



Bringing the Jetsons to Life

Thought Leadership • September 29, 2021

This article was first published in Legal Era on 29 September 2021

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Introduction:

1. With the emergence of novel technologies in the realm of artificial intelligence and subsequent demand for expeditious services, drones have become an important tool, facilitating everyday business. The use varies from spraying insecticides over a huge field, shooting films from a bird's-eye view, surveillance, food and medicine deliveries, and even air taxi.
2. The concept of drones is not modern in India, however, it will be safe to state that the exploitation of drones was limited to defense purposes and was solely monitored by the government. Now with changing times, modern technologies, simple controls and quick availability, drones have entered the civilians' terrain.

Backdrop:

1. In December 2018, the Office of the Director of Civil Aviation, issued The Civil Aviation Requirements (CAR), 2018 for the operation of Civil Remotely Piloted Aircraft System (RPAS), which meant that the regulations were not applicable to autonomous drones. Under the said rules, all the approvals such as for import, for unique identification number (UIN), permit to operate and other operational requirements was under the direct supervision of the Directorate General of Civil Aviation (DGCA).
2. Thereafter, in March 2021, the Central Government promulgated The Unmanned Aircraft System Rules (UAS Rules), 2021, which came into force on 12 March, 2021. The Rules received a lot of dissension from the stakeholders, as the UAS Rules were more stringent compared to the CAR, 2018, because of the strict compliance, rigorous procedures involved in obtaining multiple permissions and permits, payment of fees for every individual application, and over 25 different forms. Moreover, permission was also warranted to import parts/components, separately, and every non-compliance had a severe penalty, ranging from 25,000-1,00,000, without any minimum limit.
3. Pursuant to the suggestions and feedbacks received from the industry/stakeholders, the government, in June 2021 with the intention to repeal the UAS Rules, 2021 promulgated the draft rules titled The Drone Rules, 2021, with simplified process, reduced number of forms, and minimal human involvement. In the words of the Ministry of Civil Aviation, trust, self-



certification and non-intrusive monitoring were the key elements of the said rules.

Key Differences Between UAS and Drone Rules:

The less bureaucratic rules aim at making things significantly easier for people and companies to own and operate drones. Let us take a look at how different are the Drone Rules from the UAS:

1. The new rules do not require obtaining a unique authorization number to act as importer or manufacturer or trader or owner or operator;
2. Unique prototype identification number for obtaining the certificate of airworthiness and to manufacture drones is not required, thereby easing the approval process;
3. New rules allow the use of prototypes for research and development purposes, without the need of certification;
4. Require the importer or the manufacturer to issue a certificate of conformance, certifying each unmanned aircraft has been done away with thereby, relaxing the approval process;
5. The import process is eased by doing away with the requirement of import clearance, which under UAS Rules could only be issued by the DGCA and upon its recommendation, DGFT would have allowed the import. Under Drone Rules, the imports are directly governed by DGFT;
6. It has relaxed the process to register existing drones and has done away with the need to file multiple forms. Under Drone Rules, one can easily register its existing drone through digital sky platform;
7. It does not require the system operator to file multiple forms in order to obtain an 'operator permit' from DGCA. Under the UAS, there were two types of operator permit i.e. operator permit-I for goods delivery and operator permit-II for other operations and the same required renewal after a period of 10 years;
8. Organizations can conveniently carry out research and development activities without having to obtain any certificate of airworthiness, unique identification number, prior permission and remote pilot license. Under UAS Rules, the eligible organizations had to convince DGCA and obtain authorization before carrying out R&D;
9. Unlike UAS rules, new rules do not require one to obtain a student remote pilot license, before obtaining a remote pilot license;
10. It has done away with the requirement for obtaining a remote pilot license from DGCA. Under Drone Rules, the remote pilot license will be issued by the authorized training organizations, through digital sky platform, making the process simpler and efficient;
11. There is no need to categorize unmanned aircraft under multiple categories;
12. It has only six forms as compared to UAS rules, which had 25 different forms;
13. Under new rules, the fees are reduced to a nominal amount, irrespective of drone type.

Understanding the Drone Rules, 2021:

Introduction:



1. These rules confirm that the Aircraft Rules 1937 will not govern drones, except those with a weight of more than 500 Kgs.
2. A drone is defined as an aircraft that can operate autonomously or can be operated remotely without a pilot on board. Under these rules, Drones have been classified under five (nano, micro, small, medium & large) different categories, as per their weight.

Certification & Registration:

1. Except for those importing, manufacturing or operating a prototype drone for R&D and nano drones, everyone else needs to conform to the 'Certificate of Airworthiness' issued either by the Quality Council of India or a certification entity authorized by the Quality Council of India or the Central Government.
2. These rules further mandate everyone to apply for a 'Unique Identification Number' of drones by applying through Digital Sky platform (a platform hosted by the DGCA for various activities related to the management of drone activities in India), without which one cannot operate a drone.
3. Owners of existing drones can register their devices under these rules through Digital Sky platform, provided they already have a Drone Acknowledgement Number, provided under the voluntary disclosure scheme, on or before 31.12.2021.

Remote Pilot License

1. A licensed remote pilot, who has completed its training from a remote pilot training organization authorized by DGCA, can only operate drones. However, no license is required for nano drones and micro drones used for non-commercial purposes.
2. **Designated zones for operation of drones:**
3. Green Zone:
 - the airspace up to a vertical distance of 120 meters above the ground level and
 - up to a vertical distance of 60 meters above the ground level, located between a lateral distance of 8 kilometer and 12 kilometer from the perimeter of an operational airport.

Drone operations for R&D are allowed in the green zone.

1. Yellow Zone: is defined as the controlled airspace of defined dimensions within which the operation of drones are restricted, and one needs permission from the air traffic control to operate in this zone.
2. Red Zone: is beyond the territorial waters of India and operations are allowed only under exceptional circumstance by the Central government

Safety and Management:



1. The Central government will notify safety features, the installations of which would be mandatory in the drones. Such safety features might include 'No Permission - No Takeoff' (NPNT) hardware/firmware, Real-time tracking and geo-fencing capability, which means restricting the movement of a drone within a specified airspace.
2. Government will segregate the entire air space into green, yellow and red zones for the operation of drones and shall publish the airspace map on the digital sky platform. The government may update such airspace maps from time to time.
3. The rules empower an officer not below the rank of Superintendent of Police or its equivalent to temporarily declare a specified area as Red zone, for a maximum period of 48 hours, through digital sky platform.
4. In order to streamline drone traffic, the government will publish the policy framework in respect of the Unmanned Aircraft System Traffic Management (UTM) System on the digital sky platform, which will facilitate permissions and develop drone corridors.

Insurance:

1. The provisions of Motor Vehicles Act, 1998 shall govern third party insurance of drones and compensation in case of damage to life and/or property caused by such a drone. Third party insurance is not needed for nano drones.

Prosecution & Penalties:

1. The Aircraft Act, 1934 governs the prosecution and penalty, for contravention and non-compliance of these rules.
2. The offenses, related to non-compliance and contravention of these rules are compoundable in nature and the penalty for such contraventions will not exceed rupees one lakh. However, the DGCA if satisfied, may cancel or suspend any license, certificate, authorization or approval granted under these rules.

Conclusion

Returning to where we started from, drones will play a significant role in changing the everyday lives of people. The response of the government to the comments and needs of the stakeholders shows that it is headstrong toward taking these rules to their logical conclusion. The combination of relaxations for R&D, the establishment of drone promotion council and simplified application structure, is a war cry for competition, innovation and a push towards bringing The Jetsons To Life.

