Feeling GILTy

Defining the terms Globalization, Internationalization, Localization and Translation

by Pierre Cadieux and Bert Esselink

As the title suggests, we should perhaps feel a little GILTy that of the above four terms, only translation is generally well understood. In a past issue of the LISA newsletter, Donald DePalma and Hans Fenstermacher argued that our industry cannot even agree on what globalization, internationalization and localization mean. Don and Hans also pointed out the lack of "coopetition", i.e. collaboration among competitors, in our industry.

This article is a modest first step in what we believe is the right direction. It is an example of coopetition between two periodicals focusing on the language industry towards a simple objective that is beneficial to our whole industry: clarifying our most basic terms. This article will be published, more or less simultaneously, in both periodicals. We hope that others will take similar small steps?

From the dictionary

Why do we need definitions? Is the dictionary not enough? Consider the following table that was built using the Merriam-Webster on-line dictionary (www.m-w.com). We searched for the GILTy terms and for "locale"; the results are sorted by date (see figure 1). It is interesting to note how old these terms all are (and the dates here are for the English language; a concept such as *translation* is obviously much older). It is also interesting to note that *globalization* was introduced towards the end of World War II. Although the last three definitions are not extremely enlightening, it remains that all five definitions are quite compatible with their current use in our industry. To be precise, only the terms *locale* and *internationalization* require a slight semantic shift *in our industry*. To illustrate this semantic shift, just compare the above definition of *locale* to the one provided by the Sun Solaris Operating System Manual: "a collection of files, data, and sometimes code, that contains the information needed to adapt Solaris to local market needs".

term	date	definition
translation	14th century	rendering from one language into another
locale	1772	a place or locality especially when viewed in relation to a particular event or characteristic
localization	1792	to make local: orient locally
internationalization	1864	to make international
globalization	1944	to make global

figure 1

The IBM internationalization glossary at www-106.ibm.com/developerworks/library/glossaries/unicode.html shows:

globalization The process of developing, manufacturing, and marketing software products that are intended for worldwide distribution. This term combines two aspects of the work: internationalization (enabling the product to be used without language or culture barriers) and localization (translating and enabling the product for a specific locale).

figure 2

The Microsoft glossary at www.microsoft.com/globaldev/reference/Glossary.asp shows:

Globalization: Designing and implementing software so that it can support all targeted locales and user interface languages without modification to the software source itself. This processing includes enabling for all target languages, and adding NLS support for target locales.

Internationalization: See Globalization

figure 3

A short history

In the beginning, or shortly thereafter, there were people. And when one people met another people, *translation* was born. Then, somewhat later, came software. And when people started translating software, some of the changes required were not, strictly speaking, translation: changes to character encodings, date and time formats, sorting rules, etc. The term *localization* was used to more generally describe any changes required to adapt a product to the needs of a particular group of people generally in the same physical location or *locale*; in short, *to make local* as the dictionary suggests.

A *locale* in our industry identifies a group of people by their common language and cultural conventions; the group may or may not be in the same physical location. French-Canadians, for example, are present mainly in the province of Quebec, but there are several other groups in Manitoba, Ontario and New Brunswick. In our industry, the word *locale* has become a *virtual location*, more akin to the concept of *culture*. To wit, we name locales by language-country pairs; for example, French-Canada is one locale, while French-France is another.

Definition:
Localization of a **thing** is adapting a **thing** to the needs of a given *locale*.

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*. This definition represents a shift away from the dictionary: internationalization, in our industry, is only the first step in the overall process of *making international*, as the dictionary suggests.

Finally, when the "rest of the world" gained in importance, it was a marketing imperative to have a strategy to sell all over the world: a so-called *globalization* strategy! Unfortunately, when this commercial term was imported into the more technical space of globalizing products, two different definitions arose. See figure 2 and 3.

From perusing about 6 other glossaries, it seems about evenly split: Mozilla agrees with Microsoft, eLocale agrees with IBM, etc.

Globalization

The word *globalization* is a mine field these days. In the news, it is used to mean economic globalization which, the anti-globalization groups counter, should be preceded by globalization of social programs and human rights. While these uses of the word are totally out of the scope of this article, it is interesting to note that both sides agree on what globalization means, namely *to make global*—as the dictionary suggests.

The *globalization* of a **thing**—be it a social program, a marketing strategy, a website, or a software product—is simply about spreading a **thing** to several different countries, and making it applicable and useable in those countries. We suggest therefore that our industry should follow the general meaning the word globalization already has in other domains, which is simply the dictionary meaning.

Definition:
Globalization of a **thing** consists in adapting a **thing** to the needs of N locales.

Formula: GLOBALIZATION = N * LOCALIZATION

Another important aspect to globalization is that it is never all-encompassing; the target is never all the countries nor all the languages of the world. In fact, of the approximately 6,000 languages on the planet today, typical globalization efforts rarely target more than six at a time.

Internationalization

So where does internationalization fit into the above formula? Although we did not need the internationalization concept to define the objective of globalization, we will need it to define an effective **globalization process.**

To define internationalization, let's consider a couple of examples:

- Internationalization of source code consists, among other things, of centralizing text strings in resource files to make it easier for the translator to do his job (and avoid accidental changes to source code).
- Internationalization of documentation may consist in enforcing a consistent writing style, standard terminology, controlled grammar rules, to make the text easier to translate (and avoid errors).

It is clear that the general purpose of internationalization is to make translation and localization easier (and avoiding errors thus increasing quality). It seems the original definition of internationalization as *localization-enablement* was the correct one.

That is the most general and fundamental intent: if you are going to do localization N times, it makes sense to work out what operations you can perform just once beforehand so that it makes the next N steps easier. If you consider the on-going maintenance of a product, internationalization is effective even in the N=1 case. But as the world gets smaller and smaller, we see N=6, 10, 12, etc. In such cases, internationalization is simply inevitable.

Some may be surprised or disappointed not too see the more usual definitions:

- "internationalization consists in making *something* language independent"
- "internationalization consists in externalizing localizable items"

These so-called definitions suffer from several faults:

- they are tasks, not fundamental definitions, and they are an incomplete list
- they are too specific; e.g. they don't apply well to internationalization of documentation
- even as tasks involved specifically in software internationalization, they still fail to describe the true nature of the activity (we intend to clarify the fundamentals of software internationalization in a separate article)

A good definition tells us what something is, not how it is done. The definition on this page defines internationalization for what it truly is, in a very general way, independent of the specific **thing** to be

GLOBALIZATION = INTERNATIONALIZATION + N * LOCALIZATION

Definition:
- Internationalization of a **thing** consists in any and all preparatory tasks that will facilitate subsequent localization of said **thing**.
- The purpose of internationalization is to make localization easier, faster, higher quality and more cost-effective.

internationalized. By reminding us that internationalization is a very general idea, by reminding us that many people can contribute in many different ways, it will ultimately allow us to generate a better, more complete list of tasks for the specific thing to be internationalized.

The new formula for an efficient process thus becomes:

The "GILT slide" below puts it all together.

- Globalization is a two-step process: internationalization and localization.
- There are usually several localization efforts happening in parallel.
- Translation is often the largest part of localization.

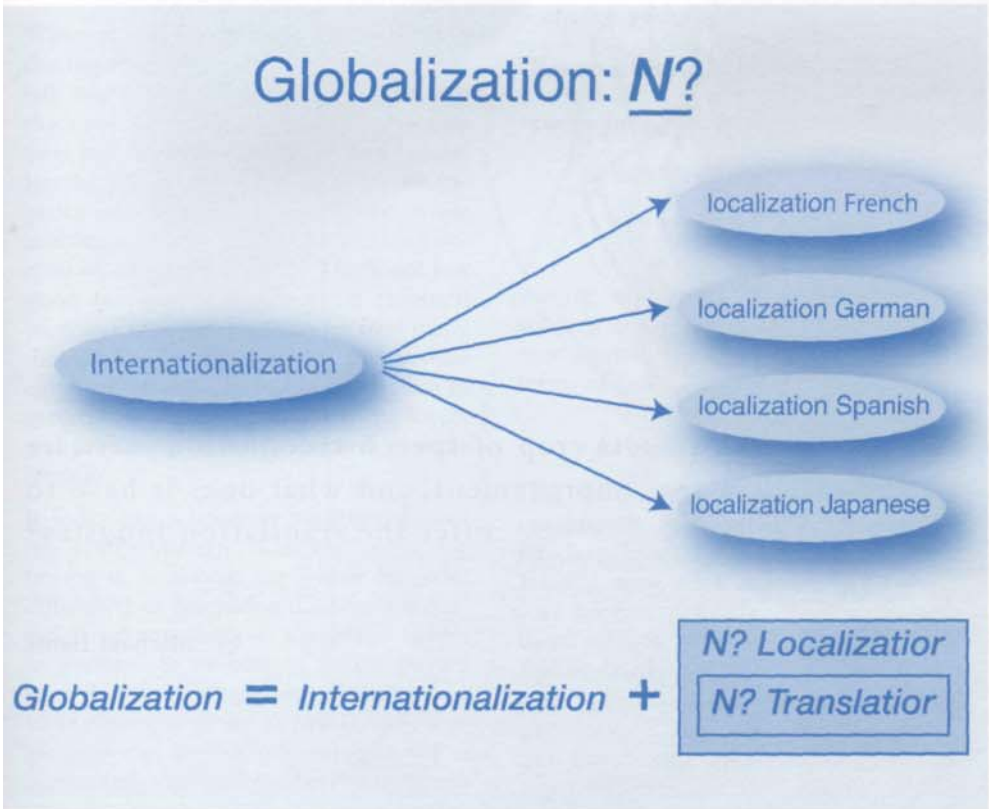
So what about translation?

To complete our quartet of terms, we can show how *translation* fits into these key processes. Once again, we can probably rely on the vernacular understanding of the word and say that translation refers to the specifically linguistic operations, performed by human or machine, that actually replaces the expressions in one natural language into those of another. This has the effect of making translation just one task—possibly the most time consuming, costly and vital, but as we have seen not the only one—in adapting something to the needs of the given locale.

An interesting phenomenon is that much of today's new, emerging publishing standards, such as content management systems and XML, place a new focus on the *art* of translation. Where localization previously incorporated translation as "just one" of the activities, these new publishing standards strip all the complexities from the raw text, i.e. separate layout and structure from the "content", which is one of the primary goals of *internationalization*. This means translators in localization can finally start focusing on what they should really be focusing on—changing one natural language into another.

We can see more and more practices and technologies that were previously very specific to the "localization world" entering into the more traditional *translation* industry. For example, translation memory tools are now commonly used by translators who translate material which is not software related. Similarly, legal translators may be faced with XML documentation while life sciences translators may have to translate a piece of software running on a medical device.

As humanity evolves, so do languages and definitions. The concepts of translation and localization may progressively merge. Localization may no longer be a separate discipline since sooner or later all translators will have to know at least the basics of localization—from translation to localization, and back again.



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