# Alternative Configuration

## Composite Armor

Switching to composite armor presented us with two choices. First, we could assume an equivalent protection under the new technology and count secondary effects principally as a function of the weight benefit. Second, we could assume an equal weight and derive secondary effects from an increased protection. The former was chosen because it seemed to have a broader range of second order effects.

Consequently, it was determined that switching from standard to composite armor had a principal positive effect on weight, which in turn had positive affects on speed. Concealment was also improved, though not as a function of weight, due to properties resulting in improved thermal and electromagnetic signature management.

This selection was made by comparing the new configuration technology to the functional capabilities and selecting the four that already applied to the standard armor configuration, *withstand close combat, withstand under-vehicle attack, withstand large caliber attack,* and *withstand indirect attack.* Additionally, five more functional capabilities were selected based on the desirable properties of the composite armor, *traverse terrain, improve speed, power vehicle, availability,* and *transportability*.

Having down-selected the functional capabilities, we then re-scored these against key metrics for mobility, protection, and system characteristics, *speed, probability of vehicle kill, probability of concealment,* and *weight.* Armed with the new scoring matrix, we altered corresponding values in the MANA and re-ran the simulation to determine the effects on mission success.