A performance comparison of search trees

Changes

Przemysław Rosiński
Piotr Janaszek

Faculty of Mathematics and Information Science
Warsaw University of Technology

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DOCUMENT METRIC

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HISTORY OF CHANGES

Version	Date	Author	Description
0.0.1	30.12.2011	Piotr Janaszek	Created document
0.4	1.01.2012	Przemysław Rosiński, Piotr Janaszek	Created Requirements
0.9	1.01.2012	Przemysław Rosiński, Piotr Janaszek	Created Used Solutions and Postface
1.0	1.01.2012	Przemysław Rosiński	Fixed mistakes and changed document formatting

REQUIREMENTS

Most of the requirements were fulfilled without any changes, but few small improvements were made.

In business analysis there was stated that only one tree can be processed at the time, but many trees can be processed sequentially. In the final application it is changed so that in *Create* and *Search* mode user works on one tree, when in *Batch Process* mode many trees can be processed. It gives the flexibility between processing trees one-by-one with visualizing their structure and creating trees and searching elements in batch.

Main user path diagram showed that when user wants to create tree from file, he or she should choose type of tree in first order and then load input file. The order was swapped. Thanks to choosing file firstly, one file can be used as a source of data for many trees.

USED SOLUTIONS

Changing order of creating tree from file and selecting input file forced a change in application activity regarding retrieving and adding data. Also, there is difference in preparing performance results. It was decided not to count number of visited nodes what simplified and slightly shortened time of searching.

Two changes were made regarding user interface. For switching between modes there are buttons used instead of tabs. Result remains the same for the user. Also, image box was replaced by panel with controls for plotting. It produces reliability of resizing and scrolling. These changes were done to make interface more intuitive and better-looking.

From the point of view of developing the application there is one improvement in comparison with Technical Analysis. From logic package there was extracted part responsible for providing data. Provider created this way is in form of a DLL library, what makes it easy to be enhanced and utilized in other applications.

POSTFACE

Application fulfills the most assumptions of client's needs. The biggest change was made from the technical side. It is not visible to the user, but makes the program more reliable and easy to be improved and extended in future.