Chapter 7

Regulations and Laws Pertaining to the use of Unmanned Aircraft Systems (UAS) by ICAO, USA, China, Japan, Australia, India, and Korea

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ABSTRACT

The drone industry is rapidly developing around the world, and the numbers of drones are increasing. In order to maintain safety and secure stability of drone flights, regulations and laws related to drone operations are established in each country. This chapter reviews the rules and laws of drones established by the International Civil Aviation Organization, the United States, China, Japan, Australia, India, and Korea. In order to protect victims and develop the drone industry, the author proposes that it is necessary and desirable for the legislation of a unified and global “Draft Convention for the Unification of Certain Rules Relating to Drone Operations and Transport.”

DOI: 10.4018/978-1-5225-7900-7.ch007
1. INTRODUCTION

Drone technologies continue to improve at a rapid pace and are slowly pushing unmanned aircraft (UAS/Drones/UAV) toward the mainstream. Companies in a variety of industries are now looking to use drones to cut costs, boost efficiencies, and create new revenue streams and business values, such as last-mile retail deliveries.

An unmanned aerial vehicle (UAV), commonly known as a drone, is an aircraft without a human pilot aboard. UAVs are a component of an unmanned aircraft system (UAS); which include UAV’s, and a system of communications between a ground-based controller and the Drone. The flight of UAVs may operate with various degrees of autonomy: either under remote control by a human operator or autonomously by onboard computers (ICAO, 2011).

Compared to manned aircraft, UAVs were originally used for missions too “dull, dirty or dangerous” (Tice, 1991) for humans. While they originated mostly in military applications, their use is rapidly expanding to commercial, scientific, recreational, agricultural, and other applications, such as policing, peacekeeping (Franke, 2015) and surveillance, product delivery, aerial photography, agriculture, smuggling, and drone racing. Civilian UAVs now vastly outnumber military UAVs, with estimates of over a million sold by 2015, so they can be seen as an early commercial application of autonomous things, to be followed by the autonomous car and home robots.

Figure 1. Many kinds of use (fire etc.) by drone
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