

Matt Robinson – Homework 4 MV3500

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I plan to conduct my thesis inside of COMBATXXI where I will model the damage a ship takes inside of the simulation. As it currently exists, ship damage only exists in a binary: destroyed or fully operational. More complex modeling of the damage the ship receives will add value to the fidelity of the simulation. As I examine the PDUs there are opportunities to learn from them in a way I can use in my thesis work.

Entity Damage Status PDU

7.3.5 Used to communicate detailed damage information sustained by an entity regardless of the source of the damage. (length of list found in field numberOfDamageDescription) |

This is valuable for my thesis work because the ability to detail damage is precisely what I am to do while modeling ships being hit with anti-ship munitions. Did the munitions sink the ship? Or simply a degradation of sensors, comms, or weapon systems.

Logistics Family PDU

Abstract superclass for logistics PDUs. Section 7.4 |

Further in my thesis work. The logistical element necessary in an EABO environment will require very intricate and important logistics. Ships taking damage will need to assess their logistical needs to reconstitute and ‘get back in the fight’. This PDU could be helpful in that respect as well.

Electronic Emissions PDU

7.6.2 Communicate active electromagnetic emissions, including radar and radar-related electronic warfare (e.g., jamming). Exceptions include IFF interrogations and replies, navigation aids, voice, beacon and data radio communications, directed energy weapons, and laser ranging and designation systems, which are handled by other PDUs. Section 5.3.7.1. (length of list found in field numberOfSystems) |

The targeting of a ship is most often through electromagnetic emissions. No longer is it simply visual observations. Thus, using the electronic emissions PDU would help assess the different data inputs that make for a successful simulation that I could apply inside of CCXI.

Add

A PDU that could structurally break down the components of a ship would be helpful for my thesis. I didn't see that in the PDU template and that would be useful for me.