative direction.

Cultures have leveraged both censorship and propaganda in their own ways and for various reasons throughout their histories. But one key factor we need to recognize is the difference between censorship and cultural expectations. Censorship most often connotes negativity in purpose but the adaptation of content to cultural expectations can occur for many reasons, some of which may seem like censorship or even propaganda when in fact it's serving what we construe to be the majority opinion about a fact in a specific locale.

When the Korean Ministry of Information complained about the PC-based game *Age of Empires* and its version of history, and requested a change in order to allow the game to be distributed, was this censorship or just meeting cultural expectations? In the game, the Chosen Empire on the Korean peninsula had to fend off invading Yamato forces from Japan and were overwhelmed, which is essentially what the historical record tell us. The Korean government strongly disagreed with this "interpretation" of their history, claiming that the Chosen people were never overpowered to the degree shown in the game. As a result, a special patch for the Korean version had to be created that changed history for Korean players to the degree that the Chosen Empire invaded the Yamatos in southern Japan.

For most forms of popular media, governments now maintain some form of ratings board to flag issues that they feel might be particularly problematic along specific categories. Most typically this means reviewing content for the "big three": sex, violence and profanity, but the cultural sensitivity to each of these areas varies widely from locale to locale. For example, Korea's Game Ratings

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Board (GRB) didn't exist when the *Age of Empires* issue occurred but today it's known to be particularly attuned to the "big three" as well as any political and cultural nuances that may portray Korea in a negative light. In the United States, there's the Entertainment Software Ratings Board (ESRB), and for Germany the Unterhaltungssoftware Selbstkontrolle (USK), the Pan European Game Information (PEGI) system for Europe, and the Video Standards Council (VSC) in the United Kingdom, just to name a few. For film, there's a wide variety of ratings bodies, such as the Motion Picture Association of America (MPAA) in the United States and the British Board of Film Classification (BBFC) in the United Kingdom.

Some would argue that the role of these bodies is to effectively act as censors, working to extract content from creative works that may be deemed harmful or sensitive to consumers and/or otherwise negatively reflect the local culture (such as the use of blatant cultural stereotypes). From the viewpoint of the ratings boards, it's a matter of tailoring content to local expectation. However, it's critical to highlight the fine line between careful tailoring and blatant suppression. Culturalization is focused on preserving the core intent of creative content and simply ensuring it's compatible with local customs and expectations. Censorship takes another turn toward an active suppression of facts that may remain relevant to a culture but for various reasons, the central authority may want to ignore those facts for their own purposes.

One of the more controversial examples is the ongoing tendency of the Japanese government to rewrite its history textbooks to modify certain aspects of their imperialistic past, particularly as related to World War II. In Japan, textbooks go through a rigorous process of review by the Ministry of Education to ensure that it meets specific standards and guidelines. In recent years, the government has faced increased criticism around its supposedly objective review process, wherein textbooks that negatively portray Imperial Japan and its aggression during World War II are rejected, partially under pressure from the more conservative government. In 2000, a group of right-wing scholars produced the *New History Textbook* that put a positive spin on Imperial Japan's actions and drew considerable backlash from inside Japan and beyond. In June 2007, over 100,000 people protested in Okinawa after the Ministry of Education suggested that the Japanese military's role in forced suicides in 1945 on Okinawa be deemphasized for the history books. This type of revisionist move by Japan evokes calls of censorship as well as generates backlash not only from Japanese citizens who desire a truthful rendition of history but also from countries that were affected by Imperial Japan's actions, most notably China and Korea.

Is the historical revision of Japan's role in World War II a case of cultural tailoring or blatant censorship? Based on the reactions even within Japan, it could be concluded as a clear case of factual suppression. This then calls attention to the issue of how one gauges "majority" opinion and what constitutes a case of censorship. In most of the cases I've ever dealt with in creative content, it was an issue of very specific, surgical tailoring to ensure that a single content element doesn't set off a wave of local backlash. And in most of these cases, it was related to deeper cultural sensitivities such as religious faith, ethnicity and cultural stereotyping.

However, some types of content lend themselves quite easily to censorship, mainly because they are so closely tied to government messaging and/or perception of government control. Probably the best example of this would be the use of maps in information products. Sometimes the map must be tailored to meet the widely-accepted local expectations, but more often the maps are revised for local consumption due to a government's strict policy on how their territory must be displayed. If you ship a product to India that doesn't show all of disputed Kashmir as Indian territory, it will be censored. If you ship a map to China that doesn't show Taiwan as part of greater China, it will be quickly censored. Part of the impetus depends on how tightly the government desires to control the message of the content, and with the visual nature of maps, blatant suppression is the only way they see to limiting exposure to an alternative viewpoint.

In our role as content creators, especially those who ensure global distribution, we need to be very cognizant of our actions — whether we are carefully tailoring to positively meet expectations or if we are serving the cause of local censorship because of government restrictions. This is a core dilemma for many multinational businesses; at which point will a business decide to not cross a line, effectively the "moral compass" of the company? There is no easy answer to this question and it will vary from company to company. **M**

Column

Perspectives

Matthew Mermel

Translation and transcreation for the Arabic-speaking marketplace

Globalization, the integration of international socioeconomic communities fueled by rapid advances in information and transportation technology, exists as an indisputable fact of life in the internet era. Yet despite the spread of English as the international business world's *lingua franca*, the translation industry continues to grow and expand with profit projections regularly surpassing $20 billion each year.

Accordingly, multinational firms from Apple to Nike and everywhere in between increasingly invest millions of dollars in translation and localization services. The language service industry, the sector that facilitates international and multilingual business communications, proves indispensible to the process of translation and localization; duties performed by the language service industry include translation, interpretation, language technology development and linguistic consulting. Of the industry's array of manifestations, Shelley Morrison defined transcreation in her 2013 SIETAR conference talk "Embarrassing Mistakes in Global Marketing: When Innovation Needs Better Cultural Research" as "adaptation of a message from one language to another, while maintaining its intent, style, tone and context." Industry professionals agree that transcreation displays the greatest future growth potential; perhaps no global region better illustrates the challenges and opportunities of translation and transcreation than the rapidly changing Arab world.

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Accurate, effective translation goes far beyond simply substituting the words of one language with their equivalent terms in another. Rather, it requires the adaptation and transmission of the original message's intent, context, style and tone to the target language as well. Scholarly definitions of translation thus link the linguistic act of translation with awareness and understanding of the target language's culture, its communicative norms and expectations — all of which fall precisely within the domain of sociolinguistics. Percy Balesman notes in a July 14, 2010 blog post that "Translation is not a matter of words only: it is a matter of making intelligible a whole culture," meaning that one must perform the agentive act of "creating a text for the target audience."

Translation, transcreation and the Arabic marketplace

Multinational companies regard the Arab world, teeming with emerging socioeconomies such as Saudi Arabia, Qatar and the United Arab Emirates, as a vast region of untapped potential; accordingly, corporations as diverse as Ford Motor Company and TGI Friday's Inc. devote considerable effort and resources toward localizing campaigns and products for the Arab marketplace. In order to reach these consumers, however, experts in the local sociolinguistic culture are clearly needed; for instance, as *The Economist* article "Surfing the Shabaka" found last year, "the proportion of Arabs online grew 30-fold between 2000 and 2012," even though "fewer than 1% of all web pages are in Arabic."

Effective and accurate translation from one sociolinguistic standard to another requires individuals intimately familiar with the target culture, as well as its language and its expectations for socially acceptable behavior, particularly with regard to translation and transcreation into Arabic. In "Arabic Translation Across Cultures," Moheiddin

A. Homeidi reviews the myriad of challenges and linguistic complexity of providing accurate and culturally relevant translation. Homeidi asserts that language is an integral part of culture and vice versa: after all, "words only have meanings in terms of the culture in which they are used."

Beginning with a review and bidirectional translations of Arabic and English idioms, Homeidi transitions to a discussion of the theoretical and applied considerations each translator must be cognizant of when carrying out his or her duties. Rejecting the need for literal translations, which, crucially, fail to capture the original intent of the text, Homeidi instead stresses the importance of contextual and cultural knowledge to effective and accurate translation. For example, in Arabic the closest approximation of the term "one-parent child" is *laqit*, literally "foundling," a translation non sequitur. However, this may be unclear to Arabs unfamiliar with Western mores of child rearing that differ from the parenting norms of Arab society. In order to rectify this and similar situations, the translator must provide explanatory footnotes when "the event or case is not found in the Arab/Muslim target culture, so the concept expressing it doesn't exist, and consequently, the language has not devised a linguistic means to express it."

"Translation is not a matter of words only: it is a matter of making intelligible a whole culture"

In an article in *British Studies in Applied Linguistics 13*, Susan Bassnett supports this notion, highlighting the untranslatable nature of certain words going from English to Arabic and back again, whether due to context or form. The task of the translator working with such languages, therefore, "is not to ignore cultural differences and to pretend that there is such a thing as universal truth and value-free cultural exchange, but rather to be aware of those differences." Because one "can't take the language out of culture nor the culture out of the language," the proper approach to translation grants equal weight to linguistic, semantic, pragmatic and cross-cultural considerations. Clearly, then, this culturally aware approach to translation and transcreation in the Arab world aligns with the proclamations of intercultural scholars; more importantly, it meets the needs of client firms operating within the sociolinguistic paradigms of the target Arabic language marketplace and maximizes opportunities for profits, revenues and growth therein. **M**

Business metrics and KPIs for localization

Libor Safar

Making a business case for localization is a lot easier today than it may have been in the past. The advantages of winning new customers or satisfying existing ones with products and content provided in their native language are obvious. That so many successful enterprises use localization to generate more than 50% of their revenues internationally is an argument that is hard to beat. However, many localization managers may still struggle in supporting their case with concrete numbers and metrics that would stand as solid proof as they present their plans and budgets internally.

That is not say that there is a shortage of metrics being used. But many of these are, understandably, operational, focusing on the efficiency of localization operations and measuring the various aspects of the age-old trifecta of quality, time and cost. Measuring the return on investment (ROI) of globalization efforts is notoriously difficult, especially the return part of the equation. But it is not impossible, so having a good set of practical business metrics that can serve as key performance indicators (KPIs) is useful. Sound business metrics can also go a long way toward changing the perception of localization from cost center to revenue enabler.

Currently, there are no generally accepted standards. It's not that there have been no efforts to develop a set of industry-wide metrics. Those long enough in the industry may recall the Localization Metrics Initiative (LMI), spearheaded by the Localization Institute back in 2003. Perhaps as a proof of the industry dynamics, of the then 14 participating companies, only five – Canon, Cerner, Cisco, IBM and PTC – exist today as independent organizations. GALA, for its part, has developed the concept of supply-side metrics via its Vendor Metrics Initiative.

When considering localization metrics, it makes sense to distinguish between three areas: presales content localization (marketing, websites, social media or advertising); actual product or service globalization; and after-sales content localization (such as customer support or knowledge bases).

Presales metrics

While some organizations may view localization as a cost, more forward-looking and mature companies consider it an investment capable of enabling international revenue growth. There is a range of leading and trailing indicators that look at the localization's contribution toward generating sales in international markets. International market growth rate and relative market share in a given local market are two that provide the most relevant information.

However, the devil is in the detail when it comes to understanding how product localization actually influences the extra revenue. If an original nonlocalized product was available in the given market, it makes sense to establish a baseline revenue and calculate the increase in sales, adjusted by the "organic" market growth rate, meaning the rate of growth that would incur regardless.

In calculating this ROI in localization, it is necessary to include other nonlocalization investments into new markets. On the flip side, the "return" part of any calculation should include the decreased cost of doing business in a given locale, such as lower support costs.

Most investments into product localization are hardly discreet events. Companies invest in ongoing local product releases, expanding the amount of content made available in a given local language over time. As a result, many localization ROI calculations may fail to account for the ongoing nature of such an investment in localized assets.

So an alternative option is perhaps to calculate the return on localization assets, as a parallel to the financial ratio of return on assets (ROA). This indicates the efficiency of using

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the assets companies have at their disposal. In the context of localization, this metric would use the income derived from localized products or services divided by the total or average value of the existing localization assets in the same period.

The beauty of this approach is that it forces companies to understand the current value of such assets, which includes the past investments in multilingual content as well as its reuse and unavoidable degradation over time. This metric is especially useful for making comparisons over time.

Where hard data on revenue is not immediately available or relevant, organizations may measure a number of other quantitative or qualitative indicators, and web and the impact of multilingual marketing content is one area where a wide range of metrics is readily available.

Customer online engagement is a set of metrics that serves to show how engaged customers are with your company's online presence – websites, blog, online support pages, discussion forums and so on. There is currently no one widely accepted measure of online engagement but, in the context of localization, the following are the key metrics:

- Number of unique visits from target locale
- Number of conversions and conversion rate by target locale
- Percentage of visitors from target locale accessing content in local language
- Click-through rates in local content pages or email campaigns
- Bounce rate on localized pages
- Average time on site by target locale
- Percentage of new versus returning visitors per target locale
- Search engine ranking for target keywords in target locales using preferred search engines

While these are useful leading indicators, the trailing indicator of the impact localized marketing content has is in the number of qualified international leads and the cost per such leads. Among other objectives, localized web presence serves to generate incoming leads from the given target locale, which can then be qualified and, ideally, converted to a customer.

The number of thus generated leads from language-specific marketing is a useful benchmark, as is the conversion ratio – how many eventually get converted into actual sales. In calculating the cost per such leads, it is important to consider the total cost of local marketing, including the web content localization, online advertisements, pay-per-click campaigns and social media, as well as internal costs. You can then drill down to the quality and cost of leads by specific sources.

One frequently overlooked insight is provided by comparing the behavior of customers from a given locale in the localized web content with how they navigate and how they convert in nonlocalized web content.

Online share of voice is an extremely useful proxy for how much your company is discussed online and in social media – the conversations people are having about your brand or your products, and how positive, neutral or negative their perceptions are. The beauty of it is that this enables you to narrow down on the share of voice by target markets or by language use.

While such a sentiment analysis is built into a growing range of commercial tools, free tools do a great job as well. Watching this data over time will give an indication of the impact a localized approach to a given language market has, as well as comparisons with competitors and their products.

The online share of voice is calculated as the number of mentions of your brand or product in a given market relative to the total number of mentions of all the brands or products in a given segment, and it is possible to analyze specifically positive, neutral or negative mentions. The actual share of voice would then consider only the positive and neutral mentions.

Brand awareness is another excellent leading and trailing indicator of your company's success in a given local market. It is useful to conduct brand awareness research before and some time after major local-marketing or localization milestones, as well as over time, to understand the impact that your local product and content have and how your brand is known and perceived in individual markets. It is critical to test both unaided and aided brand awareness. While unaided or spontaneous brand awareness will show how much local users know of your product or brand without being prompted (brand recall), aided brand awareness will do the same while testing the knowledge of those surveyed giving them a specific list of product or brands (brand recognition).

Globalization metrics

There are myriad metrics and KPIs used in practice to measure the efficiency of the actual localization efforts. This is where many organizations routinely work toward performance measurements, such as:

- Percentage of on-time deliveries
- Number of linguistic or technical quality errors
- Pass/fail rates
- Project delays or requests for extensions
- Average turnaround time
- Adherence to budget

Business metrics would look at the bigger picture, consider the contribution that localization makes toward overall corporate goals and determine the efficiency of doing so. One useful measure is looking at the total localization headcount: the total number of in-house staff directly involved in localization activities. This can then be assessed as a number relative to the company's total revenues or its international revenues – showing the contribution each employee involved in localization has to international sales, as a total or by markets and regions.

In a similar vein, another practical measure is considering the total localization cost as a sum of all the in-house and outsourcing budgets, taking these as a percentage of the total or international revenue. By the same token, companies can consider the total localization staff headcount and compare this with total localization costs, getting the globalization cost per employee involved in localization.

There are no general benchmarks in this area, given the obvious differences in the way organizations structure their localization operations, the proportion of their in-house staff and the amount of outsourced work. But these are very relevant metrics to watch over time, and to potentially compare with the performance of individual units in larger organizations.

Where meaningful data exists, companies may do the same on the product or product line level, measuring the total costs or headcount associated with localizing a given product with the revenues.

Where intercompany comparisons are possible is in the area of the cost per word. Here it makes sense to consider the fully-loaded average cost per word, which includes the overall internal as well as outsourced costs required to produce localized content divided by the total number of words localized. This measure enables an understanding of the overall efficiency of the operations and the total cost of localization on a per-word basis.

While it is useful to consider the unit word rates for individual languages, the truth is this often does not allow for comparing apples with apples. This is because they may include different activities. For instance, steps such as editing, proofing, terminology management, project setup, independent review and quality assurance may or may not be bundled into given per-word rates. In another case, falling unit word rates may belie major expenditures elsewhere in the overall production process.

Instead, the fully-loaded average cost per word considers the whole production workflow, and takes into account the internal as well as outsourced costs of any localization operation. Some organizations may also work with the average cost of outsourced words and exclude the cost of

Presales metrics	Business metrics for globalization	After-sales metrics
• International market growth rate • Relative market share • Return on investment in localization • Return on localization assets • Customer online engagement • Number of qualified international leads • Cost per qualified international lead • Online share of voice brand awareness (aided, unaided)	• Total localization headcount • Total localization headcount relative to revenues • Total localization costs • Total localization costs relative to revenues • Fully-loaded average cost per word • Average cost of outsourced word • Time to market • Opportunity cost of a delayed release	• Support call deflection • First contact resolution • Customer satisfaction

Figure: Key business metrics and KPIs for localization at a glance.

their internal operations. In this case, the measure will show the productivity of their localization outsourcing.

The average cost per word has gone down substantially in the industry over time, as a result of the years of investment into automation, translation technologies and processes that have substantially increased leverage and decreased the average cost per word. This average per-word cost has decreased dramatically – in some cases by 40-50% for many organizations, and certainly more than unit rates for new words in most target languages have over the period.

Time to market is another critical metric, looking at the time it takes to release the given product or content in local languages. A faster time to market normally indicates a better integration of the localization and internationalization functions into the overall product/release process, and a higher level of automation.

In this age of simship and agile development, a large part of product releases are multimarket and multilanguage. This means product or content localization may become a critical path for global product releases. This serves to show how tightly linked localization is to the actual product development and marketing strategy.

There are no established standards for measuring time to market, but there are perhaps two meaningful ways of measuring the impact of localization in this context. The first looks at the time-to-market as a delta between the first release of a given product or content, and its release in local language. For simship scenarios, this will be zero. Particularly for first releases, you can also measure time to market in the original sense, from, say, when the product is conceptualized to the moment it is made available to local consumers. This time may differ for individual local language versions.

One aspect to always consider is the opportunity cost of a delayed release. Every week of delay in providing a given product on the market means a week of lost sales. The first to market advantage can be potentially huge.

After-sales metrics

Localization plays a huge role in the after-sales, with the main goals normally being to increase or maintain local users' satisfaction, ongoing engagement through localized marketing and social media, and the reduction of support costs by providing local users with support content in their own language.

In many organizations, presales information is the priority, as it serves to get the client to buy and use the given product, and as such is seen as an investment. But localized after-sales support is often an afterthought. It's expensive – customer support costs are a significant percentage of total revenue, it's seen as a cost with no apparent contribution to the bottom line, and spread into multiple budgets.

However, change is afoot. First, more and more companies are beginning to move customer service from a cost center to a differentiator, using customer satisfaction metrics to measure how good they are. Second, there is a major increase in the provision of self-service channels, digital channels such as real-time chat and email, and in usage of communities for customer service. Finally, machine translation is dramatically reducing the cost of providing customer support content in multiple languages. And it's finding users very grateful for local language content, even if linguistically imperfect, as a clearly much preferred option to no translation.

In this sense, the impact of providing localized support content can be measured as follows:

- *Support call deflection*: Decrease in the number of support calls or other requests after publication of localized support content.
- *First contact resolution*: Percentage of support requests resolved at first contact.
- *Customer satisfaction*: When it comes to measuring local customer satisfaction, arguably nothing beats the simplicity of the Net Promoter Score.

Final recommendations

There are a huge number of potential metrics that localization professionals may use to measure the impact of their work. Focus on a few key metrics; three to five usually make the most sense. Also, be consistent. The beauty of KPIs lies in the way they enable comparisons. Make them visible. There is little point in hiding them. Promote them so that everyone knows how well you do. Finally, create a direct link to your company's KPIs. This is an excellent opportunity to promote the critical role localization teams have in reaching the overall goals in every organization. **M**

Project collaboration, context and coordination

Ian Henderson

Project management is a crucial discipline for any business, especially those in the technology sector. Software companies, for example, are challenged to roll out new products on increasingly aggressive timelines, and so effective project management is critical to ensure that a final product – one that has been fully vetted and tested – makes it to market on deadline.

It's difficult enough to keep pace when going to market domestically, and the pressure only increases when companies begin to test international waters. But economic factors are making foreign markets required destinations for many more businesses.

Corporations have identified a number of emerging markets across Latin America, Asia, Africa and the Middle East as prime targets for international expansion. Digital commerce in India is projected to grow by a whopping 70% this year, according to technology research and advisory company Gartner. Brazil is the king of the Latin American eCommerce market and trails only China in terms of rapid global growth, while estimates from a report by payment solutions provider PayFort predict online sales in the Middle East will reach $15 billion in 2015.

Businesses are reading the tea leaves and making plans to expand in anticipation of these growth trends, but success in an international market is highly dependent on execution. A 2015 global digital marketing report by Razorfish, called "Digital Dopamine," shows that consumers in Brazil and China are dependent on technology, eager to engage with new gadgets, but also highly demanding of their digital experiences, for instance. If a new business fails to make a good first impression in either of these countries, among many others, it will be tough trying to tap these increasingly competitive markets.

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Localization can make or break a business' entrance into new foreign markets. In a hurry to expand and seize international customer bases, organizations also cannot afford to rush the localization process, nor waste time on drawn-out or tedious projects.

Ensuring strong project management

Effective localization project management is the best way to ensure companies can translate core content, including product interfaces, software code, copy and more, in a way that is linguistically and technically accurate, on time and on budget.

A well-structured localization team is headed by a lead localization manager, who stands atop an otherwise flatly structured group of native-speaking translators with appropriate technical or vertical knowledge.

The localization manager reports directly to the client, working with the business to chart the overarching plan and report progress. He or she also determines the rules of engagement between translators and the client's key creative personnel, which may include marketers, designers or programmers.

The lead manager can also identify the best translation talent for the job. In-country, native speakers with varied backgrounds, whether in research, software development, graphic design or sales, can offer the most appropriate support for a particular job.

Metrics can also reveal opportunities for a more efficient or effective localization process. Localization managers could consider tracking two sets of metrics: production return on investment (ROI) and business ROI.

Production ROI, which may include metrics such as cost per word, cost per page, time-to-market and much more, tracks how efficient the localization team is in completing its work. With these figures in hand, the lead manager can evaluate ways to make projects run better in the future.

Business ROI demonstrates the value that translated content offers to revenue or market share after the localization project is completed. Here, you might compare localized product sales versus nonlocalized product sales, or estimate the value of new market share compared to the cost of the localization project, among many other metrics. Ultimately, the objective is to demonstrate how the project yielded real business benefits.

When good localization projects go bad

With one manager driving the team and ensuring plan execution from start to finish, a business can steer around the pitfalls of poor project management, which include repetitive work and unnecessary frustration, and maximize the international business opportunity localization can create. After all, according to research by Common Sense Advisory, 72% of consumers worldwide say they prefer to purchase products in their native tongue.

The hallmarks of a poorly managed localization project are fairly consistent: frustrated remote translators who find it impossible to decipher inscrutable technical language, annoyed engineers or marketers with a distaste for having to retread over previous development or copywriting work to incorporate new languages, and ultimately, a disjointed or incomplete product that is irrelevant or poorly understood by its intended users.

These are challenges that stem from ineffective project management. It's what happens when a localization agency passes a single client from one project manager to another every few months — objectives change, deadlines are missed and plans are diverted.

It's the effect of relying on remote, nonnative translators who are not able to work side-by-side with the people who actually create the content being translated, and who don't grasp the technical nuances of the client's vertical market.

It's also what happens when the translation process is left to be an afterthought — something that is only considered after the English-language product manuals or software applications have already been completed.

Bad localization projects happen when plans aren't developed, context is ignored and the translation and content creation processes are poorly aligned.

Paying attention to details

Localization may seem like a fairly straightforward process: simply take this content and translate it into a new language. But once you're required to work with different content formats and consider cultural nuances, you realize that attention to detail is a crucial part of any translation project. The solution is to set the table ahead of time, accounting for potential roadblocks before they occur.

Eric Michielli, database administrator at the weather forecasting service AccuWeather, claimed a well-designed localization process helped the company enter new international markets. AccuWeather embarked on an ambitious project to localize its website and mobile apps with tailored content, user interfaces and sourcing for a number of new countries.

To avoid missing any important details, the lead localization manager first sought insight from AccuWeather executives, marketers and engineers in an initial project planning session, said Michielli.

By picking the brains of these weather experts and applying their own knowledge of application design and local language context, translators were able to anticipate obstacles that could have otherwise tripped up the project.

For example, in some parts of the world, it's not enough to simply say it will be "hot" outside. That forecast would need to be clarified with relative terms to describe humidity and other factors that a local user would understand.

Similarly, foreign alphabets can complicate mobile and web design. Saying there is a "chance for a flurry" in English translates to "prawdopodobieństwo lekkich opadów" in Polish — a much larger phrase that might not fit elegantly on a mobile interface.

With these details acknowledged from the start, the project manager was able to design a proactive localization plan that avoided costly development delays and ensured that a better product reached local customers. Whether it was source code, copy or user interfaces, translators were available to offer context and clarity to engineers as they actively developed localized content in more than 50 languages.

"The key to effective localization is a clear design process," Michielli explained. "Our team is working together to tailor the products we're working on now through a turnkey planning, assessment, translation and activation process that is producing a superior user experience across digital platforms and devices by country."

Context is king

Context involves not only terminology, but also the timing, reasoning and visual cues we rely on to derive meaning from language. By ignoring these factors during the localization process, project managers risk confusing users.

On-site contractors can be a lifesaver

Reaching out to your language partners for on-site contractors can help you extend your reach while preventing burnout on your team. Integrating this source of expertise into your localization management model allows you to shorten your time to market for localized products by making innovation a reality. As people work side by side in real time, more as colleagues and partners than as customers and vendors, the dynamic of their relationship changes. They become much more comfortable applying new ideas to solving the challenges they now face together, separated only by a thin cubicle wall.

The functions that lend themselves to third-party contracting include project managers, translators, terminologists, editors, reviewers, internationalization engineers, localization engineers, software testers (upstream for functional testing and downstream for linguistic quality assurance) and web producers. Hosting some of these functions on-site also allows you to meet colocation requirements for confidentiality and software testing.

What should the contract for on-site staffing cover? Make sure that the details of work arrangements are clear to both parties before anyone arrives on-site. Here are seven areas where you should be especially vigilant:

1. **Find out what can go wrong — and right.** Discuss this opportunity with one or more of your language suppliers to hear about their experience in providing on-site contractors. Ask them for references. Do the same with colleagues at other companies, focusing on what they do to ensure that these relationships are mutually beneficial.

2. **Nip the cost argument in the bud.** Be prepared for your manager or an executive to push back on the cost of on-site contractors. Perform a 360-degree calculation for cost, and more importantly, for estimated additional revenue. For example, if engaging two on-site testers allows you to deliver ten localized versions to market two weeks earlier than planned, make sure that everyone understands how much this can add to the bottom line.

3. **Collaborate with your language service provider (LSP) to create a clear statement of work.** The statement of work for on-site staff should cover the required profile, exact responsibilities, concrete deliverables and explicit timeframes. Build in a trial period, along with periodic reviews, to ensure that the arrangement continues to fulfill your needs.

4. **Don't sweat the small things.** Neither privacy issues nor concerns with nondisclosure agreements should prevent you from hosting on-site staff if both parties agree that it makes sense. Nondisclosure agreements are only as good as the paper they are written on, regardless of whether the signatories are full-time employees or contractors. What matters is to engage the right people and manage them well.

5. **Meet with your human resources and legal professionals.** During the exploration phase, you and your LSP should work hard to win over your company's human resources and legal support staff. Do this sooner rather than later, in case there are corporate roadblocks that may block your way. Ask what their concerns are and address them together. If your partner has already provided embedded staff for other customers, ask them to share what went well and their recommendations for improvement.

6. **Negotiate costs.** If you can afford on-site project management, then you may be able to find funds to cover travel and other associated costs, if necessary. Remember, having on-site staff engaged through a third-party is still much less costly to you than hiring full-time employees with the associated overhead expenses.

7. **Write in an option-to-hire clause.** Don't be surprised if you eventually decide to hire a contracted project manager or web producer full time. To make it easier on everyone, include a clause up-front that spells out whether and how you can do this.

Even though your company may have outsourced the majority of its translation or localization function for many years, it may be able to reap further benefit from colocated teams working together to deliver the best products and services to local markets faster. Investigate the possibility of engaging on-site staff with your LSPs today — especially if your team could use some extra backup at cost-effective rates.

— Rebecca Ray, senior analyst, Common Sense Advisory

Gene Hall, manager of information development at Stratus Technologies, explained that his company's software, which alerts users to IT systems availability problems, relies heavily on context. Notifications tell users if anything is wrong with their operations, and are, naturally, meaningless if misunderstood.

"This is a style of help that isn't displayed like a book," Hall said. "All of the documentation is on the website, like traditional support, but there are elements such as alerts and warnings that were built right into the interface that also had to be translated."

The project required technical expertise and an understanding of how particular imagery, terminology and interface elements would be interpreted by users in different countries.

Critically, the initiative also included a quality assurance phase. Translators tested the product in each native language to verify that each alert displayed the correct copy and imagery, and that the notifications ultimately made contextual sense. It was a major advantage for the Stratus team, which was assured that its localized product would make it to market with accurate information.

Context can also be lost when terms are over-translated, which is why project managers should set the table by defining the words that will be used to describe certain concepts and ensuring only approved terms are used consistently. For example, when localizing a product manual for a "smartphone," translators should avoid interchanging similar but different terms such as "mobile device," or brand names such as "iPhone," to limit confusion.

Everything in sync

Project managers must also consider the working relationship between translators and content creators, and how their pace of work affects deliverables. Ultimately, everything must be in sync to ensure a localized manual, application or website hits the market by deadline.

David Lett, director of product localization and internationalization, SuccessFactors, an SAP company, described the challenges that can arise when projects aren't properly synced with product deadlines. The human capital management software provider ships a new product update in 40 different languages every three months, and up to 78,000 key software values and 400,000 words of interface copy must be localized each quarter.

Complicating matters for SuccessFactors was an emerging process gap — as translators worked to localize all that content, software developers were continually making new updates, meaning parts of the product could not be translated in time for release. Up to a quarter of the localized content each quarter remained in English, said Lett.

To close this gap, project managers needed to develop a process in which translators could actively localize content even as the product was being updated by engineers. The solution was a staggered multidrop, multiple-delivery strategy.

"We started delivering five different drops of content to the localization team, and they would deliver the files twice," Lett says. "That allowed them to start translating the code about six weeks before they had access to the finalized content."

The system meant translators would receive the final drop of content three weeks before general launch, with a turnaround time of two weeks. However, since most of the product had already been localized as a result of the first four drops, the final delivery was relatively easy to make.

Automation also turned this quarterly translation project into a more streamlined process. SuccessFactors' strategy is one example of a creative solution localization project managers must develop to help companies meet demanding content delivery deadlines.

Planning a smarter project

A well-designed localization plan can make a big difference in helping project managers anticipate and address difficulties and meet delivery objectives. However, a plan is only as good as its execution, and successful translation relies heavily on a team of native translators who understand the material they are working with and can provide the context needed to deliver accurate content.

Project managers should think holistically about localization. Involve all relevant members of the process in the planning phase and talk through potential pitfalls and stumbling blocks. Think creatively about ways to change processes or workflow to support effective translations. Finally, include a verification process to ensure that when your content reaches its final destination, it will be both easily read and understood. **M**

Secure localization management

Mike Reed

The year 2014 was branded by some as the "year of the hack," when some significant breaches of cyber security and web vulnerabilities resulted in high profile international headlines. Not a week went by without a tale of woe befalling some household name, causing us all to sit up and take notice of the state of security in this internet age – even if it was only to change our social media passwords. Which got me thinking: as guardians of customer data, in the form of translation content, reference materials, translation memories and the like, how effective is the language industry when it comes to cyber security? How well do we serve our customers' security needs?

It is fair to say that the general public is aware of only a fraction of the cyber attacks against organizations that occur almost every hour of every day; attacks perpetrated by a range of different parties, from casual hobby-hackers and hacktivists to more organized data theft on a grand scale. If this is of no concern to you then perhaps it should be, since most of the governments of G20 countries cite cyber security and the associated risk of data protection and system hacking as a Tier 1 threat, alongside international terrorism and military conflict. But it's not just governments that need to take the threat seriously; we all need to assess our security profiles and maintain effective controls against unauthorized cyber activity, which is no mean feat given that the internet is so tightly woven into the fabric of our businesses and society in general. Although slightly left-field, the ever-increasing proliferation of internet-connected devices – things that until recently we all considered to be passive, everyday objects – merely adds to the challenge of keeping data secure. True, your IT systems are unlikely to be infiltrated through your toaster, but the recent story of wireless webcams being compromised by the simplest of tweaks (with resulting images being posted for all to see on the internet) serves as a timely reminder that we all need to take steps to protect our data. Also, and more importantly, to protect the data belonging to our customers.

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How to protect our data

Most of us associate data protection with firewalls, which have been a mainstay of IT security for many years. Indeed, over the millennia, the humble wall has been the method of choice for many who have sought to secure their assets, defending them from external attack. From Beijing to Rome, cities became fortresses as seemingly impenetrable barriers were constructed in an effort to keep out would-be invaders. In the majority of cases, however, such fortifications alone were not enough to save civilizations from their eventual downfall, as those within their confines were lulled into a false sense of security. Feeling safe inside their domains, inhabitants became complacent, forgetting what might happen if their defenses were breached, which inevitably they were. Breaches generally came in two forms: the first was catastrophic failure, whereby once the mighty wall was scaled no other protection was in place to prevent invasion. The other was more insidious; over time, strategies of engagement with the outside world gave way to carelessness about who and what was coming through the gates.

If you are beginning to draw parallels with how the world approaches data security today, then you'd be right to do so. However, how much have we actually learned from history? The answer depends on the kind of organization you ask and the importance it attaches to information security,

Control objectives	Standard requirements
Build and maintain a secure network	1. Install and maintain a firewall configuration to protect data 2. Do not use vendor-supplied defaults for system passwords and other security parameters
Protect data	3. Protect stored data 4. Encrypt transmission of data across open, public networks
Maintain a vulnerability management program	5. Use and regularly update antivirus software on all systems commonly affected by malware 6. Develop and maintain secure systems and applications
Implement strong access control measures	7. Restrict access to data by business need-to-know 8. Assign a unique ID to each person with computer access 9. Restrict physical access to data
Regularly monitor and test networks	10. Track and monitor all access to network resources and data 11. Regularly test security systems and processes
Maintain an information security policy	12. Maintain a policy that addresses information security

Table 1: Generalized PCI DSS controls and standards.

which generally comes down to a reliance on security for livelihood. Those companies that act as data controllers or high-volume data processors generally have a very good understanding of what secure means, supported by mature, audit-driven policies and procedures. Arguably, one of the most effective information security regimes, which can serve as a benchmark for us all, is the Payment Card Industry Data Security Standard (PCI DSS) as seen in Table 1, which helps safeguard the details of approximately 95% of credit cards on the planet. Its implementation goes a long way toward ensuring adequate protection against security breaches, by combining the need for physical defenses with compliance-driven processes. Table 1 is a summary of the PCI standard that has been generalized to refer only to data. Interestingly, the control objectives and their corresponding requirements still hold true, despite the broadening of the scope. Indeed, any rational person reading this article would expect all of their data (not just credit card details) to be handled according to the standards described.

Security in the localization industry

Thus far, we have highlighted the need for solid information security controls and identified a good standard that we (probably) all agree should be adopted in one form or another. How is it then that the localization industry lags so far behind in espousing appropriate security controls for the data that it processes? After all, with an estimated worldwide turnover of $33 billion, this is hardly a cottage industry. Or is it? With the vast majority of language service providers being self-employed linguists working out of their homes, it actually fits one definition of a cottage industry very well. But as we all know, above this talented global network of linguists are the language service companies selling the localization dream and managing its delivery at local, national and international levels.

So who's to blame for the industry lagging behind in terms of its security credentials and capability? Answer: we all are. From individual linguists to language services providers to software manufacturers, we all have to take some responsibility for the situation, and are all going to be involved in fixing it before it's too late. We can either proactively manage how our industry responds to the threats posed by cyber crime or we can bury our heads in the sand and pretend the problem doesn't exist. The trouble with the latter approach is that by the time we come up for air, the landscape will have changed and we could be facing an uphill battle to regain customer trust. And if you are a buyer of language services, you have to play your part as well. Only through your insistence that information security is given the importance it deserves will the industry really start to change. You have the ability to demand change, the industry has the ability to deliver it.

So how savvy are customers when it comes to security in the localization industry? One would imagine that risk-aware organizations will know exactly what happens to their data when they send it to their language service provider. But detailed risk-management isn't the norm. What is, still revolves around transmission of content through unsecure email or unencrypted USB sticks. Without wishing to be too generalist, customers often appear content to simply sign a nondisclosure agreement with their language service provider, agree to the standard terms and conditions and then (somewhat naïvely) assume that their data is secure and well-protected. However, when there are so many third parties involved in the localization supply chain, how can they be sure that this is the case? How can they know where their data is being sent, who is viewing it, how it is being stored, whether it is being securely deleted post-project and most importantly, if their content is vulnerable. The maxim of *caveat emptor* appears to be stretched beyond its practical limits when it comes to the procurement of localization services.

To this end, the industry needs some sort of security charter: a set of guiding principles that everyone can adhere to and that affords some peace of mind to the unwary buyer. It should be the responsibility of all language service providers to ensure that all parties within their supply chain are security compliant. Translators, proofreaders, DTP suppliers, AV specialists, interpreters, transcribers and language testers all need to understand

the importance of information security and take appropriate steps to conform to documented (and better still, contracted) standards. Similarly, language service providers should ensure that their own staff work to a set of robust information security standards, backed up by regular training and awareness sessions on subjects such as data protection, anti-bribery, fraud awareness and the like.

Technology to the rescue

Thankfully, the past few years have seen a new breed of translation management systems come to market that have been designed to address many of the security concerns described above. Making full use of almost ubiquitous access to the internet, their basic premise is to negate the need for file transfers to linguists, meaning that source documents and linguistic assets (translation memories, style guides, glossaries and other supporting material), remain under the control of the language service provider – typically on their servers. The products in this space also tend to ensure that linguists only have access to content they are responsible for and that is relevant to their work, and the more advanced solutions offer additional controls, such as nonproliferation and copy/paste lockdown. Role-based permissions also ensure that project managers have restricted system rights so that customer-specific data is only accessible to those who are authorized to work with it. Lastly, in the very best products, all activity is logged as part of a detailed audit trail. This enables language service providers and their clients to remain safe in the knowledge that they know who is accessing their information, and when.

However, state-of-the-art translation management systems are only as secure as the environments in which they are deployed. To this end, the hardware, security controls and human processes in place within the hosting data center play a crucial role in maintaining data security. The use of sophisticated web-application firewalls, perimeter networks and advanced denial-of-service detection algorithms all keep valuable information and content as secure as possible. When the physical security elements within the data center are combined with a strong information security management system of the kind imposed by ISO 27001, and backed up by regular security audits, language service providers can be sure that they have good control over their data and (more importantly) the data they are trusted with by their clients.

Rise of the machine

No article on information security would be replete without a mention of free machine translation (the *bête noire* of professional linguists) and the perceived dangers that accompany it. Among risk-averse, highly regulated, international industries there is a growing unease around the use of free machine translation sites by staff wishing to get the gist of content not in their mother tongue. The trend is for such sites to be filtered from use and replaced by private, bespoke machine translation solutions, thus ensuring that risks associated with confidential data loss are minimized – at least through that particular avenue. Those with the deepest pockets (and possibly the highest levels of suspicion) opt for in-house solutions, while others satisfy themselves that a trustworthy machine translation supplier with the right security credentials can offer them the kind of assurance they need. Irrespective of the operating model, the scene is set for significant growth in this area of language services as cyber security rises up the boardroom agenda.

The language industry needs to wake up to the issues around cyber security and start putting in the controls and procedures that will help safeguard customer data. While more regulated industries have embraced change and gotten their cyber house in order, only a few key language service providers appear to have made inroads in this area, offering the kinds of assurance that an increasing number of customers now demand. 2015 needs to be the year that our industry starts to deliver on security promises. **M**

Why translation management is broken, and how to fix it

Nataly Kelly

Many of us in the localization industry have rallied for most of our careers to achieve a very big, collective dream – getting organizations to take translation seriously.

Those of us who work in this industry, whether as buyers or suppliers of translation, can easily see what the problem is. Most businesses treat translation as an afterthought even though it fuels global revenue. As a result, it is rarely centralized and rarely gets attention from the executive team. So even though translation is a core component of any global business strategy, it's often relegated to the bottom rung of the corporate ladder.

Translation gets stuck in organizational silos

Generally, an organization's management realizes it needs to do something about translation due to an urgent business need. Something has to be translated. Often, it's because of a new opportunity in another country. Less commonly, it's because the company has made a strategic decision to go into a new market.

As a result, the natural reaction is to first look at the organizational chart of employees and wonder, "Who will own this?" Rarely does anyone think they need a quarterback for something as seemingly simple as translation. In the mind of the uninitiated, buying translation is as easy as calling up to order a pizza. For companies that are new to it, translation is rarely viewed as a strategic investment or a component of global growth. It's seen as something that just "has to be done." As such, it often gets assigned to a low-level manager, an intern or a receptionist. The problem? These individuals rarely have the resources or skills to treat translation as what it is: a strategic business investment that fuels a company's global growth.

Thus, translation becomes stuck in a silo. Often, the same process is repeated around the company, so translation then gets stuck in multiple silos. As an organization becomes more global, suddenly other parts of the organization rely on translation too. It often starts with a need from sales or marketing, but then permeates the product and operations teams, client services and even finance. Translation usually stops just short of the executive team.

Enlightened approaches to translation remain illusive

Some of the more enlightened companies, especially those that are serious about growing international revenue, see that what they need is "more than just translation," so they end up calling it "localization." That's a bit closer to the truth, but still not exactly right. Those of us who are practitioners know that these two processes differ, and we know exactly how. But when buyers new to translation use this term, they are often trying to distinguish between a literal, bad translation (which they call "translation"), and a translation that truly resonates with the target audience and sounds local (which they call "localization").

Still, no matter what they end up calling it, when management looks for a place for translation to "live," they often relegate it to middle management on the product or engineering team, or occasionally marketing. Once in the silo, translation unfortunately tends to stay there, neglected at worst, deprioritized at best.

And of course, the bad news for the organization at large is that meanwhile, other areas of the company purchase translation, yet none of them benefit from the translations that other groups have paid for. Centralization is a pipe dream at these companies, and the best they can do is to centralize a few groups to make translation a shared service. As a result, the brand loses consistency as it crosses borders, usually making it harder for the company to compete in local markets.

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In other words, many companies incur a large opportunity cost that they aren't even aware of, due to the lack of any organizational centralization for translation activities. But the lack of centralization itself stems from a bigger root cause — a failure to give translation its proper place within the organization.

Where translation should live at a modern organization

Does translation need a C-level title? Is there a need for a chief globalization officer? What about a localization czar? Well, this is not necessarily the best solution. There's a reason that such titles are uncommon. Translation should be represented on executive teams at many businesses, but not in this exact form. While there may be exceptions, at most companies, the proper home for translation is under marketing — global marketing in particular.

I know this might be a controversial statement for anyone who has witnessed large localization departments housed under product or engineering. This is the case in many older organizations that have been around for decades. That model had its reasons for emerging in its day. But here are seven key reasons why putting translation under marketing is a better model, one that is more suitable to any modern, tech-driven business that wants to truly maximize its global growth:

1) Budget. Marketing has the biggest budget at most companies, and therefore can throw great power behind translation. Other departments suffer from much smaller budgets, and can become so cost-conscious that they are often forced to take a miserly approach to translation, which can reduce quality and ultimately create an inferior user experience.

2) Investment mindset. Marketers are increasingly viewing all content (not just multilingual content) as an investment that can be leveraged across many channels, programs, and campaigns. Their reach, especially where content is concerned, extends well into other parts of the organization, such as client services, sales and product. As such, they are more likely to view translation with an investment mindset, calculating the value it can bring their companies overall, instead of just looking at it narrowly and myopically as a cost to be reduced.

3) Accountability. Marketers are more accustomed than ever to showing campaign attribution and return on investment (ROI) for the various programs they undertake, including content marketing programs. Rolling translation into this kind of system ensures that ROI will be tracked. When translation is housed in other departments, a common problem occurs — the business owner for translation doesn't actually have access to the internal data from the marketing team that would enable them to prove ROI. Often, it's like pulling teeth, and these in-house localization managers struggle, not because they don't have the skill or desire to prove the ROI of translation. It's because they can't overcome the internal barriers. And the root problem of that is that they have the wrong organizational home to begin with.

4) Quality. If translation can get proper attention and support from anyone in the company, it's going to be from the people who are in charge of, and understand, communications. They are less likely to try to skimp on quality than other parts of the organization with smaller budgets might be. Indeed, as more and more marketers are moving toward search engine optimization (SEO) focused, inbound

and content-driven strategies, and as they realize the importance of high-quality content to help them improve their search engine rankings, translation quality suddenly takes on more importance than ever before.

5) Strategy. Translation will never be part of a business's core strategy if it doesn't have a seat at the executive table. However, that doesn't mean that translation needs a separate and additional seat. It simply means that the seat where translation should live is the marketing seat, ideally global marketing. Quite simply, this is the best way for translation to become centralized at any modern organization. Then translation becomes built into the marketing strategy, which is guided by the overall business goals.

6) Technology. Marketing is increasingly tech-driven, and marketers today seek to understand the ROI of every activity via systems, technologies, analytics and tracking tools. The budget for marketing technologies alone has risen dramatically in the last few years, and translation technologies are now being viewed as an integral part of the marketing tech stack, along with customer relationship management tools, SEO and search engine marketing tools, online advertising portals, content marketing tools, social media platforms, advocacy marketing platforms, content management systems and so on.

7) Web. While the majority of enterprise content, especially legacy content, still resides in the form of business documents, this is changing fast. Many modern organizations already skew more toward web-based content, and this trend will only continue as laggards migrate their content toward online methods of creation and publication as well. Who owns the company's web presence? Marketing.

So, in a modern company, translation should naturally "live" under marketing. Ultimately, who cares more about high-quality communications that reflect well on the brand than marketing? If there's any department that will value translation enough to put its money where the customer's mouth is, it's marketing.

For many years, well-intentioned localization and translation managers tried very hard to "sell up" and try to convince executives of the value of translation. Getting the time or attention of an executive sponsor was nearly impossible. Only the very savvy or the very lucky, sometimes both, were able to fight for budget, time and attention for translation activities at their companies. But this mindset has obvious limitations. If localization has to rely on a "sponsor" to get attention, it's clearly not a true priority for the business in the first place.

For modern and tech-savvy companies, translation will have a seat at the leadership table, not in the form of a mere "sponsor," but in the form of a marketing leader, ideally the global marketing quarterback. Only then, can translation move from being viewed as a cost to being seen as an investment. And only then, can the industry's long-held dreams of truly centralized, enterprise-wide translation management, change status from "pipe dream" to "foregone conclusion." **M**

Convincing subject matter experts to use CAT tools

Konstantin Dranch & Alan White

In terms of specialized translations, subject matter experts (SMEs) are the last line of defense. But if you've ever tried hiring professional engineers, financial or marketing managers to review texts, then you know that these people are generally busy, and they prioritize their work according to their own rules. It is challenging to convince them to follow translation company workflows and to use specialized software. However, a UK-headquartered language service provider (LSP) overcame this challenge by building a process with 70 experts working alongside translators in the same ecosystem. Here is how they did it.

The story begins in 2013, when a global automotive/aerospace engineering company changed its translation provider because of quality issues.

The problem came from a fragmented workflow: the engineering company employed in-house SMEs who worked separately from translators hired by the LSP the enterprise was using at the time. Experts referred to Microsoft Office apps, which they knew well, while translators used computer-aided translation (CAT) tools. Because of the different ways of working, project managers were supposed to import changes manually. However, it was often the case that the managers didn't import the changes. Under pressure to deliver on deadline, the LSP often added corrections to the final product only. They forgot or simply did not have the time to update translation memory (TM) and term bases.

As a result, translators repeated mistakes over and over again. Review changes did not recur in the subsequent texts, and SMEs had to redo their corrections every time. It meant a waste of their working hours. At first, it seemed like a minor problem because the final translations were good. Nevertheless, over time the client had to terminate the contract with the LSP.

Lower tech requirements for the validators

The Translation People, a provider of language services headquartered in the United Kingdom with offices in Europe and the United States, approached the engineering enterprise with an offer to connect SMEs to translators on the same platform. This way, corrections could be added to the TM in real time, and emailing files or manually importing changes could be eliminated. As the TM grew, SMEs would have less and less work, freeing up their time for other activities.

The experts, or validators, comprised a diverse group of more than 70 people scattered across numerous locations and time zones. Some of them were stationed in the United Kingdom, but others were based as far away as South America and Asia. The engineering company conducted translations into 25 target languages with two to four reviewers per language: factory directors, marketing people and financial managers. They edited translations in their spare hours, often as a favor rather than as a full time job. They knew terminology in their field really well, but generally were not familiar with translation tools or processes, and had little time to learn them.

For SMEs to start working in CAT tools instead of Microsoft Word meant that the translation company needed to overcome the SMEs' resistance to technology. The LSP chose software that had a lightweight interface and operated directly from the browser. The software did not require installation or updates and it was possible to run it on any machine without having to lift corporate restrictions on new software. Furthermore, it allowed the LSP to provide licenses to translators,

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and use the best people for the job, even if they didn't own desktop translation memory as was often the case with linguists in developing countries and emerging markets. After these benefits had been brought to the negotiating table, the LSP was awarded the contract and started its work.

The LSP began with standard steps such as testing technical translators, as well as building TM and glossaries from aligned texts. However, the biggest task of training SMEs still lay ahead.

To organize this, a project manager set up a dedicated web page on the LSP website. It contained a link to the agency's project management system and a second link to the CAT tool for validators. In addition to the webpage, the project management team created a PDF reference guide for SMEs. It contained instructions on using the software tool and a step-by-step description of the workflow.

It made sense to invest time into making a proprietary guide, rather than to refer the client to an official wiki. Coming up with proprietary training materials increased brand awareness, since The Translation People representatives were new to the employees of the client. They needed to establish themselves and make their name known. A concise guide that contained only necessary operations was a great vessel for this.

Training and communication

When the landing page and the PDF guide were ready, the LSP started training. With the audience scattered around the world, sometimes as far away as Japan and South America, it made sense to run the sessions online in webinar format. Each session began with an introduction of the company and the process, and followed up with a live tool demo on shared screen.

From 10 to 12 experts attended each session, grouped by time zone, languages and availability. It wasn't easy to bring all SMEs together, and in the end the translation company ran seven webinars to reach everyone.

The sessions went smoothly, but attendees didn't ask many questions. It was only three months later while reviewing and validating texts that it became apparent how few had absorbed the training. Even though the chosen software system, Memsource, is relatively easy to start working in, the idea of TM, with its bilingual format, segments and suggestions, wasn't quite clear to SMEs. Project managers received many questions and they could see that some of the validators downloaded source texts to work on them locally. To overcome this difficulty, the LSP had to update training materials and do a lot of individual training.

Faced with some resistance to technology on the part of SMEs, the LSP had to stay on its feet and adjust training. They released video demos with instructions and created a shorter guide, only one page long, to complement the previous eight-page document. The new guide was handed to the SMEs as a printout for their desks.

After the second round of training and the distribution of the one page document, the number of technical support requests came down by about 40%. Obviously, the experts didn't have the time to scrutinize a longer PDF guide, but were quite happy to use a brief printout.

As a final step the communication approach changed and project managers focused on explaining the basics of translation technology to validators who still experienced difficulties.

They explained the benefits of TM for the enterprise, and specifically for the SMEs themselves. Over time, the use of the CAT tool led to less work on the part of validators because their terminology and style were being taken into account. They were visible to linguists when they translated, which led to a general decline in the number of corrections.

SMEs saw that this work was rewarded with improved translations, and were motivated to follow the suggested process. When proficiency with the CAT tool approached 100%, the LSP disabled file downloading to make sure validators worked only online.

In the end, it was not a single specific action that changed people's minds, but a combination of factors. While training sessions and material helped, and a lightweight interface made it easier to learn CAT tools, it came down to personal motivation, general practice and familiarity with the tool over time that did the trick.

A 25% efficiency increase

Now, two years into the project, all SMEs are working in the translation environment. SMEs implement corrections directly to a centralized TM, and it continues to grow.

On average, the number of changes per job has decreased by about 25% across all the languages. For a team of over 70, this means dozens and hundreds of saved billable hours. Peak improvement values in some languages, where the quality of previous translations was lower, reached roughly 45%.

Although it was a successful project, in hindsight, it would have been better to run live or face-to-face training sessions, even if it was costly. This would have established presence and the correct approach from the start. Another thing that could have been done differently would be to run the training right before the first project, leaving less time for skills to be forgotten. A pilot project or a dummy run could also have been used to solve this. **M**

The great rates debate

Oleg Semerikov

How much to charge: the perennial thorn in the side of freelance translators. What's everyone else doing? What's normal? What's too much? What's not enough? You might be forgiven for closing your eyes and picking a number out of a bag. But although calculating rates can be one of the most challenging parts of freelancing, it's also at the core of any viable business. However uncomfortable the topic, particularly if you're from a culture where talk of money or pricing your skills is a sensitive issue, it's one that deserves your time.

When you're thinking about rates, there are two main goals – keeping busy and paying the rent or mortgage. Charge too much and no one will work with you, so you can't pay your bills. Charge too little and you'll end up having to work all hours just to scrape together a living, ending up burnt out and frustrated. It's best to aim for sustainability, where you neither alienate clients nor exhaust yourself.

One shortcut to charging is to have a look at the average rates for your language pair or specialism and then charge that. It's simple and straightforward, but it has the disadvantage of not being tailored to your needs and your clients', and it doesn't take into account many of the other complex factors that go into creating sustainability. Add to this the difficulty of obtaining accurate data about rates and it's easy to see that just charging the average is an unprofitable cop out.

According to Proz.com, the largest online translators' community, the average price for translation of English is $10 to $12 per 100 source words, while the minimum rate is about $7 to $8 per 100 source words. Translation providers of rare languages command higher rates of up to $17.

The 2012 Common Sense Advisory survey of more than 3,700 language services providers and freelancers across 114 countries showed that the average price for translation, for the 30 most popular languages, is $13.40 per 100 words.

Cooperating with many professional freelance translators I find that their rates for translation from English to most European languages range from $6 to $15 per 100 source words depending on the translator's experience, the language pair, the topic of the text to be translated, the file format and other factors.

However, these are the prices freelancers usually offer to direct customers. They offer lower rates to translation agencies that they cooperate with on long-term contracts.

From my own experience of collaborating with a number of translation companies, it seems large Western European companies are ready to pay freelancers $4 to $6 per 100 words for English to Russian translation, for example, while some Eastern European agencies offer "dumping" rates that can fall below $1 per 100 words.

By contrast, according to my own research, translation agencies charge their clients rates ranging from $7 to $30 per 100 source words for translation from English to most European languages.

Finally, you should also consider different price units. Charging by source words is a common practice in English speaking countries, while Germans usually calculate translation rates using lines with a standard 55-60 characters per line. Ukrainian, Russian and other Eastern European translators normally charge by characters in the source text or by pages with a standard of 1,000 or 1,800 characters with or without

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Even for the same language pair, translators can charge different rates depending on the complexity of the project, the deadline, the file format, the subject matter and so on.

spaces per page. However, many freelancers prefer to charge by the word as an international unit for translation.

Sell your skills

So what should you consider when settling on prices? One basic factor to take into account is your skillset. Are your skills rare, like knowledge of an unusual language pair, and therefore more valuable? Are they particularly hard to develop, requiring significant investment, such as a law degree? Are they in demand, as with IT and web knowledge? This should all be reflected in your rates. Equally, it is possible to play to your strengths in the other direction as well. If you're an extremely fast and accurate translator of straightforward marketing materials you can afford to charge less per word, because your speed means you can still make a good hourly rate. If you can extract PDF text to Word or handle desktop publishing, these added extras should be reflected in your rates.

Leading on from the importance of your unique skills is the importance of selling them to the client. A handy hint from the field of psychology: establish value before quoting. Going in cold with a quote at the beginning of an email or call gives clients no incentive to choose to work with you. If you can first let them see what their money is buying them they will be much more likely to want to invest. So lead with your strengths: your specialist training, experience, speed and so on, before stating how much you charge. Don't give in too easily when clients try to haggle you down. A good rule of thumb is to think about how often clients haggle with you. If you regularly lose clients whenever the conversation turns to prices, it's possible you're overcharging. Equally, if clients always accept your first offer it's likely that you're undercharging, so be brave and try leading with a higher figure. All this is much easier to accomplish if you're busy, because if you lose a job through over-quoting you won't be sitting around without work, worrying about where your next meal is coming from. Remember that no one gets it right every time, and earning more money is a lifelong project rather than one to be accomplished overnight.

Be practical

Of course, in an ideal world you would be able to set the value of your choice on your no doubt unique and irreplaceable skills, but back on planet Earth there are other practicalities to consider! You need some realistic data to back you up when working out how much to charge, regarding both the market and your own expenditures. So do the math! You are a commercial enterprise, not a charity, and you need to be commercially viable just like any other business. Work out your living and working costs, from rent and utilities to taxes and health care. You need to earn at least this much. How many hours do you want to work? How much should you therefore be earning per hour, and how many words can you translate per hour? From this you can work out your target per-word rate and work toward it. This can be personalized endlessly. Perhaps you only want to work four days a week, but you're happy to live on less money. Perhaps you want to retire at 50, or buy a yacht, or send all eight of your children to expensive private schools. The best thing about self-employment is that it's all up to you. This is also the worst thing about self-employment! Keeping track of your earnings, whether at an hourly, weekly or monthly rate, will motivate you to keep trying when it comes to establishing yourself. It's worth remembering that everyone has to start somewhere, and the only route to sustainable success is hard work over many years. There are no shortcuts!

Practicalities aren't limited to your own outgoings, of course. Another key consideration when pricing your work is the market itself. Is there enough demand for the work you do for you to make a living charging your current rates? If not, can you offer other services to make up the shortfall? Can clients afford you, or are you forcing them to go elsewhere? Do you have enough work to keep yourself busy or are you always scrabbling to find another job?

Be flexible

You might consider not charging one fixed rate for a number of

reasons. One common tactic for new translators is to charge slightly lower than you would like until you have plenty of work to keep yourself busy, and then gradually acquire new clients at a higher rate, dropping your lower paying clients as you go. Of course, high rates are not the only benefit a client can offer. For example, although agencies tend to pay slightly less than direct clients, they compensate for lower rates by providing a good bulk of work that can become your bread and butter.

Even with one client your rate might change from job to job. For very small jobs you might consider charging a minimum fee to cover the relatively high ratio of admin to translation. You might offer discounts for repetitions if you use a computer-aided translation tool. You might also decide to charge less for easier or less important jobs, or charge a premium for anything that needs to be published. Some clients will ask you to offer discounts for large volumes of work. You need to think carefully about whether this makes sense on a case-by-case basis. If they are providing a large project with a lot of repetition of subject matter it might well be worth discounting the final price. With the same topic you'll become an "expert" as you go, so after the first few thousand words you won't need to research in such great detail and you'll find that you speed up. If, however, your client's idea of bulk work is a selection of different smaller texts on a variety of topics it might not make sense to offer a discount. If you need to research each text from scratch you may find your working week consumed with a discounted job when you could be earning your full rate from other clients.

Finally, there are some other reasons why you might add a premium to your rate, perhaps to account for the inconvenience of a rush job or weekend working, or perhaps to cover bank transfer or PayPal fees for clients paying in a foreign currency. Through experience and trial and error you will learn what works for you.

Becoming the king or queen of the translation jungle

To sum up, ensure that your quotes come from the head, not the heart. Do not base your quotes on a fear of overcharging, vague notions about what other translators are turning or your unexamined beliefs about how much you deserve to earn, particularly if you are not blessed with natural self-confidence! Instead, look for real and concrete examples of how much other translators of your ability are earning, as well as the realities of your own finances and those of the market. Ultimately sustainable working practices mean that you should settle on a rate that is fair to both you and the client, where they get value for money and you get a fair rate for a job well done. Your fee should be high enough to motivate you to do a good job, and you will do yourself and other translators no favors to settle for less and rush resentfully through an underpaid job.

Finally, do not expect well paying, high-quality work to just land in your inbox. While there might be some low-hanging fruit out there, like any good hunter-gatherer you will need to stalk your prey if you want to reap the full rewards! Time spent emailing new clients, networking and developing your professional skills will pay dividends in the long run, so neglect these tasks at your peril. Do not be put off by the effort of marketing yourself. If cold-calling 100 potential new clients lands you one long-term, well paying collaboration, then you have not wasted your time, and just because a company has not advertised their need for a translator it does not mean that you are not exactly what they are looking for. Fortune favors the brave in the translation jungle, so do your research and then have courage enough in your convictions to go and seek out the rates you want. With patience, hard work and diligence both in your translating and your marketing you will be richly rewarded. **M**

Advancing science by overcoming language barriers

Abe Lederman & Darcy Katzman

Scientific discoveries are often restrained by language. The English language may be thought of as the "universal language" in the global scientific community, but only a fraction of scientists actually speak the language, continuing to publish information in their native languages and in non-English databases. Between 2001 and 2011, the number of publications from China in peer-reviewed, non-English journals increased from 3% to 11% of the total world output. In this decade, China will surpass the United States as the most prolific publisher of scientific journal articles. These non-English publications are submerged in what is known as the Deep Web. They aren't likely to be found in places that search engines such as Google or Bing crawl, meaning they will not be easily accessible to English-speaking researchers.

The Deep Web (Figure 1) has garnered a lot of interest lately, partly because the dark web and Deep Web have been referred to interchangeably by many people. In October 2013, the FBI shut down the Silk Road website, a dark web eBay-style marketplace for selling illegal drugs, stolen credit cards and other nefarious items. But the Deep Web is very different from the dark web black market where shifty and illegal activity takes place.

Think of the Deep Web as more academic – used by knowledge workers, librarians and corporate researchers to access the latest scientific and technical reports, gather competitive intelligence or gain insights from the latest government data published. Most of this information is hidden simply because it has not been "surfaced" to the general public through Google or Bing spiders, or is not available globally because of language barriers. If a publication reaches Google Scholar, chances are, it now floats in the broad net of the shallow web, no longer submerged in the Deep Web. A large number of global science publications are located in the Deep Web, only accessible through passwords, subscriptions and only accessible to native language speakers. These publications, hiding in the Deep Web, limit the spread of science and discovery.

Figure 1: Areas of the web.

Researchers looking for information that is not in their native language(s) find that time works against them. The carrot of scientific collaboration is just before them, yet out of reach

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Darcy Katzman served as the WorldWideScience.org and Microsoft Translator liaison at Deep Web Technologies from 2007 to 2014.

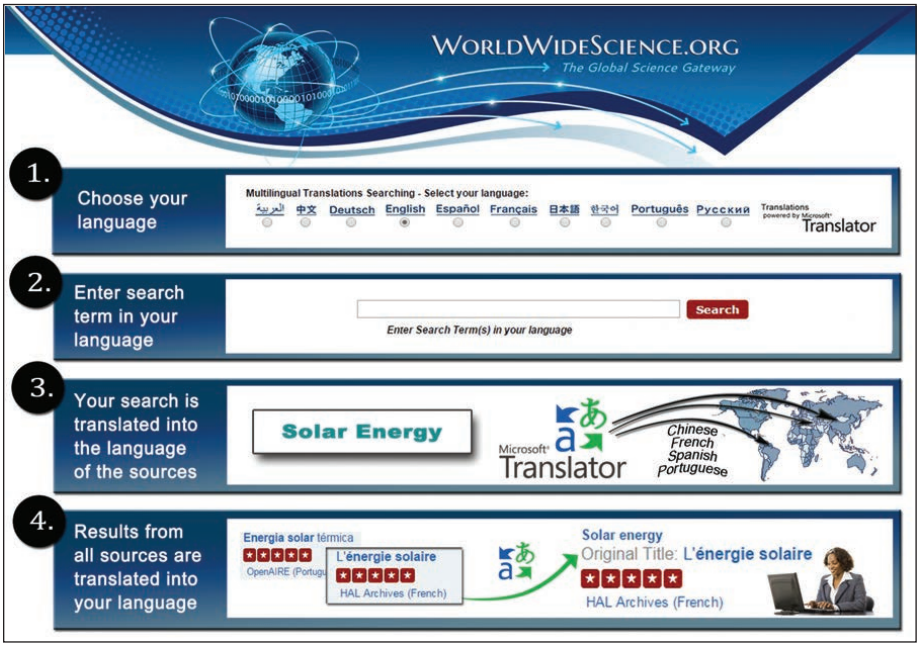

Figure 2: WorldWideScience.org translation flow.

unless they undertake hours and hours of back and forth between a translator and whatever database they hope will have relevant scientific information. In reality, many of these scientists don't even know where to look, nor do they even want to spend the time searching in these repositories. The effort is monumentally time-consuming. In the science and technical industries where timely distribution and access to new knowledge is critical, this process is laborious, painstaking and often unsuccessful, given the sheer effort needed to find information.

Creating the global science gateway

On January 21, 2007, at a ceremony at the British Library, Ray Orbach, then under secretary for science at the US Department of Energy, and Lynne Brindley, then chief executive of the British Library, signed a statement of intent to collaborate in creating a global science gateway that would make science output more easily shareable across the globe.

An initial version of the global science gateway, which became known as WorldWideScience.org, was developed and launched in six months using a federated search product from Deep Web Technologies (DWT) that can quickly and easily search in real-time dispersed science repositories. This initial version of WorldWideScience.org searched 12 databases from ten countries.

Federated search, unlike popular search engines such as Google and Bing, doesn't send spiders out to build an index of information. Instead, when a user clicks the search button, a federated search engine will send that search query out to all of the sources it searches, simultaneously. It's almost as though the user is going to each source of information and searching it directly, rather than searching from a single search box. Once the federated search engine has received all of the results from all of the sources, it blends them together, ranks them, removes any duplicate results and displays them on a single page for the user to see.

On June 12, 2008, at a gathering in Seoul, South Korea, the WorldWideScience Alliance was formed "to formalize their commitment to sustain and build upon the online gateway to the world's science information." The founding document for the WorldWideScience Alliance, signed by 14 representatives of scientific and technical organizations around the world, noted:

"By transitioning WorldWideScience.org from bilateral to multilateral governance, we commit ourselves to a long-term vision for enabling and accelerating scientific discovery through unique and innovative use of federated searching and other technologies. Through our joint efforts, we will sustain and build upon the purpose of providing a single, sophisticated point of access to diverse scientific resources and knowledge from nations and international bodies around the world."

With WorldWideScience.org now firmly established as the go-to gateway for access to a growing collection of the world's most valuable science collections (38 databases from 32 countries) the WorldWideScience Alliance asked DWT to undertake a research effort with the goals of developing a capability for searching non-English science repositories in WorldWideScience.org and making the content in WorldWideScience.org more easily available to non-English speakers in their language.

Choosing a machine translation engine

In this next phase DWT envisioned enhancing WorldWideScience.org with a multilingual search and translation capability for a more comprehensive Deep Web search. Using live translators was simply not an option for the search engine. By its very nature, the search engine required "on-the-fly" translations to work in an on-demand environment, translating a user's query as well as the results brought back. While machine translation is not perfect, it would allow researchers to discover important articles in their field of study. And if an article seemed valuable enough, the researcher could request that the article be translated by a human translator.

Knowing this, DWT investigated a number of machine translation engines, keeping the following requirements in mind:

- *Multiple language support:* Although WorldWideScience.org only needed ten languages for the multilingual launch, the Alliance's plans to grow their membership and their search of diverse science databases required the support of as many language pairs as possible from the translation engine. Only engines supporting a broad number of languages were evaluated.
- *Translation quality:* Acknowledging that the quality of machine translations varies, the Alliance needed to find a machine translator that would perform well across a wide range of languages.

Figure 3: Search results can be easily translated into a variety of languages.

■ *Programmatic interface:* DWT required that the machine translation be accessible programmatically via an application programming interface (API) that would facilitate integrating the machine translation service into its federated search product.

■ *Affordable:* Machine translation software and services can be expensive. The WorldWideScience Alliance needed an affordable solution.

Microsoft Translator, developed and enhanced by Microsoft Research's Natural Language Processing group going back to 1999, fulfilled all of the above requirements. Microsoft Translator uses a statistical translation model to perform translations. This approach is the most common approach today, and requires a large corpus of text and corresponding translated text to build mostly automatically a translator for a new language pair. Microsoft Translator is highly scalable, customizable and supports 50 languages, while continually adding languages to its list. Most importantly, the WorldWideScience Alliance and Deep Web Technologies were able to establish a partnership with the Microsoft Translator group, which supported their development efforts and helped to promote WorldWideScience.org.

Translating the world's science

Multilingual WorldWide-Science.org Beta officially launched in June 2010 at the International Council for Scientific and Technical Information (ICSTI) annual conference held in Helsinki, Finland. It was the first search engine to search databases in diverse languages and retrieve and translate results. The engine was hailed by Richard Boulderstone from the British Library as "the world's most important scientific resource, where the global science community can share knowledge." WorldWideScience.org Beta searched in nine languages: English, Chinese, French, German, Japanese, Korean, Portuguese, Spanish and Russian, adding Arabic two years later.

Finding information on WorldWideScience.org is simple: a researcher first chooses the language that he or she would like to search in and submits a search query (Figure 2). The query that has been entered in the user's language is then translated into the languages of the sources that will be searched. When results come back, they are translated from the language of the source to the

user's language using Microsoft Translator. The researcher then sees a single page of results (Figure 3) in his or her language, with the most relevant results at the top of the page. The Microsoft Translator service allows users to view on a split-screen an original article and a translated version of the same article side by side.

While multilingual federated search has been well received by WorldWideScience.org users and is in production at a number of other sites, improving federated search is an ongoing process.

In the next couple of years, DWT will add support for additional languages as new members join the WorldWideScience Alliance and will require databases in languages not currently supported by WorldWideScience.org to be searched as well as enable users in these new member countries to search in their languages. We also envision leveraging the Microsoft Translator Hub to create custom translators for languages not available via Microsoft Translator.

Machine translation quality varies among different vendors and may vary depending on the language pair and direction – for example English to Russian vs Russian to English. DWT is working on making its translation modules plug-and-play so that it is easy to use the best available machine translation software based on the languages needed to be translated.

A key capability of our federated search is relevance ranking, determining how closely a search result matches the user's query. Determining relevance is challenging in non-romance languages, particularly East Asian languages such as Chinese, Japanese and Korean. Integrating technologies from companies that are good at parsing and analyzing text in foreign languages will help to improve the quality of the relevance ranking.

Finally, WorldWideScience.org will be enhanced so that it automatically detects the country that the user is coming from, presents an interface in the user's local language and assumes that users are entering their query in their local language. It is also possible to switch the user interface of the federated search application among the languages now supported.

The good news is that the multilingual federated search capability initially developed for WorldWideScience.org is not limited to that site and not even limited to science. Since the initial launch of multilingual WorldWideScence.org in 2010, DWT has developed a number of other multilingual federated search applications.

In 2015, the United Nations Economic Commission in Africa (UNECA) will launch their multilingual federated search portal to enhance cross-pollination of innovative news and ideas for and throughout Africa. The UNECA portal will search in four languages: English, Spanish, Portuguese and French.

Outside of science we see an opportunity to provide global companies with a multilingual competitive intelligence capability so, for example, if a large contractor is bidding on a project in China it will have access to local intelligence in their own language. DWT sees the opportunity to create a website that searches the world's most important news and media sites in their native languages, eliminating some of the sugar coating and bias that occurs when global news is summarized by English-focused news outlets.

In June 2015, WorldWideScience.org will be celebrating its eighth birthday. Over the past eight years, the site has received many accolades. The Science Gateway was promoted to the highest levels of the US State Department as an example of US scientific cooperation with counterparts in China and Russia. WorldWideScience.org is seen as helping to reduce the "digital divide" by providing access to publicly available scientific research output to many in third world countries who do not have access to commercially available scientific literature.

Today, searching 500 million pages of quality science and technology information from around the world, across 100 repositories with 22 of these repositories being non-English, WorldWideScience.org has proven that scientific discoveries can surpass language barriers. **M**

Advances in machine translation

Andrzej Zydroń

In 1978, Kurzweil Computer Products launched the first commercial optical character recognition (OCR) product. It had mixed reviews and was reasonably good for clean Courier font published text. Initial quality on a mix of typefaces was only around 90%, which was too low for general acceptance: it was quicker and cheaper to transcribe from scratch than it was to post-edit the OCRed text. By 1990, overall quality for commercial OCR products had reached 97%, which was still too low, but by 1999 overall quality had reached 99% – the tipping point where general use and acceptance of OCR was a given. We are approaching a similar point with machine translation (MT).

The great advances in MT over the past decade resulted from the timely coming together of four main technologies: First, Big Data, in the form of the availability of very large parallel multilingual corpora. Second, the alignment of bilingual corpora at the sentence/segment level. Third, the application of Bayesian probabilities to work out the word and phrase alignments for each segment in the form of Hidden Markov Models (HMM). Fourth, the use of the word and phrase alignments to "decode" new text.

This statistical machine translation (SMT) approach originated, like so much good work in this field, from IBM research and was first presented as a concept at the 1996 COLING conference in Copenhagen. These ideas were taken up by the European Union (EU) funded Moses project and have been seminal in breaking down the language barrier on the Internet.

SMT has provided very important advancements in MT. Whereas previous attempts at MT could only deal with very restricted language pairs and controlled source language, text SMT is totally unconstrained in this respect, and with enough data can attempt any language pair if given enough aligned segment data.

We have all invariably used SMT in the form of Google Translate or from the multitude of spinoff SMT engines. The list of contributors in this field is long both in terms of academic institutions and researchers, but special note must go to the EU and Philipp Koehn, Franz Josef Och and Daniel Marcu who published the seminal paper "Statistical Phrase-Based Translation" in 2003, as well as Hermann Ney for his original work on the HMM approach to word alignment. Special note must also go to Professor Andy Way and his team from Dublin City University (DCU). DCU has become one of the foremost SMT centers of excellence worldwide.

The EU-funded EuroMatrix and EuroMatrixPlus have provided great improvements to the overall performance and quality of SMT, with recent improvements to the decoder footprint from Marcin Junczys-Dowmunt. Franz Josef Och became the brains behind Google Translate, which has arguably become the most well known and iconic image of SMT. Daniel Marcu established Language Weaver, while Philipp Koehn helped establish Asia Online as one of the most famous commercial SMT companies.

Great improvements have been made to the basic SMT models being used, but the Bayesian and HMM concepts are still at the core of the alignment process. Improvements have been made to the alignment model, concentrating on phrase alignment as well as hierarchical phrase alignment. Nevertheless, the core concept of SMT continues to be "guessing"

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based on the Bayesian probability model as to what are the most probable alignments between the source and target languages at the word and/or phrase level.

The basic, fundamental premise of SMT is that we do not have access to the kinds of bilingual lexicons we want, so the only way is to try and work out the most probable word and phrase alignments.

The flying FALCON

One big problem with SMT is the need for a large amount of data to make it accurate. Smaller companies may not have the linguistic assets or the research needed for their own engines – unless they collaborate. The FALCON project attempts to address this by bringing together a collection of European language technology developers and academics. It is an EU-funded Seventh Framework Project comprising Trinity College Dublin (TCD), DCU, Easyling, Interverbum and XTM International. FALCON stands for Federated Active Linguistic data CuratiON, and is largely the brainchild of David Lewis, Research Fellow at TCD. FALCON initially had the following goals:

- To establish a formal standard model for Linked Language and Localisation Data (L3Data) as a federated platform for data sharing based on a Resource Description Framework (RDF) metadata schema.
- To integrate Easyling's Skawa proxy-based website translation solution, Interverbum's TermWeb web-based advanced terminology management and XTM's web-based translation management and computer assisted translation products in one seamless platform.
- To integrate and improve SMT performance benefitting from the L3Data federated model as an integral part of the project as well as integration of the DCU SMT engine with XTM.

The FALCON project started in October 2013 and is scheduled to run for two years, ending in September 2015.

FALCON will provide a mechanism for the controlled sharing and reuse of language resources, combining open corpora from public bodies with richly annotated output from commercial translation projects. Federated access control will enable sharing and reuse of commercial resources while respecting business partnerships, client relationships and competitive and licensing concerns.

You can think of the L3Data aspect of FALCON as a distributed, federated database that points to the domain-specific training and terminology data that is available, given certain commercial restrictions as regards private data, and that can be used to build custom SMT engines on the fly. In the world of the internet, only a distributed federated linked data database can achieve this. FALCON will use the highly flexible RDF as well as a Simple Protocol and RDF Query Language (SPARQL) database. Using the semantic web concept, FALCON will provide a fast and efficient mechanism for sharing translation memory and terminology data for specific domains.

As Don DePalma of Common Sense Advisory describes eloquently in a Global Watchtower blog post entitled "Building the Localization Web," this will potentially allow smaller language service providers to have access to a much broader range of linguistic assets than would otherwise be the case. A federated, distributed L3Data store will allow for a flexible and very scalable model, without the limitations and restrictions associated with centralized repositories.

The improvements to SMT foreseen at the start of the FALCON project were to involve continuous dynamic retraining of the SMT engine with real-time feedback of post-edited output. It would also involve named entity recognition (NER) to protect personal and product names, for example, from being processed accidentally by the SMT engine. For instance, *President Bush* should never be transliterated as *President Small Shrub*, and NER ensures that it is not.

The project also aims to provide an optimal segment post-editing sequence that will offer maximum benefit for the continuous retraining of the SMT engine. Another of its goals is the

integration of terminology into the SMT chain by forcing the SMT engine to use existing terminology, where it is identified, (so-called "forced decoding") rather than relying on the statistical probabilities for the translation. Lastly, it aims at active translation memory (TM) and terminology resource curation through an L3Data RDF database built as part of the FALCON project.

Apart from the L3Data store, which in its own right is an important step forward in terms of establishing a federated way of holding relevant data, and curation and optimal translation sequence, the improvements build on existing advances in SMT. Nevertheless their integration into a production workflow based around XTM represents an important incremental step forward in terms of automation and consolidation of techniques.

The initial SMT engine for FALCON was going to be OpenMaTrEx (www.openmatrex.org) from DCU. OpenMaTrEx was an adaptation of the Moses SMT engine, but with an added twist: it introduced the concept of "marker" or function words to assist in phrase alignment. All languages use around 230 function words such as prepositions, conjunctions, pronouns and ordinals such as *if*, *but*, *above*, *over*, *under*, *first* and so on to delineate phrases and subsegments in sentences. This was an interesting avenue of experimentation that in the end did not provide the hoped for improvement in alignment, but the concept was nevertheless very sound from the linguistic point of view.

During the initial investigations concerning improvements to phrase handling and so on, the FALCON project team stumbled across BabelNet (www.babelnet.org). However, the implications of BabelNet were not immediately apparent during the initial design phase. It was only while investigating ways of improving SMT performance in terms of word and phrase alignment that its significance became truly apparent. An initial review of the BabelNet dataset and API provided a revelation.

BabelNet to the rescue

BabelNet is a marvelous project funded by the European Research Council as part of the MultiJEDI (Multilingual

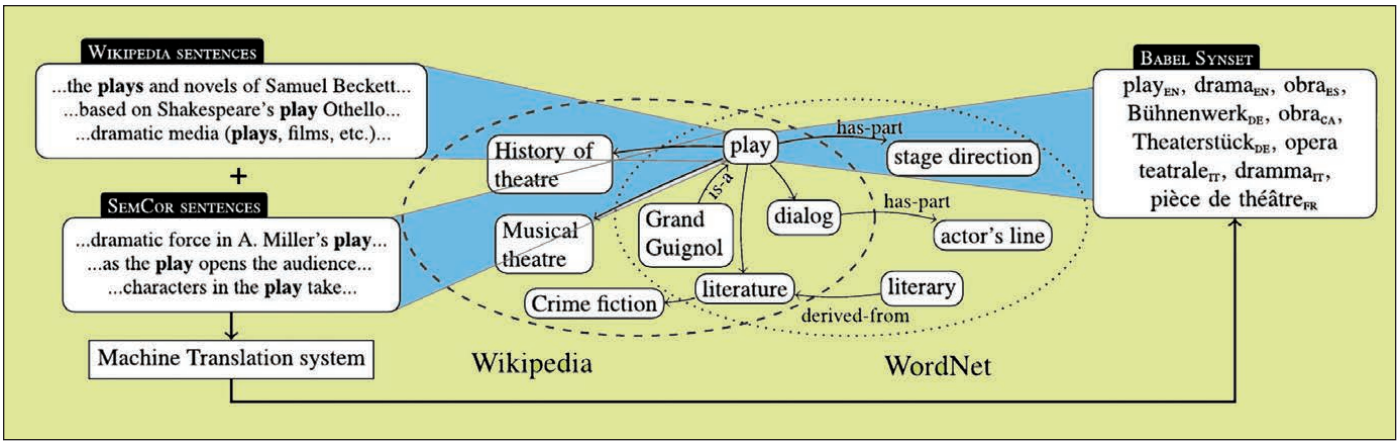

Figure 1: BabelNet makes use of enormous data pools to disambiguate words.

Joint word sensE DIsambiguation) project. BabelNet is a multilingual lexicalized semantic network and ontology. So far, so good. What is impressive about BabelNet is its sheer size, quality and scope: BabelNet 2.5 contains 9.5 million entries across 50 languages. This is truly Big Lexical Data. Roberto Navigli and his team at the Sapienza Università di Roma have created something even more remarkable: the plan for BabelNet 3.0 is 13+ million entries across 263 languages. This increases the size, breadth and depth of BabelNet's semantic data even more (Figure 1).

By trawling through Princeton's remarkable WordNet lexical resource for the English language and then through Wiktionary, Wikipedia and following through additional resources on the Internet, BabelNet has produced a veritable multilingual parallel treasure trove. Its richness also allows for word sense disambiguation (WSD) for homographs, one of the big tricky spots for MT and SMT.

The BabelNet API makes it easy to produce bilingual dictionaries. It does not take a great deal of imagination to work out what the addition of extremely large-scale dictionaries can have on the accuracy of SMT engines. Even just adding the dictionary data to the training data for a Moses-based SMT engine has a significant effect on the accuracy and quality scores.

Big lexical data has the potential to remove the "blindfolds" that have shackled SMT to date, significantly improving both accuracy and performance through bilingual dictionaries and word sense disambiguation.

BabelNet will continue to grow in size and scope over the next few years adding further online dictionary data such as IATE (http://iate.europa.eu/) and other multilingual open data resources. BabelNet now forms an integral part of the FALCON project, helping improve word alignment for the DCU SMT engine.

The future

There is still much work to be done. The Moses GIZA++ word aligner is not optimized for dictionary input and has no direct notion of mechanism for WSD. The Berkeley Aligner can take dictionary input as it is designed for both supervised and unsupervised operation but is primarily designed for word and not phrase alignment. Much research work remains, but the fundamentals of SMT have now been significantly shifted. BabelNet in its current form does not tackle function words, but it is relatively simple using existing internet resources to "harvest" the bilingual equivalents between various languages. The use of function words can then be used to assist with subsegment and phrase alignment in the manner foreseen by OpenMaTrEx.

The SMT team at DCU, Trinity College and the rest of the FALCON team will be working on adapting existing Open Source software such as Moses and the Berkeley, Apache and Stamford tools to take maximum advantage of BabelNet.

Many other features of SMT regarding morphology and differences in word sequences between languages remain to be fully resolved in the open source domain, but the basic building blocks for truly effective machine translation are now in place. Just as search engines revolutionized the way we access data on the internet using methods unforeseen in the early 1990s, SMT is well on the way to becoming our primary mode of translation. We are already using SMT to get the gist of what is on a given web page or email in a language that we do not understand, of course.

Human endeavor is always based on incremental improvements. Just as OCR reached a tipping point in the mid-1990s, so will SMT become the predominant tool for translation within the next five years. Just as translation memory, terminology tools and integrated translation management systems have helped to automate and reduce translation and more significantly project management costs, integrated and automated quality SMT will further automate the actual translation process itself. Translation will largely become an SMT post-editing process.

The quality and data resource issues have been largely addressed in theoretical terms but implementation of these ideas is well on the way. The translation workflow will be mainly around post-editing for most commercial translation projects. This can only be a good thing for all concerned as the demand for translation is growing at around 8% per annum and further automation of the process is the only way to meet this growing need. The advances in MT and increased SMT usage contribute greatly to the expansion in global trade and thus help to lift billions of people from levels of poverty. **M**

Basic terminology

This section offers terminology, abbreviations, acronyms and other resources, especially as related to the content of this issue. For more definitions, see the Glossary section of MultiLingual's *annual Resource Directory and Index (www.multilingual.com/resourceDirectory).*

A/B testing. In the context of marketing and business intelligence, a randomized experiment with two variants, A and B, which are the control and treatment in the controlled experiment. It is a form of statistical hypothesis testing with two variants.

application programming interface (API). A software interface that enables applications to communicate with each other. An API is the set of programming language constructs or statements that can be coded in an application program to obtain the specific functions and services provided by an underlying operating system or service program.

computer-aided translation (CAT). Computer technology applications that assist in the act of translating text from one language to another.

consecutive interpreting. The interpreter begins his or her interpretation of a complete message after the speaker has stopped producing the source utterance. At the time that the interpretation is rendered, the interpreter is the only person in the communication environment who is producing a message. Normally, in consecutive interpreting, the interpreter is alongside the speaker, listening and taking notes as the speech progresses. When the speaker has finished or comes to a pause, the interpreter reproduces the message in the target language, in its entirety and as though he or she were making the original speech.

content management system (CMS). A system used to store and subsequently find and retrieve large amounts of data. CMSs were not originally designed to synchronize translation and localization of content, so most have been partnered with globalization management systems.

crowdsourcing. The act of taking a task traditionally performed by an employee or contractor and outsourcing it to an undefined, generally large group of people, in the form of an open call. For example, the public may be invited to develop a new technology, carry out a design task, refine an algorithm, or help capture, systematize or analyze large amounts of data.

The Darwin Information Typing Architecture (DITA). A topic-oriented XML-based document architecture managed by the DITA Technical Committee at the Organization for the Advancement of Structured Information Standards (OASIS).

eXtensible Markup Language (XML). A programming language/specification pared down from SGML, an international standard for the publication and delivery of electronic information, designed especially for web documents.

International Organization for Standardization (ISO). A network of national standards institutes from 145 countries working in partnership with international organizations, governments, industry, business and consumer representatives. ISO acts as a bridge between public and private sectors.

internationalization (i18n). Especially in a computing context, the process of generalizing a product so that it can handle multiple languages and cultural conventions (currency, number separators, dates) without the need for redesign.

Internationalization Tag Set (ITS). A set of attributes and elements designed to provide internationalization and localization support in XML. ITS 2.0 is the current version of the standard.

localization (l10n). In this context, the process of adapting a product or software to a specific international language or culture so that it seems natural to that particular region. True localization considers language, culture, customs and the characteristics of the target locale.

machine translation (MT). A technology that translates text from one human language to another, using terminology glossaries and advanced grammatical, syntactic and semantic analysis techniques.

natural language processing (NLP). A main focus of computational linguistics, the aim of NLP is to devise techniques to automatically analyze large quantities of spoken (transcribed) or written text in ways that parallel what happens when humans perform this task.

project management (PM). The systematic planning, organizing and controlling of allocated resources to accomplish project cost, time and performance objectives. PM is normally reserved for focused, nonrepetitive, time-limited activities with some degree of risk.

return on investment (ROI). In finance, the ratio of money gained or lost on an investment relative to the amount of money invested. The amount of money gained or lost may be referred to as interest, profit/loss, gain/loss or net income/loss.

rule-based machine translation (RBMT). The application of sets of linguistic rules that are defined as correspondences between the structure of the source language and that of the target language. The first stage involves analyzing the input text for morphology and syntax — and sometimes semantics — to create an internal representation. The translation is then generated from this representation using extensive lexicons with morphological, syntactic and semantic information, and large sets of rules.

simship. Simultaneous shipment of a product to different markets worldwide, as opposed to releasing in the home market first and in other locales later.

simultaneous interpreting. The interpreter reformulates the message into the target language as quickly as possible while the source speaker is speaking. Normally, in simultaneous interpreting between spoken languages, the interpreter sits at a microphone in a soundproof booth, usually with a clear view of the speaker, listening through headphones to the incoming message in the source language. The interpreter then relays the message in the target language into the microphone to whoever is listening.

source language (SL). A language that is to be translated into another language.

statistical machine translation (SMT). A machine translation paradigm where translations are generated on the basis of statistical models whose parameters are derived from the analysis of bilingual text corpora. SMT is the translation of text from one human language to another by a computer that learned how to translate from vast amounts of translated text.

TMX (Translation Memory eXchange). An open XML standard for the exchange of translation memory data created by computer-aided translation and localization tools.

translation management system (TMS). Sometimes also known as a globalization management system, a TMS automates localization workflow to reduce the time and money employed by manpower. It typically includes process management technology to automate the flow of work and linguistic technology to aid the translator.

translation memory (TM). A special database that stores previously translated sentences which can then be reused on a sentence-by-sentence basis. The database matches source to target language pairs.

Unicode. The Unicode Worldwide Character Standard (Unicode) is a character encoding standard used to represent text for computer processing. Originally designed to support 65,000 characters, it now has encoding forms to support more than one million characters.

XML Localization Interchange File Format (XLIFF). An XML-based format for exchanging localization data. Standardized by OASIS in April 2002 and aimed at the localization industry, XLIFF specifies elements and attributes to aid in localization. XLIFF could be used to exchange data between companies, such as a software publisher and a localization vendor, or between localization tools, such as translation memory systems and machine translation systems.

xml:tm (XML-based Text Memory). A standard for XML to allow ease of translation of XML documents.

Associations

elia.
european language industry association

Elia
Elia, the European Language Industry Association, brings together translation, localization and interpreting companies that do business in Europe. The association provides its members with tools and opportunities to improve their businesses such as training and networking events, resources for business development and joint marketing efforts. Above all, Elia is a community of peers. It is a place for language companies to learn, grow, socialize and share. Join us. Discover Elia. Share the enthusiasm.
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GALA
Globalization & Localization Association

Globalization and Localization Association
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.
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localizationguy

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STAR Group *Ramsen, Switzerland, 41-52-742-9200 216-691-7827, Email: info@star-group.net Web: www.star-group.net* ***Ad on page 10***

Localization Services

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Languages Asian and European

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Languages All

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Translation Management Systems

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Web-based

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Adam Jacot de Boinod

Red, white and blue with emotion

In 1969, the linguistic community comprised of Brent Berlin and Paul Kay believed it wasn't fair to argue that there was a striking difference between the color idioms of various languages, or that one could conclude that every language had worked out its own system in a totally arbitrary way.

There has been much talk in the language world of "linguistic relativity," which looks at how the structure of a language can alter the method by which its users envisage the world, and the idea of language determining thought. This is called the Sapir-Whorf hypothesis. The current view is of a more balanced notion of linguistic relativity, namely that language influences certain kinds of cognitive processes in nontrivial ways, but that other processes are better seen as subject to universal factors.

There is a famous Korean proverb, *kagingaksaek*, meaning "for each man a color" (or "many people, many opinions") and it is certainly and refreshingly true that around the world the use of idioms involving color varies considerably. We can be green with envy, see red or feel a bit blue. Colors have a strong symbolic force, though not everyone agrees on what they stand for. Take green, for example — it certainly seems a constant reference point for the inconstant world of emotions:

Być zielonym z zazdrości (Polish): to be very envious (literally, to be green from envy).

Skide grønne grise (Danish): to be very nervous (literally, to defecate green pigs).

Håbet er lysegrønt (Danish): stay hopeful even when it looks bleak (literally, hope is light green).

Grün vor Stolz (German): very proud (literally, green with pride).

Me sacas canas verdes (Spanish): you are annoying or angering me (literally, you're giving me green hairs).

Vert de peur (French): very frightened (literally, green from fear).

Ficar verde de raiva (Portuguese): to become furious (literally, to become green with rage).

Purple, however, seems to signify the consequences of excess:

Ponerse morado (Spanish): to be full [of food] (to become purple).

A fi vânăt (Romanian): to be bruised (to be purple).

Ficar roxo de raiva (Portuguese): to become enraged (to turn purple with rage).

Paars van de kou zien (Dutch): extremely cold (purple from the cold).

Whereas brown has bleaker connotations:

Ze bruin bakken (Dutch): to brag or exaggerate (to bake them brown).

Imprensa marrom (Portuguese): the disreputable/tabloid press (the brown press).

Faire quelqu'un marron (French): to cheat on someone

Adam Jacot de Boinod is the author of The Meaning of Tingo and Other Extraordinary Words from around the World, *published by Penguin Books, and creator of the iPhone App Tingo, a quiz about unusual words.*

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

(to make someone brown).

Esto pasa de castaño oscuro (Spanish): this is beyond a joke (this goes beyond dark brown).

Pink appears at least to offer some greater cheer:

Pintarlo de color rosa (Spanish): to gild the lily, overdo it (to paint it pink).

Op een roze wolkje zitten (Dutch): to be annoyingly happy in love (to sit on a little pink cloud).

Svæve på en lyserød (Danish): to be in love (to float on a pink cloud).

Pembe yalan (Turkish): a white lie, a "good" lie (a pink lie).

And white often denotes purity:

Poner la mente en blanco (Spanish): to clear your mind of thoughts (to put your mind in white).

Piu bianco non si puo (Italian): blameless, innocent (more white you cannot).

Eine weiße Weste haben (German): to be innocent (to have a white vest).

So with all the constancy suggested, it's heartening when the same feeling can be expressed through different colors, such as jealousy:

Gelb vor Eifersucht werden (German): to become yellow with jealousy.

Svartsjuk (Swedish): jealousy (black ill).

Groen van jaloezie zien (Dutch): to be very jealous (to see green from jealousy).

There is also the sense of impecunity:

Al verde (Italian): in the green (short of cash).

Estar sin blanca (Spanish): to be broke (to be without white).

Op zwart zaad zitten (Dutch): to be broke (to sit on black seed).

Or sheer anger, which in English we call seeing red:

A se face roşu de mînic (Romanian): to become furious (to turn pink with rage).

Ficar verde de raiva (Portuguese): to become furious (to become green with rage).

Doprowadzić kogoś do białej gorączki (Polish): to make someone angry (to lead someone into a white fever).

I find it rather refreshing that we can't assume any of the preconceptions of which colors should be suggested to represent a particular emotional framework, and that each country and language has a different history of idioms they are accustomed to employing. **M**

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it's just not evenly distributed."

William Gibson

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