Submission 90 – Anthony Banks

I teach high school level STEM and Aerospace at a school located on the Redcliffe Peninsula. My thoughts, however, do not necessarily reflect those of the school that I teach at.. Please see the attached pdf for my responses to the RID questions as posed in the Departments RID document. I also have a video response titled "Proposed Remote ID for Recreational Model Aircraft and Drones - an Australian Educator's Perspective" which can be found here: https://youtu.be/DBtGDl2qUL8

I would also like to personally invite you to my school if you wish to see educational drones and RC model planes in action. Many thanks for allowing me to comment on the possible implmentation of RID technology.

Response to Remote ID Questions as posted on the Department of Infrastructure, Transport, Regional Development, Communications, and the Arts website documentation

Data and access questions

1. *Who should have access to Remote ID data and to what information?*
   - All of the Data and access questions presuppose that RID will become a reality. For the purposes of these questions, let's play along. If this is referring to network RID, then I don't like the idea of anyone having access to the data. We have all seen what happens when our data is not kept secure and becomes available on the dark web or elsewhere. It has happened recently in our banking institutions.
2. *Should there be a data collection standard?*
   - If you are talking about how are data is stored and shared, then see the above comment.
3. *What is the best method of providing Remote ID data to relevant stakeholders?*
   - RID data should not be supplied to anyone that are deemed 'relevant stakeholders' because the term is vague and can be used in whatever way that suits. Can a person or organisation be a relevant stakeholder at a particular time but then be excluded at another time, but keep the RID data that was previously shared with them? Do stakeholders change? I would imagine so.
4. *What types of drone operators should be required to carry Remote ID equipment to operate drones? What should be exempt and why?*
   - Recreational & educational drones and radio control (RC) model planes should be exempt however if this is not possible, then DON'T require them to carry RID technology if they are less than 1kg. Professional drones should be totally exempt regardless of their weight as their operators have undergone training and licensing.
5. *How* can Remote ID privacy issues be managed?
   - You can't manage this. RID by its nature is broadcasting an operator's location to anyone with the app on their phone. Having a drone or RC plane broadcasting the operator's details and geographic position is frightening and fraught with danger, especially when the aircraft is still airborne. This is a terrible idea if a young person is flying and is confronted by an irate member of the public. It is dangerous. RID seems to be a solution looking for a problem that really isn't there.

Technology questions

6. *Is Remote ID (BRID, NRID or both) an appropriate solution for Australia? Are different types of Remote ID more fit-for-purpose in different contexts or applications? Are there other types (or variations of types) of Remote ID that should be considered?*
   - Both BRID and NRID are NOT appropriate and NOT needed. We DON'T have a drone problem now and to assume we will have one is not proven - see my video "Proposed Remote ID for Recreational Model Aircraft and Drones - an Australian Educator's Perspective" and transcript (URL provided at the end of this document). Australian drone sighting data near airports in Australia appear anecdotal at best according to my research, and sightings in the US according to the FAA reveal no net increase in drones and in fact, a reduction in 'evasive action' needed by pilots when a drone has been sighted. See video for the evidence on this. In the US, there has only been one issue with a drone hitting an aircraft, and in Australia, there is no evidence to suggest that there has been any incidences let alone an accident happening. We have a much bigger problem with birds around airports…evidence available in my video.

7. *What factors should Remote ID mandates be based on, e.g. location, airspace related, other?*
   - If RID does in fact come in, deal with the heavier drones. Beware that it would be very easy for a nefarious actor to plant RID modules around an airport without using a drone, and as a result, shut that airport down. It just won't work.
   - Education is the key for those law abiding citizens who fly drones for pleasure. Simple, periodic announcements and advertising using appropriate channels is all that is needed to keep drone activity under control.

8. *What technical requirements, standards and governance arrangements should be considered in the introduction of Remote ID to position for integration with adjacent systems, including the development of the UTM ecosystem?*

- The answer to this is beyond my pay scale. All I can say is that if AAM (E-VTOL) is the main reason for RID to be in existence, then surely the recreational/educational can co-exist, especially if our authorities (federal, state, and shire) are open to establishing a plentiful supply of FRIAs or the Australian equivalent - see my video regarding the issue of MAAQ clubs and the inability of young people to get to them. Readily available FRIAs really are the answer to this whole issue. AAM could be programmed to avoid them, and recreational/educational pilots are educated to avoid AAM corridors. Everyone wins!

9. *What features does Remote ID require to ensure tamper resistance and to mitigate security issues (including cyber risks)?*

- Consumer level drones such as DJI produce will have RID modules pre-installed and this may hamper the ability to tamper with them although I wouldn't guarantee it, in fact I'd go as far as saying, it won't be long before the information on how to 'adjust' or mask the module's ability to broadcast, will become easily available. Already RID spoofers and cloaking devices are on the market.
- Technically minded people who make their own drones and RC aircraft are not constrained by the above information, and the onus is on them to install a module. I think many won't, even if they don't intend to operate in areas where they shouldn't be.
- The bottom line is, law-abiding citizens will use the technology, nefarious actors won't.

Usage questions

10. *What impacts could mandatory equipage have on drone operators?*

- Not just professional drone operators! Drones and recreational fixed wing RC aircraft are a great way for young people to get into the hobby, which then leads on to a career path in the industry. As an educator, I have seen this first hand. RID will make this harder and our aviation industry which is already struggling under the burden of lack of qualified pilots, maintenance engineers, air traffic controllers to name a few, will be placed under even more stress.
- An inability to understand the privacy issues for many recreational drone flyers, by that I can imagine that most recreational flyers of the 'drone under the Christmas tree' variety won't even fully understand that there is a RID module pre-installed on their shiny white DJI drone and what it actually does, and the implications of having one that is broadcasting location information, even if whoever purchased the drone had it explained to them by the vendor that the drone had a module…they just won't get it. It is too abstract. The ones who do fly a lot recreationally probably won't buy a drone with a pre-installed module, and it will be up to them to install their own module - whether they do or not is up to them, and if they don't…what will happen?

11. *Should mandatory equipage be rolled out to all drone operators, or phased through types of operators and/or operations?*

- I don't know how you would do this. Are you meaning commercial operators? Would they be happy with what you are rolling out? Are you forcing them to be locked in to a particular type of module? I'm sure based on what I've seen, that some modules are more accurate than others.

12. *Are there existing standards that should be considered/adopted to facilitate Remote ID uptake in Australia?*

- Can't comment on the standards side, however I believe the commercial operators would certainly be part of the uptake of RID but I can't speak for the recreational community, many of whom won't be au fait with what it is all about.

13. *Who should we be engaging with, particularly outside of the aviation industry (e.g. telecommunications providers)?*

- Makes sense for RID but they will not recognise the implications of RID's implementation for the Aerospace industry. They will simply be part of it because it will pay. You should engage more with people like me who train young people how to fly SAFELY and RESPONSIBLY, and with local councils across this land so as to provide Australian FRIAs.

Appendix and Notes

- My YouTube take on RID: Proposed Remote ID for Recreational Model Aircraft and Drones - an Australian Educator's Perspective: https://youtu.be/DBtGDl2qUL8
- You are welcome to come and visit me at Mueller College, Rothwell, Queensland, to see first-hand, how drones and RC aircraft can positively influence a young person's career choices and point them to an aerospace career.

Final Thoughts

Don't throw out the baby with the bathwater! Drones are NOT a huge problem, and in fact, placing an additional burden on recreational flyers is going to have a detrimental effect. We are NOT seeing issues in this country. Australia could be a leader around the world in the integration of recreational/educational RC aircraft and drones, AAM aircraft, and full-sized aviation. Australia was a leader in the early days of drones in the National Airspace but fell behind. Let's reinstate that position…the US should be looking to us for a workable solution rather than a ham-fisted sledgehammer of an approach, especially as it will be proven that the US solution is unworkable and is doomed to fail. To add a broadcast or network module is not a smart way to fix an issue which doesn't even exist. Australian FRIA's are the best solution to this combined with an educational program for the recreational/educational flying public.

Thanks for taking the time to read this, and once again, feel free to get in contact to discuss or even better, visit our school aviation department to see how useful drones and recreational radio control aircraft are in teaching many different educational concepts.