


New publication: Exploiting sets of independent moves in VRP

<p style="text-align: center;">Title</p> <p>Exploiting sets of independent moves in VRP Authors: • Tommaso Bianconcini • David Di Lorenzo • Alessandro Lori • Fabio Schoen • Leonardo Taccari Affiliations: GOL-DINFO and Fleetmatics Research</p>	
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Abstract:

Most heuristic methods for VRP and its variants are based on the partial exploration of large neighborhoods, typically by means of single, simple moves applied to the current solution. In this paper we define an extended concept of independent moves and show how even a very standard heuristic method can significantly improve when considering the simultaneous application of carefully chosen sets of moves. We show in particular that, when choosing a set such that the total cost variation is equal to the sum of the variations induced by

each single move, the quality of solutions obtained is in general very high. When compared with numerical results obtained by some of the best available heuristics on challenging, large scale, problems, our simple algorithm equipped with the application of optimally chosen independent moves displayed very good quality.