

# Aircraft Maintenance

# Software Management

Presented to: ARINC Industry Activities (IA)

By: Marcus Labay, FAA

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Federal Aviation  
Administration



# Why create an Advisory Circular ?

- **In response to field inquiries**
- **Provide consistency**
- **Establish links to industry standards and FAA software guidance**
- **Include advances in technologies**
- **Relevant to 14 CFR Part 91, 121, 125, 129 (US) and 135**



# Subject areas of the AC

- **Definition of software**
- **Software sources**
- **Different stages of software**
- **Transfer methods/media**
- **Software loading**
- **Maintenance entry requirements**



# Definition of Software

- **Provide a definition relevant to aircraft maintenance**
- **Leverage existing aviation standard language**



# Software Sources

- **Original Type Certificate Holder (TCH)**
- **Amended TC or Supplemental Type Certificate (STC)**
- **User developed software**
- **Third party supplied software**



# Different Stages of Software

- **Residing on a server or storage device**
- **Staged on an aircraft and ready for use**
- **Moved to an active state**



# Transfer Methods/Media

- **Manual transfer by physical methods**
- **Remote transfer**
- **Physical media (floppy, USB or flash card)**
- **Portable Electronic Device (PED)**
- **Wireless transfer**



# Software Loading

- **Procedures provided by TCH or STC**
- **Operator specific methods to follow industry standards**
- **Performed by qualified personnel**





# Maintenance Entry Requirements

- **Must meet 14 CFR Part 43**
- **Acknowledges 14 CFR Part 121 and 135 operations**
- **Recognizes the complexity of remote software loading in maintenance activities**



# Regulatory References (14 CFR)

- **1.1 *Maintenance* means inspection, overhaul, repair, preservation, and the replacement of parts, but excludes preventive maintenance. & *Preventive maintenance* means simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations**



# Regulatory References cont.

- **43.3(f) The holder of an air carrier operating certificate or an operating certificate issued under Part 121 or 135, may perform maintenance, preventive maintenance, and alterations as provided in Part 121 or 135**
- **43.3(k) Updates of databases in installed avionics meeting the conditions of this paragraph are not considered maintenance and may be performed by pilots provided...**



# Regulatory References cont.

- **145.205(a) A certificated repair station that performs maintenance, preventive maintenance, or alterations for an air carrier or commercial operator that has a continuous airworthiness maintenance program under part 121 or part 135 must follow the air carrier's or commercial operator's program and applicable sections of its maintenance manual.**



**Marcus Labay**  
**FAA Flight Standards**  
**[marcus.a.labay@faa.gov](mailto:marcus.a.labay@faa.gov)**  
**(281) 929-7006**

