

## **Due July 17**

### Individual Assignment: "Book Report "

Find an article or set of articles that describe an application of linear or integer programming, or some other form of optimization. [A good source for management applications is a journal titled **INTERFACES** that you can find in the MIT library or at <http://silmaril.smeal.psu.edu/interfaces/>; if you have a particular interest, we may be able to direct you to specific articles or places to look, or use the Search capabilities on the **INTERFACES** home page.] Summarize briefly and prepare a critique and evaluation of the paper(s). Your report (exclusive of appendix and attachments) should be no longer than 3 single-spaced, typed pages, normal fonts, normal margins. The desired length is two pages.

You should assume the role of a member of a corporate operations research staff, who has identified an optimization application at your prime competitor. Your report should be addressed to your manager, and its objective is to inform of the application and to explore its potential for your firm.

Your report ...

a. Should be written as a memorandum in terms and language that is appropriate for your manager's level of familiarity with the subject matter, and for his/her attention span. In particular, the manager is not an expert in math programming or mathematics, and indeed, may possess both disdain for the technical details as well as some skepticism about the applicability of this methodology to his/her operational context.

You may want to include a technical appendix with model formulations and exhibits (for the manager's staff). To help us in reviewing your memorandum, please also submit a copy of the original article(s).

b. Should describe the problem context and model construction, the implementation and application, as appropriate.

c. Should critique the model and its application. For instance, is the model a realistic representation of the problem? Does the data exist to parameterize the model? How hard will it be to implement the model? Is the model suitable for sensitivity analysis, and for "what if" analyses? What are the alternatives to the model?

d. **Before submitting your report, please take some time within your groups, and discuss and share each of your reports.**