Legislative Task Force on Unmanned Aircraft Systems
August 1, 2014 Meeting at 733 West 4th Ave
Temporary Anchorage Legislative Information Office

9:00am – 4:00pm

Task Force Members:

- Representative Shelley Hughes, Co-Chair
- Senator Donny Olson, Co-Chair (not in attendance)
- Joe Jacobson, Commissioner Designee, Department of Commerce, Community Economic Devel.
- Mike O'Hare, Commissioner Designee, Department of Military and Veterans' Affairs
- Lieutenant Steve Adams, Commissioner Designee, Department of Public Safety
- John Binder, Commissioner Designee, Department of Transportation, Public Facilities
- Ro Bailey, University of Alaska Fairbanks
- Steve Strait, Aviation Advisory Board, Governor's Office and DOT/PF
- Steve Colligan, Representative Member for the Academy of Model Aeronautics
- John Parker, Integrated Robotics Imaging Systems
- Steve Wackowski, Tulugaq II (called in)
- Bob May, Gallery Lodge, Kasilof

- Ginger Blaisdell, Staff to Rep. Hughes
- Syndey Seay, Staff to Senator Donny Olson (called in)

Invited Attendee:

- Kathleen Strasbaugh, Legislative Legal (called in for questions)

Meeting attendees:

- Gary Williams, Aero Forensics
- Jeff Yates, Dat/Em Systems International
- Brandon Anderson, Alaska Aerial Technology
- Jay Skaggs, FAA
- Pete Adams, ENI Petroleum
- Mike Pannone, Aero Forensics
- Carole Anderson, UAA Student Aviation Administration

MEETING SUMMARY

9:00am Welcome and Introductions .....Representative Shelley Hughes

- Round table discussion of expectations from each task force member; specific outcomes include:
  1. Ensure that safety is the utmost priority, and also that there be a cooperative effort between all facets of not only the industry, but the public and federal and state government to foster the growth of the industry in the right way.
  2. Consider an internship program introduced into the university system.
  3. Recognizes a wide range of uses for UAS, but must be very mindful of public safety and public trust. Must not infringe on the privacy of the public.
  4. Oct,Nov the initial draft will be out from FAA and the Task Force may want to consider weighing in during the public comment section.
- Each member discussed his/her background and personal experience with unmanned aircraft systems, and some general comments about what the task force can do for Alaska.

Task Force Responsibilities per HCR15 and Review of Resolution

The duties of the task force shall include

1. reviewing regulations and guidance from the Federal Aviation Administration regarding unmanned aircraft systems;
2. studying the Federal Aviation Administration's "Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System Roadmap," issued November 7, 2013 (1st ed. 2013) and its application to the development of unmanned aircraft systems in the state;
3. conducting a public hearing concerning privacy and the capture of data by unmanned aircraft systems at the University of Alaska's test site;
4. evaluating complaints and concerns expressed to the task force;
5. identifying potential privacy and public safety concerns associated with unmanned aircraft systems and determining whether legislation is necessary to address them;
6. further studying the nonpublic use of unmanned aircraft systems to encourage development of the private sector unmanned aircraft system industry;
7. considering recommendations for public education related to unmanned aircraft systems;
8. further studying and making recommendations with respect to ensuring unmanned aircraft users comply with applicable laws; and
9. providing written recommendations, together with suggested legislation, for a comprehensive state policy for unmanned aircraft that protects privacy and allows the use of unmanned aircraft systems for public and private applications.

Review of HB255 ..... Lt. Steve Adams

- Lt Adams read through HB255 and discussed the applicability of the law.
- Current update on Department of Public Safety using UAS
    - DPS does not currently have a program for UAS, have been working towards establishing one for the past two years. The missions when UAS would be used would likely include:
        1. FIRST: search and rescue, within defined incident perimeter
        2. SECOND: Lost children or vulnerable people
        3. THIRD: Mapping or examination of traffic incidents that may not be accessible
        4. FOURTH: Mapping of hostile crime scenes.
        5. FIFTH: Officer safety during tactical operation
        6. SIXTH: Natural disasters and hazardous materials operations, in areas
    - Will not turn these into "speed monitors" - These are public safety monitors, not law enforcement monitors.
    - DPS is hoping to acquire a UAS in the very near future. Due to short-staffing and lack of funding, DPS is probably another year out from purchasing a UAS.

Earlier this month the Fairbanks area conducted multiple mock scenarios where traditional methods and UAS were used.

TRAFFIC: for 3D mapping of a traffic accident and how the data was implemented to draw lines between points of impact etc. Current equipment took one hour for imaging the scene and 3 hours to process the data before evidence could be moved. Mapping by using the Scout UAS took about ten minutes on scene and an hour and half to process the data.

- UAS will dramatically reduce traffic blockage time during incident management. Mapping of the entirety of an incident scene is a slow process due to the spread of evidence items after collision. Expectations are that UAS will allow for more immediate clearing of a crash scene and could reduce process time by up to three hours.
- It was also added that officer safety, overall traffic monitoring of flow into an incident area can also be greatly improved by UAS implementation.

Active Shooter in a Multi-story Building: UAS flew over the building with a body-temp monitoring tech to monitor for heat signatures within the building. The UAS relayed info to commander as to the location of the gunman. SWAT team was able to assess the situation better and complete action more safely by understanding the movement of the gunman.

FIRE: UAS was able to identify the hottest spot of the fire within an insulated training building, and the UAS was able to identify the "hot spots" and communicate that to the officers.

If we have a UAS for Department of Public Safety, is the Certificate of Authorization (COA) needed for every incident? Or is it a one-time COA?

- Lt Adams: First, we need a training COA to be able to demonstrate safe operation, then a jurisdictional COA, then on a case-by-case basis we would need to evaluate whether it is feasible and safe to use UAS.
- There are states/counties currently operating UAS under jurisdictional COAs.

FAA Reg 8900.268 addresses the inappropriate use of UAS, gives some idea to the field offices as to what they can do. Currently, there are no state statutes that are specific to UAS.

Review of Status of PPUTRC ..... Ro Bailey

- Update from Ro Bailey on test site and range activity

On December 30, 2013, Alaska was announced as a Test site location by the FAA. To become operational, Alaska had to complete flight planning guide, improve privacy, and apply for COA.

The finalization process culminated in Michael Huerta, FAA Administrator, coming to Alaska in early May and signing the COA. At the same time, PPUTRC launched the Aryan Scout flight in Fairbanks conducting a mission over the large-animal science facility.

- Goals of research was to study how the drone affects the animals, does it disturb them, etc…
- Test site will be taking "baby steps" alongside FAA to make sure that everything they do is both advancing the state of knowledge, while meeting all of the required regulations.

PPUTRC Expectations:

- Anticipating COAs for multiple aircraft under one COA, takes about 90 days to get a COA approved, barring any major setbacks.
- Air-worthiness: there are no "standards" to declare airworthiness. The FAA will establish a special airworthiness program for the test sites. Will be performance standards for airworthiness, rather than design standards. Tests will be performed on UAS in the test site to determine airworthiness based on performance.
- It's about building confidence with the FAA, building a trust, as that increases the test site may gain the ability to produce its own COAs.

What is the interest level for use within the test site, now that AK is officially a site?

"Almost overwhelming interest, way more industry users are interested now", including local and state aviation entities. Many entities are recruiting commercial pilots to become UAS pilots.

Without federal funding, how are you supporting the test site?

ACUASI has the initial funding provided by the legislature ($5 million FY2012), "still living on that, but it's going – fast". The test site business model provides for directly charging for use of the test site for private users, industry testing, as well as government missions and grants.

- **Possibility of UAF becoming an FAA Center of Excellence**

  FAA Center of Excellence, Univ of Mississippi and Alaska are partnering in the application process, and if they are chosen, the state would receive funding from the center for research. Process of selection is in beginning stages.

Ro was asked to describe the process of how UAS were used in the Kenai wildfire.

Too many steps to discuss all but in summary, we got a phone call from a member of the national guard, saying they may want to use UAS on Funny River fire. The Scan Eagle was needed for the mission. After receiving the verbal go-ahead, Ro called the FAA and requested an emergency COA on Monday, Memorial Day. Team was dispatched immediately to Kenai. COA was approved in less than 24 hours.

DMVA: *"This was a great exercise in the process of HOW to get a mission like this approved, an exercise in process and futility."*

The flight took part at night, to scan thermal hotspots of the fire and map the hot spots, pass the information onto the firefighting team leads for access from mobile phones. The information allowed the crews to knock down a number of hot spots.

The real cost-saving potential is more eventual than anything, when we have the resources (models of UAS) that we need for a range of scenarios (fires, search and rescue, etc…) Once we have the proper tools for the proper scenario, that's when the real cost savings will be seen. Matching the right UAS with the right scenario is KEY.

Will there be a debriefing process after the use of UAVs in real situations?

DMVA: Yes, we do have debriefs to address needs to make improvements and better the process.

Report on AUVSI Conference in Florida May 2014 .....Joe Jacobson

- Copy of flyer that was developed for the AUVSI conference is provided
- Update from the DCCED efforts in promoting UAS industry in Alaska:

AUVSI event in Florida May 2014: Over 8000 attendees, majority being aviation vehicles, some ground and under-water. The Department had a booth to share info about why AK is leading the nation in advancing UAS industry. Industry follow up: generated about 40 industry contacts. PPUTRC is confident that the connections made at this event have possibility of future contracts.

Panel discussion at AUVSI took place with AK reps. Follow-up interviews resulted as well as the possibility of a PBS-funded tv documentary series on Alaska UAS.

The group of AK reps at the event met with a global simulation training company to discuss opportunity to establish a UAS training facility in AK. That company has been in Alaska this week to tour possible locations and learn what AK has to offer.

Report on Military and Alaska Aerospace Corporation Consideration of UAS ..... Mike O'Hare

- What are the military plans for UAS in Alaska?

  AK National Guard, AK Aerospace, Homeland Security all fall under DMVA. Department Of Deffense plans to incorporate the Gray-Eagle UAS (predecessor to the predator drone) to the into Alaska for long-range training; NOT a military mission. The FAA regulates the process and COAs are still required for all missions.

  Weaponization of UAS on the domestic front has never been discussed for the National Air Space. There is a clear line between commercial use and battle-use.

  AK National Guard is not interested in actually owning the platforms, but are interested in training pilots for UAS.

  Emergency Management, Homeland Security perspective: No ownership of platforms, but will contract out services to UAS industry for emergency response and management.

  Same COA process for Gray Eagles, but does that include flights over military airspace?

  DMVA: No, for flights over military airspace during training, no COA, but for any missions that take place outside of that space it will require COAs (for emergency response missions etc…). The military will "have to look at the capabilities, the time associated with the process, and the cost. If it's less expensive to have satellite imagery available, we'll use that but it is always good to have options."

- What are the AAC plans for UAS in Alaska?

  AK Aerospace Corp will be working with the university to implement training sites and programs. Kodiak may become a training range. AK Aerospace Corp will not be purchasing any platforms, but is interested in operating the facilities.

Report on Department of Transportation .....John Binder

- Exploring uses of UAS by DOT, opportunities available. State is very excited about the possibility of using UAS to develop the GIS system for the state for mapping and geography.

- Concern with the integration process. A lot of traffic in our skies, "big sky becomes not so big". Recovery of aircraft is another point of concern.
- Biggest factor is proper communication between users and UAS pilots, and the airports and state.

Introduction of Items in Notebook .....Ginger Blaisdell

Tab 1

- Final Report to the Legislature, June 30, 2014
- HCR15
- HB255

Tab 2 – **Up to date with industry**

- Newsworthy comments – pulse of the industry – What's happening with UAS policy worldwide

All documents were provided to stimulate dialogue and consider others' good ideas.

Documents included a summary of ten of the most notable UAS currently in the news and a blog with good info graphics for consumers. The FAA published a fact sheet January 6, 2014 that succinctly described Civil UAS, Public UAS and Model Aircraft. Australian Certified UAV Operators Inc comments on Australia's legislative recommendations – many are similar to Alaska's concerns. UK Civil Aviation Authority is establishing a case-by-case review for approving UAS. Philippines issued UAS regulations that are very restrictive. News article on South Africa using the term "RPAS" rather than UAS to bring the "pilot" back into the acronym to identify that a human is involved. Fully autonomous aircraft are not being considered at this point. And finally an announcement that the FAA is on track to meet its Sept 2015 deadline of integrating UAS into the National Air Space.

UNIV: Fully autonomous UAVs are currently banned by the FAA. Related the conversation back to the technology being implemented in automobiles (ABS braking, parallel parking, etc…) and how it takes some work for the public to become comfortable with this type of technology.

Tab 3 – **Hobby Fliers**

All documents were provided to stimulate dialogue and consider others' good ideas.

- Guidelines for Hobby Fliers – prepared by the Academy of Model Aeronautics entitled "What Can I Do With My Model Aircraft?"
- FAA Interpretation of the Special Rule for Model Aircraft
- P.L. 112-95 Sec 336. Special Rule for Model Aircraft

AMA: The Academy of Model Aeronautics has also prepared a matrix of UAS platforms, their intended uses and requirements.

Hobbyists' perspective: through this entire process, you learn the methods of procedure. AMA's mission is to promote safety, regulations and responsibility for our youth. Regardless of whether they go into the UAS field, the process will teach give them valuable experience and prepare them for professional life." STEM education, training, and igniting the interest in our youth should be a priority.

AMA is preparing to roll out a hobby self-certification system. To obtain special classification for aircraft over 55 lbs you need to prove that you have the ability to safely fly an aircraft over 55 lbs. AMA will provide training programs for certification. AMA offers special waivers and training programs for many different types of UAS.

Tab 4 – **Commercial Fliers**

All documents were provided to stimulate dialogue

- FAA expediting commercial use for film production, precision agriculture, power line and pipeline inspection, and oil and gas flare stack inspection
- Perception that FAA Does not/Cannot Enforce
- Hollywood cinematography exemption
- UAS used by private investigators
- Industry already solving issues before UAS are approved for commercial use: flight tracking software, no-fly-zone software around airports, auto-parachute for system failure, and more. **Industry**: Patent on sensory avoidance technology, a radar system that weighs about 12.6 ounces, and when it is finished and ready for production it will weigh closer to 6 ounces.

Tab 5 – **Privacy and Safety Concerns**

All documents were provided to stimulate dialogue

- Revisit Legislative Legal Services memo on existing privacy laws
- New memo from Legislative Legal Services regarding private investigators using UAS
- Obama issues executive order for National Telecommunications and Information Administration to develop guidelines for UAS privacy.
- Definition of "reasonable expectation of privacy"
- Australia's power point on Commercial RPAS and Privacy

Tab 6 – **Public Education, Evaluating Complaints, General Operations, Certification, Insurance/Liability, Consequences**

AMA: Within discussions about large operators and industry advancement is the opportunity for STEM education for our youth. UAS provide a great opportunity to get our kids engaged in engineering, science and technology. Engaging the general public is crucial for the process of integration. We need to define the broad spectrum of usage and educate the public on UAS, the rules. "It's happening, and we need to get out in front of it."

UNIV: discussed the intern program they have at UAF currently, four interns now and discussion of future private sponsorship for "co-op" program.

Public: As a commercial pilot, the fact was discussed that large aircraft are currently almost fully autonomous. Human pilot takes off, programs the route into mapping system and the plane can fly and land itself with very minimal human interaction. Emphasis that in order to gain the public trust and comfort level with UAS in commercial airspace, they need to rely on the positive stories (the search and rescue success, fire-fighting, etc.) The task force cannot move too quickly and risk a negative outcome.

Flip chart pages on walls summarized these discussion points

- Industry Needs:

    1. Require manufacturers to include safety flyer in all hobby/commercial aircraft sold
    2. Signage when flying for commercial purposes (such as real estate or agriculture) - "unmanned aircraft in flight"
    3. Idea of a "fishing license" would not be needed for commercial use because of other certifications and licensure. The license would include a sticker for the aircraft so it could be tracked back to the responsible owner – maybe for hobby

    AMA: From the hobbyist's perspective, we are required to have identification stickers on aircraft. The real question is how to define and separate the levels of the airspace to determine the regulated differences between commercial and hobbyist UAVs. Does the general hobbyist know this or just active AMA members?

    UNIV: The FAA is working on licensing requirements right now. There is a requirement to register aircraft now, just like any other manned aircraft. This allows the UAS to be traced back to the owner. In the commercial/industry sector, insurance companies require UASs to be stickered for ID.

- Future Meeting Agenda:

    1. Responses to FAA rules in Oct/Nov
    2. PPUTRC public meeting on privacy policy at the September meeting will meet the FAA requirements of the test site for this year
    3. Data retention
    4. Invitation to AMA officials on education

5. Define framework – training and education
6. Dept Public Safety guidance document on enforcement of UAS
7. Integration not segregation of airspace: invite DOI, FAA, Military, BP/Exxon, etc

- Public Education and Outreach:

1. Public Trust
2. AMA certification program
3. UAA – UAS course taught by Harry Kieling Wed nights beginning Aug 27
4. Plus or minus 55 lbs: civil ~ public ~ hobby
5. Sizes and purpose
6. Develop matrix for the common person ~ Define what a UAS is, what a model aircraft is. What their purposes are. Where, when how can they fly?
7. Competition and award for best government use

- Public Information and Education Campaign: Possibly start the process at a very young age via education and school system.

1. User polls?
2. Hobby transition to professional
3. Intent and use matrix ~ including categories and distinct lines of separation as to the types of operations and the regulations associated with each category
4. Web presence
5. Pamphlet
6. Successful uses
7. Challenges
8. Privacy
9. STEM / voc tech
10. Public relations: who's doing what? Government, industry, hobby
11. Op Ed in publications
12. Social media
13. DCCED marketing assistance

- Follow Up – To Do

1. Military mission in Alaska – process and plans
2. Letter to Commissioners of state agencies on UAS re: point of contact for their department
3. Italy data protection laws
4. Who to contact? Complaint / enforcement system / responses
5. FAA enforcement
6. Doug Marshall UND privacy
7. UTMS – unmanned traffic management system
8. FAQs could be discussed at a teleconference meeting of the task force

Tab 7 – **Written public testimony**

- No written testimony provided
- Public attendees provided comments as requested throughout the day

3:30pm Closing Remarks and Adjourn

FINAL THOUGHTS:

Ro: Interest Group meeting coming up in September. What we're doing, Test site info, FAA, usergroups Sep 16-18.

Steve Strait: important to focus on integration of the airspace, not segregation. Need to reach beyond just the entities that we represent here on this TF. Inclusion of the military in the discussion. Education, we should do our best to mitigate accidents via education of the public to hopefully minimize incidents.

John Parker: Public education is vital. With an informed public, we are more likely to be successful in integrating UASs.

Bob: Education of controllers, maintainers, operators and the public. Continuous evaluation of the industry and policing it.

Steve Colligan: I agree with education, but we have to define it. Public Relations, the industry and oil companies and those who are using this tech are responsible for telling the stories of the good that is being done with UASs.

John Binder: Supported Colligan's idea of a framework/matrix.

Mike O'Hare: Education. What we've done, are doing and should do with UAVs and allow for feedback to address major concerns. Mike can arrange a military contact or provide updates on how the military is using the technology.

Joe Jacobson: Prioritization of what the TF can reasonably accomplish by taking an approach that things can be taken on one at a time and accomplished. Not becoming overwhelmed by too much information. Need to be good and strategic about what our messaging is going to be. A public awareness campaign, budget action to promote the work of this TF and information to the public.

ALASKA
UAS Interest Group

2014 | Alaska UAS Interest Group Annual Meeting

Sept. 15-18, 2014 | Anchorage Hilton Hotel

A forum for civil, commercial and government technologists, engineers, users and stakeholders.

- Learn about the Pan Pacific UAS Test Range Complex
- Examine the potential impacts of UAS activity in the Arctic
- Explore UAS applications to education, research, natural resource management and emergency response
- Hear about how NOAA will use UAS to monitor rivers

Learn more about the conference: www.uasalaska.org
Register online at: registration.gi.alaska.edu/conference/uas2014

For more information or registration assistance contact
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