

## REVIEW OF MASTER THESIS OF JÁN PECSÖK

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This is a brief review of the master thesis submitted by Ján Pecsök.

The technical contents of the thesis are quite vast for a Master thesis. Even though no new results have been obtained in this thesis, the amount of material presented would warrant acceptance of this thesis provided that the author understands the contents well.

In this report, I will present some criticisms and suggestions that I hope will help improve the presentation of the thesis. The comments are not in depth and are supposed to be a general guideline.

- The author should run a spellcheck so that obvious typos are identified. It is not the case that such errors are plentiful, but this will certainly help catch the small number of errors that I saw here and there.
- Articles such as “A” and “The” are consistently misused. This is perhaps due to English not being the native tongue of the author. Unfortunately, a list of such mistakes will make this report terribly long. I would nevertheless suggest a second, more careful reading by the author.
- Some basic things that have been omitted need to be described (perhaps in an appendix). Linear Programming and Duality certainly fit the bill. LP duality is a very non-trivial thing specially since there are more than one formulation. I think this addition will help non-expert readers. Also, since the author discusses quite a lot of basic linear algebra at some point (Section 2.2), I think that demanding an inclusion of LP Duality is not entirely unreasonable an expectation.
- Same as above. Discuss “Cuts in a directed graph”. There are more than one way to make sense of the notion and the author would be wise enough to point which one he has in mind. Similarly, total unimodularity is mentioned without any reference or definition first (page 6).
- I believe that web references should not be acceptable for content that is available in textbooks or papers published in peer-reviewed venues (References 33-40). If absolutely necessary, one should include a date and time stamp for when the website was accessed since it might not be available at the provided link at a later date.
- In the introductory list of problems (Section 1.1), I would suggest rewriting things to avoid repetition. For example one does not need to mention the name of the problem, provide detail, and then use a sentence like “problem xyz asks us to...” or “blah blah is xyz Problem.” Also, it would help to move the problems that are described “for readers’ reference only” into an appendix.

- Section 2 reads like a mix of overview, history, and review of the materials presented in the thesis. It would help to break things up properly. I suggest rewriting the introduction of Section 2 (everything before the start of 2.1).

A note regarding typographical errors: There are numerous typographical errors in the text and I believe a significant revision would be needed to fix this. Unfortunately, the errors are so many that I cannot point them out without filling pages. I would be available on Jan. 27th and if the author wishes I can give the notes that I made in the thesis while reading it. Unfortunately, I do not have access to a scanner at the moment to be able to send the notes.

A final remark: It would be better to discuss the implementation in more detail. Even though perhaps it may not be breaking new grounds research-wise, clearly this is original work of the author and should be highlighted. Another problem is that the author does not describe the machine used for compiling and running the program. I believe that whenever presenting "timing information", description of the exact configuration should be provided.