

3D Official Procurement Process

PROBLEM / OBJECTIVE

In many cases, the legacy weapon systems in use today were designed, manufactured, and tested using old technology. Today, cutting edge technology exists, making DoD efforts to maintain configurations cost prohibitive when sustaining operational effectiveness. In addition, today’s official technical data standard consists of 2D drawings. Even when made available in 3D digital data, the data is not released to vendors as “official” per government regulations. These files are considered for information (reference) only. By employing this outdated procurement method, vendors must recreate 3-D data from 2-D official data to ensure compliance of parts. Re-creating 3-D data costs vendors time and money in quoting, manufacturing, as well as quality. Using 3-D digital data (models) will help to facilitate interoperable supply chains. Suppliers will benefit from the use of sharing open source files. This will reduce non-recurring engineering costs and manufacturing cycle times.

ACCOMPLISHMENTS / PAYOFF

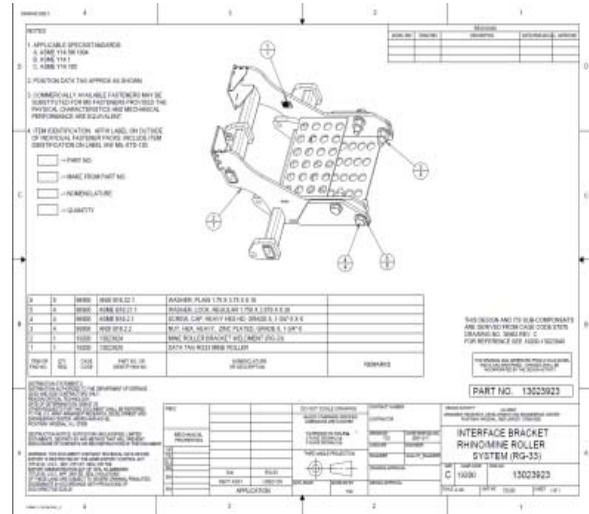
Process Improvement:

The Picatinny Arsenal and the Defense Supply Center – Columbus (DSCC) have developed a “3D Official” business pilot process to include 2D to 3D drawing validation.

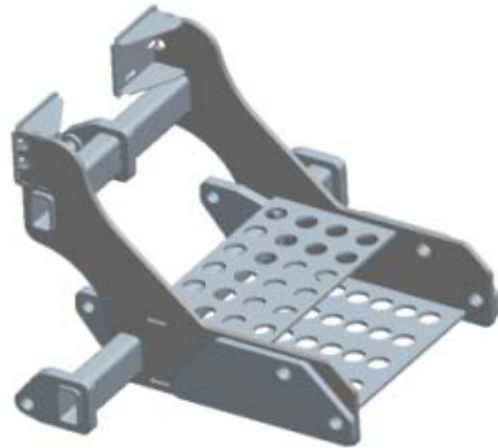
This effort has established “3D Official” as a new business process for engineering data from the Engineering Service Activity (ESA) to DSCC for CAD-maintained data. This required an in-process review at the DSCC of the current procurement method as well as the selection of 10 parts for the “3D Official” procurement.

In addition, a manual method was developed to convert 2D drawings to 3D models. This

2D Model



3D Model



involved the creation of a 3D model from 2D data, the validation of the newly created 3D model against the 2D drawing, and subsequent validation and approval.

The implementation of this new process led to a thorough review and update of the current procurement practice by the DSCC which included:

- Review of data receipt, storage, and transmittal methods.

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- Edit and rewrite of procedures for terminology, solicitation, contract language, and legal aspects.
- Survey of suppliers to evaluate interest and capability with the 3D digital data.

Expected Benefits and Warfighter Impact:

- Reduce lead-times and cost of critical weapon spares by changing DLA's 2D to 3D Official data procurement process environment
- Shared inter-agency supplier bases increase agility to better handle unexpected fluctuations in supply and demand
- The bottom line: The 3D Procurement Process demonstrates the OSD vision of enterprise manufacturing, supply chain responsiveness and interoperability

DLA has implemented a pilot project where an aircraft modification contract has imposed 3D modeling to be used in lieu of 2D for the provisioning and cataloging effort. This project will assist DLA to update applicable policy and procedures by identifying processes and systems that need to be adopted allowing them to engage the Model Based Enterprise.

PARTICIPANTS

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