

ABSTRACT:

SOFTWARE COMPONENT FOR REARRANGING ITEMS OF A LOCALIZED GRAPHICAL USER INTERFACE

Winkler Ágoston, awinkler@aut.bme.hu

Juhász Sándor, juhasz.sandor@aut.bme.hu

Budapest University of Technology and Economics

Department of Automation and Applied Informatics

The world-wide improvement of the information infrastructure allowed the usage of various computer applications for a wide range of people. However, as most users understand only their own national language, the localization of software products has become essential for the software development companies because this is their only way to reach a significant number of customers in the international market.

One of the most important tasks of the localization is the translation of the user interface into the specific national languages, often with the aid of computer programs. However, the pure translation of the texts is only the first step of a complex process: graphical user interfaces are often optimized for the size of the original language texts, causing that certain items (e.g. text labels, buttons, list boxes in user dialogs) often increase (depending on the nature of the source and the destination language) and may even slip above each other. This does not simply cause an unassuming appearance but makes the usage of the program more difficult (even impossible), so the arrangement of the items must be corrected subsequently.

The correction should preserve the original structure of the interface (e.g. the relation of logically coherent items that are originally in one row or one column should remain the same during the rearrangement), furthermore, it is important to keep the nicely proportioned design of the interface (the formation of large empty areas should be avoided). The transformation can be processed with human contribution, however this solution is quite time-consuming and does not ensure the desirable precision by all means.

This paper describes a software component that automatically rearranges the items of a user interface based on the principles above, by integrating into a translation support system. After describing the main algorithm, some special problems (arisen during the practice) are presented together with their solution. The parameters of the algorithm are summarized by showing their effects. The paper is illustrated by real-life examples.