

Improving Flight Accuracy for Aerial Wildlife Surveys in Sub-Saharan Africa

Abstract

Aerial surveys are vital to assessing animal populations as part of an effort to understand ecosystem health, a primary component of social and economic development in rural regions of Africa. This paper describes the design, deployment and preliminary performance results of a mobile application that provides visual real-time feedback to assist cockpit crews conducting aerial surveys.

Introduction

This poster introduces a system that assisted in surveys for the Great Elephant Census. It is based on a 7" Android tablet, which integrates with a laser altimeter mounted externally on the survey aircraft. It provides a point of data fusion, using the built in sensors on the tablet to determine airspeed and location, and display the various pieces of information in one place.

Goals

- Provide meaningful cockpit information to assist in survey navigation.
- Reduce the cognitive load of the FSO, who oversees the operation of the aerial surveys.
- Increase the accuracy of aerial surveys.
- Minimize build costs.

System Design

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Lessons Learned

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Results

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Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table 1: Table caption

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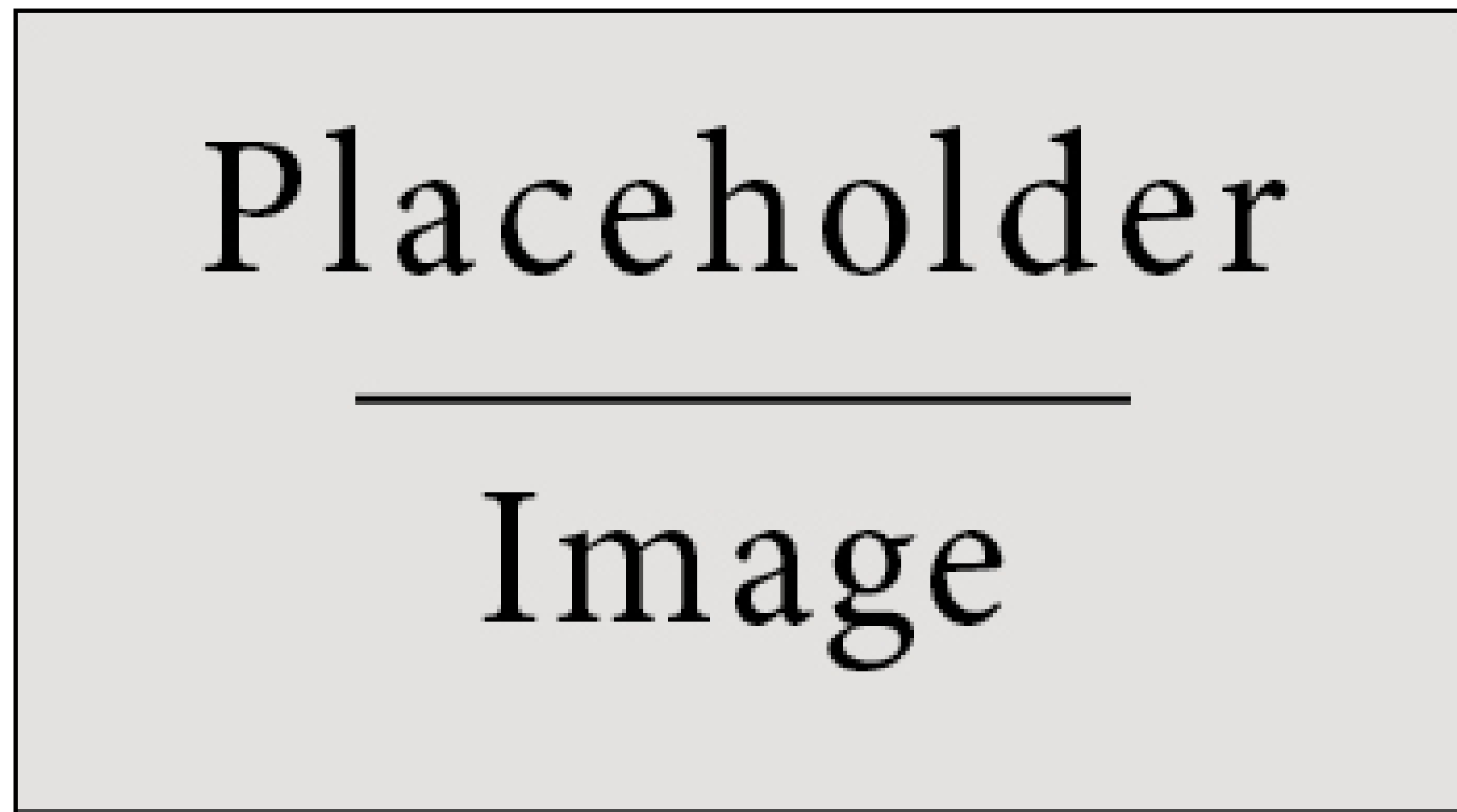


Figure 1: Figure caption

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Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table 2: Table caption

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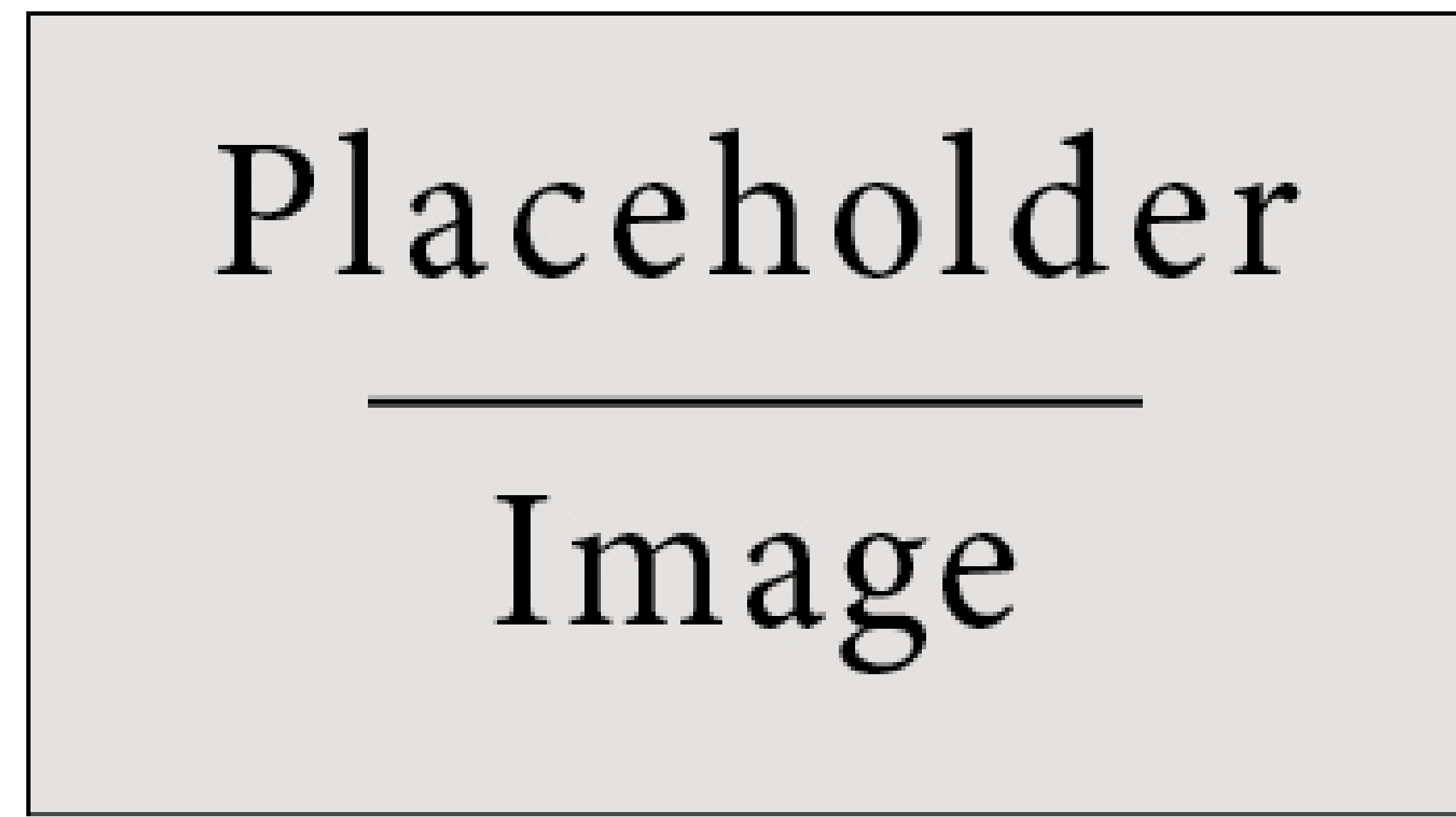


Figure 2: Figure caption

Conclusions

- Pellentesque eget orci eros. Fusce ultricies, tellus et pellentesque fringilla, ante massa luctus libero, quis tristique purus urna nec nibh. Phasellus fermentum rutrum elementum. Nam quis justo lectus.
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Acknowledgements

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