MOEs

# Slides Write-Up

1. Slide 1: title slide
2. Slide 2: this is the definition of Survivability from <cite reference>. It appeals to me because it is applicable on a number of different levels, from sub-system to system-of-systems.
3. Slide 3: This is from <cite reference> and is an acknowledgement that attributes of survivability fall into two gross categories.
4. Slide 4: This is a reduced version of the onion from <cite reference> and focuses on avoidance vs. proactive measures.
5. Slide 5: An early attempt at showing that different attributes of survivability apply more or less universally at differing system levels of granularity.
6. Slide 6: Here I make the leap mapping –ilities to the attributes of survivability. This mapping in its final form will largely inform our understanding of our key model parameters.
7. Slide 7: A quick cut at providing definitions for the –ilities.

# Situational Awareness

## MOEs

* Connectivity – refers to some level of connection to an authoritative source. This could be a program of record, another vehicle, an external sensor, or any other information source. This applies from the sub-system through system-of-systems level.
* Connectedness (like a graph) – refers to the number of edges on the Connection graph, with a *k*-graph being fully connected. This speaks to bandwidth utilization, information latency, and transport resilience. Applies from the sub-system through system-of-systems level.
* Sensors – the sensor grid often begins on the platform, itself, and is currently being implemented at the individual warfighter level (soldier as a sensor). It extends up through the system-of-systems level. Sensors are varied and include ground sensors, IR, thermal imaging, night vision, laser rangefinder, frequency scanners, optics sensors, gunshot detection, and more.
* Line of sight (height from ground, vehicular imposition impairing vision) – based on *d = sqrt(h(2R + h))* and is obstructed by buildings, geographic features, forestation, and other artifacts*.*
* Battle group (Is that a term??? Who you’re with and what they might know) – related to (or dependant on) connectedness.

# Stealth

## MOEs

* Size – affects how easily detectable I am. Applies from the platform up through the system-of-systems level.
* Noise (Db) – noise has an obvious effect on stealth.
* RADAR profile (reflectivity) – independent of size, what do I look like on the RADAR?
* Emissions (radio, IR, laser) – I presume, the lower the better.
* Heat signature – related to emissions (I think)
* Footprint (tracks / impact to landscape) – this is a visible physical impression of how much I disturb the landscape.
* Interference capability (sensor jamming) – this is the only active component of stealth that I am aware of.