

Faster Primal-Dual Algorithms for the Economic Lot-Sizing Problem

Dan Stratila

We consider the classical lot-sizing problem, introduced by Manne (1958), and Wagner and Whitin (1958). Since its introduction, researchers have worked on faster algorithms for it. Federgruen and Tzur (1991), Wagelmans et al (1992), and Aggarwal and Park (1993) independently obtained $O(n \log n)$ algorithms. Recently, Levi et al (2006) developed a primal-dual algorithm.

Building on the work of Levi et al, we obtain a fast primal-dual algorithm for the lot-sizing problem and analyze its running time.

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