

In the Aviation Supply community having PDUs which can track the position and status of material is of vital importance to Supply Commanders for gauging on when materials will arrive. The more connectivity the Supply Officer can have between the parts that are needed by the flight line maintenance and the parts that are all over the world, the better they would be able to plan off of this knowledge.

1. ServiceRequestPdu
  - a. 5.5.5 Communicate information associated with one entity requesting a service from another. (length of list found in field numberOfSupplyTypes)
  - b. This PDU would be what is necessary to notify the Supply Department that a part is required. The supply Department manages their local material, but they won't know when to deliver parts to a maintenance entity until that said entity gives them a request for a part.
2. ResupplyOfferPdu
  - a. 5.5.6 Communicate the offer of supplies by a supplying entity to a receiving entity. (length of list found in field numberOfSupplyTypes)
  - b. This PDU is what can be used to notify the Maintenance Department that the Supply Department can support their request. At this point, the service request has been acknowledged and is pending action from the Supply Department.
3. EntityStatePdu
  - a. 7.2.2. Represents the position and state of one entity in the world. See 5.3.2. (length of list found in field numberOfVariableParameters)
  - b. This PDU would be able to notify those who need to know, the state or position of the part requested. Once the Supply Department has sourced a part to fulfil the request from the Maintenance Department, they will then need to track the part from its point of origin to the customer. This specific PDU is arguably one of the most important, as it is vital the Supply Department does not lose the position and state of all the things they are moving to support multiple maintenance entities. Armed with this knowledge, they can make estimates on when material should be delivered to the correct entity.
4. ResupplyReceivedPdu
  - a. 5.5.7 Used to acknowledge the receipt of supplies by the receiving entity. (length of list found in field numberOfSupplyTypes)
  - b. This PDU is necessary to close the loop on the request. Once the appropriate maintenance entity has received the part they requested, this PDU can close out the request and notify those who need to know that the part is now for maintenance action and not with the Supply Department.