Causes & Consequences: An Analysis of FAA Enforcement Actions Against Remote Pilots

Trevor Simoneau[1], Ryan J. Wallace, Ed.D.[1], Jonathan Rupprecht, J.D.[2]

[1]Aeronautical Science Department, Embry-Riddle Aeronautical University, Daytona Beach, FL [2]Rupprecht Law, Palm Beach Gardens, FL

EMBRY-RIDDLE Aeronautical University

Abstract

The continued integration of uncrewed aircraft systems (UAS) to the National Airspace System (NAS) has caused a myriad of challenges for the Federal Aviation Administration (FAA), UAS manufacturers, and operators. One of these challenges is maintaining the safety of the NAS. To accomplish this critical task, in 2016 the FAA promulgated Part 107 regulations, the rules governing UAS operations. Expanding upon work initially commenced by UAS attorney Jonathan Rupprecht, this study analyzes 78 FAA enforcement action cases against remote pilots from 2012 – 2020. Forty-four of those cases, with preliminary results, are presented in this poster. The purpose of the study was to determine the frequency of specific regulatory violations, the overall nature of the violations, and identify any emerging trends. Additionally, the researchers sought to evaluate the value contribution of specific violations to proposed civil penalties using linear regression analysis. Preliminary results discovered three key violations the FAA frequently prosecuted, with respect to UAS operations: *airspace violations*, *flying over people*, and *loss of control*. The research team further provides recommendations for additional policymaking to mitigate noncompliance by remote pilots.

Introduction

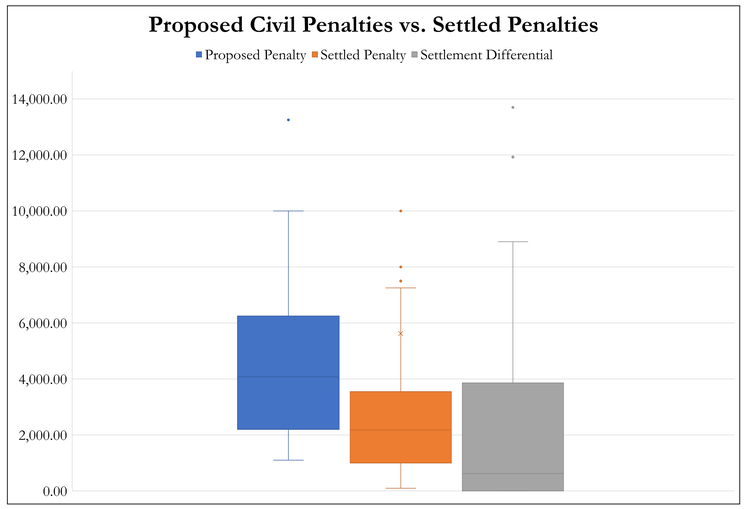
- On August 29, 2016, the FAA enacted 14 C.F.R Part 107 regulations, which govern UAS operations (Operation and Certification of Small Unmanned Aircraft Systems, 2016).
- Certificated remote pilots are required to abide by these regulations, which govern UAS operations.
- If they fail to do so, the FAA has regulatory enforcement power under 49 U.S.C. §§ 44709 and 46301 to bring civil penalty or certificate action against them (FAA, 2021).

Methodology

- Orders assessing civil penalties, certificate actions, and settlement agreements, were obtained via a Freedom of Information Act (FOIA) request.
- The documents were analyzed using the qualitative analysis software tool NVivo.
- The plain text of the civil penalty and certificate action orders was coded into themes and analyzed to identify specific regulations that were violated and the facts of each violation.
- A quantitative assessment of the proposed and settled civil penalties was conducted and examined.
- Plan to conduct regression of regulatory violations against assessed penalties to assess violation value.

Preliminary Results

Regulation	Number of Violations
14 CFR § 107.12(a), Certificate Required	39
14 CFR § 107.23, Hazardous Operation	38
14 CFR § 107.12(b), Certificate Required	35
14 CFR § 91.13(a), Careless or Reckless Operation	29
14 CFR § 107.13, Registration	26
14 CFR § 107.65, Knowledge Test Recency	24
14 CFR § 107.49(a), Preflight Familiarization	23
14 CFR § 107.19(c), Remote Pilot in Command	20
14 CFR § 107.41, Operation in Certain Airspace	19
14 CFR § 107.47, Flight Restrictions via NOTAMs	18



The research team is using NVivo software to examine enforcement narrative data for common themes/trends.

Preliminary Conclusions

- There are three key regulatory areas where the FAA is especially active in prosecuting remote pilots: airspace violations, flying over people, and loss of control.
- Median proposed civil penalty $4,075, with settled penalty median ~53% of proposed penalty.

References

Federal Aviation Administration (FAA). (2021). *Order 2150.3C Change 7: FAA Compliance and Enforcement Program.*

Operation and Certification of Small Unmanned Aircraft Systems, 14 C.F.R. § 107 (2016).