

As an Infantry Officer by trade, there are a number of PDUs that would be of interest in my respective community. As a commander or as part of a combat operations center, battle tracking is always a difficult task and having the most updated and timely information on all units can be tough in a fast-paced environment. Below are the three that I think would be the most relevant/important in my opinion.

### **1. MinefieldStatePdu**

5.10.2 Communicate information about the minefield, including the location, perimeter, and types of mines contained within it. IEEE Std 1278.1-2012, IEEE Standard for Distributed Interactive Simulation - Application Protocols.

This clearly has big implications for ground operations if we were able to receive data on detected minefields in our area of operations. This PDU is especially useful because it contains a Bitmap as well as location of minefield, formation, type of mines, number of mines, and a perimeter.

### **2. TSPIPdu**

9.4.2 The Time Space Position Information (TSPI) PDU shall communicate information about the LE's state vector. IEEE Std 1278.1-2012, IEEE Standard for Distributed Interactive Simulation - Application Protocols.

As described above, this PDU communicates all positional information for live entities (LEs). Things like location, velocity measured speed, orientation, and any specific data about all live entities could be used for tracking friendly and enemy entities all across the battlefield.

### **3. EntityDamageStatusPdu**

7.3.5 Used to communicate detailed damage information sustained by an entity regardless of the source of the damage. IEEE Std 1278.1-2012, IEEE Standard for Distributed Interactive Simulation - Application Protocols.

While self-explanatory, this PDU communicates damage information of entities in the battlefield regardless of the source of damage. I think the source of damage is important, but sometimes we just need the status of all units and we do not necessarily care how they got hit. This PDU contains the entity ID as well as description records of damage in a list. This could give a commander better situational awareness of the status of all units.