

On the Stacker Crane Problem and the Directed General Routing Problem

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Abstract: In this talk we deal with the polyhedral description and the resolution of the Directed General Routing Problem (DGRP) and the Stacker Crane Problem (SCP). The DGRP, in which the service activity occurs both at some of the nodes and at some of the arcs of a directed graph, contains a large number of important arc and node routing problems as special cases, including the SCP. Here, large families of facet defining inequalities are described. Furthermore, a branch-and-cut algorithm for these problems is presented. Extensive computational experiments over different sets of DGRP and SCP instances are included. These results prove that our algorithm is among the best solution procedures proposed for both problems.

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