APPLICATIONS FOR REMOTELY PILOTED AIRCRAFT SYSTEMS

J MONK

CSIR

ABSTRACT

The history of unmanned aircraft can be traced back for almost a century but only recently, with the advances in sensor and computing technology and their relative reduction in costs has there been a remarkable growth in both the numbers of these systems and their applications.

With growing numbers of these systems appearing in civil airspace, the International Civil Aviation Organisation (ICAO) was required to provide guidance for their safe operation amongst other manned airspace users. They coined the term “Remotely Piloted Aircraft System” due to a legal requirement for there to be a pilot in command who could be held accountable in the case of an incident or accident. Autonomous flight vehicles were then and are now still frowned upon in civil airspace.

In an effort to better understand the current applications of unmanned aircraft and in particular Remotely Piloted Aircraft Systems, their development history will be explored, their types and classes described and the effect of the regulations on their use and the world market investigated. Only a relatively small subset of the large number and variety of applications of these systems will be covered in any detail focussing on those systems that could add value in Southern Africa.