Application of Digital Human Modeling to the Design of a Postal Delivery Vehicle

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The development of a new carrier rout vehicle for the U.S. Postal Service began with the design of the vehicle interior from an operator-centered perspective. A task analysis of the postal worker while driving and while performing mail-handling operations guided the layout of the vehicle interior. The Jack human modeling software was used along with SAE Recommended Practices and other tools, to create a vehicle environment that will accommodate a large percentage of the operator population. The challenges of designing for this unique work environment provided a good opportunity to evaluate the relative strengths and weaknesses of the available human factors tools, including the Jack digital human figure model. This paper describes the development of the vehicle interior, discusses some lessons learned, and concludes with recommendations for increased functionality and improved integration of vehicle interior design tools.

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