Introductions, Experience/ Interests

Jeff McDougal  Interested in UAS as a tool to enable collection of hydrographic data
(interested in developing a multi-tool)

Carl CdeBaca (Nevada) Original Position paper author, currently uses UAS for
Ortho and topo mapping

Bob Neathamer, interested in the potential of UAS, not currently using UAS

Todd Beers currently plans to launch UAS as part of their business this year

Cliff Baker (Alaska) Interested in UAS, is aware of the Univ. of Alaska program, believes
that NSPS/NCEES should look into this as a specialty

Chris Glantz (Oregon) He is remote sensing lead for Oregon DOT. ODOT currently uses
UAS for quarry surveys and has two remote pilots on staff. They are following current
FAA regulations. He is working towards RPIC certification

Jim Craddock (North Carolina) His company has a drone they are actively using and
testing.

Brent Birth –(PA) Interested and looking for info

Todd Beers

Kim Leavitt (Idaho) Interested in the position paper. Familiar with Idaho State
program that studies various facets of UAS. He is interested in accuracies and
feasibilities.

Joe Paiva-(Kansas) Involved with UAS since 2010. Teaches UAS through his company,
Geo-learn. Currently pursuing RPIC, and is on PhD committee reviewing NMAS for UAS

Joanne Williamson (Hawaii) Experienced in programmatic planning and development,
No experience with using UAS for technical mapping.

Also on committee, Debi Juhasz-Anderson, Jolene Hoffman, Tim Burch, Craig Amey and Bradley
Guinther

Apologies if anyone was missed, please add anyone if I missed their names, and forward to
them as well.

Purpose of UAS Committee: Carl got us started by mentioning there are no accepted survey
mapping standards for UAS technology at this time. Traditional parameters of photogrammetry
are not sufficient to analyze the current UAS mapping work products. Standard should be
created by NSPS, and resources gathered by the committee and made available to the members.

All agreed the technology is developing rapidly, and surveyors need to be actively engaged in defining their role and setting standards, as well as keeping up with the technology as it pertains to mapping.

Joanne added that we need to create a programmatic approach for NSPS in order to give members tools for successful implementation of UAS technology. It is imperative that the committee includes safety standards, SOP, manuals, training options in addition to the accuracy and precision standards that also need to be set and defined.

Current Use:
Per Jim Craddock: To date most useful on bare earth, and smaller surveys with good results with stockpiles and land fill surveys.

Cliff Baker: He is familiar with the Univ. of Alaska Fairbanks UAS program and has seen presentations of various use cases from their research. He mentioned that UAA has found that different Structure From Motion algorithms produce different results. This creates a need for this committee’s diligence on the technical issues.

Joe Paiva: He is on a PhD committee for a student who is working on a project which narrows workflow for NMAS. Paiva will forward the student dissertation to the group and will follow up with further communication.

Certification:
Kim Leavitt: There is a benefit and need for UAS specific certification for UAS mapping. The idea is to have a group of members that can authoritatively speak about UAS and mapping standards.

Brent Birth: Great Lakes Committee had discussed that UAS should pursue a specialty certification. This might create further discussion and new legislation about surveying definitions. There have been current discussions in PA about licensed practice.

It was generally agreed that a certification for surveyors for UAS use will benefit the survey community and ensure quality mapping guidelines as well as safe operations.

The committee would explore the possibilities of creating a specialty UAS certification.
There are a lot of reasons that Surveyors need to define standards and get a handle on using UAS for surveys. Cliff mentioned that United Rentals is now leasing UAS – for the express purpose of ‘replacing surveys.’

Joe mentioned that arguments based on statute will get old fast, NSPS should base its positions on better quality data and standards, not because we have the law and licenses to stand on.

It was agreed that we should have a UAS certification, and it needs to be stronger than just knowing how to fly a UAS. It needs to cover much more and how it correlates with what we do. We need to perfect the argument that this is needed to “protect the public” The certification should cover the product, not necessarily the collection method.

Joe warned that certification will need a lot of management due to the ever-changing technology.

NSPS could consider fostering and funding research projects for these types of things.

Brent: Since UAS use is heavier in other countries. Can we pull from them?

Joanne
1. Need to socialize standards and training
2. Create a white paper where we define standards for surveyors and UAS
3. Consider having someone manage this and sift through research and standards for the committee

Jim said that this committee should also follow the direction of FAA regulations and drive standards.

Carl: Committee functions should also include
1. Be a databank for articles on UAS
2. Be a databank for standards on UAS
3. Suggested starting with generic standards.
GOALS
1. Produce a white paper to guide best practice development for using UAS for Survey purposes (Joanne agreed to send a draft table of contents)
2. Provide robust resource connections for NSPS members at various levels of technology use and program development.
3. Join, collaborate and network with UAVSI and other UAS organizations
4. Develop a plan for a UAS specific certification for surveyors

IMMEDIATE GOALS:
1. Investigate possibility for NSPS website to develop a webpage for resources, UAS committee collaboration and online networking.
2. Strong white paper draft by NSPS fall meeting
3. Immediately look into joining AUVSI, and pursue other organizations, sources and networking possibilities. This will greatly enhance our own knowledge base and assist the committee in outlining best practices for surveyors
4. Task force to look into all the components needed to develop and implement guidelines for UAS survey certification

Meeting
Time: propose first Friday of the month, 9-10 AM Hawaii Time
Next meeting April 7  (At this point it is open to suggestions.)
Platform: TBD, Conference call, other interface?
Agenda: TBD
Platform for collaborative documents? Suggestions welcome.

Various tasks to date
• Platforms for ongoing collaboration
  o Joe
• Outline for white paper with headings and topics:
  o Joanne
• Page on NSPS for UAS Committee news and resources
• AUVSI for education and networking resources
• Task force for UAS certification strategy