

Drone-Flight-Check

Drone information and drone traffic management database & app for enhanced safety and regulation

- Drone registration database
- Management of No-fly and Limited-fly zones
- Checking and authorization of flight operations (flight licensing)
- Geo-fencing and drone tracking

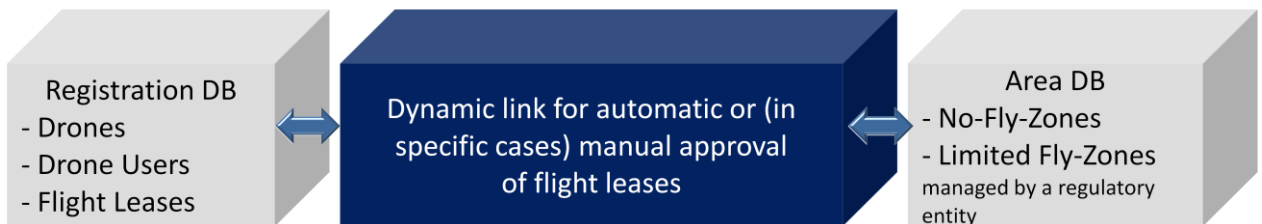
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Drone information and traffic management database & app

As the number of drones for professional and recreational use irresistibly increases, concerns equally rise on aeronautical and public safety and homeland security. Appropriate regulation and traffic management tools have to be implemented to easily authorize where and when the users can fly.

Drone registration, user-friendly flight approval mechanisms, geo-fencing and drone traceability, which are all integrated into the Drone-Flight-Check concept from Colibrex, form a drone information management system in line with the ultimate objective of a future Unmanned Aerial Systems Traffic Management (UTM) system.

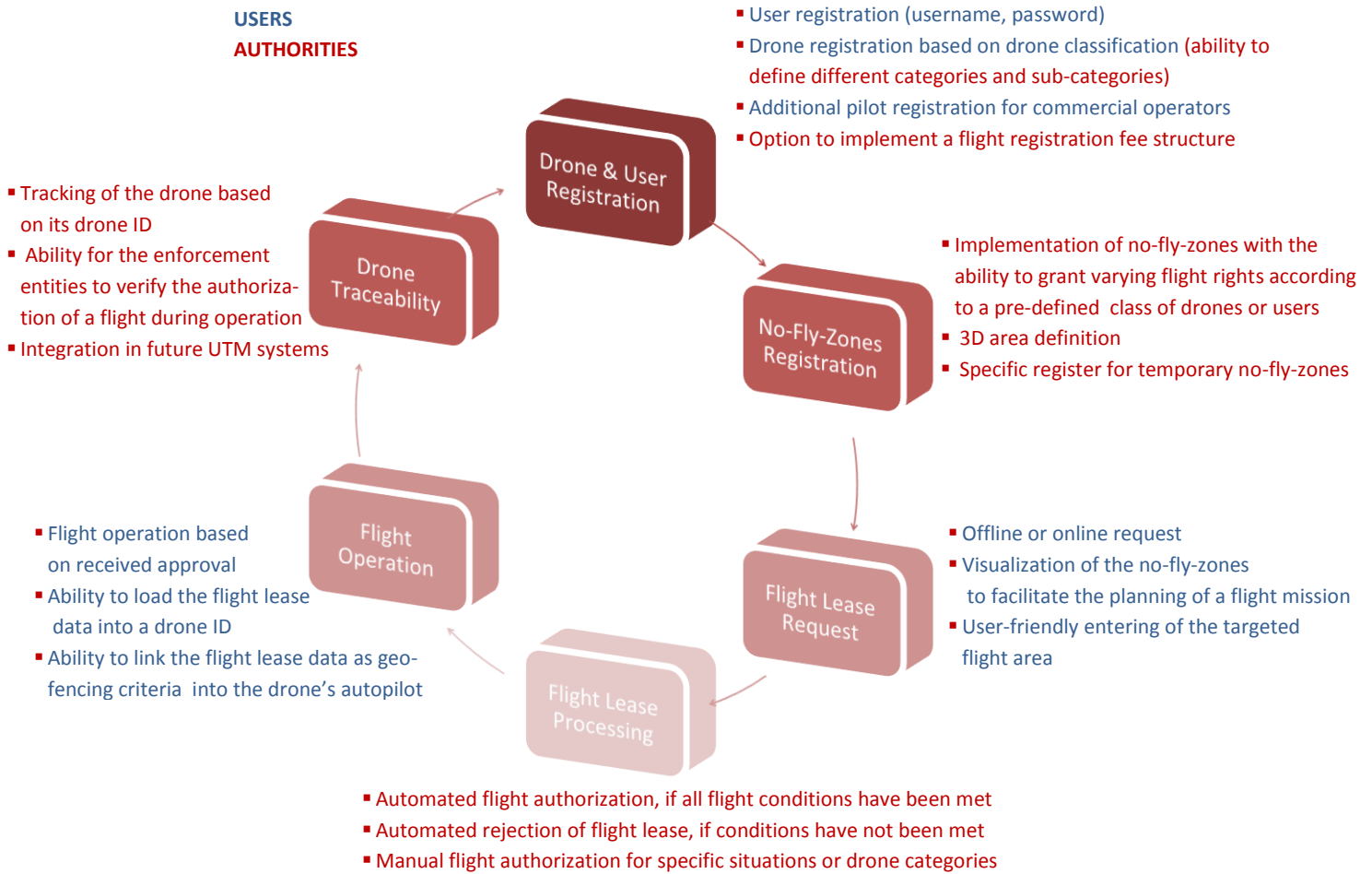
The key of the Drone-Flight-Check solution is to dynamically link the registration database and the individual flight lease requests of the users to an area database where all no-fly-zones or limited fly-zones are centralized and updated. This shall for ex. prevent a user to fly into a temporary no-fly-zone or enable only specific categories of drones/users to fly into a specific area.



The platform enables drone users to verify where and when they can fly. On top of that, the release and referencing of a flight by the system (done automatically for the easiest cases) or its rejection, adds to the safety of any drone flying operation. The system also provides authorities with the possibility to track and verify the authorization of a drone while in operation.



Drone-Flight Check processes



Pilot Register + Drone Register + Flight Lease Register + Exclusion Zone Register

Drone ID:	DE00003RPA
Drone Class:	1
*Weight Net (g):	8500
*Payload Max (g):	2000
*Flight Height (m):	150
*Flight Speed (m/s):	14
Registration Date:	30-10-2015 07:24
*ValidityDate:	31-10-2015 00:00
*Time Zone:	UTC+01:00
HW	
Name:	Skyflit
Type ID:	
Make/Producer:	LSofSA
Serial Number:	LSX10
Type Certification ID:	
Drive Type:	EL
Control	
<input type="button" value="Submit"/> <input type="button" value="Reverse"/>	

DroneID	HWName	HWSerialNumbr	ControlName	ControlSerialNu	RegistrationDate
DE00003RPA	Skyflit	LSX10	Pishawk		30-10-2015 07:24
DE00004RPA	Testdrohne				3-11-2015 11:59
DE00005RPA	HT-8 C180		Height tech Gm		4-11-2015 12:45

Pilot Register + Drone Register + Flight Lease Register + Exclusion Zone Register

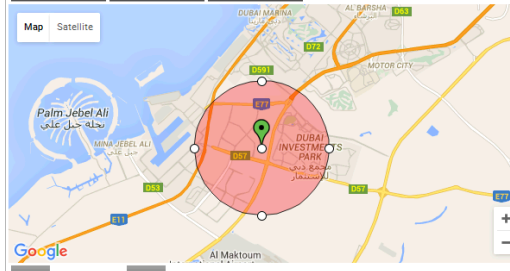
Lease ID:	L0000004516040814
*Lease Name:	Hobby Dubai Test
Contour Type:	Circle
Permission Type:	Personal Activity
Pilot:	Haerberle
Permitted Drone Class:	1
Permitted Drone:	DC000036RPA
Identified Zone List:	Select options
*Start Time:	2016-04-08 00:00
*End Time:	2016-04-12 00:00
*Time Zone:	UTC+02:00
<input type="button" value="Submit"/> <input type="button" value="Reverse"/>	

Map Confirmed Lease List Unconfirmed Lease List

Center Latitude: 24.98563271
Center Longitude: 55.13793182
Circle Radius[m]: 5404.04

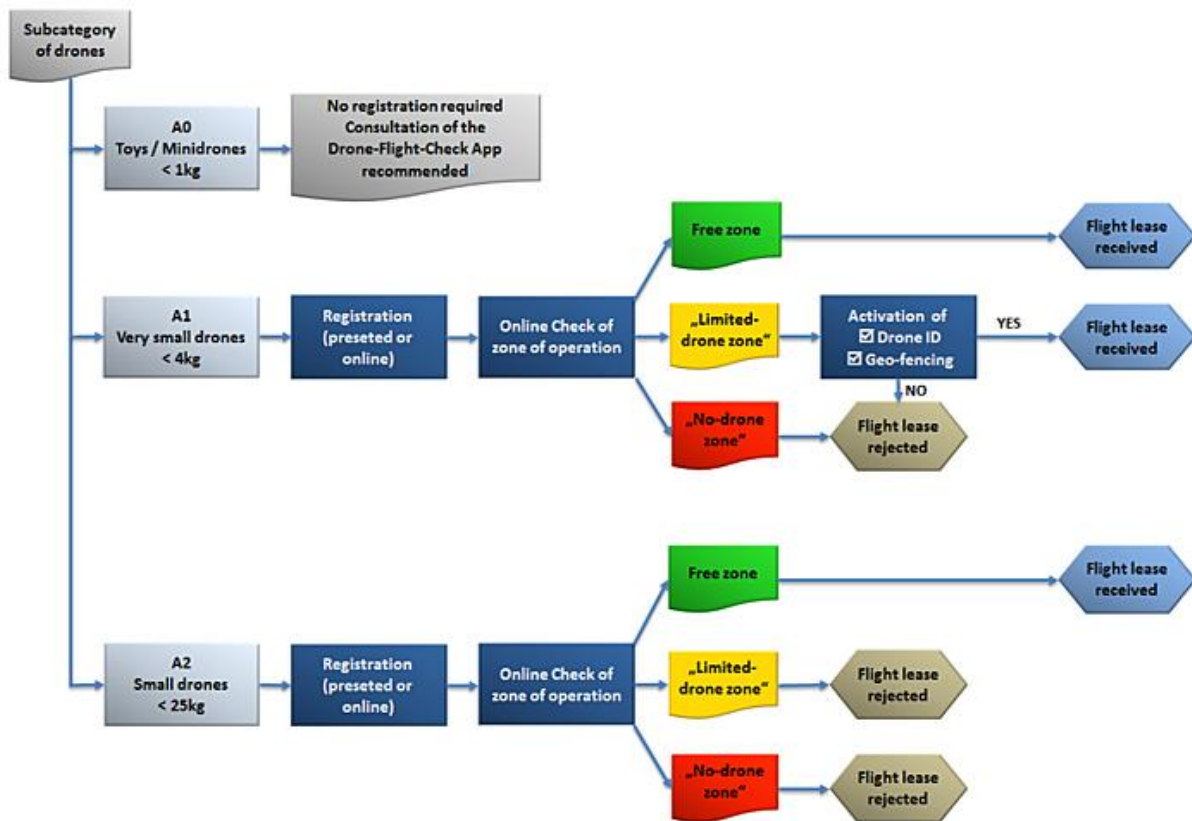
Add New Modify Delete

Map Satellite



Now show: 1/1

Example of a possible classification process for flight authorization



Drone traceability

- Drone-ID based on proprietary RF module (other electronic-ID solutions can be integrated into the Drone-Flight-Check platform) continuously transmits the digital number plate, the lease ID and the flight status and can thus enable enforcement entities to verify the legality of a drone during operation
- Drone traceability is a prerequisite for future Unmanned Aerial Systems Traffic Management (UTM) systems and crucial for efficient counter-UAV solutions

Why Colibrex / LS telcom

- Colibrex combines its experience as a professional drone operator with the long-standing expertise of its parent company LS telcom towards high dynamic databases and licensing processes
- Drone-Flight-Check is an adaptable solution, configurable according to the legislation in place and the requirements of regulatory authorities, and follows the recommendations of international organizations

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