



RHODE ISLANDVIEW 2019 - 2020

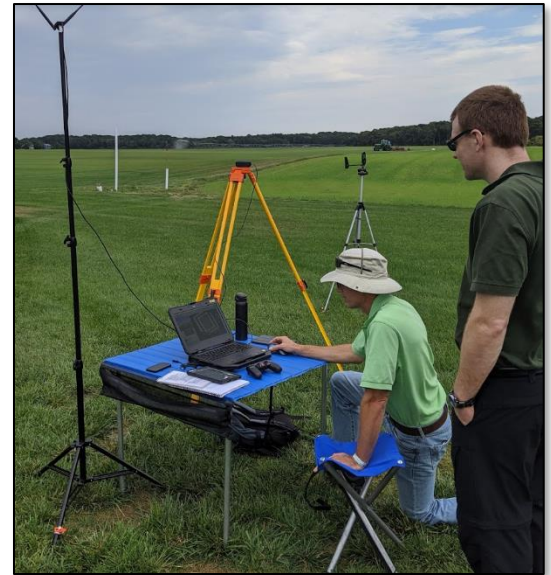


RHODE ISLANDVIEW 2019 - 2020 ACTIVITIES

Rhode IslandView continues providing unique opportunities for undergraduate students to work alongside aerial drone professionals.

With support from Rhode IslandView, the University of Rhode Island Environmental Data Center recruited and mentored an undergraduate research assistant who learned how to process remote sensing data collected by small Unmanned Aerial Systems (sUAS). The assistant concentrated on creating a semi-automated data processing workflow for multispectral imagery (e.g. true color and infrared data), and developed additional workflows for collecting and processing aerial photographs for creating virtual 3D models of buildings.

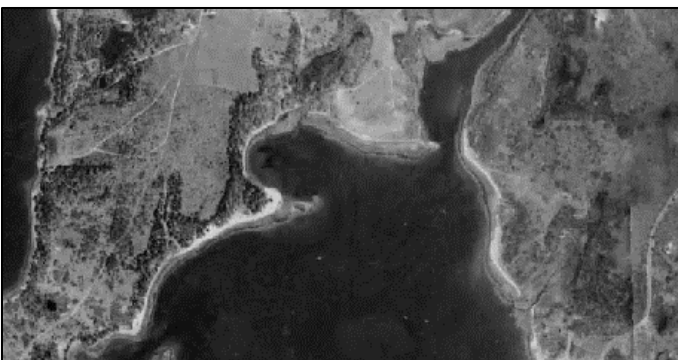
This initiative provided a unique employment opportunity for a student who represented a local historically underserved community, and also directly supported USGS National Land Imaging Program Objective 3: Promote Undergraduate and Graduate Research and Employment Skills. Rhode IslandView created a valuable opportunity for a student entering the workforce with cutting-edge sUAS knowledge.



sUAS flight operations team at work.



Original 1939 historical aerial imagery available from RIGIS.



1939 historical imagery enhanced by Rhode IslandView.

Rhode IslandView improves the usefulness of publicly available historical remote sensing data. Collaborating with the Rhode Island Geographic Information System (RIGIS) and the Rhode Island Division of Statewide Planning, Rhode IslandView is exploring approaches for improving the appearance of historical aerial photos from 1939 by manipulating them with specialized remote sensing data processing software.

This ongoing pilot study is focusing on a region in the vicinity of Quonset Point, North Kingstown, an area that has undergone rapid land use changes since these photos were taken in 1939. RIView is investigating how to efficiently georeference and mosaic these photos so they may be more easily used by Geographic Information Systems (GIS) for a wide range of applications, such as municipal planning and climate change studies.

This research initiative ties into USGS National Land Imaging Program Objective 5: Support the U.S. Department of the Interior Secretarial Priorities.

Rhode IslandView is a member of the AmericaView Consortium, a nationally coordinated network of academic, agency, non-profit, and industry partners and cooperators that share the vision of promoting and supporting the use of remote sensing data and technology within each state. AmericaView is funded by USGS grant agreement G18AP00077.

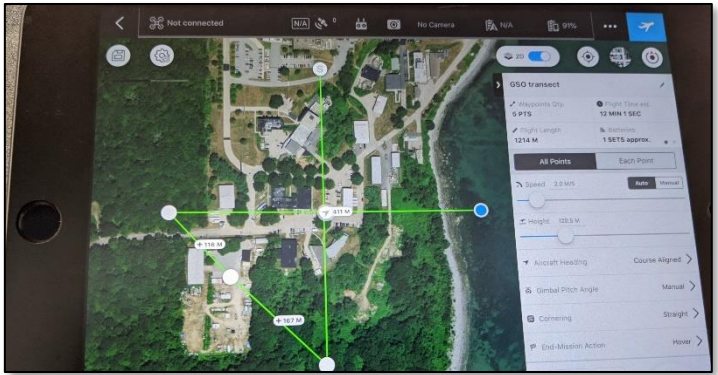


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BENEFITS TO RHODE ISLAND

Rhode IslandView fosters local applications of drone-based technologies. Drones have an unmatched capability to quickly and inexpensively capture detailed aerial photographs of small areas. Upon joining AmericaView in 2014, RIView has focused on facilitating online access to remote sensing data and promoting the use of small Unmanned Aerial Systems (sUAS). The consortium's approach to this is largely through conducting demonstrations, providing undergraduate student training opportunities, and building data acquisition partnerships.

Remote sensing datasets of Rhode Island historically have been difficult to view by the general public. The computer file formats, complex software, and robust computer hardware used to efficiently access these types of data are not readily accessible by most. Rhode IslandView has created web-based map services in partnership with the Rhode Island Geographic Information System consortium (www.rigis.org). These services are used behind-the-scenes by online map application developers to directly connect our communities with remote sensing imagery and detailed lidar-based elevation models.



Snapshot of a simple sUAS mission plan.



Critical applications, such as STORMTOOLS, use the services that are maintained with the support of Rhode IslandView.

RHODE ISLANDVIEW CONSORTIUM MEMBERSHIP

THE
UNIVERSITY
OF RHODE ISLAND

RIGIS



USDA
United States
Department of
Agriculture
Natural Resources Conservation Service



Federal consortium members identified above do not receive funding from AmericaView.

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