Translation: Making the Connection

by John Ghrist

Selling AS/400 Solutions, November 2000
, pg. 26
Article ID: 8476
Related Topics: ERP, Marketing & Sales

One of the biggest barriers to sales of U.S. software to the Asian market — and the international market in general — is language. Although English is a common international language, it's not universal. Abroad, software packages that provide English-only interfaces are at a sales disadvantage, even when competing against applications that offer more limited functionality, because most end users require an interface that lets them work in their native language.

The logical solution is to provide national-language versions of key product offerings, but finding competent translators for technical material such as user interfaces, help files, and product documentation can be a challenge. Do you hire in-house translators? Go with a translation service? Use translation software? And, once you've made a choice, how do you evaluate the services and tools you'll work with?

One company that overcame this dilemma is Mapics, Inc. (and its predecessor companies), in successfully marketing overseas a well-known AS/400 manufacturing solution.

The MAPICS Story

Manufacturing Accounting Production Information Control System (MAPICS), originally an IBM product and a popular manufacturing software package for IBM midrange systems, was released in 1978. The product was first translated into some European languages in the mid-1980s. The original translators worked directly on source files without benefit of translation tools — a slow, manual procedure that was only as accurate and efficient as the person doing the translating. By 1990, the English version of MAPICS had been translated into 15 languages, mostly European, but also Korean, Japanese, and Traditional Chinese. With a few exceptions, the translation process was handled by IBM's infrastructure of Translation Centers, which translated user interfaces and help text at a nonnegotiable cost to product development.

In 1993, Marcam Corporation bought rights to MAPICS from IBM. Lacking IBM's in-house translation resources, however, Marcam had to subcontract translation to IBM's European Language Services (ELS). ELS handled negotiations with individual national-language translation services in each market country and helped with much of the file and data handling. But in 1996, IBM eliminated ELS, leaving Marcam in need of a new way to appeal to overseas users.

More than a Translation Challenge

By the 1990s, translating interfaces, help text, and documentation into different languages was only part of the problem of customizing

application software for global users. "Localization" issues had come to the fore — that is, the ability for software packages to conform to variables such as local business practices, mandatory taxes, date formats in data, and the use of commas and periods in numbers.

In Asia, for example, comma and period placement is important because there's no such thing as "cents" when you're talking Japanese yen. Also, the complexity of the characters in Chinese and Japanese requires conversion of software to double-byte character set (DBCS) format for execution on the AS/400 and other platforms.

Beyond that, there are multinational business issues to deal with. For example, if a French subsidiary (whose end users want interfaces in French) of a U.S. company (which needs English activity reports for corporate headquarters) sells something to a German company (whose employees need invoices in German), the application must do more than just present a French-language interface.

Finally, software "internationalization" also presents application-tailoring considerations dictated by how a company does business. For example, in a firm's overseas markets, does it sell products directly or through a reseller, remarketer, or distributor? How are license agreements structured? Who's responsible for installation, distribution, and support? These relationships directly affect how an application can best serve its users.

Finding a Solution

All these considerations complicated the picture when Marcam sought a translation solution to replace ELS. A development steering committee — comprising Marcam's CEO and executive vice-presidents of International Operations, Research & Development, and Product Support — started meeting in 1993 to focus product direction after Marcam acquired MAPICS from IBM. The committee based its decisions to translate MAPICS into particular national languages on the business considerations of potential sales and revenue, taking into account regional salespeople, market analysis, and translation-cost estimates. At that time, the committee decided translation efforts should focus on the three major European languages and Portuguese, Japanese, and Simplified Chinese. It also decided the job couldn't be done in-house because maintaining a translation staff would be too costly.

Based on the steering committee's direction, Marcam's internationalization organization researched the market extensively but ultimately found only one product, Seagull's Text Translation Tool (TTT), that could do the job. In particular, only a few tools supported help-text translation, and almost none of them supported all the languages Marcam was interested in.

On the basis of references, Marcam chose to contract with Interpro Translation Solutions to train translators in Japan in the use of TTT and also selected Interpro to translate MAPICS into Simplified Chinese. In 1997, Marcam split into two separate companies, with one of the entities, named Mapics, Inc., retaining the rights to development and marketing of the MAPICS product. Mapics, Inc., evolved the product over the next several years to XA, its most current version. Over the next several years, Interpro took over converting MAPICS to Japanese. When MAPICS decided to enter the Taiwanese market, Interpro was the logical choice for a translation partner because of its knowledge of the product and its excellent track record with Simplified Chinese and Japanese. The decision to enter Taiwan was followed closely by the decision of the Spanish translator to leave the business. Mapics again selected Interpro to handle the Spanish translation because of its proven ability to pick up work previously performed by another partner.

How to Translate an Application

Today, Interpro still translates MAPICS' XA AS/400 user interface using TTT. Interpro translates XA's client/server user interfaces, online help text, and documentation using a variety of PC- and Macintosh-based translation, programming, and desktop publishing applications. Interpro chooses localization and translation employees who are native-speaking professionals of the target language and who have experience in software localization or show proficiency in translating technical material.

XA development occurs in a single-byte character-set (SBCS) environment. Translatable text is externalized from RPG source code into display and printer file formats by MAPICS developers. After the development is complete, the product enters the quality-assurance phase. The product also enters what's called a machine-readable information freeze, during which time the externalized screens and report layouts being tested can't be changed. At this point, Mapics begins the product translation process with the goal of delivering the SBCS-language versions at the same time it delivers the English product.

When the SBCS English product is ready for final packaging and distribution, a group of tools generates a DCBS version of the same product. Mapics gives this version of the product to Interpro for translation into Japanese, Simplified Chinese, and Traditional Chinese. These products are on a delivery schedule of 60 to 90 days after the delivery of the SBCS English version.

After Interpro receives user-interface source files from Mapics, Interpro extracts the translatable source literals (e.g., on-screen text) and message texts. It runs these against TTT or PC-based tools to isolate and size only those literals and messages that have been added or modified in the new release. Interpro then translates, proofreads, and quality- checks these literals and delivers them to Mapics to be included in the product.

The next phase of the project is to translate online help text and localize any new or modified bitmaps within the help text. After translating help text, translators update the user documentation. Mapics uses Adobe Framemaker and Microsoft Word for documents that Interpro converts into hyperlinked Portable Document Format (PDF) files for delivery back to Mapics.

Mapics' international business affiliates validate the translated product and send any needed corrections and changes back to Interpro, which makes these changes in its translated version(s). When this reworking feedback loop ends, Mapics developers build a final version of the product, and the company begins work on the product's packaging. After the translated versions go into general release, Mapics supports SBCS-language versions from its Netherlands facility and DCBS-language versions from its Atlanta support group.

The Translation Workload

Interpro bases its costs and schedules on the actual number of words it must translate in a particular project.

Obviously, applications with hundreds of thousands of words take longer to convert than applications that only use a few thousand words. Because there is so much variation in how code is written and literals are stored from product to product, there's no way to devise a formula correlating literals to lines of code processed for all projects. Similarly, screen-display translation work can vary significantly — some screens require extensive translation and localization work, others virtually none. Interpro calculates costs by applying a "per word" localization fee, plus charges for quality

assurance, formatting, and validation time. On average, Interpro reports that a translator in one day can localize user interface literals at the rate of 1,400 to 2,000 words per day or 2,300 to 3,300 repetitive words.

Product architecture influences localization time significantly. Literals externalized from product code make the localization process much simpler, as do products that use side-by-side rather than stacked literals. A side-by-side literal (e.g., the words "purchase order") usually appears not only on the user-interface screen together but side-by-side within source code as well. Stacked literals, by contrast, generally have two or more associated words that appear on different lines of the screen and are also separated in source by several lines of code — making it harder for translators to recognize that the words are associated with each other.

Another complicating factor is that the amount of data displayed on each user screen can affect the time needed to make target-language abbreviations. Documentation originally produced in Word and Framemaker is easier to handle than text created and presented using other applications.

Yet another factor influencing conversion time is how well-adapted for international use a product already is. A product being converted for international use for the first time usually presents more new problems to work through than translation projects involving previously internationalized products. Finally, the amount of support the software vendor provides the translators can affect project length. Translators often need one-on-one help with obscure literals, acronyms, and abbreviations; delayed or inaccurate answers from a vendor slow the process and can diminish translation quality.

Lessons Learned

After years of working with Interpro, Mapics is satisfied with the service and quality of translation efforts for its products. Mapics estimates that up to 75 percent of its approximately 1,000 overseas customer sites use translated software. The company also believes that the internationalization of its products during the translation process is critical to product success because overseas customers want internationalized software.

>However, like any software project, successful translation efforts require up-front planning of a project management structure that spells out which vendor employees will interact with which translation-service people, clearly defined project milestones with weekly status tracking, emphasis on early detection and reporting of problems that can affect the project timeline, and keeping management on both sides in the loop.

It's also clear that if a software application vendor wants its product to succeed in overseas markets, translation of the user interface and documentation is mandatory. Correspondingly, the quality of the translation is crucial to an end user's understanding and effective use of a product.

Finally, user-interface software translation is important for a psychological reason that can't be quantified. Making the effort to translate an application into the native language of a market's end users implies a commitment to that market — a tangible action that helps build prospective customers' confidence and trust in the vendor before the first sales call ever takes place.