Submission 38 – Christopher Andrews

Going over the cons of remote ID and offering an alternative.

I fly home brew multirotor drones and fixed-wing model aircraft.

I'll focus on the question at hand - Issues of safety, security, and accountability - Along with the details of network remote ID, or broadcast remote ID.

In general, I am against remote ID, as it is a bad answer to the questions being asked.

I'll address safety first. First to manned aviation, then to other people on the ground near the pilot.

In order for manned aviation to have any benefit to Remote ID, they will require dedicated drone Remote ID receivers (for broadcast), or an internet connection (for network) and displays to display this information. Will manned aviation be mandated to have these sensors to avoid us? - I don't think this use case is probable, and it also places the responsibilty of avoiding drone operators on manned aviation, which is completely backwards in my view.

A much better solution is to develop tools / phone apps / websites to let drone operators know where manned aviation are in real time - much like flightaware. Drone operators could even contribute to this data by setting up ADS-B receivers, it's as simple as buying a cheap software defined radio (such as the RTL-SDR, somewhere between $30-$50), and letting a low end computer such as a Raspberry Pi decode and report this data.

I don't believe remote ID will provide any additional safety to people on the ground near the pilot either. People are not likely going to install a "drone detector app" if network remote ID is used, and unless they are also walking around with an SDR receiver, are not going to have any benefit from broadcast remote ID either. Drone make a decent amount of noise which will be a much more practical indication a pilot is in the area.

What I am trying to convey - we already have a responsibilty to not endanger person or property. Remote ID provides no added benefit to safety for manned aviation without an extreme expense for manned pilots, and provides zero safety advantages to the general public around drone operators.

If both manned aviation are following the rules of being above 500ft while not landing or taking off, and drone operators are following the rules of remaining under 400ft and not flying inside the exclusion zone of airports - collisions are not possible. As far as I know the only confirmed incident of

manned aviation colliding with a drone, was a police helicopter and a police drone - and even in this case there were no fatalities. I am unaware of any an incident occuring in Australia.

A minor detail is that any on-vehicle remote ID module is going to add to the weight, and possibly interfere with the control link. Both of these are a negative to safety.

The second question asked is security. I do not see the benefits of security to the general public, manned aviation, or drone operators. I do see a security flaw if drone operators have to broadcast their personal details. If we compare the situation to the most dangerous vehicles we all operate, a motor car, I cannot look up someones personal details (name, address) via their number plate.

The third is accountability.

I do my best to fly within the rules. I generally operate in remote areas - beaches, sugar cane paddocks, or cattle properties where I have the room. The exception to this is when I fly at home, well below the tree line. A pilot putting others at risk will either a) Not aware they are doing the wrong thing, or b) know what they are doing is wrong, but doing it anyway.

For people in group A, how will this change be communicated? I have a few models that have no remote ID modules, I wasn't even aware this was being proposed until I was made aware of it from a youtube video - and if it wasn't for that video I would also be part of group A if the rules change. The point I am attempting to make here is that only drone pilots who have their eyes on regulations will fit remote ID modules to their drones, and that is going to be the ones that are going to stick to the rules.

For people in group B, they are simply not going to fit remote ID modules to their drones. This is not going to help "hold drone operators accountable".

There is a far easier method for identifying drone pilots to aid in accountability. Look for the person staring at the sky holding a transmitter - or the person possibly wearing FPV goggles. We do stand out, and I have answered many questions about the hobby - possibly inspiring a few to get into the hobby.

Please do not add cost or regulate the hobby out of existence, a drone or fixed wing model in the hands of a 13 year old child may be the start of a pathway leading to manned aviation, and I have seen many journalists use drones rather than helicopters to capture footage which also improves

safety. The hobby definitely has its benefits. Manted remote ID would make all those DJI drones flying around illegal.

To recap: While I do not see any advantage in Remote ID, but I'd like to see if an app developed to warn us when manned aviation is approaching. That would be a tangible benefit to both manned aviation and drone operators, and is something I would be very happy to use - it costs nothing to either us or manned aviation and would help with safety. It could even be developed by drone hobbyists as an open source project, given the right leadership.