

Using Drones and Covering Your Legal Bases

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HELMORE
LAWYERS
AYERS

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THIS PRESENTATION IS MERELY A PRESENTATION OF RESEARCH AND
NOTABLE UPDATES OF LEGISLATION AMONG PROFESSIONALS
IF YOU HAVE ANY QUERIES PLEASE SEE ME AFTER THE
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YOU SHOULD ALWAYS CONSULT YOUR LAWYER

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PRESENTATION

Overview

- ▶ How technology is changing and the importance of Drones (UAVs)
- ▶ The law surrounding the use of UAVs
- ▶ Keeping up-to-date with changes, properly referencing and updating your terms and conditions

UAV's

What is a UAV?



How technology is changing and the importance of Drones (UAVs)

- ▶ Technology is rapidly changing...
- ▶ Historical development of UAVs



UAVs



Aerostat
Global hawk

AEROSTAT

200 ft. long
65 ft. across the hull

Aerostats are tethered fabric balloons filled with helium that float 15,000 feet in the air from a single cable. They can lift 1,200 pounds, including a camera that pans 360 degrees for constant real-time surveillance. They are used extensively on the Afghanistan-Pakistan border and above Kabul, where one of them is anchored at Bala Hissar, an ancient fortress. Their virtue is that they can stay aloft for months at a time, carrying a heavy load of intelligence equipment. Their shortcoming is that they cannot be moved rapidly for new assignments.



GLOBAL HAWK
44 ft. long
116 ft. wingspan

Sometimes described as a "flying albino whale," the Global Hawk is the largest flying drone. Although linked to humans on the ground, Global Hawks fly mostly on their own, guided by GPS coordinates they download from satellites. They were deployed over Afghanistan in 2001, providing commanders with battlefield images. The Global Hawk flies higher than the Predator and can stay up longer — for almost two days.



X-47B
38 ft. long
62 ft. wingspan

The Navy's prototype combat drone, and the first combat drone able to take off from an aircraft carrier and land on it. Its first test flight (29 minutes) was on Feb. 7, 2011.



REAPER
36 ft. long
66 ft. wingspan

The largest armed drone. Called a "hunter-killer" aircraft, the Reaper can detect humans and can fire Hellfire air-to-surface missiles. It will soon replace the better-known Predator.



PREDATOR
27 ft. long
55 ft. wingspan

The Predator is the Cessna-size workhorse that has dominated remotely piloted flight since the Sept. 11, 2001, attacks. The Pentagon has 169 Predators in its inventory.



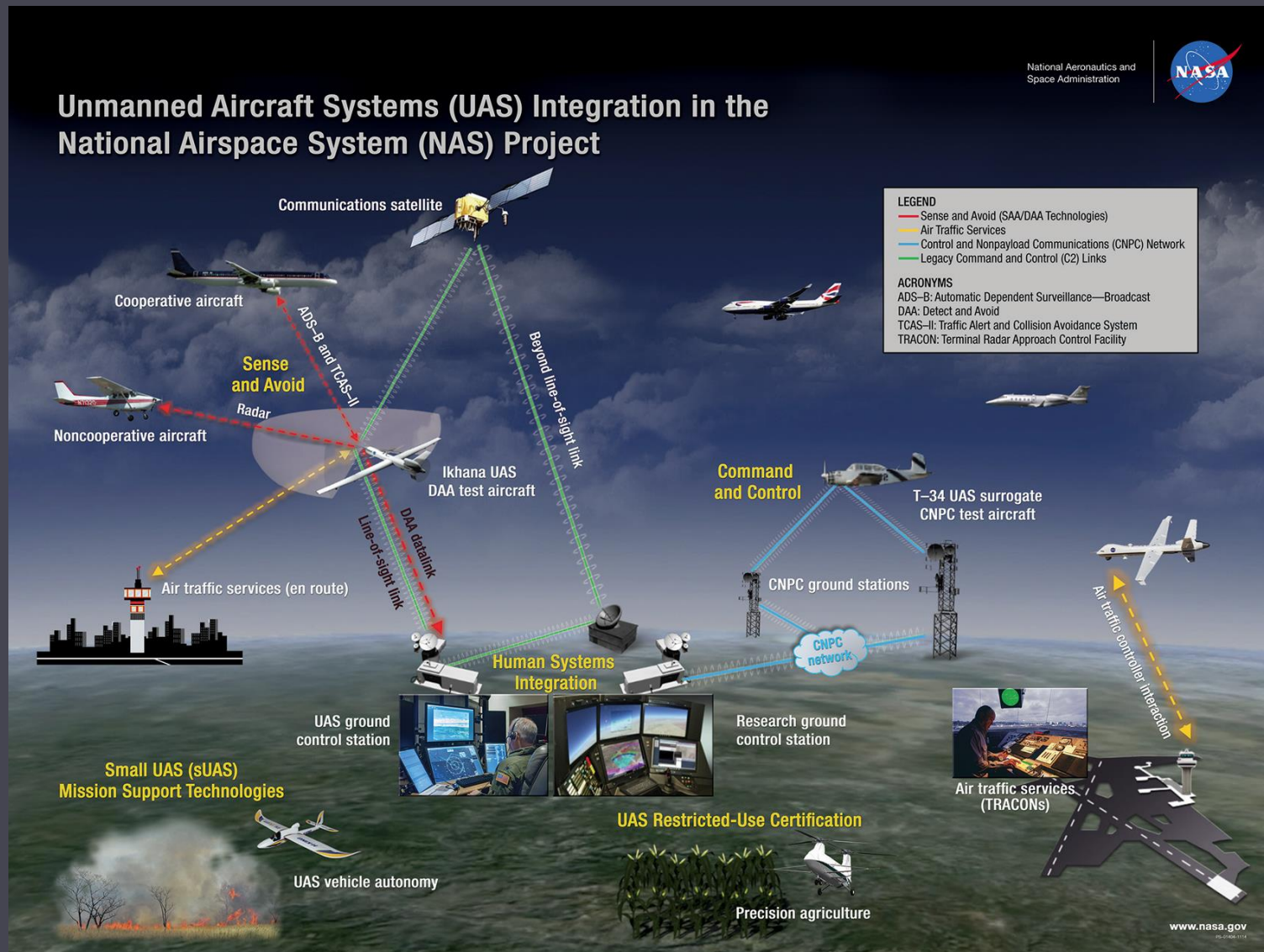
Why are drones becoming important?

- ▶ Military uses aside (as well as spying on your neighbours watering their garden whilst a water ban is in place....)
- ▶ Save time
- ▶ A new safety element for workers?
- ▶ Save lives???


Survey

- ▶ Who is using a UAV?
- ▶ Part 101 or 102 or both?
- ▶ Who is contemplating the use of UAVs?
- ▶ Terms of engagement or terms and conditions pertaining to UAV use?

US perceptions of UAVs and the use of Airspace










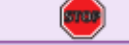

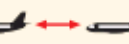
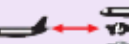




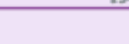








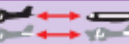







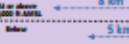
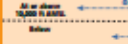

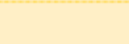
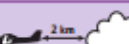



Airspace



CAA
CIVIL AVIATION AUTHORITY
OF NEW ZEALAND

NEW ZEALAND AIRSPACE

Effective 7 June 2007
www.caa.govt.nz

		Controlled Airspace			Uncontrolled Airspace	Special Use Airspace	
		Class A	Class C	Class D	Class G	Authorisation Required	
Airspace Requirements	IFR						
							
							
							
				Below 10,000 ft – 250 knots max	Below 10,000 ft – 250 knots max		
						<p>Uncontrolled airspace includes VFR Transit Lanes and General Aviation Areas when active by day</p>	
VFR							
							
							
							
							
				Below 10,000 ft – 250 knots max	Below 10,000 ft – 250 knots max		

KEY

= IFR	= SVFR	= Flight Information Service	= Entry Clearance Required	= Traffic Information Provided	VFR minima at aerodromes within a control zone (CAA Part 11) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>CEILING</th> <th>VISIBILITY</th> </tr> </thead> <tbody> <tr> <td>DAY</td> <td>1000 ft</td> <td>5 km</td> </tr> <tr> <td>NIGHT</td> <td>1000 ft</td> <td>5 km</td> </tr> </tbody> </table>		CEILING	VISIBILITY	DAY	1000 ft	5 km	NIGHT	1000 ft	5 km
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= VFR	= ATC Service	= Aircraft Radio Required	= ATC Separation Provided	= Visibility	VFR minima at aerodromes in uncontrolled airspace (CAA Part 11) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>CEILING</th> <th>VISIBILITY</th> </tr> </thead> <tbody> <tr> <td>DAY</td> <td>400 ft</td> <td>1000 m</td> </tr> <tr> <td>NIGHT</td> <td>1000 ft</td> <td>5 km</td> </tr> </tbody> </table>		CEILING	VISIBILITY	DAY	400 ft	1000 m	NIGHT	1000 ft	5 km
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Operational Requirements

Mandatory Broadcast Zone (MBZ)

- Standard position and intentions on entry, when joining the circuit, before entering a runway, and at specified intervals
- Ambulances and/or landing lights must be on if equipped
- MBZs should only occur only under special conditions

Low Flying Zone (LFZ)

- Extends up to 100 feet AGL
- Obtain a briefing from the specified using agency before entering
- Standard intentions prior to entering and on exiting

Non-mandatory Airspace

Common Frequency Zone (CFZ)

- Standard position and intentions if radio equipped
- Ambulances and/or landing lights should be on if equipped

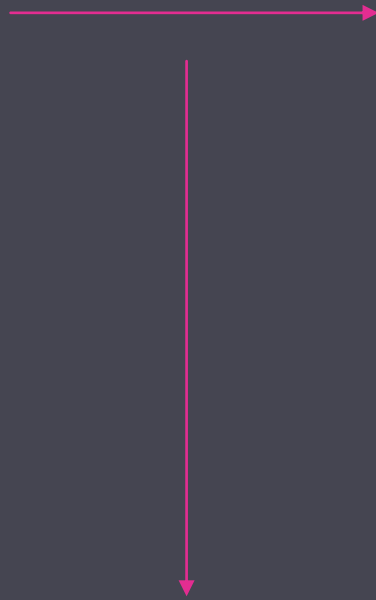
Parachute Landing Area (PLA)

- Treat the airspace as an active PLZ (especially upland of the PLZ) like a danger area in terms of your altitude

Always refer to the AIP New Zealand and the Civil Aviation Rules for current requirements.

For further information, see the GAP booklet, *New Zealand Airspace*.

Domestic law - vertical
International law - horizontal



The law surrounding the use of UAVs

- ▶ ICAO
- ▶ Civil Aviation Authority Regulations
 - ▶ Part 101 requirements
 - ▶ Part 102 requirements

Ambiguities

- ▶ Demarcation - air space and outer space???
- ▶ Line of sight? Long sighted or short sighted? Google maps calculation by foot?
- ▶ Different types of drones: list available on CAA but new and improved UAVs are frequenting the market constantly

Keeping up-to-date with changes and properly referencing / updating your terms and conditions

- ▶ The standard terms and conditions will not be enough
 - ▶ The importance of clear terms and conditions:
 - ▶ Limit liability
 - ▶ Ensures compliance with the legislation
 - ▶ Pilot-in-command
 - ▶ Exclusivity
 - ▶ Other streams of income - IP?
- ▶ The best way for companies to update their terms and conditions is to.....

ASK ME TO DO IT!!!



Let me write your new UAV
Terms and Conditions and
Terms of Engagement!!

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