



SQUAD OVERMATCH - A Squad Performance Modeling and Simulation System for Soldier Lethality

Soldier lethality and survivability, is a complex assessment of the interplay between soldier physical performance, materiel effectiveness (i.e, effectiveness of enabling technologies to provide protection, lethality, mobility, information, communication, and concealment), squad assignments and responsibilities, mission planning, and threat assessment, while considering any degradation of performance and operational effectiveness due to injury of one or more soldiers. SQUAD OVERMATCH addresses the need for capabilities to effectively evaluate trade-offs among these considerations both to maximize the probability of mission success and maximize soldier survivability/operational effectiveness is paramount to mission planning. The SQUAD OVERMATCH simulation environment constitutes a capability for simulating a Squad scenario, with personnel equipment distributed among squad members, evaluating squad performance, and ultimately inform requirement, procurement evaluation, and optimizing Squad performance.

SQUAD OVERMATCH scientifically addresses soldier mobility, lethality, load, squad, and Soldier performance, implemented as a single system operating with interdependent variables, including equipment load, anthropometry (body variation), scenarios, terrain, friendly and enemy forces. The system enables modular development and inclusion of metrics as output, including mission effectiveness, time to completion, squad performance, and casualty assessment developed in collaboration with the Army Future Command DAC, USARIEM and other partners.

APPROVED FOR PUBLIC RELEASE



SQUAD OVERMATCH



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Analysis Builder

> Select Scenario



> Manually Configure Squads

Squad Leader	TL-A	R-A	GB-A	...
Anthropometrics: Male, 25 yrs, 1.85 m, 99.7 kg				
Weapons: M4, 270 rds; M17, 34 rds				
PPE: VTP, TEP, IHPS				
Other: IVAS				
Avatar				

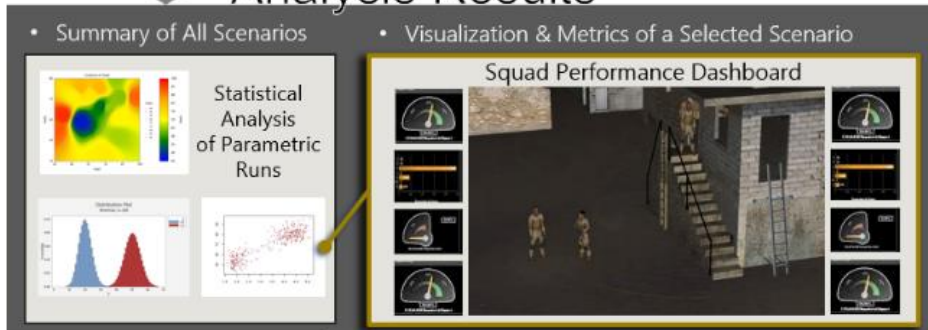
> Configure Parametric Runs

Blue Force Distributions	US Close Combat
Blue Draw Mode	Normal
Blue Weapons	Fixed by Position
Blue PPE	Fixed [VTP, TEP, IHPS, TCEP]
Red Force Distributions	Andalasan Irregular
Red Draw Mode	Uniform
Red Weapons	Fixed by Position
Red PPE	None
Iterations	10000

Analysis Execution



Analysis Results



Army Impact



- ✓ Design Trades
- ✓ Acquisition Decisions
- ✓ Mission Planning