

Jaturon Juntum 2012: Development of Web-based Open Source Optimization Tools.  
Master of Engineering (Industrial Engineering), Major Field: Industrial Engineering,  
Department of Industrial Engineering. Thesis Advisor:  
Mr. Pornthep Anussornnitisarn, Ph.D. 120 pages.

Research and study in Operations Research have applied to solve the engineering problems, production planning and transport routes, which are complexity and many parameters. For solved these, university or college must have commercial solver programs such as Matlab, Lindo, Mathamatica, etc. But these programs are not enough to college's users because it's high prices, these is major obstacle for study and research in Operations Research. The main purpose of this research is develop online solver tool that can solve linear programming problems and mixed integer linear programming with non-limit decision variables problem and free. The tool is integrated with open source solvers and internet technology. For used in study, research, and industry, users not install any programs. The results showed that open source program can solve both linear programming problem forms correctly without the restriction of the number of decision variables. Assumes that efficiency is acceptable and similar to popular commercial programs.

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Student's signature

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Thesis Advisor's signature