Errata sheet for the article "A Matheuristic for the Liner Shipping Network Design Problem" by Brouer, Desaulniers and Pisinger

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September 29, 2015

1 Solutions with a weekly frequency

The solutions reported in the article *"A Matheuristic for the Liner Shipping Network Design Problem", Transportation Research Part E, 72, p. 42-59 (2014)* by B.D. Brouer, G. Desaulniers and D. Pisinger enforces a minimum speed along with a 24 hour port stay at each port. It has come to our attention that some services created by the construction heuristic requires a longer port stay than 24 hours in order to maintain the weekly frequency requirement. It means that the vessel is allowed more idle time at port and unfortunately, the fuel cost during this idling time has not been accounted for. The extra cost is minimal and does not change the overall objective value significantly as can be seen from the document `CorrectionSheetResultsBrouerDesaulniersPisinger.xlsx` published along with this errata sheet. We have also published the best networks of our algorithm along with LINER-LIB 2012 in order for the community to be able to compare their own results to our solutions. In the article we obtain 10 new best found solutions for the LSNDP. Five of these do not have any services with additional idling time, but the remaining five do have a number of services with extra idling time. We have fixed the error in the code (with no other improvements) and rerun tests for these five instances. For one instance we cannot claim to have the best solution, for the remaining four our solutions are an improvement to those of *"A base integer programming model and benchmark suite for the Liner Shipping Network Design Problem", Transportation Science 48(2), (2014)* by Brouer, Alvarez, Plum, Pisinger and Sigurd. For two instances we even find better solutions than those reported in *"A Matheuristic for the Liner Shipping Network Design*

Problem", Transportation Research Part E, 72, p. 42-59 (2014) by B.D. Brouer, G. Desaulniers and D. Pisinger. The corrected networks are published along with the original best networks.

We sincerely apologize for this error in the code, but hope that the community can move forward with these new published networks if new best solutions are found for the version of the problem with extra idling time as well as the version where a port stay off exactly 24 hours is required.