Center for Security, Strategy and Policy Research

How were Drones Invented and What Does the Future Hold? A Complete Timeline



Author

Paul Posea is a technology enthusiast and entrepreneur who is keenly interested in flying and talking about drones on his website, <u>Dronesgator</u>, and <u>Youtube</u> channel

© The Center for Security, Strategy and Policy Research 2021

The opinions expressed in this publication are those of the author and do not necessarily reflect the views of CSSPR or UOL.

All rights reserved. No part of this publication may be reproduced or transmitted in anyform or by any means, electronic or mechanical including photocopying, recording or any information storage or retrieval system, without the prior written permission of the copyright holder.

Please direct all enquiries to the publishers. All imagery in this report is licensed under Creative Commons 2.0 from Unsplash.com, with thanks to all the photographers.

CSSPR

The Centre for Security, Strategy and Policy Research (CSSPR) is an autonomous policy research center housed in the University of Lahore(UOL), Lahore. It aims at generating research on issues relating to contemporary security and strategic aspects that affect Pakistan's domestic security environment and its international relations with other countries of the world. The Center aims to generate research-driven and nuanced discourses on how best to address security and strategic challenges that deny Pakistan the opportunity and ability to play its role as a responsible seventh Nuclear Weapon State in the world.

The Center conducts research, publishes, and holds conferences on a broad range of regional and international security, strategic, peace and conflict issues. Through this Center, we aim to establish national, regional and international linkages and collaborate with universities, think tanks, research institutes and eminent scholars from around the world, enabling national and international scholars and our students to use CSSPR's platform to deliberate upon issues that carry a global impact.

Center for Security, Strategy and Policy Research (CSSPR)

1-Km Defence Road Lahore Email: csspr@siss.uol.edu.pk www.csspr.uol.edu.pk

University of Lahore (UOL)

1-Km Defence Road Lahore Email: info@uol.edu.pk T: +92 423 2233888 www.uol.edu.pk

How were Drones Invented and What Does the Future Hold?

A Complete Timeline

With the recent advancements in technology, we usually tend to forget what got us here in the first place or might simply think certain things popped into existence in their final form.

That is also the story of drones, both commercial and military, which we will dive into in more detail in this article.

We are going to have a look at a short timeline history, which I put into more detail in my <u>history</u> <u>of drones article</u>, as well as an infographic showing details of the main events in history that have shaped the current drone technology.

Let us first have a look at the history of radio-controlled drones.

1898 - Nikola Tesla Pilots the First RC Boat

One of the many moments showing the genius of Tesla was when he surprised everyone by doing in a New York pond what looked like a feat of magic at the time: controlling a small RC boat with a transmitter.

Some people were amazed, some were thinking it was just a small monkey inside controlling it, or even magic, but now we know that he pioneered radio-controlled technology.

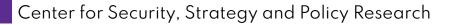
What the genius of this man created at that time was the first radio-controlled craft. His invention consisted of a 4-foot-long miniature ship with 3 antennas on top, equipped with various levers that could be controlled and even lights that could be switched on or off from a distance, all feats never seen before.

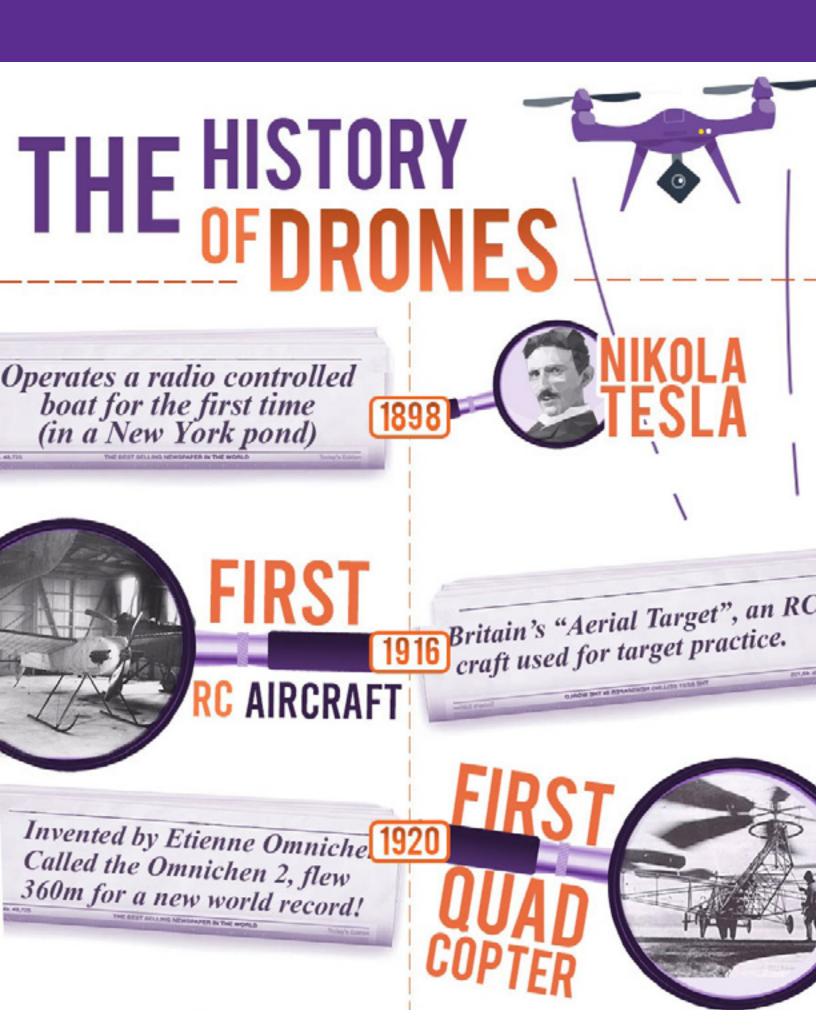
1914 - First UAV for the UK Army

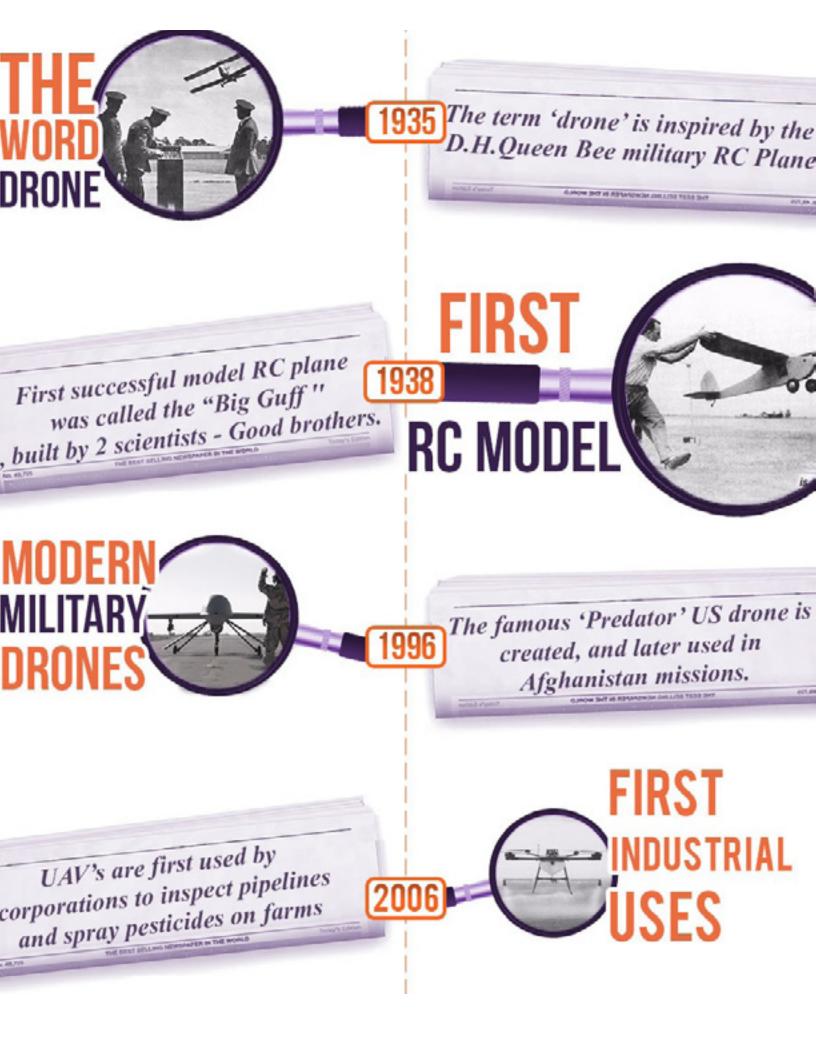
Britain's Aerial Target was the first military operated "drone", made with the purpose of being an aerial target. Shooting planes with pilots still in them proved to be quite dangerous, and the UK needed an edge with their pilot training. The development of a plane that could be operated from the ground, meant pilots could experience shooting real flying objects before they had to do it in a first hand experience during war.

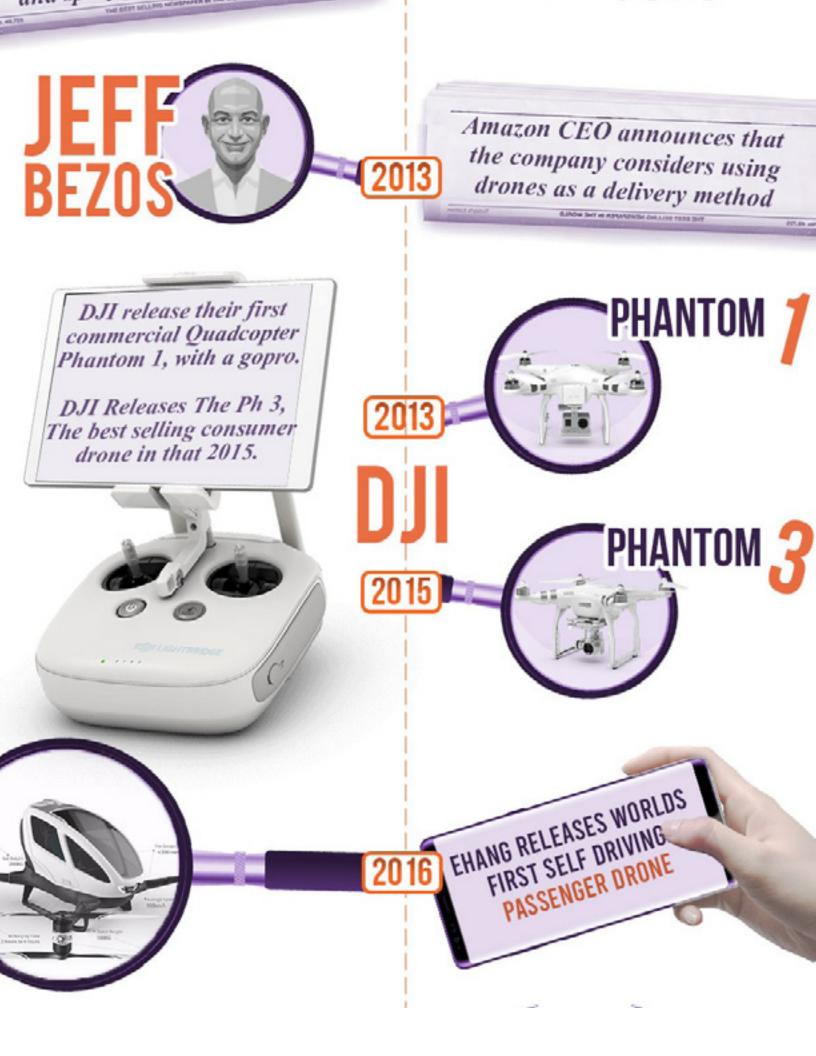
1920 - The First Actual Quadcopter - Omnichen 2

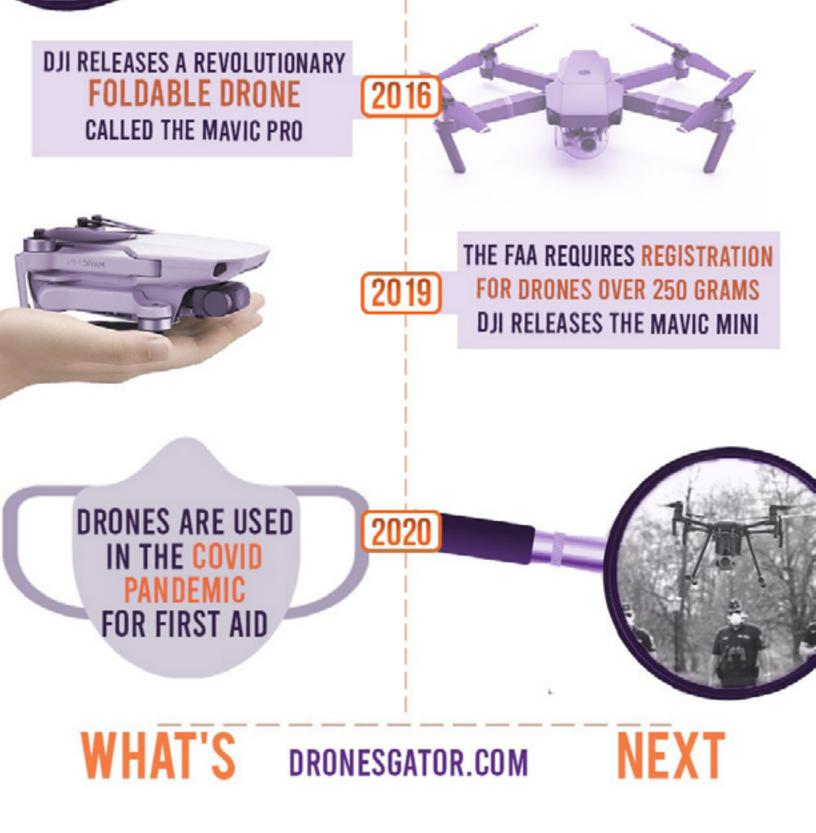
While the previously-mentioned machine was radio controlled so you could call it a drone, this time we are looking at the first quadcopter, a flying device with 4 motors and one propeller on each. It managed to fly for a mere 360 meters, but even so it established a new world record for such a device, and later that year managed to fly for up to 1 km in range.











1938 - First Model RC Airplanes

While RC plane technology was developed for a while, only at this point it got small and cheap enough to be widely adopted by enthusiasts. The first RC plane competition was held in 1937 where the Good Brothers pioneered their plane called Big Guff which won that year's competition.

1996 - Modern Military drones - US Predator

When we think about modern military drones, the easiest to recognise is the one used for the first time in Afghanistan to search for Osama Bin Laden. Drone and airplane technology took a great leap during and after the second World War and now military drones can fly up to 740 kilometers away and for up to 2 days at a time.

2013 - DJI Phantom 1 is Released

The beginning of regular consumer drones as we know them today(simple camera quadcopters) was sprouted with the invention of the first drone from the Chinese company DJI. The drone could have a gopro attached to it and could be remotely operated, but the best thing about it was that it was ready to fly from the box and quite affordable for the time.

In the following few years, DJI has completely monopolized the consumer drone market with models like the Mavic Series, a foldable but capable camera drone or their agricultural drones.

2016 - First Passenger Drone Car from Ehang

While attempts to make a flying car have been made before, the first successful attempt was made in 2016, when a chinese company called Ehang revealed their Drone Car prototype. It was able to carry a human for 23 minutes and it costs way less than a helicopter, making it the first potentially viable flying car.

The model has suffered some modifications with time, but with better battery optimization and higher flight times, this could actually replace some helicopters in the near future.

What is the current state of commercial drones?

While most progress in technology has been made in the military domain, the current consumer niche has expanded the most. Regular hobby grade drones are used for varied things some of which include:

- Cinematography Aerial filming has become considerably cheaper by using camera drones compared to the use of helicopters in the past
- Agriculture Spraying crops, analyzing the heatmaps of fields, and having an aerial view have considerably optimized agricultural pursuits in the past few years.
- Delivery While there are some legal and privacy issues still at play that stop big e-commerce companies like Amazon from following their dream of drone delivery, it is still just a matter of time until it happens

How are military drones viewed by the public?

While regular consumer drones are helping development in many industries, military drones are also developing at a similar rate. People seemed more concerned about regular consumer drones spying on them or <u>drones listening in on their conversations</u> than the general use of military drones in warfare.

But what is the current public opinion on military drones?

A Gallup poll reported that <u>65 percent</u> of Americans agreed with the U.S to launch drone strikes against terrorists overseas. The majority of Americans at least seem to agree with the use of targeted drone strikes agains terrorism.

Where are we headed?

In a world that is increasingly globalized, the regular consumer drone will be found more and more in domains including construction, inspections, policing, and more, making it a frequent sight which we will get used to.