

The Guide from MultiLingual Computing & Technology

GLOBAL WEB

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contents

- 4 Building a Global Web Site
John Yunker
- 10 Global Web Sites: Issues and Examples
David Shadbolt
- 14 The W3C at Work
Martin Dürst






GUIDE GETTING
STARTED

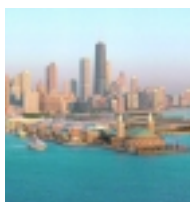


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Introduction to the Global Web

Millions of people use the World Wide Web every day, and more and more of them are surfing in languages other than English. In early March, English-speaking Web users were about 36% of the worldwide total, according to Global Reach. And they use the Web for all kinds of reasons, from homework to auctions, from news to meetings and political campaigns.

Banks, real estate firms, event planners, news outlets, consultants, retail clothing companies, consultants, farmers' cooperatives and a host of other businesses — as well as governments, nonprofit organizations and individuals — are discovering the benefits and perils of creating a global Web site. This special supplement is designed to introduce some of the important issues and background information that will help anyone develop a Web site that works worldwide.

John Yunker's overview of the basic principles involved in building a successful global Web site includes dramatic examples of sites that work and sites that don't, and explains how to build a site that serves both the company and customers.

David Shadbolt profiles the globalization process as experienced by several companies, from how they selected their localization vendors to how they chose their operational models. More information and additional profiles of Web globalization projects are available on our Web site at www.multilingual.com/globalWebProfiles

Martin Dürst, one of the leading experts of the World Wide Web Consortium (W3C), completes this guide with a description of several W3C standards and how they have been developed, as well as background information about the organization and how people in the information technology industry can participate in its work.

Our cover is a detail of an installation by Chinese-born, MacArthur Award-winning artist Xu Bing, who now lives in Brooklyn, New York. Many of his works look at language from an unusual point of view. In this piece, the silkworms were released to "silk" the acrylic-relief text of the folk tale "The Foolish Old Man Who Removed the Mountain." One of his projects over the past several years has been the development of Square Word Calligraphy, in which characters from the Latin alphabet are arranged to build words — English, Czech, German and so forth — in the style of Chinese characters. At right is an example: *MultiLingual* rendered for us by the artist. For more information about Xu Bing and his art, including more images of "word play," we recommend his Web site, www.xubing.com

—Laurel Wagers, Managing Editor



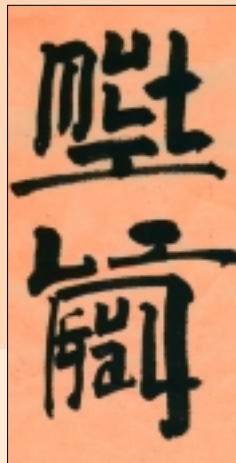
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David Shadbolt



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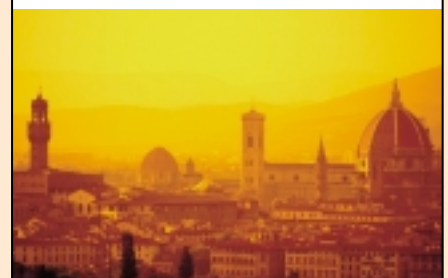


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Building a Global Web Site

John Yunker

Browse just about any major corporate Web site these days, and you'll find evidence of Web globalization in action. For example, in the past year alone:

L.L. Bean launched its first localized Web site (in Japanese);

Amazon launched a Canadian Web site (in English and French);

Office Depot launched a Spanish-language Web site; and

eTrade added a German site to its existing portfolio of 12 localized Web sites.

And this trend shows no signs of slowing. According to a November 2002 report from the research firm Allied Business Intelligence, Web globalization is the fastest-growing segment of the global language translation industry, set to reach \$1.7 billion in revenues by 2007. More significant still are the revenues that these global sites will generate for their companies, further accelerating globalization (as well as Web globalization) and driving the world's economy.

Yet while Web globalization is, for most companies, inevitable, successful Web globalization is much less certain. Every day, Web sites grow more complex and more crucial to a company's bottom line. A Web site may be a marketing channel, a software product, a brochure, a shopping mall or all of the above, thus making the internationalization and localization of that site an increasingly complex endeavor. Even software localization, which has long been viewed as the most challenging of localization projects, pales in comparison to that of many Fortune 500 Web sites.

To complicate matters, corporate executives often have misconceptions about how Web globalization should work, what it should cost and how long it should take. It's not that executives don't want to learn more about Web globalization; rather, it's that they often don't know what questions to ask. The tips in this article will help both

clients and agencies ask the right questions before going global.

Premature Globalization Happens (to the Best of Us)

More often than not, marketing departments initiate Web globalization. But Web sites do not serve only marketing departments. If a company localizes its site for a dozen markets without engaging all departments that will be affected — from accounting to sales to customer support — internal and external problems are inevitable. Just because a Web site is globally aware, one can't assume that the company behind it is globally aware. How will customers from around the world get what they need if your customer service department only speaks English? How will customer information in different languages be organized in your database? Can your database

even support different character sets? What about currencies, product fulfillment and returns? These messy details can quickly turn a well-meaning effort into a very painful and expensive process.

A Web site affects organizations horizontally, touching many departments simultaneously. For Web globalization to be truly successful, these departments must not only have their say in the process but be fully involved in the process. Once this happens, you will all be much better prepared for the challenges that await the company. While this approach may slow down your Web globalization efforts, it will accelerate the globalization of your entire company.

Roma Wasn't Built in a Day

The early days of the Internet were marked by corporate Web sites that were little more than "Welcome to my home page" brochures. And while these sites seem quaint now, they were a crucial step along the road to the development of more sophisticated Web sites. A similar learning curve must occur with Web globalization. Today, many companies are in that "Welcome to my home page" stage of Web localization. Yet these baby steps are important steps nonetheless. Not every company should expect its first localized Web site to be as functional as its native-language Web site, at least not without a significant financial investment up front.

Consider L.L. Bean. Its first Japanese Web site was hardly a site at all; it consisted of a few customer support Web pages localized for Japanese users.

These few Web pages, however, played an important role in justifying further investment. L.L. Bean localized customer support pages for six languages in all, yet found that its Japanese pages were the overwhelming



L.L. Bean's Japanese site — first version



L.L. Bean's Japanese site revised



favorites in terms of usage. Clearly, customers in Japan wanted to order on-line. L.L. Bean already had established a healthy direct-mail operation in Japan. As a result, in 2002, L.L. Bean worked with Basis Technology to launch a fully functional Japanese site.

This was no small project. Yet because the company had developed those Japanese pages years ago, departments across the organization were better prepared for the cultural, linguistic and logistical challenges the much larger site would present.

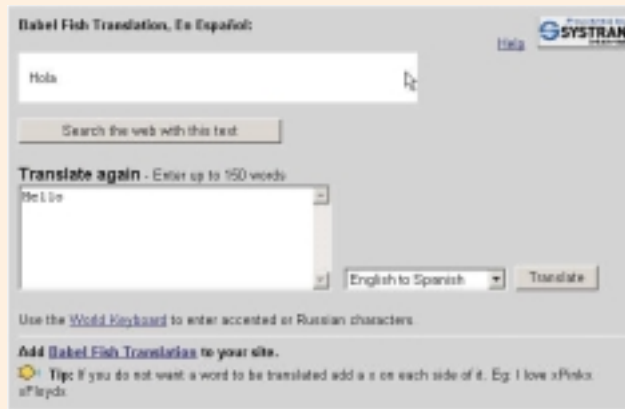
ROI Is Relative

While it may seem strange that a company doesn't localize its Web site for every country in which it does business, this is an all-too-common fact of life. Executives want Web sites that generate revenue, not drain revenue, which is how they often view Web localization projects. Executives often assume (based on agency quotes) that Web globalization must be a very expensive initial investment. If clients believe the minimum for which they can localize a Web site is \$250,000, they will naturally be reluctant to give the project the green light. Indeed, Web localization can easily approach this figure for large Web sites, but this need not be the case in the early stages, as illustrated with L.L. Bean.

The trick is to justify return on investment (ROI), regardless of the size of the site. Executives need to understand that a localized Web site need not be a translated photocopy of the parent site — and, in fact, should *not* be a photocopy. Instead, a company could localize a narrow subset of the site, with a smaller budget and smaller revenue targets. Companies know they need to localize their Web sites, but they also need to know they can get there gradually. Agencies in search of their own ROI would be wise to help their clients go global gradually, succeeding in small steps along the way.

Computers Iterate; People Translate

The machine translation (MT) vendors have done an impressive job of promoting the capabilities of their software. Unfortunately, translation vendors have done a less



The Babel Fish Translation site

impressive job of promoting the limitations of their software. As a result, too many executives assume that software will replace human translators in the foreseeable future, if not already. And the existence of AltaVista's Babel Fish certainly hasn't helped matters.

Babel Fish Translation is a double-edged sword for the translation industry. For anyone who can speak more than one language, Babel Fish is a comedic lesson in the limitations of MT. But for those people who speak only one

language, MT is a nifty tool, one that appears to mark the beginning of the end of human translators. Perhaps it is wishful thinking. Hiring humans to translate your Web site is expensive and always will be. But wishing upon MT is no solution. People within the translation industry know full well that translators are in no danger of losing their jobs; the challenge is in making the business community just as aware of this reality.

Translation is both art and science. Computers, at best, will take over the science part of the process — the maintaining of consistent terminology, the translation memories, the copying and the pasting. Computers will indeed play a crucial, money-saving and time-saving role. But they can never take over the art of translation. Only human translators can handle the linguistic and cultural nuances that are essential to helping businesses succeed in global markets.

Global Sites Need Global Gateways

As localized Web sites are developed, often little consideration is given to how these new sites will fit in with the parent site. Should we assume that all users around the world will arrive at the parent site (which is usually in English) and be directed to the localized Web sites from there, or should we assume users will arrive at the localized sites via country-specific URLs? A "global gateway" will ensure that users around the world quickly and seamlessly find the resources they're looking for in the languages that they require.

The global home page of Siebel plays "Where's Waldo?" with users trying to find its global gateway (hint: It's right above the "Legal Notice" link at the very bottom of the page). Clearly, not all companies have given enough consideration to how users find their localized Web sites. Now look at what users see when they first visit eTrade: a splash global gateway. Every localized Web site is clearly indicated and, after selection, a cookie is stored on the user's computer with the user's language preference so that this page does not need to be encountered again.



The Siebel global home page. Try to find the global gateway



The eTrade global gateway



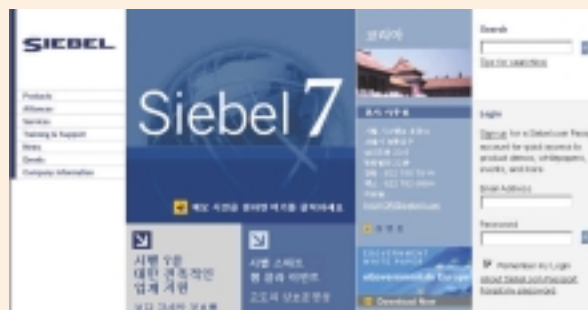
A global gateway is like a net. You want to make sure you build it in such a way that nobody slips past. A global gateway is much more than a “select country” pull-down menu on the home page. It’s an all-encompassing term for the devices you use to direct users to their locale- and language-specific sites. As more of the world’s population goes on-line, Web teams will need to build sites that catch as many of these users as possible. While a global gateway alone won’t make your site global, it’s an important step in making your site more globally usable.

Global Façades Don’t Fool Anyone

Some sites appear global, but upon closer inspection, they are a mile wide and an inch deep. I call this the global façade, a dangerous strategy for companies to adopt. Consider, once again, Siebel. Those users who do find their way to Siebel’s localized Web sites are bound to be sorely disappointed. The accompanying screen capture shows the Korean home page.

At face value, the Korean site appears to be roughly 50% translated. Yet if you select any of the translated links, odds are you will land on English-language pages. In fact, only one of the Korean links takes you to a Korean-language page. And this page links to all English-language pages. Siebel’s “Korean” Web site consists of only two Korean-language Web pages in all.

Siebel’s globalization approach is much different from L.L. Bean’s approach. While L.L. Bean only translated a few pages initially, it did not attempt to create the impression that these pages were anything more than customer support pages. Siebel, however, creates the impression that it has a Korean Web site, which, after a few mouse clicks, turns out to be false. Successful Web globalization doesn’t necessarily require hundreds of translated Web pages; however, it does require that you manage expectations carefully. Web users can be very forgiving if you



Siebel's Korean Web site



ESPN English



ESPN Spanish

warn them that you do not fully support their languages, but if you don’t manage their expectations properly, they can be just as unforgiving.

Overweight Sites Travel Slowly

With few exceptions, most of the world accesses the Internet through dial-up connections (or over cellular phones). This means that bandwidth-hogging Web sites lead to unnecessarily long download times, testing the patience of even the most dedicated Web users. Most companies prefer to develop localized sites that maintain the same look and feel of their source-language sites. If the home page is overweight, however, the localized sites will only exacerbate the problem.

Consider ESPN, which offers English and Spanish-

language sites. Both sites are overweight. By “overweight” I refer to the total weight, in kilobytes, of the HTML and related graphics. The industry average hovers around 100 kilobytes (K). The ESPN sites weigh in at more than 220K with more than 45 graphics in all.

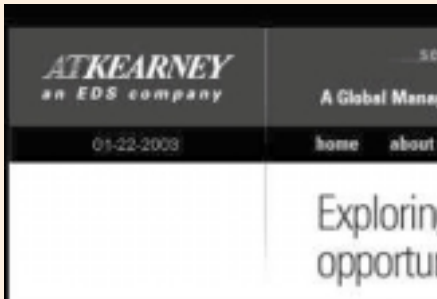
Had ESPN adopted Google’s approach — that is, a text-driven site with spare use of graphics — it would make itself much more usable to the world. Google proves that a Web site can be popular and lightweight; it weighs in at under 35K.

Even in the United States, fewer than 20% of all homes have high-speed Internet connections; perhaps these are the people ESPN is targeting, but surely most companies want to gain more than just broadband users. Before taking your site global, consider a redesign to cut out some of the fat. Not only will you increase the odds of users spending time at your site, you will likely develop a site that is more easily localized since trimming the fat typically requires fewer graphics.



Little Things Mean a Lot

With Web localization, there is no such thing as a “silly little detail.” Consider the home page of A.T. Kearney, a global consulting firm. Underneath the logo, the site features today’s date. Including the date on your Web site may seem like an afterthought, but it can lead to confusion when addressing a global audience. The formats for numbers, dates and addresses vary widely by country.



A.T. Kearney: What time is it there?

For example, if the date on the A.T. Kearney site read 08-04-2003, an American would assume it means August 4, while a German would assume April 8. Had A.T. Kearney used a less-ambiguous format, such as 23 January 2003, there would be no room for confusion. Other details that are often overlooked include untranslated error messages and “page not found” Web pages on localized Web sites. As shown in the accompanying screen capture, the Terra Colombia Web site is in Spanish, but its error page remains in English.



A Spanish-language site, Terra Colombia, with an English-language error page

Details can also help make your site shine. Take a look at the Korean Web site of Fairchild Semiconductor, shown on the next page. This is the first localized Web site for Fairchild, and it currently does not include a localized search engine. Yet Fairchild does not hide this shortcoming; in fact, it alerts users with a brief notice within the search engine input field (albeit in English). Details such as this do make a difference. To catch these details, you simply need to view your localized site through the eyes of your users and manage their expectations accordingly.



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Fairchild Korea: Note the search engine warning

There Is No Such Thing as "Rest of World"

There is good reason why movie executives in Hollywood often ask if a film will "play in Peoria" before releasing it. The United States may be one country, but it is made up of countless cultures and subcultures, based on region, ethnicity and income. Marketing executives have learned to tailor — in other words, *localize* — their promotional efforts to these various groups. Unfortunately, when these same marketing directors take their promotional campaigns to markets outside the United States, they often do not realize that just as many subtleties exist in other countries, cultures and regions. Similar challenges exist in Web globalization.

For example, companies often assume that if they translate their site into Spanish, then the new site will reach all Latin Americans. Consider Boston Scientific, which built a "Latin American" Web site. The first problem presented by the Latin American site is that there is no such thing as a Latin American flag, as illustrated in the global gateway (a good reason to avoid using flags for navigation).

Yet the flag is a minor detail compared with the Latin American site itself. Naturally, the site is in Spanish, but what flavor of Spanish? There is no such thing as one Spanish, just as there is no such thing as one English. And where is the Portuguese for Brazilian Web users? As companies expand outside their native countries, they tend to break up the world into regions: EMEA (Europe, Middle East, Africa); Asia Pacific; the Americas; or, worse, ROW (rest of world). Although these groupings do offer a sense of order, they can be dangerous because they lead executives to assume that the people within these regions have more in common than just geography.

Granted, companies have a long, long way to go before they provide Web sites localized for every country, culture and subculture. But what they can begin doing today is



Boston Scientific comes up a flag short for its Latin American site

working toward a new way of looking at the world outside their native market — a more personal, less regional, less ROW view of the world.

Act Now or React Later

The good news about Web globalization is that you can easily reach a whole new world of customers. The bad news is that the

competitors of the world can easily reach *your* customers. Coca-Cola gets 70% of its revenues from outside the United States. Over the years, it has developed more than 50 Web sites, but has no sites in Arabic. That void was filled recently, but not by Coca-Cola — by an upstart company selling a product called Mecca-Cola.

Granted, there are a number of reasons beyond Coca-Cola's control why Mecca-Cola is succeeding: global backlash, local product



Coca-Cola earns 70% of its revenues outside the United States, yet has no Arabic-language Web site



Enter Mecca-Cola



marketing and a heavy dose of publicity. Still, it is worth considering how great the backlash would be today had Coca-Cola worked more urgently to localize its presence in the Arabic-speaking world. Globalization in general — and Web globalization in particular — can quickly topple corporate empires and give rise to new ones.

What Next?

This is an exciting time to be involved in Web globalization. The number of global Internet users is nearing a billion, and English is losing its dominance over the Internet. In the years ahead, Web globalization will graduate from luxury to necessity — opening the door to greater business opportunities, greater agency opportunities and a more worldly Internet. Ω

Before Going Global...

Here is a collection of resources for better understanding the technological challenges of Web globalization.

Web Sites:

- i18n.com — www.i18n.com
- i18n Gurus — www.i18ngurus.com
- I18nGuy — www.i18nguy.com
- Silicon Valley Localization Forum — www.tgpconsulting.com
- Society for Technical Communication — www.stc.org
- The CIA World Factbook — www.cia.gov
- Unicode Consortium — www.unicode.org
- Web of Culture — www.webofculture.com

Books:

- Another One Bites the Grass: Making Sense of International Advertising.* Simon Anholt, John Wiley & Sons, 2000.
- Beyond Borders: Web Globalization Strategies.* John Yunker, Pearson Education, 2002.
- CJKV Information Processing.* Ken Lunde, O'Reilly, 1999.
- The Savvy Client's Guide to Translation Agencies.* Byte Level Research, 2003.
- XML Internationalization and Localization.* Yves Savourel, Sams, 2001.

Articles:

- Telles, Myriam. "Registering With Global Search Engines," *MultiLingual Computing & Technology* #35.
- Yunker, John. "Building Web Sites Without the Wait," *MultiLingual Computing & Technology* #39.



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Global Web Sites: Issues and Examples

David Shadbolt

While much has been said about the advantages of country-specific Web sites as a means to improve communication and increase service levels and revenue, many companies have eschewed the commitment due to the investment in time and money. But with more metrics available showing positive return on investment (ROI), companies are taking a second look at global Web sites.

The term *global* in the context of country-specific Web sites generally means undertaking both internationalization and localization of the Web site. *Localization* is the term used for adapting a product to users in one particular market. This would include translating user interface strings; inserting locale-specific graphics and images; using content that avoids ambiguous cultural terms; and anything else that creates the look and feel of a local site. This task is much easier and therefore less costly if the site is internationalized with the global market in mind, a complex process that involves engineering the code at the design stage.

Any organization should make internationalization part of its core activities with architects and planners working closely with marketing and sales departments in the design and implementation stages. In reality, many organizations have designed their sites with one national market in mind so that localization for another market invariably involves a degree of internationalization work and the costs that going back to fix something incurs. Hedley Rees-Evans, marketing director of the globalization company SDL International, confirms this reality. "With the exception of software and technology companies, most have not thought

about localization issues and undertaken any of the internationalization requirements. These requirements would involve such issues as externalizing the hard-coded strings into a format that is easily localizable so as to avoid the need for expensive subsequent engineering to remove and reintegrate the text. Another issue is designing for reduction in programming time needed to handle and display information such as time and date formats, currency symbols and number formatting correctly. Another typically expensive mistake, of course, is the inclusion of translatable texts in navigation buttons which are not layered graphic files; these then have to be manipulated as graphics rather than simply by replacing the text layer. Designers also often forget to allocate sufficient page space for the more lengthy terminology found in languages such as German. When the page is crowded with data and text elements, this can even result in a redesign to accommodate the 20% extra copy length German can require."

Algonquin Studios considered these issues when it recently designed and deployed Web sites for Coldwell Banker Europe (CBE). The

first is a sales and marketing extranet, the CBE-Link Toolbox, published in Spain, Germany and The Netherlands. Polish and Swedish sites exist and are awaiting a decision on going live. There is also the CBE Public Portal (www.cbeurope.com) with country sites in Spain, France and The Netherlands that contain both English and the native language. Greg Norton, who handles project management and client relations at Algonquin for CBE, says, "There are four very separate and distinct Web sites, so the issue of localization came into every single deliverable we produced. The font, Arial, and the graphics and navigation buttons are in a template to maintain the same look and feel. It's a text-based navigation system. There is no text in the graphics, and the text in the navigation buttons wraps to avoid breaking errors."

Lisa Walsh, director of marketing and Web publishing at CBE, says, "We are creating a truly pan-European site (www.CBEurope.com). Every country site has the same look and feel. Customers can browse pan-European topics on the European home page such as *News & Events* or jump easily from country site to country site. In addition, we allow the user to search for homes in any country from all country sites. For example, Spanish users in the Spain site can search from the Spain site for homes in France in Spanish. Of course, they can also search for homes in Spain. This allows for CBE to create referral business on a pan-European level. It's important that we have a multilingual site that will allow users to browse the European site in the language of choice or browse the country sites in that country's language(s) or English. In the future, we may add the ability to navigate all country sites in many languages."

Another example is the Web site of CHEP, the pallet and container supply chain logistics company. The multilingual Web site was designed and developed by Razorfish, a New York IT consulting firm that designs and builds Web applications. Razorfish implemented the site on a J2EE architecture running on BEA WebLogic Application Server, Apache Web Server and an Oracle database residing on a Solaris Platform. During the site construction, Microsoft Excel was used to gather the content in the various languages, and Java-based

Global Web Site Project Profile

Web architecture and localization donated by:
Bowne Global Solutions (BGS)

Client organization: 2003
Special Olympics World Games,
a nonprofit organization.

Web site management model: Centralized to all regions of the world.

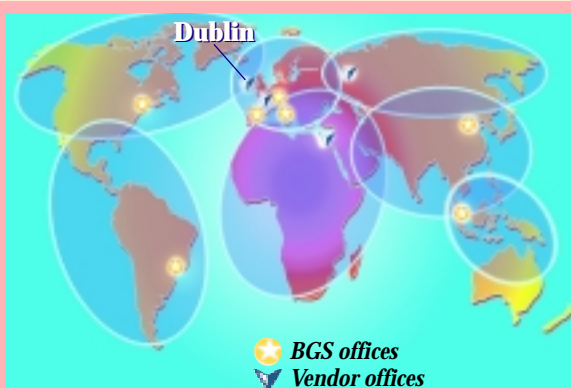
Functions supported: Press relations, marketing and fund-raising information, native language search engine, knowledge base and local phone numbers.

Languages: Arabic, English, Chinese, French, German, Italian, Portuguese, Russian and Spanish.

Web technology: Win 32/64 platform uses HTML and XML and is Unicode enabled. A CMS is integrated with the BGS Elcano technology.

Localization: Dublin, Ireland, is the site of the games and the client office. Dublin is also the location of the BGS vendor where primary project management is taking place. The ★ symbols indicate BGS country offices that are involved in coordinating site localization: New York, Madrid, São Paulo, Sindelfingen, Munich, Rome, Beijing and Singapore. The ▼ symbols indicate locations of vendors supplying language services.

For more information about this project and for more global Web site project profiles, see www.multilingual.com/globalWebProfiles





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proprietary tools were used to generate the static pages. The localization of the site and translation of content were undertaken and managed by GCI, the CHEP public relations firm. CHEP then has its resources in the relevant markets review the translations to ensure that the tone and tenor of the messaging are preserved. The site now supplies chain information and on-line account access for customers in seven languages: English, French, Spanish, German, Dutch, Italian and Portuguese. Deb Spicer, CHEP vice president, corporate communications, says, "The new CHEP.com reinforces our global vision with our e-tools account access for our customers and information for prospective customers in a multilingual, solutions-oriented approach."

Double-byte Languages

Double-byte languages such as Chinese, Japanese and Korean are generally considered the biggest challenge for localizers due to issues such as Chinese scripts including a set of elaborate ideographic characters for numbers or the need in Japan to support pronounceable strings called *furigana*. Marc Bautil, chairman and CEO at iLanguage, says, "We try to minimize any of the changing environments when we are dealing in Asian languages. You can talk to every specialist of that area, and half the

time they don't know what goes wrong. It's always an idiosyncrasy of a particular software program you might be working on."

iLanguage localized WebEx Communications, which builds real-time communications infrastructure for Web meetings, into four languages including Japanese and Korean. WebEx services enable end users to share content and applications simultaneously in a seamless, integrated vocal and audiovisual environment. When the company began localizing its software and user interface to serve its target international markets, it began with Japan, using a number of freelance translators. But analysis showed that this solution was too costly due to the complexity of managing numerous virtual translators as well as possible compromises in quality. WebEx turned to iLanguage, which does 99% of its work in-house, according to Bautil.

The project involved numerous file formats and requirements, including C++, HTML, Java, and other file and source codes. As the WebEx development team and iLanguage's project teams began working together, some minor technical errors naturally occurred. These were quickly resolved as both teams acted immediately to revise the processes for communications and globalization. Bautil says, "Their engineers extracted content from the applications and gave it to us as resource files, mostly

Excel spreadsheets with content strings from the application, but it seemed awkward or out of context, which made it challenging for our translators. However, our translators were trained to use the WebEx meeting software, which made it easier, and we created glossaries and used TRADOS translation memories."

The production team, made up of a project manager and four in-house Japanese translators, met the strict deadline, which enabled a successful implementation on time after three QA tests. As a result of this success, WebEx turned back to iLanguage with the localization of the meeting center in Korean and a bigger challenge: a complete translation of Web page content, localization of graphics and coding, translation of collateral documents and forms and voiceover development of WebEx Express Training Modules. WebEx is now the first Web conferencing service to support multiple languages in a single Web meeting. Subrah Iyar, WebEx chairman and CEO, says, "By allowing users to work in multiple languages, we can greatly leverage our service and significantly widen our base of potential customers. iLanguage has done an outstanding job. Our communications network services are just as elegant and easy to use for our Japanese or Korean customers as they are for our English or French customers."



Consultation Services

Close consultation with the client is essential to the success of any localization project. Ralph McElroy Translation Company (RMTC), a localization vendor, has localized many sites, including the recent localization of DuPont's BioTech site into Spanish (www.dupont.com/biotech/espanol). As RMTC operations manager Shelly Orr Priebe points out, "More often than not, our clients rely on us not only to effectively localize their sites, but to provide technical guidance and insight. More than once we have been asked to rename all of the localized files to include a distinguishing extension for each language, with the intention of including all of the source files and localized files in one location. Instead, we suggest that they store each language version in its own location. Otherwise, every link reference in every file would need to be renamed to point to the right link. The potential for creating errors as a result of this unwieldy undertaking would be unacceptable."

Cooperation and communication are easier with a knowledgeable client. When RMTC did the DuPont Web site, it was possible to accept interim changes in source design and content until the eleventh hour before site launch. "While aggressive schedule goals often preclude 100% source stability at the onset of the localization process, revision control for this site was particularly critical," says Orr Priebe. "Project management professional Tina Wuelfing coordinated version control with different client contacts in different functions from multiple locations. The use of TRADOS, which allows the translator to view the source and target files in final format side by side, facilitated mid-project revisions, minimizing the otherwise daunting task of continuous changes."

CBE's Walsh believes that it was important to work closely with Algonquin Studios from the beginning: "I was able to work with Algonquin on everything from design to buildout and localization. Having one place to go was crucial

in the success of this project. Algonquin took the time to learn about our business, and therefore I only had to explain our business once. If I had used a different designer, it probably would have taken more time to come up with a design that would work to meet all of our needs."

Time-to-market

Clients have always demanded faster project completions from their localization vendors, who usually deliver on time even though some deadlines are challenging. Globalization Partners International (GPI) had 20 business days to complete a project for the Inter-American Economic Council (IAEC) with an initial budget of \$20,000. IAEC, a Washington, DC-based non-profit organization, required a dynamic, multilingual database-driven Web site that its staff could update daily without delays or excessive costs and without keeping a technical Webmaster on salary full time. The organization also needed to launch its site to coincide with two key events for the IAEC: the 2003 Annual Winter Award Gala and the January 15-19, 2003, Antigua and Barbados Business Roundtables.

IAEC chose GPI to design, develop and implement www.inter-american.org in English, Spanish and Portuguese. The project involved site design and development from submission and approval of design comps through localization of content into Spanish and Portuguese and installation and training on the Web content management system (CMS). The system architecture includes presentation, application and data tiers and functionalities such as ability to author, edit and post multilingual content, including photos, without technical assistance or HTML expertise. Access to content had to be via a browser so IAEC staff could update the site while on location conducting conferences anywhere in the western hemisphere. GPI delivered the project in 19 days and under budget.

IAEC president Barry Featherman says, "The quality and quantity of timely information we can now make available to our members in


their native languages are an amazing goal realized." During the first two months after the launch, traffic increased on average by 35% in total sessions served, 25% in average page viewed per session and time spent per session increasing 5% in the 2-to-5-minute and 6-to-15-minute ranges compared to averages from September through November 2002.

Only 15,000 words needed translating for the IAEC site. Large commercial organizations have a great deal more content and expect not only a fast turnaround on the initial project, but also on subsequent localization of content changes. Morgan Stanley Dean Witter (MSDW) is a global financial services firm operating in the funds management and information market and maintains an on-line list of all fund profiles and details of their composition. SDL International was engaged to provide a solution to the management of the related multilingual content, localizing articles and commentary into Italian, German and Spanish. Rees-Evans says, "We localized 170,000 words in the 'basic' site and 230,000 words of archived articles, quickly and efficiently, simultaneously building the translation memory. In addition, there are updates of approximately 80,000 words every month, which are then translated into the other languages in a process initiated automatically every day at 11:45 and 16:00 (New York time) so that the latest material is immediately available."

Content Management

Published Web sites receive constant updates to content. Managing these changes is a complex business that a CMS with multilingual capabilities simplifies. One important consideration is the organization's chosen site management model: a *centralized* site managed with strong control from the home office; a *decentralized* site managed with strong in-country local control; or a *distributed* site managed with a balance of control between the home office and local in-country offices. This would dictate workflow rules for content management. For example, the IAEC site is centralized. GPI implemented Blue Mesa Creations' Site Manager ML, a Web-based CMS, to update the site, post new articles, create new links, adjust navigation and add photos and artwork from a simple and intuitive Web application. Martin Spethman, GPI managing partner USA, says, "Site Manager ML also offers easy and flexible workflows that allow content to be created, edited and published by a single person or by an entire content staff. The system tracks content requiring translation and feeds a flexible translation workflow."

The MSDW site combines general information for the public with more detailed data for brokers, with 80% of this content being common content across the different languages. The content is updated weekly and monthly and



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is transposed into other languages at short notice and within a short turnaround time. It is a decentralized Web management model. SDL's multilingual CMS, SDLWorkflow, was used. "The site database manages around 1,000 template files and graphics, built dynamically," Rees-Evans says. "Content changes are detected automatically, saving substantial time and cost. A key objective was to take advantage of SDLWorkflow's transactions over HTTPS/XML, all of which are initiated from behind the firewall for maximum security. Use of computer-aided translation meant that about 50% of content matched previous translations, saving substantial amounts of money each month. The system's workflow automatically involves MSDW staff for review at the appropriate point, ensuring absolute accuracy of the translation and its necessary style before publication."

The back end of CBE's site is managed by Algonquin's Web-based Quantum CMS. Norton says, "We used Quantum to build the site. Our client uses it to enhance, expand, edit and continue to breathe new life into the site. It really comes into play in a post-deployment scenario. It's designed for different workflows, authors and editors and has a WYSIWYG environment where they can write and edit as

though in a Word document. If they prefer, they can write in a code environment. But an author in France or wherever can use approved electronic files, images, documents and so on, but nothing else."

Walsh says, "Since I do not know much HTML, a content management program is extremely important to me. I am able to easily make changes to CBEurope.com 24 hours a day, seven days a week. In the future, we could have up to 26 country sites, and this would make managing each site extremely difficult for one person. However, with Quantum CMS, we are able to train users in Europe who do not have a lot of experience with computers to use the CMS to update their own country sites. Quantum is working very well for our needs, and Algonquin is always making updates that continue to make the tool better for our needs."

Obtaining Feedback

Many organizations have IT departments and choose to design and implement global sites in-house, but at some point they would benefit from bringing in specialized language vendors with hands-on experience. Orr Priebe says, "In our Web localization work, we see a wide variance in Web site structure and complexity. It is

not always the most complex sites that reveal opportunities to assist and educate clients. In analyzing a prospective client's files recently, our Web development team found that they had really taken to heart the lesson about the value of keywords in their HTML meta-tag information — to the extent that they had listed about four times as many as the most generous of major search engines would read! Multiply this times quite a few pages where keywords were individually chosen. Now consider that this site is being localized into nine languages, and you begin to see what our design team saw. Had we not pointed this out, they would have spent 10% to 15% of their localization budget on translation of content that would never be used. We emphasized that only the most relevant keywords should be translated. Every ounce of potential must be squeezed from the localized Web pages. With improved search engine ranking, our clients' localized pages are found by those they are trying to reach."

Excessive keywords in the meta-tag information might seem a rudimentary mistake for seasoned IT departments and Webmasters, but those new to Web site globalization will find many such hazards. Consulting with language vendors can help site designers build safely. **Q**



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The World Wide Web Consortium (W3C) is providing a firm base of standards such as (X)HTML, CSS, XML and many others. The W3C is also working on exciting new technologies such as SVG, XForms and SOAP with the goal of leading the Web to its full potential. But what does it need for the Web to work truly globally?

General Principles

From its beginnings, the World Wide Web was designed to be worldwide or global. The basic principles of the World Wide Web are easily taken for granted or more often ignored. But they are crucial for the efficient development of global Web sites.

The translation, localization and content adaptation necessary for a successful global Web site require a great deal of human expertise and effort. The design principles of the World Wide Web and W3C standards in particular help to isolate and streamline the different localization tasks.

Unicode as the reference character set. Unicode, the universal character standard, is used as the reference for character encoding in all W3C standards. This shows up in numerous places. Every XML processor is required to accept the two Unicode encodings UTF-8 and UTF-16, and UTF-8 is the default encoding for XML documents. The character encoding of an XML file is indicated right at the top of the file. Using Unicode-based Numeric Character References (for example, ABCD for Unicode character U+ABCD), data can be converted to legacy encodings and back without loss if necessary. Implementing the whole back-end of a global Web site in Unicode can dramatically simplify the handling of multiple languages. Serving Web pages directly in UTF-8 is now widely feasible. As a result, localization professionals can concentrate on their job, rather than worry about encoding issues.

Universal Resource Identifiers. What keeps the Web together is not so much HTTP or HTML, but URIs (Uniform/Universal Resource Identifiers), the famous Web addresses. A Web page with an address of `http://www.example.com/cool.html` may no longer be cool (that may have been a while ago). Nevertheless, being able to use memorable and meaningful addresses can be extremely helpful.

Useful Links

W3C — www.w3.org (includes links to all technologies mentioned in this article from left side of page)
Internationalization Activity — www.w3.org/International
Core Task Force of the Internationalization WG — www.w3.org/International/core
GEO Task Force of the Internationalization WG — www.w3.org/International/geo
Web Services Task Force of the Internationalization WG — www.w3.org/International/ws
Character Model for the World Wide Web — www.w3.org/TR/charmod
Internationalized Resource Identifiers (IRIs) — www.w3.org/International/O-URL-and-ident
Web Services Internationalization Usage Scenarios — www.w3.org/TR/ws-i18n-scenarios
Unicode — www.unicode.org

The W3C at Work

Martin Dürst

In the past, however, using characters other than US-ASCII in URIs has not been very well defined. This has also caused a lot of complications when trying to send query data to the server. The W3C is working on moving URIs more and more toward UTF-8. As an extension to this, we are defining Internationalized Resource Identifiers (IRIs), which allow native characters in place of the ugly %-escapes.

Universal access. While the previous principles are basically technical, universal access is an inherently human-oriented principle. In its fullest, it means that nobody should be left behind with regard to Web technology. This includes aspects such as culture, languages, education, ability, material resources, access devices and physical limitations. The W3C Internationalization Activity works to make sure that W3C standards are usable for any language and culture. This is important for localization because it ensures that the same technology can be used across a global Web site. The W3C's Web Accessibility Initiative similarly takes care of ability and physical limitations. With very little careful planning at the right time, a Web site can easily be used by people with various challenges. This makes sure no customer is lost. It also results in additional benefits, such as easier localization due to a clearer structure and a reduction in data size, an important consideration when sending Web pages around the globe.

Universal access also applies to the author side. W3C technology is designed for all kinds of Web authors and Web sites, from the home-made site for a local audience to the global corporate Web site and everything in between.

Device independence. Device independence is another important part of universal access. Being able to look at a Web page on a

mobile phone or a PDA is an everyday reality in many parts of the world. The past few years saw some confusion with regard to device-specific technologies, but technology is now firmly headed toward using (carefully scaled-down) versions of Web standards such as XHTML Basic. The benefits for content providers and in particular localizers are clear: only one set of technologies has to be dealt with; the choice of target devices is on the content provider's side; with a little bit of additional effort, more than one class of devices can be targeted; and easier repurposing means better amortization of localization costs.

Separating content and style. Web pages full of (non-standard) FONT tags are still around. Fortunately, they are fewer and fewer. Using stylesheet technology such as CSS (or XSL), the same or better visual effects can be achieved with much less effort. The Web page code is much less cluttered, which means less effort when translating. And style changes needed for different languages and cultures, such as different fonts, sizes and colors, can be made in a single place rather than over and over again. Style sheets also help designers to get away from a fixed page size, very important because translations take widely varying amounts of space.

Structured information. Information on the Web is available in many different forms, from bitmap images to structured XML files. Different forms have vastly different consequences on how easy it is to work with the information. Having more structure in most cases makes things easier. It can provide metadata helpful for localization, and it can help repurposing and reusing content and translations. XML is also used to streamline localization and translation with industry-specific formats such as TMX and XLIFF.

The W3C is working to move from less structured formats to more structured formats. The work on XML provides the base for this. A typical example is SVG (Scalable Vector Graphics). It is based on a careful analysis of what designers wanted to do and were actually doing with two-dimensional Web graphics. It replaces heaps of pixels (GIF or PNG) with a structured XML format. As a result, SVG is scalable (a user can zoom in and not get jagged



edges), is more compact, and can easily be edited, which simplifies translation or even just makes it possible. If sizes have to be adjusted due to differing text lengths, that can also be done easily. SVG also allows users to include some language alternatives in the same document. This can in some cases be easier to maintain than having the same large graphics in different files.

The Semantic Web is another activity of the W3C aiming at making information more manageable and in particular easier to reuse. One main application area is metadata, which is again important for localization.

Descriptive is better than procedural. To say what to do is better than to say how to do it. The more scripting a page uses, the more difficult it can be to localize it. As an example, many sites now use scripting to simulate a date picker for checking input values in a form or for changing a form depending on entries in another part of the form. Adapting a date picker to another date format or calendar is very complex. Based on the experience with forms in HTML, W3C is working on XForms. Using XML to hold form data, and XML Schema to provide type information, XForms makes it possible to just say, for example, "I expect the user to input a date here." The browser then can display this in a way that the user will understand. XForms is not completely standardized yet, but it is moving ahead fast.

How the W3C Works

A look at the W3C's history and organization will help explain why W3C is so focused on getting technology right in the long term.

W3C history. The World Wide Web Consortium was founded by Tim Berners-Lee, the inventor of the World Wide Web, in 1994. In 1995, INRIA (Institut National de Recherche en Informatique et en Automatique, France) joined Massachusetts Institute of Technology (MIT) as a host. Keio University (Tokyo, Japan) became the Asian Host in 1996. At the beginning of 2003, the role of European Host passed from INRIA to the European Research Consortium for Informatics and Mathematics (ERCIM).

Although the World Wide Web was intended as a global technology, initially there was quite a gap between intent on the one hand and specifications and implementations on the other hand. Originally, special "internationalized" versions of a specification (such as RFC 2070 for HTML) had to be written. To improve this, the Internationalization Activity of the W3C was founded in late 1995, with a first workshop in 1996. The Internationalization Working Group, constituted in early 1998, has reviewed many specifications as they were developed. As a result, both

specifications and implementations are becoming much better internationalized.

The W3C uses a unique process to create its standards, which are called Recommendations. Many people participate in this process. They roughly fall in three categories. The *public* can get involved in open discussion lists and by sending comments on frequently published Working Drafts. The *member organizations* (companies, universities, research institutions) participate in Working Groups and influence the overall direction of the Consortium. They also provide the funds for running the Consortium. The *team* consists of about 70 people employed by the Consortium via the host organizations. The team provides technical coordination and organizational support. Team members in the Internationalization Activity are Richard Ishida and Martin Dürst.

The World Wide Web and the use of W3C technology continue to grow rapidly. New technologies, such as Web Services and the Semantic Web, are proposed regularly and moved towards standardization. Also, the Web continues to grow, in particular in areas of the world where it is less used currently. So, it is crucial to identify the relevant internationalization issues and needs for these technologies more quickly and to be more actively involved than in the past. This will ensure that W3C technology can be used readily around the world. This is why the Internationalization Activity was rechartered in September 2002. It still consists of a Working Group and an Interest Group. The Working Group now consists of three task forces, two of them starting new work.

Internationalization task forces. The Internationalization Working Group's three components are the GEO (Guidelines, Education & Outreach) task force, the Web Services task force and the Core task force.

The GEO task force aims to make the internationalization aspects of W3C technology better understood and more widely and consistently used. It is working on guidelines related to (X)HTML and CSS.

The Web Services task force is looking at issues and requirements for Web Services internationalization. It recently published a first working draft of Web Services Internationalization Usage Scenarios. By exchanging data between machines instead of serving documents to users, Web Services touch different issues of the internationalization and localization problem space.

Membership in these two task forces is open to experts from W3C Members and the public. Their work can be followed in the public archives of the mailing list.

The Core task force carries on the earlier work of the Internationalization Working Group: reviewing specifications of other W3C Working Groups and progressing two basic documents along the standards process. The first document, the Character Model for the World Wide Web, describes the internationalization architecture of the W3C; the second specifies IRIs.

While W3C principles and technology can help users in building global Web sites, users can help the W3C to continue to make its technology support internationalization and localization needs. Ω





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