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ON A ROUTING PROBLEM WITH CONSTRAINTS THAT INCLUDE DEPENDENCE ON A TASK LIST

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We consider the solution of a routing problem complicated by constraints and by a possible dependence of the cost function on a task list. In addition, the statement admits that some of the constraints may be formed depending on a current list of tasks. Possible applications of this problem include routing the workers' movements under increased radiation in the process of dismantling radiation sources as well as steering a numerically controlled machine tool during the sheet cutting of parts. We propose a modification of widely understood dynamic programming and use it to design two versions of an algorithm, which are implemented as computer programs.

Keywords: dynamic programming, route, precedence constraints.

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