Constrained Suitability Optimization of Military Officer Assignments

Spencer Matthews[1,2], Matthew Fletcher[1,3], Brandon M. McConnell[1], Russell E. King[1,2]

[1] Center for Additive Manufacturing and Logistics, NC State University, Raleigh, NC
[2] Edward P. Fitts Department of Industrial & Systems Engineering, NC State University, Raleigh, NC
[3] Operations Research Graduate Program, NC State University, Raleigh, NC

Every year, the US Army spends millions of dollars moving officers between duty stations. There is currently a lack of planning and decision support models available to assist branch managers with managing this talent pool while considering both readiness and cost tradeoffs. We consider the problem of assigning US Army Officers to jobs based on their talent profile. First, we transform and map a dataset of officers and jobs into a usable dataset. Then we introduce a general assignment problem in the form of a mixed integer linear program where talent requirements and budget are constraints. Finally, we optimize the model in order to get the best possible match of officer to job subject to budget considerations. Ongoing research is already underway to support visualizing tradeoffs between overall quality of match and cost, and identifying distinct solution sets for further consideration.

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