

# Automated User Interface Localization

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**Abstract-** An important aspect of localizing the user interface of any interactive application in a computer system is the translation of a large amount of text, usually English language text, consisting of words, phrases and sentences that occur as part of the interaction. As can be expected there is a lot of commonality in these text items across applications and even across platforms. Automated assistance in the generation/translation of these text items would enable and encourage more localization efforts. In this paper, the description of a multiple language such as English – Hindi, Hindi – English system that can be used to provide such automated assistance. It is a common desktop application which is simple to use, extensible and scalable to other languages as well.

**Index Terms-** Localization, Internationalization, Parser, Translation, Automated , Multilingual

## I. INTRODUCTION

A major task in localization of any application in a computer system is the generalization/translation of text items that are presented by the system to the user in the course of interaction. The present invention provides a system and process which has the advantages of shortening the time and cost required to create a new localized version of a software product by automating much of the language translation process; by providing tools to automate the modifications to the program being localized, thereby reducing the probability of creating errors in the localization process and providing some measure of consistency between subsequently localized new releases of the product, and between different locales. The system disclosed includes an environment and tools to develop software modules to create methods to display, enter or print various single and multi -byte character sets. Moreover the system disclosed provides a mechanism for an independent software developer to localize a software product, using only a binary copy of the target program and the localization tool kit for that product. This will permit the Software manufacturer to contract with developers in various countries, minimizing risks by not having to provide the developers with a source code version of the portions of the product which do not require localization, and assuring rapid and consistent versions of the localized product through the use of the tool kit provided for that product. The invention provides a method and apparatus for creating a localized version of a target computer program product by first creating a binary version of the localized materials using the localization kit, and then using the localization kit to overlay this binary version of the localized materials onto a binary version of the target computer program product. The localization of certain locale data in the target

computer program binary image is also facilitated. The localization kit also provides tools to test and verify the localized version of the target computer program product. The system disclosed also provides a framework wherein new localization tools can be easily incorporated into the overall process.

## II. FEATURES OF SYSTEM

The basic idea is to make the translation faster and consistent by making use of this automated user interface. the translator has to search for the text item in the system and obtain the equivalent item in the target language. This kind of dictionary can also play an important role when more than one translator and localization engineer are involved in localizing a single system or a suite of applications .it will help in maintaining consistency in translation / localization. The system has the following capabilities :

- 1) It can search fast
- 2) It can add or remove terms easily
- 3) It can be extended to more locales
- 4) It has simple API
- 5) It has simple GUI
- 6) Interactive

## III. PROPOSED WORK

System Architecture:

Modules of our system will be as follows :

- A. 1.System setup Module
  - B. 2.Database Module
  - C. 3.GUI Design Module
  - D. 4.Implementation Module
- A. System Setup Module

The basis for managing any project , including localization , is the project plan . set up your project plan with milestones, time buffers and constraints.

To estimate the effort , count the words of the user interface and the documentation to be translated , add times for translation preparation and review.

B. Database Module

This will handle all the initial database such as words, phrase,, sentences, text blocks which will be occurring in the resource files of the system also the desktop applications.

The use of Unicode character encoding will also be used for the multilingual texts.

C.GUI Design Module

Design the graphical user interface of the software application.

The design of a GUI for the user will be made in such a manner which will be user friendly and as well as attractive too. As it is widely seen that the interface design holds an impact on the success of any software application.

Define the basic terminology to be used or translation of the user interface and the documentation. The basic terminology includes button labels, menus, functions and concepts used in the software.

#### D. Implementation Module

The software application can be implemented by maintaining the Database , defining basic terminology, designing GUI.

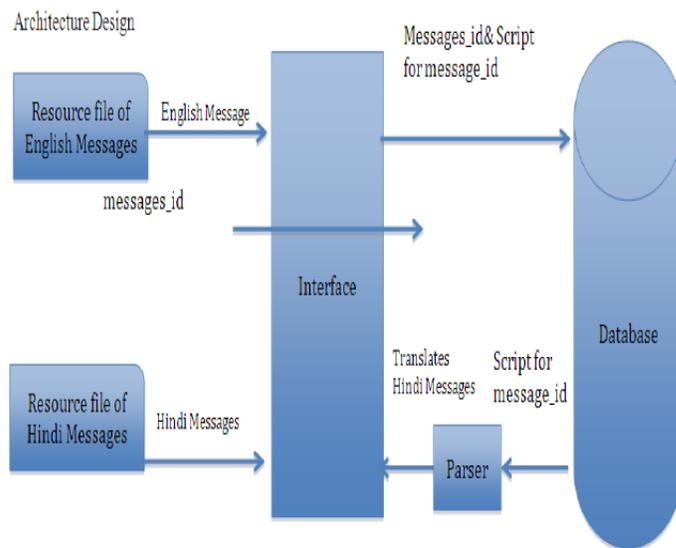
After the 3 modules, start to localize the software application.

User interface localization can be performed with the support of a localization tool or even by translating string resource files.

Localization tools works the same way as translation tools works. It works with the segmentation rules applying to the user interface strings rather to the sentences. A complete localization is only achieved if all controls (button labels, tooltips, menus, field labels and system messages) are translated.

Finally test the correctness of the translated texts

The interface is been designed by using Visual Studio .Net (Visual Basic). The .Net framework is a Multilanguage environment for building , deploying , and running web services and applications .



**FIGURE 1 : SYSTEM ARCHITECTURE**

#### IV. RESULT

In our project “Automated user interface localization ” using initial databases with all words , phrases , etc and also using unicode characters encoding for displaying multiple language text, localization tools are being used which will give us an efficient result.

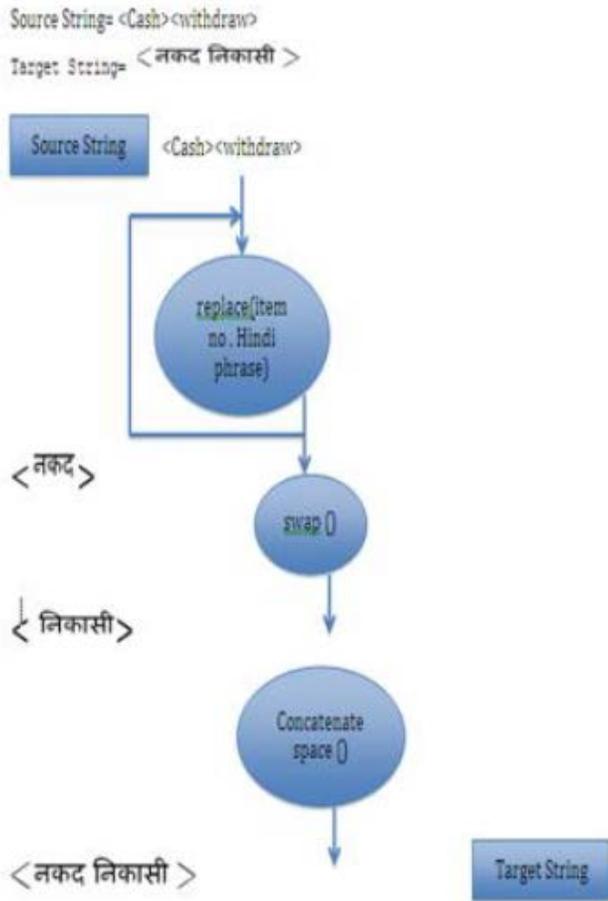
The expected outcome of this software application is accurate and reliable maintenance in lesser time than older system used to take.

#### V. CONCLUSION

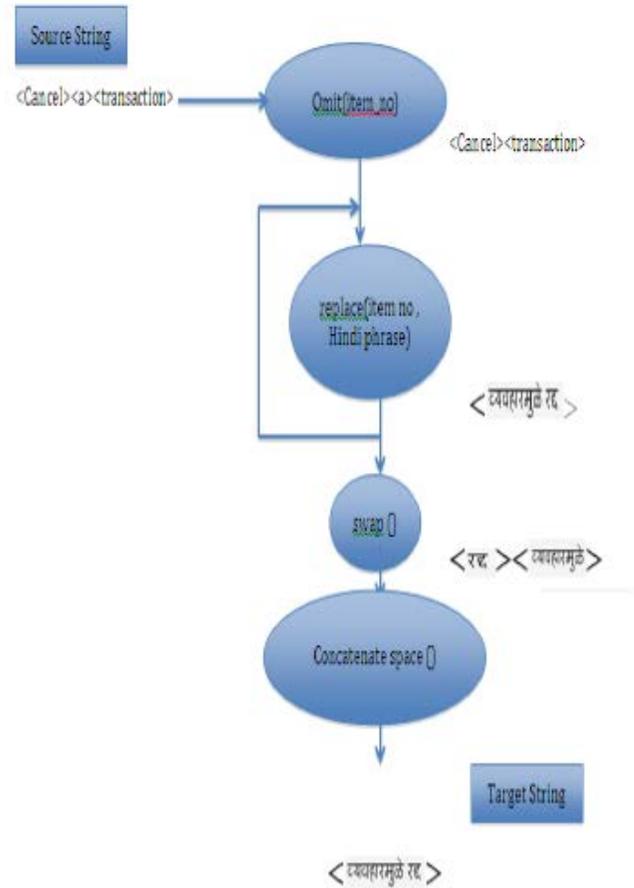
Translation of messages is an important step in software localization, which is emerging to be a new paradigm for software development .We can provide automated tools in order to do so. It can be extended for use in a technical literature machine translation system. The localization process includes analysis, assessment, creation and maintenance, translation, adaptation, media localization, testing, quality assurance and project delivery. As part of conclusion we conclude the number of points that have to be considered, in order to effectively localize a software product or website.

APPENDIX

EXAMPLE 1



EXAMPLE 2



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We would like to acknowledge the support provided by our mentor and my colleagues for successfully carrying out this work. We would like to thank the institution for all the facilities and infrastructure they have provided us

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