

<b>SBIR 06.2 PHASE I - AWARD DETAILS</b>	
<b>ORGANIZATION</b>	ARL
<b>TOPIC NUMBER</b>	A06-068
<b>CONTRACT NUMBER</b>	
<b>YEAR OF AWARD</b>	
<b>AWARD START DATE</b>	
<b>AWARD COMPLETION DATE</b>	
<b>PROPOSAL NUMBER</b>	A062-068-1380
<b>TITLE</b>	Effects of Damage to Composite Materials
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<b>COMPANY</b>	BlazeTech Corp. 24 Thorndike St. Cambridge MA 02141-1882  Minority Owned: No Veteran Owned: No Number of Employees: 8
<b>KEYWORDS</b>	composite materials, damaged composite, modal response, engineering model, finite element analysis, testing, model development, verification and validation
<b>ABSTRACT</b>	Because of their high strength to weight ratio, composite materials are being increasingly used to replace metals in current combat vehicles, particularly for armor and structural applications. This trend will continue into the future as requirements become more stringent. Of particular concern for the Army is the effect that damage to the composite has on its vulnerability within a combat environment. In this project we propose to develop an engineering model of the residual strength and modal response of damaged composite plates through an approach that coordinates and integrates results from analytical models, finite element simulations and testing.
<b>BENEFITS</b>	The use of composites is growing rapidly in both military and civilian sectors. Commercial applications of the model developed under this effort range from the aircraft industry to the auto and shipping industry.