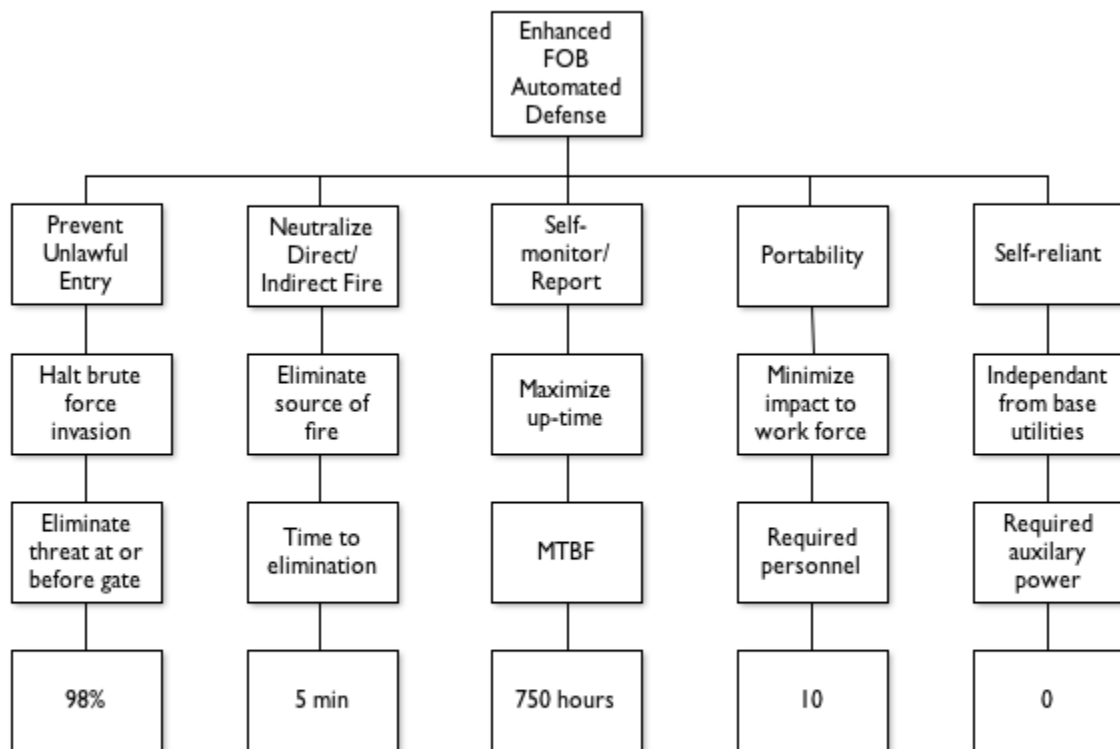


Homework for Module 3

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July 25, 2011

The following is a first draft Value System Design based on the work done in previous Modules and also on reading provided material.



The key system functions in this Design include prevention from unlawful entry, neutralization of direct and indirect fire, and self-monitoring and reporting. Included in prevention of unlawful entry is protection against suicide bombing. This function is also sufficiently broad as to include protection against base over-run and deceptive penetration. Neutralization of direct and indirect fire includes both defense against incoming rounds and elimination of hostile fire at its source. Portability and self-reliance are the *-ilities* and constitute the nonfunctional aspects.

Per requirements, I am discounting Chemical Biological, Radiological (CBR) attacks and am furthermore assuming that ground attacks will be carried out by light armor and infantry style divisions. If there is a determination that we need to combat heavy armor then the system will have to scale and will lose portability. While I am not aware that I am presently making any additional assumptions I cannot completely separate myself from my experiences. I am continually guided by the vision of the fictional automated defense in *Aliens* and also by my own experience with the US Navy's Phalanx CIWS, a most impressive system.

I have attempted to constrain evaluation measures in such a way as to ensure that they are either natural or direct and therefore easier to measure and attain. The measure of MTBF will be constructed and based on design, materials, manufacturing tolerances, and ultimately operating conditions. The MTBF measure was drawn directly from the requirements document as was the measure for required personnel.