DRONE FEDERATION OF INDIA

Recommendations

Prepared for: **Office of The Director General of Civil Aviation**

Prepared by: **Drone Federation of India (DFI)**

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Subject:

DGCA Circular: Requirements for Operation of Civil Remotely Piloted Aircraft System (RPAS)- 2017

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OUTLINE

Premise

With a rather wide spectrum of operations, the value of the current drone / UAS industry exceeds USD 100 billion. With an exponential rise in drone activity across India, it is imperative the the future of the industry is secure while ensuring the overall safety measures while carrying out drone operations. Governing bodies such as the DGCA face situations where in regulations are to be devised to ensure safety and security while harnessing growth and innovation in the drone industry. Striking this balance will be supremely beneficial for the growth of the industry and enable an increase in the adoption of aerial technology.

Solutions

Growing innovation trends in India call for streamlined process and healthy and robust regulations. The Drone Federation of India aims at harnessing the best forces in the Industry and supporting all governing agencies to make the environment as friendly as possible for drone players.

POLICY REVIEW

Innovation Focussed

The DFI has exhaustively deliberated all line items in the Draft Regulation Document issued by the DGCA and welcomes the same. The regulations are in alignment with industry objectives and appear to create an environment where aerial technology can be harnessed to perfection and nurtured to deliver compelling results across sectors that avail these services.

RECOMMENDATIONS BY DFI

Altitude

Altitude limit may be increased to 400ft as per international standards as opposed to 200ft

Single Window Clearances

Formulation of a Single body comprising of members from DGCA, WPC, MHA, Defence Organisations, DGFT, etc. for obtaining UIN and UAOP. An online portal will streamline and drive efficiency in the registration process.

Several maverick drone operators who work in the entertainment industry have highly specialised drones frequently flown at low heights indoors. Registration of the same must be mandated.

Testing and Experiment Zones

In order to facilitate the development of the Drone Technology, there should be a few designated zones where extensive testings could be undertaken. In such zones, the requirement of UAN and UAOP should not be queried given the stage of development of the UAS.

Payload / UAS Weight

2kg limitation in UAS payload may not guarantee any immunity from malicious intent. Moreover, the 2kg restriction, does not preclude the most popular Chinese UAVs i.e. the DJI, Phantoms from operating freely but precludes almost all Indian manufacturers from this category who have UAVs in the range of 2-4kgs of weight. On the other hand, DJI Phantoms, even though are less than 2kg in weight have been experimented with by people to lift upto about 1kg weight with their standard battery packs (https://youtu.be/E6zZWsWhC8s). Therefore, it is recommended to increase the weight limit of Micro UAVs as 4kg or higher to ensure that the industry flourishes with maximum benefit to industries and citizens, while adequate security, safety and tracking measures have been taken care of in the regulations otherwise. Sweden and UK both have 7kg as their defined limit for first of second category of UAV systems.

Unique Identification Number

UIN should have a syntax in alignment with the make and model of the drone. This will ensure each unit is traceable and reduce effort of certifying each and every aircraft.

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In a typical UAV model, the battery pack and payload weight can be varied for different types of missions. It will help authorities determine the actual payload capacity of the UAV and weight of the battery pack(s). This will help in accurate risk profiling of a UAV. Even DJI Phantoms, even though are less than 2kg in weight have been experimented with by people to lift upto about 1kg weight in addition to their standard battery pack (https://youtu.be/E6zZWsWhC8s).

Security Program

Active RFID tags emit a signal of their own for an extended period of time and will be really helpful in locating lost UAVs in remote areas or passing through critical areas and SIM card with GPS tagging will assist in tracking UAVs in flight around critical areas.

A formalised security control manual published online with mandatory completion will help create awareness and build drone operator registry.

Drone Controls

Several startups are working on swarm capabilities using drones which will be beneficial across industries. This would involve control of scores of drones using minimal base stations. The same has been carried out by intel across locations around the world. Limiting controls of drones to one operator would hamper the Research and Development efforts expended by these entities (https://www.intel.com/content/www/us/en/technology-innovation/aerial-technology-light-show.html).

Mobility

Operations from moving objects such as a car / bike should be permitted given the extent of coverage in the entertainment industry. Capturing wild life, tracking geo tagged animals in reserves and covering events such as boat or car races require the drone operator to setup base on a moving body.

SUPPORT FROM DFI

The Drone Federation of India will be honoured in supporting the DGCA is streamlining its initiatives to help improvise and cushion drone operations across India. Areas of support may include

Data Sets

Considering the outreach and client base of all members of the DFI, the association has access to over hundred drone operators, both companies and maverick in the industry. Below the Line marketing initiatives indicated that this list may be growing on a monthly basis. By our estimates, there may be over thirty thousand drone owners across India and the DFI intends to track purchase and flight patterns adopted by the operators with the intent to bolster the industry.

Security & Compliance

With a large database of users, drones and vendors, the DFI can help build educational programs to ensure that all drones used, made or assembled in India are up to standard.

Permissions

The DFI can double check the integrity and history of a person seeking permissions with the help of historic data and alert the DGCA should there be a potential incident. Further, DFI can help in developing and deploying the permission mechanism to ensure all drone operations are under the DGCA umbrella.

Advocacy

With a fleet of industry thought leaders, legal experts and drone exponents, the DFI can richly contribute to amendments in policy and overall advocacy for robust yet innovation friendly governance.

FOCUS GROUP

Report Building

Core Committee Members of the Drone Federation of India discussed the regulations at length and charted out areas that might align with the overall industry objective. Members of the council are listed herewith.

Member	Profile
Vignesh Santhanam	CMO- Quidich Innovation Labs Pvt. Ltd., Mumbai
Rahat Kulshreshtha	Founder and CEO, Quidich Innovation Labs Pvt. Ltd., Mumbai
Vipul Singh	CEO, Aarav Unmanned Systems, Bengaluru
Bitun Banerjee	BD, Asteria Aerospace, Bengaluru
Pravin Prajapati	CEO, InDrones, Mumbai
Tarun Malkani	Ex-COO, Rio Tinto Diamonds