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Use of LiDAR in Automated Aerial Refueling To Improve Stereo Vision Systems

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5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

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13. SUPPLEMENTARY NOTES

14. ABSTRACT

Researchers at the Air Force Institute of Technology (AFIT) developed an algorithm for Automated Aerial Refueling (AAR) based on a stereo-vision system. The system requires a large amount of image processing and is subject to noise and processing artifacts. Light Detection and Ranging (LiDAR) presents an alternative approach to AAR. A single flash LIDAR camera may perform the same task as two stereo vision cameras and eliminate the aforementioned processing overhead. A LiDAR will not experience the same noise and processing artifacts of stereo vision, which makes it a lucrative endeavor for further research.

15. SUBJECT TERMS

Light Detection and Ranging (LiDAR), Automated Aerial Refueling, Stereo Vision

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
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