Perspectives on Localization

edited by
Keiran J. Dunne
PERSPECTIVES ON LOCALIZATION
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Perspectives on Localization

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Volume XIII

EDITED BY

Keiran J. Dunne
Kent State University
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A Copernican revolution

Keiran J. Dunne

Twenty years ago, “localization” as a profession and industry did not exist. In the intervening two decades, localization has emerged as a profession related to, but distinct from, translation, and as an industry in its own right that “has grown to the point where the 20 largest IT companies alone are leveraging around USD 1.5 billion a year to generate sales of some USD 15 billion, an incredible ROI of over 1000%” (LISA 2003: 18). Today the total size of the localization industry worldwide is estimated to be approximately USD 8.8 billion per annum (Beninatto and DePalma 2005), and yet despite the industry’s phenomenal growth over the past 15 years, localization remains a little-known and poorly understood phenomenon outside of the relatively closed circle of its clients and practitioners.¹ Even among the various stakeholders — clients, vendors, subcontractors, executives, developers, sales and marketing personnel, and project managers, to name a few — there exists no consensus as to what precisely constitutes localization, due in large part to the ways in which it is perceived.

Definitions of localization tend to be contextually bound, reflecting the perspectives of those who formulate them (See Folaron 196–197 in this volume). Those working on the front lines, where translation generally comprises the bulk of day-to-day localization work, may consider localization essentially as “translation on the computer for the computer,” to borrow a phrase from industry pioneer Jaap van der Meer (1995: 14). Business executives tend to consider localization through the quantitative prism of return on investment: “There is usually no advantage for a developer in localizing a consumer CD-ROM title or business application for any market unless it can make money in that Market [sic]” (Wilson 1997). Localization project managers, who strive to reconcile the conflicting (and sometimes contradictory) demands of all stakeholders, may view localization as an exercise in herding cats. Consultants and industry experts may take a broader perspective in which localization is all about leveraging source-language development investments to drive revenue, profits and enhanced market share in international markets by “combining language and technology to produce a product that can cross cultural and language barriers” (Esselink 2003: 4). Like a Rorschach test,
such definitions provide greater insight into the perspectives of those who formulate them than they do into the phenomenon of localization itself. The very range of perspectives and their contextually-bound nature nonetheless shed light on the structural barriers to a global view of localization.

Indeed, localization does not consist of a discrete process or a defined set of tasks, but rather represents a focal point in the corporate matrix\(^2\) at which various business units, objectives, and processes intersect:

- Development and authoring, which tend to focus largely — and often, exclusively — on the functional characteristics of products to the detriment of linguistic and cultural considerations that may be critical to successful localization efforts
- Sales, running the gamut from international rollouts of clearly defined and planned corporate strategies to ad hoc opportunism
- Marketing, in which messages, materials, and sometimes products themselves may need to be redesigned based on user preferences or cultural norms of the target locale(s)
- Corporate legal counsel, given the fact that localization of a product and its accompanying documentation may be subject to regional and/or national laws and regulations
- Management, which tends to see localization as back-office spending rather than as a wise investment, and thus tries to minimize localization-related outlays at all costs.

Fragmented perspectives on localization are confirmed and reinforced by educational curricula in which foreign languages and translation, computer science, graphic design, as well as business and management tend to be mutually exclusive areas of study:

- Authors and developers often lack expertise and knowledge of foreign languages and cultures (Best 2004) — even of their own — and consequently may fail to grasp the financial ramifications of culturally-bound decisions and practices.
- Executives as well as sales and marketing personnel are often unaware of the ways in which linguistic, legal, and cultural issues can impact a product’s usability, image, and even legality, and thus may make commitments to deliver features or functions without a global understanding of what will be required to effectively carry out their directives.
- Translators possess linguistic and cross-cultural expertise, but often lack technical knowledge and an understanding of the market forces and business imperatives driving the decision to localize in the first place.
Foreign language and translation educators tend to be the products of humanistic programs that focus on literature and literary analysis, and as such often do not possess in-depth knowledge of localization tools or processes, nor of the market realities driving the industry today.

Localization functions as a Rorschach test not only within the context of a given project or company, but also at the level of industries and organizations. In-house clients, outsourcing clients, vendors, individual subcontractors, industry associations, standards organizations, industry experts and educators all bring very different perspectives to bear on localization. The problem of fragmented perspective is compounded by the relative lack of communication between such groups. In sum, localization simply does not lend itself well to being perceived globally.

This is perhaps not surprising given the youthfulness of the field and the speed with which it has developed, thanks to the rapid spread of the computer and the advent of the Internet. Fifteen years ago, localization initiatives were largely confined to the realm of IT and large Silicon Valley companies, and localization itself was generally equated with the adaptation of software for sale in international markets (primarily Western Europe and Asia). Until approximately the mid-1990s, “localization” generally meant the translation of software user interfaces and Help, along with any necessary re-engineering that might be required to ensure the correct display of all on-screen information and to maintain full functionality in target-language versions. However, the advent of the Web browser in the mid-1990s, which fueled both the popular explosion and commercial development of the Web, caused a major shift in the scope of localization across the entire corporate food chain. Localization is no longer the exclusive province of major conglomerates with brick-and-mortar sales and distribution facilities worldwide. On the contrary, the emergence of the World Wide Web, a virtual “Eighth Continent” inhabited by over a billion online consumers worldwide (DePalma 2002), has leveled the global economic playing field as never before and opened international markets to any company that publishes a Web site — including sole proprietors. Today, any company that conducts business on the Web is confronted by potential localization issues and ignores them at its peril. The spectacular explosion of e-commerce, especially B2B e-commerce, has in turn fueled the proliferation of an ever-expanding variety of “content” to be localized in an ever-increasing number of formats for an increasingly diverse set of users and locales. The rapid pace at which the tools, technologies and scope of localization are all evolving only serves to further underscore the difficulty of maintaining a global perspective on localization.

So what exactly is localization? Drawing on definitions formulated by the Localization Industry Standards Organization and experts such as Pierre Cadieux...
and Bert Esselink, our working definition of localization is as follows: The processes by which digital content and products developed in one locale (defined in terms of geographical area, language and culture) are adapted for sale and use in another locale. Localization involves: (a) translation of textual content into the language and textual conventions of the target locale; and (b) adaptation of non-textual content (from colors, icons and bitmaps, to packaging, form factors, etc.) as well as input, output and delivery mechanisms to take into account the cultural, technical and regulatory requirements of that locale. In sum, localization is not so much about specific tasks as much as it is about the processes by which products are adapted.6

Moreover, localization is but one of a number of interdependent processes and cannot be fully (or correctly) understood without being contextualized in reference to them. These processes are referred to collectively by the acronym GILT (Globalization, Internationalization, Localization, Translation). However, it might be more logical to reverse the acronym: “TLIG” would more accurately reflect the historical evolution of the industry and the sequential way in which practitioners and corporate strategists have become aware of the relative importance of these processes:

- **Translation.** “The world's second-oldest profession” has existed for thousands of years.
- **Localization.** The term emerged in the late 1980s and early 1990s, as software companies first began to attempt the “translation” of their products, and “this work began to be recognized as an industry related to, but different from and more involved than, translation” (Lieu 1997).
- **Internationalization.** The advent of localization in the late 1980s and early 1990s in turn spurred the development of internationalization. “When multiple localization efforts were performed on the same product, it became obvious that certain steps could be performed in advance to make localization easier: separating translatable text strings from the executable code, for example. This was referred to as internationalization or localization-enablement” (Cadieux and Esselink 2002).
- **Globalization.** In the context of localization, this term refers to the process of conducting business globally, i.e., of selling in international markets. Globalization entails an enterprise-wide focus and set of strategies. On a larger level, globalization refers to international economic and technological integration and the concomitant “flattening” of the world that is driving localization (Friedman 2005).

Figure 1a frames the relationship of the GILT acronym components in terms of their relative dependencies, with globalization as the primary macroeconomic
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and upstream process driver. However, chronological awareness of these processes and their relative importance has historically been gained from the inside out (Figure 1b). Early attempts to “transform” programs (and their accompanying documentation) from one language version to another soon led to the realization that there was more to it than mere translation; thus was localization born. Subsequent localization efforts revealed upstream measures that could be taken to facilitate the process, and thus was internationalization born. The need to rationalize the entire development life cycle to support the simultaneous shipment of numerous target-language versions of products in turn led larger software publishers to adopt global strategies designed to facilitate all aspects of the entire process. In this way, globalization strategies are supplanting internationalization strategies at the enterprise level, a process that has been confirmed and reinforced by the disproportionately large profits derived from localization efforts (see DePalma 19–20 in this volume).7 Driving the progressive strategic shift of planning and effort upstream from translation and localization to internationalization is the larger process of international economic, technological and financial integration, coupled with falling trade barriers, known as globalization.

Over the past two decades, awareness of GILT processes and their relative interdependencies has thus developed progressively, as sequential layers of process have been peeled away and explored like the successive figures of a matryushka doll. However, unlike in a matryushka, in which each subsequent layer is smaller and more narrowly circumscribed than the last, the successive layers of GILT peeled away over the past two decades encompass progressively larger scopes (see Figure 2).
For the reasons described above, approaches to localization have historically been largely descriptive and characterized by incremental improvements, as companies have successively grappled with and resolved issues of translation, then localization, on to internationalization and finally globalization. However, in theory, the effective management of GILT processes requires a prescriptive approach, beginning with globalization and progressing downstream through the sequential processes of internationalization to localization and finally to translation. This fact has powerful ramifications for practice, process, workflow and even enterprise structure. As shown in Figures 1a and 1b, there is a chain of dependencies from globalization, to internationalization on through to localization and translation. Working upstream against the flow of these dependencies imposes a point of diminishing returns at each step of the ladder. The relative success of translation and localization efforts depends to a great extent on the successful implementation of internationalization strategies. However, these in turn depend on an enterprise-level commitment to globalization strategies.

It is for precisely this reason that global perspective is so critical in localization. The failure to adopt effective enterprise-wide globalization strategies and to implement appropriate internationalization strategies at the level of product design means that localization processes will be condemned to remain relatively descriptive and reactive, and gains in productivity and cost containment will be incremental at best. Conversely, the prescriptive implementation of globalization and internationalization strategies, given their proactive focus on avoiding problems, will facilitate localization and enable exponential savings by eliminating costly problems before localization even begins. To the extent that different participants lack global perspective, they risk being unaware of the downstream impact that their decisions may have on other participants in the process and on the project as a whole. Likewise, when localization is driven by opportunistic sales, as opposed to defined international sales and marketing strategies, and when it is carried out after product development is complete instead of being integrated into the development cycle as a key component of corporate globalization strategies, localization professionals are forced to retroactively fix problems and address the
consequences of defective planning after the fact. The bottom line is that in the absence of global perspective, localization is invariably more difficult and more costly than need be the case.

This volume thus focuses on the need for a drastic change in perspectives on localization. The contributors are seasoned practitioners and leading scholars who offer fresh insights and actionable solutions to some of the fundamental issues facing the industry today.

The volume is divided into seven sections. The articles in the first section address the localization business case. Donald DePalma discusses the return on investment (ROI) of localization, based on focused research into the localization practices of 50 U.S. companies. Arguing that localization must adopt the metrics used by the larger business community, DePalma offers a step-by-step process for calculating the ROI of localization in terms of various standard business paybacks, and concludes that when all is said and done, localization is a great bargain. Clove Lynch takes a slightly different tack, exploring the return on globalization management system (GMS) technology investments in support of localization efforts through three Excellence in European eContent Localisation (EEEL) case studies. Lynch suggests that given the critical importance of metrics to building solid business cases on one hand and the relative scarcity of tangible data on the other hand, best-practice models must focus greater attention on the identification, generation and collection of pertinent data that focus on the core GMS value proposition, namely time, cost and quality. Finally, Carla DiFranco discusses the challenges of controlling localization costs. Asserting that most of the fundamental cost drivers are upstream (client-side) issues, she provides concrete strategies for limiting what one might call “cost creep” in localization projects.

The articles in the second section grapple with the slippery notion of localization quality. Scott Bass discusses quality in projects performed on behalf of the middle market — small to mid-size manufacturing companies whose international efforts are more often the product of opportunistic sales than of global sales and marketing strategies. After identifying common obstacles to quality in outsourced localization projects, Bass analyzes and contrasts the quality requirements of clients, agencies and translators, and concludes by proposing a number of practical paths to quality. Keiran Dunne addresses similar concerns in his discussion of localization quality management. He notes that the inherent difficulty of defining what constitutes quality in the localization industry raises questions as to how and to what extent quality can be managed in localization projects. Using the ISO 9001:2000 standard as a frame of reference, he discusses localization quality management in terms of theory and practice, and explores issues that can arise due to the fundamental tensions between customer-focused ISO 9001 principles and the outsourced, sequential localization project model that dominates in the marketplace today.
The articles in the third section focus on the rapidly growing sector of game localization. Frank Dietz’ contribution explores the unique challenges associated with game localization that stem from their non-linearity, world-making power, genre conventions and the game development process itself, which often tends to be chaotic. Dietz discusses a number of concrete issues related to interface design as well as cultural and legal considerations, and proposes a number of steps that translators and developers can take to facilitate localization processes. Eric Heimburg addresses the challenges of localizing massively multiplayer online role-playing games (MMORPGs). Because most MMORPGs are open-ended and based on a subscription model, they tend to add new content and activities on a regular basis to retain subscribers. Their sheer volume and constantly evolving nature conspire to make localization more difficult, as do the challenges of enabling players to play the game simultaneously in several languages. However, Heimburg asserts that perhaps the single most daunting challenge of localizing MMORPGs is ensuring high grammatical quality and accurate translations in all language versions. Focusing on Turbine Entertainment’s MMORPG Asheron’s Call 2, Heimburg discusses the difficulties involved in enabling simultaneous play in English, French, German and Korean and explores the innovative solution devised by the development team, namely a meta-language by which grammatical aspects are embedded in strings in order to enable more accurate translation and a higher degree of grammatical accuracy (even in the English source materials).

The articles in the fourth section address terminology management, which nearly all leading practitioners agree is of critical importance to successful translation and localization efforts, but which few companies have successfully implemented at the enterprise level. Robin Lombard explores the importance of source-language terminology management and draws upon her experience at Microsoft to provide actionable advice for making the business case and for progressively implementing source-language terminology management. Barbara Inge Karsch notes that refining the terminology management process for large-scale, multi-language projects has emerged as a business imperative for software publishers that simultaneously release multiple language versions of their products. Using the J.D. Edwards terminology management system as a case study, Karsch discusses terminology workflow in localization, describing the various steps of the process as well as their characteristics, and modularizing them for application in a generic setting.

The fifth section ponders localization education, which is a particularly critical issue given the structural imbalance between the strong and rapidly growing need for localization professionals and the available supply. Debbie Folaron’s contribution addresses localization training and education in academia. Defining the name, terms, and parameters of the discipline is a critical first step, Folaron argues,
but establishing curricula that meet both professional and academic objectives is equally important. She then proceeds to sketch the broad outlines of a localization curriculum that does just that, framing her discussion in terms of specific competencies.

The sixth section addresses localization standards and standards organizations. Arle Lommel argues that the increasing importance of standards in localization is being driven, on one hand, by the increasing abstraction of information and the separation of form from content made possible by digitization, and, on the other hand, by the emergence of information as a business commodity with tangible value. Framing his discussion in terms of the shift from knowledge-centered to information business model, Lommel explores the business value of current industry standards. Sue Ellen Wright provides an encyclopedic overview of standards and standards bodies active in the language industry today. After exploring the differences between industrial and language-industry standards as well as the types and philosophies of different standards, Wright discusses coding standards, standards for quality control and quality assurance, as well as functional standards that enable data interchange and interoperability.

The final section focuses on new approaches to the current localization paradigm of *ex post facto* adaptation. Susan Dray and David Siegel explore localization through the prism of user-centered design (UCD). After analyzing problems inherent in conventional product planning and design practices, they explore alternatives offered by UCD, illustrated by representative projects in which they have participated. Localization and user-centered design have much in common, they argue, and increased collaboration between UCD and localization professionals would benefit not only practitioners in these fields, but also those who arguably are the most important participants in the design, sales and marketing processes: the users. Finally, Gregory Shreve argues that human-populated terminology databases and translation memories in the language industry today represent first-generation applications of translation technology whose effectiveness is constrained by the time needed to compile resources, limitations on the availability of linguists, the extremely narrow range of documents that are generally consulted to solve translation and terminology problems, and the generalized reliance on the sentence as the primary translation unit in professional practice. He asserts that the language industry is not exploiting language reuse to its full potential, and advocates a corpus-based process for enhancing computer-assisted translation and localization.

The issues addressed in this volume represent some of the most fundamental challenges to the industry today, which affect nearly all stakeholders, whether they be clients, vendors, freelancers, educators, industry associations or standards organizations. Moreover, they highlight the interdisciplinary nature of the field, and
by extension, the critical importance of an interdisciplinary global perspective to successful localization efforts. It is our hope that this volume will broaden perspectives and foster greater dialogue among all stakeholders for the benefit of all.

Notes


2. Localization is not confined exclusively to businesses. In fact, NGOs (such as the World Bank) and the open source community both provide examples of non-commercial localization venues. However, this volume focuses on the corporate realm since it is there that the vast majority of localization work is currently carried out.

3. The prevalence of outsourcing has led some to suggest that localization is a commodity activity. However, commoditization presupposes that localization is not a value-added activity performed by a limited number of firms, but rather is a common and easy-to-replicate service in which repeatability and reproducibility are taken for granted. The current absence of standardization in terms of client-side authoring, design and development renders such assumptions highly problematic.

4. Industry research firm IDC predicts that e-commerce will be a USD 7 trillion market by 2007, with B2B e-commerce accounting for USD 2.2 billion in 2005 alone (Crawford 2005).

5. Content is defined as “any digitized information — that is, text, document, image, video, structured record, script, application code, or metadata — used to convey meaning or exchange value in business interactions or transactions” (DePalma 2003: 6). EMC estimates that the volume of data stored on corporate servers is increasing by more than 50% per year.

6. In the absence of effective standardization of client-side authoring, design, and development, localization cannot possibly be reduced to a cookie-cutter process. On the contrary, given the variety in the nature of projects (from voice-over to traditional string-based compiled software user interfaces to Web services, to games, etc.), and given the scope and complexity of the tools used to both author and localize products, it can be argued that localization is both an art and a science.

7. Robert Holleyman, President and CEO of the Business Software Alliance, notes that “[t]he U.S. software industry derives more than half its revenues from exports” (BSA 2005).

8. Industry analyst firm Informa Telecoms & Media estimates the size of the computer game industry at USD 35.3 billion in 2005 and predicts that it will grow to USD 58.4 billion in 2007 (Carless 2005).
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PART 1

The localization business case