**Localization**

*Topic Owners:*

Objective: Understand and implement Localization projects

* Localizability.

Most modern apps have inbuilt support for localizability. Localizable strings were suitably exported / extracted in easy to translate form e.g. – in pot file format (file extension .pot or .po).

Localization is the process of adapting a product or content to a specific locale or market. Localization is an important part of every new foreign market entry, because it ensures that the brand speaks the same language as the potential customer.

Although every one of us is unique, there are certain aspects that both unite and separate people into tribes and groups. Geographics, demographics, beliefs, opinions, languages, and experiences are elements that define who we are. Localization is the way to adjust and modify content in a way that resonates well in the target audience.

It is possible to localize almost everything. Although the term localization is often assosiated with software localization, the same principles and processes can be used with other materials as well. Here we have collected some examples of successful localization of different types of items.

**standard software localization process :**

A software product that has been localized properly has the look and feel of a product originally written and designed for the target market. Here are just a number of points that have to be considered, as well as the language, in order to effectively localize a software product or website: measuring units, number formats, address formats, time and date formats (long and short), paper sizes, fonts, default font selection, case differences, character sets, sorting, word separation and hyphenation, local regulations, copyright issues, data protection, payment methods, currency conversion, taxes.    
  
The standard localization process includes the following basic steps:

* Analysis of the material received and evaluation of the tools and resources required for localization
* Cultural, technical and linguistic assessment
* Creation and maintenance of terminology glossaries
* Translation to the target language
* Adaptation of the user interface, including resizing of forms and dialogs, as required
* Localization of graphics, scripts or other media containing visible text, symbols, etc.
* Compilation and build of the localized files for testing
* Linguistic and functional quality assurance
* Project delivery
* Resource formats

File formats are in general, text files with some markup for easy handling of strings. For example, a pot file is having a header defining some basic info such as translator, owner, encoding etc. about the file, and strings have source and translated strings. An example is given below –

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# translation of zenity.HEAD.hi.po to Hindi

# This file is distributed under the same license as the PACKAGE package.

# Copyright (C) YEAR THE PACKAGE'S COPYRIGHT HOLDER.

# Gnome Hindi Team <indlinux-hindi-gnome@lists.sourceforge.net>, 2003.

# Ravishankar Shrivastava <raviratlami@yahoo.com>, 2004.

#

msgid ""

msgstr ""

"Project-Id-Version: zenity.HEAD.hi\n"

"POT-Creation-Date: 2004-06-14 04:33+0200\n"

"PO-Revision-Date: 2004-07-10 15:20+0530\n"

"Last-Translator: Ravishankar Shrivastava <raviratlami@yahoo.com>\n"

"Language-Team: Hindi <indlinux-hindi@lists.sourceforge.net>\n"

"MIME-Version: 1.0\n"

"Content-Type: text/plain; charset=UTF-8\n"

"Content-Transfer-Encoding: 8bit\n"

#: src/about.c:347

msgid "translator\_credits"

msgstr "जी करुणाकर (karunakar@freedomink.org), रविशंकर श्रीवास्तव (raviratlami@yahoo.com)"

#: src/about.c:377

msgid "Display dialog boxes from shell scripts"

msgstr "संवाद बक्से शैल स्क्रिप्ट्स से दिखाएँ"

#: src/about.c:381

msgid "(C) 2003 Sun Microsystems"

msgstr "(C) 2003 सन माइक्रोसिस्टम्स"

…

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So, you see here, the very first line indicates the name of the file. Then some licensing info and then translator ifo. After basic file info and statistics, localizable strings are paired in source and target language. Localizable Source is kept in double quote after msgid, and translation is after msgstr. A simple text editor can also be used for localization, but the process will be very time consuming, as modern localization tools can automate many things for you.

* Localization tools

Localization tools are computer programs that help localize strings effectively, consistently and productively.

There are several ways to localize software product files. One method is to edit the original resource files before the compilation process takes place. A second method is to localize the final compiled binaries of the product, and then to either save the localized resources into the same binaries or into a separate localization database. Most localization tools are capable of handling either or both of these methods. Regardless of the localization method you choose, using the proper resource editor tools can make the localization of product resources quick and easy. Effective localization tools should also be able to create the localized version of the corresponding original file. This original file can be a resource file or a compiled file, depending on the localization team's choice of tools and localization process.

There are many good localization tools that are commercially available. Before choosing one, be aware of the various criteria that a localization tool should meet. Besides the ability to translate the string resources within the localization tool, a few other tasks the tool should perform are to:

Change the names, sizes, and styles of the UI fonts.

Resize, move, and hide controls as necessary.

Change the encoding of the text.

Replace graphics and icons with localized ones.

Modify keyboard shortcuts.

A tool's ability to track changes that are made to the original resource from build to build is another very useful feature for localizers, since they can see what is updated between builds. This change can involve a string resource, a font size, or a new icon that has been added to the original product files. On the other hand, it is also useful for a tool to track resources that have been localized, as well as who did the localization, and other pertinent information. These types of statistics and the percentage of localization work completed help the localization manager track and plan the activities of the localization team.

The localization tool should be able to extract and edit a software project's different resource-file formats, which can include INF, Microsoft Win32 resource files, Extensible Markup Language (XML), and many other file formats. The localization team needs to choose the appropriate localization tool in accordance with the resource-file format used in the project.

Another requirement of a good localization tool involves its handling of localization glossaries. (For more information on localization glossaries, see "Localization Outsourcing" in " Establishing Localization Guidelines".) The tool that creates these useful glossaries helps the localizers look up the translation of English strings within the glossaries, thus providing a consistent translation. Recycling the localization glossaries allows automated translation of any new string resources in the product that resemble previously translated strings, a practice which will significantly reduce localization costs. Finally, the tool should provide a way to add instructions on how to localize the resources; this will make localization easier and more efficient.

Of course, effective localization results not only from having the proper tools but from having the right people to perform all necessary tasks in the localization process. The following section identifies the team members on a typical localization project and examines each member's roles and responsibilities.

There are many localization tools. Some proprietary and some free open source. Most popular among them are – Trados (proprietary), Localize (Free open source) and Poedit (Free).

**Software Localization Tools**

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| http://www.opentag.com/images/redtri.gif | **appTranslator** ([http://www.apptranslator.com](http://www.apptranslator.com/)) A localization tool for Windows EXE/DLL files. By: appTranslator (Belgium); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **Catalyst** ([www.alchemysoftware.ie](http://www.alchemysoftware.ie/)) A localization tool for Windows EXE/DLL, RC, MFC, Visual Basic, .NET, Java, XML, etc. By: Alchemy Software (Ireland); Platform: Windows; XLIFF support; |
| http://www.opentag.com/images/redtri.gif | **Crowdin** ([crowdin.net](http://crowdin.net/)) A Web-based localization environment for various file formats: PO, TS, Java, Android, Symbian, etc. By: Crowdin.net (Ukraine); Platform: Browser-based. |
| http://www.opentag.com/images/redtri.gif | **Language Studio** ([ls.atia.com](http://ls.atia.com/)) A localization tool for Windows RC, MFC, Visual Basic, MS Visual Studio projects (DSW, DSP and VBG, VBP files), InstalShield files, .NET, etc. By: Atia (Bulgaria); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **Multilizer** ([www.multilizer.com](http://www.multilizer.com/)) A localization tool for Windows (EXE/DLL), RC, .NET, ResX, Visual Basic, Delphi, Java, XML, databases, Palm, Symbian, etc. By: Multilizer Inc. (Finland); Platform: Windows; XLIFF support; |
| http://www.opentag.com/images/redtri.gif | **Localizer** ([www.lingobit.com](http://www.lingobit.com/)) A localization tool for Windows EXE/DLL, RC, MFC, Visual Basic, etc. By: Lingobit (Russia); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **Passolo** ([www.passolo.com](http://www.passolo.com/)) A localization tool for Windows EXE/DLL, RC, MFC, Visual Basic, .NET, Java, XML, etc. By: Pass Engineering (Germany); Platform: Windows; XLIFF support; |
| http://www.opentag.com/images/redtri.gif | **PowerGlot** ([www.powerglot.com](http://www.powerglot.com/)) A localization tool for Macintosh applications. By: Florent Pillet (France); Platform: Macintosh; |
| http://www.opentag.com/images/redtri.gif | **RapidTranslation** ([www.rapidtranslation.net](http://www.rapidtranslation.net/)) Localization tools to work directly on compiled application. It includes workflow, editor, and other components. The "Tiny" edition can be downloaded freely. By: RapidSolution Software (Germany); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **RC-WinTrans** ([www.schaudin.com](http://www.schaudin.com/)) A localization tool for Windows EXE/DLL, RC, MFC, Visual Basic, .NET, Java, etc. By: Schaudin.com (Germany); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **ResxEditor** (<http://www.peoplewords.com/download/ResxEditor.aspx>) Editor for .NET ResX files. By: PeopleWords (France); Platform: .NET v2.0; |
| http://www.opentag.com/images/redtri.gif | **SDLInsight** ([www.sdl.com](http://www.sdl.com/)) A localization tool for Windows EXE/DLL, .NET, etc. By: SDL International (UK); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **Sisulizer** ([www.sisulizer.com](http://www.sisulizer.com/)) A localization tools for C++, Windows application, VB, XML, Java, PO, etc. By: Sisulizer Ltd (Finland); Platform: Windows; XLIFF and TMX support. |
| http://www.opentag.com/images/redtri.gif | **StringDB** ([http://www.swbox.com](http://www.swbox.com/)) A tool and component to extract strings and create multilingual UI for .NET applications. By: SWBOX (UK); Platform: Windows, etc. |
| http://www.opentag.com/images/redtri.gif | **Visual Localize** ([www.visloc.com](http://www.visloc.com/)) A localization tool for Windows EXE/DLL, .NET Binary, Access DB, XML, etc. By: Applied Information Technology (Germany); Platform: Windows; |

**Translation Suites**

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| http://www.opentag.com/images/redtri.gif | **across** ([www.across.net](http://www.across.net/)) Set of translation tools. By: Nero AG (Germany); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **Déjà-Vu** ([www.atril.com](http://www.atril.com/)) Set of tools for translation projects. By: Atril (Spain); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **Felix** ([felix-cat.com](http://felix-cat.com/)) Translation tool add-in for Microsoft Word, PowerPoint and Excel, and HTML files (through TagAssist) By: Ryan Ginstrom (Japan); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **MemoQ** ([www.kilgray.com](http://www.kilgray.com/)) Integrated translation environment for mostly document-type formats. By: Kilgray (Hungary); Platform: .NET |
| http://www.opentag.com/images/redtri.gif | **MetaTexis** ([www.metatexis.com](http://www.metatexis.com/)) Translation workbench, using Word for the main editor. By: Herman Bruns (Germany); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **MultiTrans** ([www.multicorpora.ca](http://www.multicorpora.ca/)) Translation workbench using with full-text corpus technology, an approach different from "traditional" translation memory. Integrated in Word. By: MultiCorpa (Canada); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **OmegaT** ([www.omegat.org](http://www.omegat.org/)) An open-source project for a translation editor supporting various file type and TMX. By: The OmegaT SourceForge.net team; Platform: Java; |
| http://www.opentag.com/images/redtri.gif | **SDLX**([www.sdl.com](http://www.sdl.com/)) Set of tools for translation projects. By: SDL International (UK); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **Transit** ([www.star-transit.com](http://www.star-transit.com/)) Set of tools for translation projects. By: Star Language Technology & Solutions (Switzerland); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **Translator's Workbench** ([www.trados.com](http://www.trados.com/)) Translation workbench, using Word for the main editor. By: Trados (Germany); Platform: Windows; |
| http://www.opentag.com/images/redtri.gif | **Wordbee** ([www.wordbee.com](http://www.wordbee.com/)) Translation and translation management tool for various file formats. By Wordbee SA (Luxembourg); Platform: Web; |
| http://www.opentag.com/images/redtri.gif | **Wordfast** ([www.wordfast.net](http://www.wordfast.net/)) Translation workbench, using Word for the main editor. By: Champollion and Partners (France); Platform: Windows and Macintosh; |
| http://www.opentag.com/images/redtri.gif | **Heartsome Translation Suite** ([www.heartsome.net](http://www.heartsome.net/)) A software bundle of three professional translation editing tools: XLIFF Translation Editor, TMX Editor and Dictionary (TBX) Editor. By: Heartsome (Singapore); Platform: Java; |

* Translation memory/TMF

A translation memory is a linguistic database that continually captures your translations as you work for future use. A general and popular file format for translation memory is \*.tmx.

All previous translations are accumulated within the translation memory (in source and target language pairs called translation units) and reused so that you never have to translate the same sentence twice. The more you build up your translation memory, the faster you can translate subsequent translations, enabling you to take on more projects and increase your revenue.

Using [**a**](http://www.translationzone.com/products/sdl-trados-studio/) translation tool, you would open the source file and apply the translation memory so that any "100% matches" (identical matches) or "fuzzy matches" (similar, but not identical matches) within the text are instantly extracted and placed within the target file.

As you work through the source file, the "matches" suggested by the translation memory can be either accepted or overridden with new alternatives. If a translation unit is manually updated, then it is stored within the translation memory for future use as well as for repetition in the current text. In a similar way, all segments in the target file without a "match" would be translated manually and then automatically added to the translation memory.

Translation memories should be used by anyone who localizes content from one language into another. They are most effective when translating documents with a high level of repetition.

Translation memories are also very helpful when translating content out of context. An increasing number of organizations rely on [**Content Management Systems (CMS)**](http://www.sdl.com/products/web-content-management/)to manage their information. A CMS allows individual blocks of text, rather than entire documents, to be created/edited and then published in a variety of different formats.  A translation memory helps to make this process quicker and more consistent.

Furthermore, even if a translation memory is not being used, the dedicated translation environment would allow you to extract text from the source file and focus on localizing the text without worrying about the tags. For example, with an HTML file, all of the coding will be hidden so you do not have to waste time searching through unnecessary lines for the text that requires translation.

* Automatic translation
* L10N quality checking
* L10n testing
* L10n community management
* Best practices