

SBIR 06.2 PHASE I - AWARD DETAILS	
ORGANIZATION	CERDEC
TOPIC NUMBER	A06-131
CONTRACT NUMBER	
YEAR OF AWARD	
AWARD START DATE	
AWARD COMPLETION DATE	
PROPOSAL NUMBER	A062-131-1911
TITLE	MANET Design Assistant Tool (MDAT)
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COMPANY	Architecture Technology Corporation 9971 Valley View Road Eden Prairie MN 55344 Minority Owned: No Veteran Owned: No Number of Employees: 69
KEYWORDS	MANET, ad hoc routing protocols, network design tool, wireless networks, routing protocol selection tool
ABSTRACT	To optimize the effective performance of a mobile ad hoc network (MANET) for a mission, i.e., its mission performance effectiveness (MPE), a network planner has to make a judicious selection of several network design parameters. This task is well beyond the capability of even a subject matter expert in network protocols. What is needed therefore is an automated tool that will assist the network planner in selecting the values of the MANET design parameters that will optimize the MPE of the network for a specified mission environment. Since no such tool currently exists, a network planner typically employs an ad hoc design methodology relying on the use of default values for protocol parameters. This often results in poor performance of the MANET. To address this capability gap in MANET design tools, this SBIR effort will develop the MANET Design Assistant Tool (MDAT) that will enable a network planner to arrive at a performance optimal design of a MANET for a specified mission operating environment. The Phase I effort will establish the implementation feasibility of MDAT. A pre-production prototype of the tool will be built in a follow-on Phase II effort.
BENEFITS	This research will yield a software product, i.e., MDAT, that will enable network planners within the Army as well as the other services to rapidly configured battlefield wireless ad hoc networks for optimal performance. MDAT directly addresses the needs of Army programs such as FCS and WIN-T. In the commercial sector MDAT will enable wireless Internet service providers to arrive at optimal configurations for their mesh networks.