Test Launcher Manual

TATA62

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Av

Hendric Kjellström

henkj080@student.liu.se

Contents

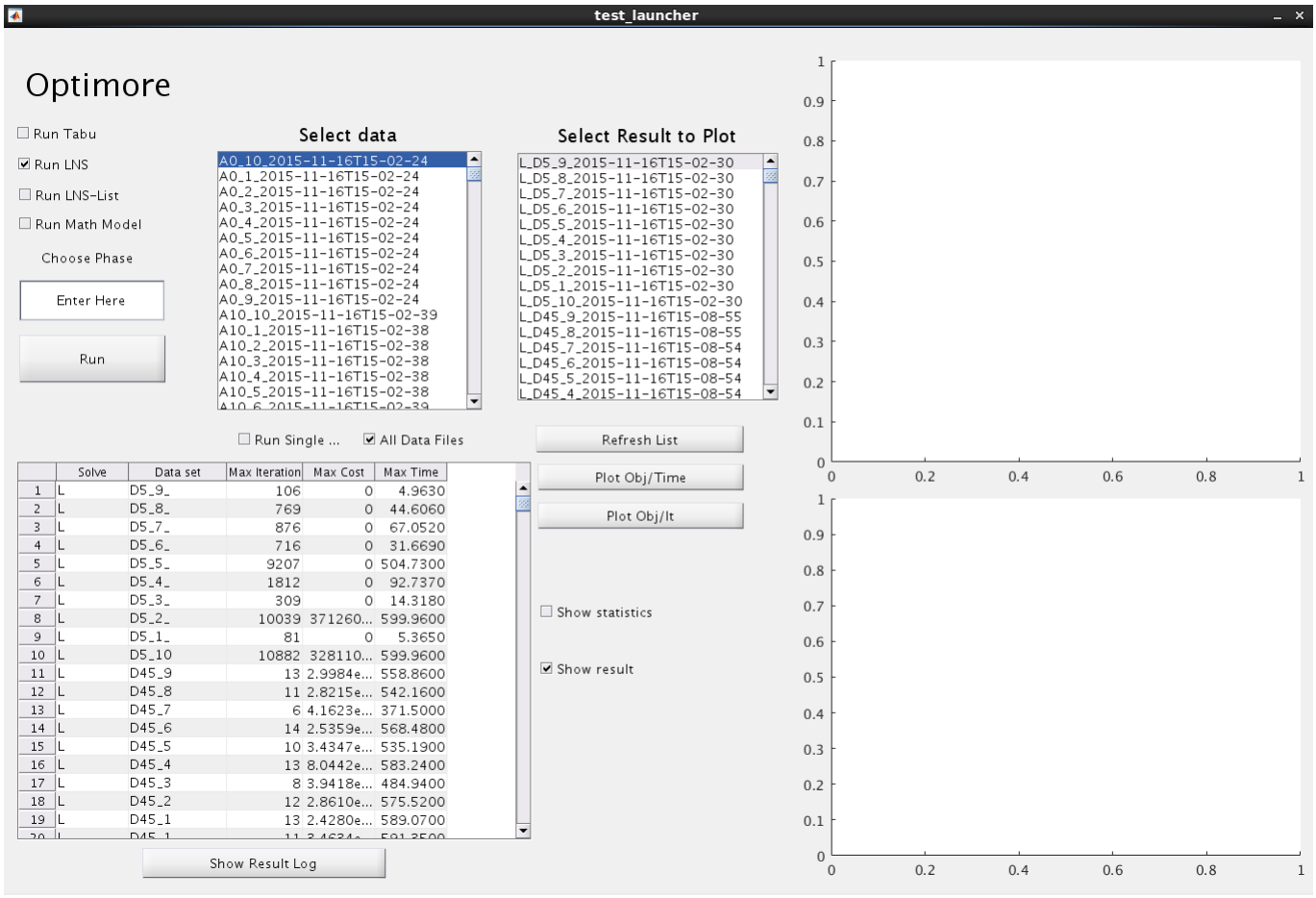
1 Launcher Overview with introduction **1**

2 Steps **2**

1 Launcher Overview with introduction

This is the final GUI suited for four different heuristics along with self-explaining push-buttons to make it simple for the user. The following steps guarantees a result.

Figure 1: Test Launcher GUI



2 Steps

- Start off by choosing one of the four different heuristics, no more no less. The GUI is not made for evaluating multiple heuristics at once.
- If the user wants to evaluate the Tabu Search, the user must put a vector inside the "Enter Here"-field. An example would be: [4,5]. Please check the technical documentation about the Tabu Search for what phases are valid. If the user persists of using a phase for the other heuristics nothing will differ from not using a phase.
- Below the "Select Data"-list-box there are two check-boxes that displays "Run Single" and "All Data Files". If the user wants to evaluate some data-sets but not all, the user simply clicks the "Run Single"-button first! Now the user can hold the Ctrl-button and click on multiple data-sets to include in the test.
- If the user wants to deplete the memory space on the account the tests are tested on, simply click "All Data Files". This action tells the script to include every data-set available.
- The list-box "Select Result to Plot" is a complete list of every result acquired by the solver. Important note: Before the results have been produced, the script displays the previous result. An example: The user used the Tabu Search for evaluating two data-sets. Then the user takes a break and closes the GUI. The next time the user opens the GUI the results from the Tabu Search will appear.
- The first time the user opens the GUI there are no previous results (given that the result folder was empty at first) which produces an error in Matlab. Ignore this and produce results and then push "Refresh List"-button to display the fresh results after the solver is finished.
- The "Select Result to Plot" now contains results that can be visualized by pushing "Plot Obj/Time" and/or "Plot Obj/It". The user can only press one result at the time. This might take some time depending on the complexity of the data so be patient. If the button does not respond, click the result to plot one more time then press any of the plot-buttons. Important note: The Tabu Search differs in result compared to the other heuristics. The natural logarithm was used to plot.
- Now the user is faced with two choices.
  - By pressing "Show result" and then clicking "Show Result Log" displays: 'Solver','Data set','Max Iteration','Max Cost' and 'Max Time'. When the "Show Result Log"-button has been pushed, the script saves the data from the table and puts in the current result folder tagged "Plain Results" (.dat file).

  - By pressing "Show statistics" and then clicking "Show Result Log" displays: 'Solve','Data set','Upper prediction limit','Lower prediction limit','Mean Iteration','Mean Time','Iteration standard deviation','Time standard deviation','Iteration Max','Time max','Iteration min','Time min' and 'Failurekvot'. Let us start with an example: The user evaluates the following data, $A0_1$, $A0_5$, $B25_2$ and $C40_1$. The statistical table will present all data, but gathers data with the same complexity. The table will show results for A0, B25 and C40.

- Following these steps will guarantee a result.