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PROBLEM: THE MAXIMUM RATE OF DELIVERY*

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ction. The jeep logistics problem occurs when the destination
 r the jeep to transport itself without refueling. The problem
 rises in air transport operations, and may have application to
 itions and interplanetary travel. Phipps [4] mentions the jeep
 having application to a space rocket with a multiple charge.
 em can be stated as follows. A jeep can carry a maximum load
 of gas and can travel m miles per gallon. The jeep is required
 sert x miles wide, where x is greater than cm . Thus, it is neces-
 sarily establish intermediate depots of gas. The problem, then, is to
 cate these depots so as to minimize the total amount of gas

] initially considers the problem where the objective is to trav-
 al distance. He then generalizes the problem to require that
 ble to return to the origin, and also considers the requirement
 ; a specific amount of fuel at the destination. In a second report
 ders the problem of delivering the maximum amount of fuel,
 triction that at most one intermediate depot can be used. Fine
 the same basic problem as does Helmer [1], using a somewhat
 proach, and obtains similar results. Phipps [4] generalizes the
 onsider that more than one jeep may be used. Several cases are
 namely, all jeeps will not return, all jeeps will return, and all
 return. The equivalence between the "one jeep" problem and
 of jeeps" problem is established. Also considered is the require-
 vering a specific amount of fuel to the destination. Franklin [5]
 e case where the vehicles have different fuel capacities and
 as. The jeep problem is also described by Bellman [6].
 per, a modified version of the jeep problem is considered, where
 e is to establish an optimal rate of cargo delivery at the final
 al cases are described. In the first case, the cargo is entirely
 second case, the cargo is only partially fuel. In the third case,
 is assessed for the use of a depot. The technique of dynamic
 g is used to establish the results.

um rate of fuel delivery. In this first problem, the cargo is en-
 The fuel load either may be used to propel the jeep or may be
 a depot.

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