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**Design Guidelines and Functional Specifications for Simulation of the Battlefield Management System's (BMS) User Interface**

**ARI Field Unit at Fort Knox, Kentucky  
Training Research Laboratory**

July 1988

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U. S. Army Research Institute for the Behavioral and Social Sciences

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for Simulation of the Battlefield Management  
System's (BMS) User Interface**

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**FOREWORD**

To ensure that the U.S. Army's future weapon systems are usable by soldiers, the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) investigates human performance issues related to prototype weapon systems. Simulation of weapon systems and particularly user interfaces to these systems provides ARI researchers with a medium for addressing human performance issues such as usability, training, and personnel requirements during the earliest stages of weapon system development. This report presents a set of design guidelines and specifications for developing a simulation-based prototype user interface to automated command, control, and communication (C<sup>3</sup>) systems for lower echelon forces.

This report by the ARI Field Unit at Fort Knox was prepared under Science and Technology Task 3.5.1, "Training Requirements for NBC and the Future Integrated Battlefield." ARI's involvement in research on future battlefield conditions supports the Memorandum of Understanding between ARI and the U.S. Army Armor Center and School (USAARMC&S) on Land Battle Test Bed Research signed 9 January 1986. The Directorate of Combat Developments at Fort Knox has reviewed and approved these guidelines and specifications. The report has been provided to design engineers contracted by the Defense Advanced Research Projects Agency (DARPA) to initiate the development of a simulated Battlefield Management System (BMS) interface that can be rigorously evaluated and modified with respect to soldier performance and training issues in the task-loaded environment provided by a simulation network (SIMNET). In addition, this product was provided to representatives of the Tank Automotive Command (TACOM) and the Communications Electronics Command (CECOM) for review by system hardware engineers.



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