Case Studies

GeoCue visits the Ohio/Indiana UAS Center and Test Complex

LP360

BSAU | AWG

Lewis Graham

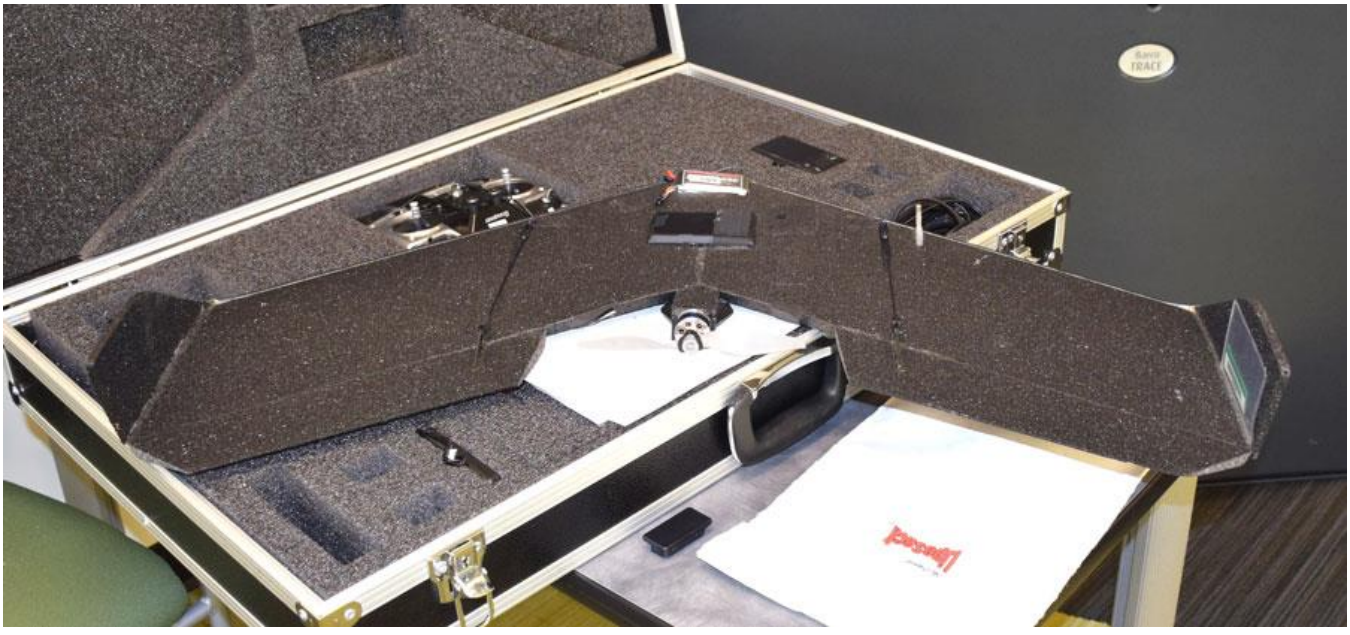
February 2014

Revision 1.0

Martin Flood (GeoCue Canada) and I visited the Oho/Indiana UAS Center and Test Complex in Springfield, Ohio this past week. We were invited by Mr. Fred Judson of the Ohio Department of Transportation (ODOT) to give a presentation at a small technical exchange meeting devoted to the topics of the legal framework for sUAS, mission planning and extracting metric point clouds from small, uncalibrated cameras. GeoCue gave a presentation on a comparison of photo correlated digital surface models (PCDSM) to LIDAR point clouds.

The Ohio/Indiana UAS Center and Test Complex is a fabulous facility located on the outskirts of Springfield, Ohio. Operating under the auspices of the Ohio Department of Transportation, the center is devoted to increasing the economic vitality of Indiana and Ohio through the emerging business opportunities in unmanned aerial systems. The center is directed by Mr. Richard Honneywell, an engaging and energetic fellow with very deep expertise in aviation systems procurement.

Mr. Judson has been diligently working on exploring the uses of small unmanned aerial systems (sUAS) for the many uses of point clouds and imagery within the typical Department of Transportation. He has formalized a process for obtaining the necessary approvals from the Federal Aviation Authority (FAA) to fly sUAS for the DOT. Thus far, he has obtained 13 Certificates of Authority (COA) from the FAA and conducted 30 sUAS flights. ODOT is current flying a senseFly Swinglet (Figure 1).



QCoherent Software LLC
www.LP360.com
256-461-8289 (phone)
256-461-8249 (fax)

Figure 1: The ODOT senseFly Swinglet sUAS

While we were in Ohio, we also had the opportunity to observe a hobbyist's flight of a senseFly eBee. The wind was about 15 knots, the temperature was below freezing and the ground was covered with snow. I will give a report in a future article on the results of our data processing!

The importance of the sUAS for small area mapping and 3D analysis cannot be overemphasized. New software processing algorithms allow some pretty amazing results, both in image mosaic radiometric quality as well as absolute accuracy of the 3D point cloud.

GeoCue will be jointly hosting a small unmanned aerial systems workshop with the Ohio UAS center this Spring. If you are interested in details of this planned event, please send an email to suas@geocue.com with "SUAS Ohio Workshop" as the subject line.

back

GeoCue enters the small Unmanned Aerial Systems (sUAS) business!! *Over the next several months we will be introducing products and services to enable you to participate in this exciting newly emerging technology. We will offer end-to-end solutions for the metric mapping application side of the business. This month we announce that we are reselling:*

- *SimActive's Correlator 3D – Correlator 3D is the premiere application for extracting photo correlated digital surface models from medium/large format imagery.*
- *Agisoft's Photo Scan – Photo Scan is an excellent, low cost workflow for generating point clouds and ortho mosaics from small, non-metric cameras flown in small UAVs such as quadcopters and "foamies."*

If you are interested in detailed information on our sUAS offerings, just send an email to suas@geocue.com.