Integrated Systems Engineering Approach to Marking Tangible Items
MIL-STD-130 Nameplates

ASSUMPTIONS/CONSTRAINTS:

- Because of configuration management, flight safety etc, the aviation community must assess the impact of any change to our weapon systems and associated subsystems.

- Changes to configuration that changes form, fit, or function or logistics/support posture (i.e. pubs, drawings, training, etc) are Class I changes requiring ECPs and TDs (technical directives).

- Most all Class I ECPs/TDs have a nontrivial cost associated.

- Most pubs and drawing changes are expensive.

- Most major weapons systems and subsystems at a minimum to the WRA/LRU level have MIL-STD-130 Name Plates including SE (Support Equipment). (Contractually Required)

RECOMMENDATION:

- A form-fit-function replacement of the current MIL-STD-130 Name Plate that incorporates both human and machine readable markings could be easily forward fitted and retrofitted to a majority of significant end items.

- Drawing/Pub changes could be minimized and/or eliminated. ECPs/TDs would be Class II

- Minimize Nonrecurring Engineering (NRE) for assessing/determining the AIT media, location for the AIT and logistics impacts etc.

- Would be an "80% solution" for DoD aviation community.

- The other "20%" cannot be easily marked with a MIL-STD-130 Nameplate and may not be easily marked with AIT at all. Issues such as viability, maturity, safety and business processes associated with direct part marking and other AIT technologies must be considered. These by their nature: size, environment, criticality, sensitivity to FOD, etc, are not easily marked without NRE investment.

- Capturing "name plate" items with a MIL-STD name plate, the services can mark in-service systems with Class II ECPs and future systems by citing the MIL-STD as still done today.

- In addition to Weapons Systems, it also can be used to mark Support Equipment.

- Nothing precludes a MIL-STD name plate as the preferred approach to marking other systems not normally requiring a MIL-STD-130 nameplate as long as size, cost or other considerations don't preclude it.

- Only addresses the marking of parts side of things. This doesn't address the information systems aspects. Each service and component will have different challenges associated with IT integration.

- If the parts are marked with a standard machine readable format, they'll be ready when the IT systems catch up.