

Dear MPC editors and reviewers,

This folder contains the source code of the algorithms described in our paper:

Zhang-Hua Fu, Jin-Kao Hao. Swap-Vertex Based Neighborhood for Steiner Tree Problems. Revised to Mathematical Programming Computation, March 2016.

It contains nine subcategories, respectively dedicated to the SPG, the PCSPG and the MWCS (each corresponding to three subcategories, i.e., BasicLS, ComparedLS and EnhancedLS). To run the source code, please follow the following steps:

Step 1: Enter the corresponding subcategory.

Step 2: The input graphs of the instances used in the paper are already put under each subcategory. Please indicate the instances to run in file "Instances-To-Run.txt".

Step 3: Compile the source code under Linux or Windows systems.

*If under Linux system, please make sure the standard GNU compiler has been installed correctly, and then call the following commands (corresponding to each studied STP variant) to build the executable code:

For the SPG problem: `g++ SPG.cpp -o SPG.exe`

For the PCSPG problem: `g++ PCSPG.cpp -o PCSPG.exe`

For the MWCS problem: `g++ MWCS.cpp -o MWCS.exe`

*If under Windows system, please make sure the Dev-Cpp environment (an open source C++ developer) has been installed correctly, and then build the source code to executable code under Dev-Cpp environment;

Step 4: Execute the executable code. It would run for one CPU hour for each test instance.

After the program terminates, the best found solution of each instance would be saved in file *.txt (in DIMACS standard format, * indicates the instance name), and the statistical results would be logged into file "Log-Results.txt".

If you still encounter any problem with our source code, please feel free to contact us.

Sincere thanks and best regards!

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