Factor	Weight	Heli	Co	Dual	Multi	Tilt
Hover Efficiency	2	8	8	6	3	2
Payload Capabilities	4	5	4	7	9	2
Physical Size	1	5	9	5	3	5
Manoeuvrability	3	5	4	6	9	2
Control Algorithms	3	4	4	6	8	4
System Simplicity	3	3	5	7	6	2
Flight Distance	3	6	4	5	4	10
Disturbance Rejection	5	4	3	5	7	4
Stability	5	5	5	6	8	5
Top Lateral Speed	1	5	3	6	7	10
Total Score	300	145	135	178	208	126

TABLE II

ROTOR CONFIGURATION SCORING MATRIX FOR AN AERIAL PHOTOGRAPHY PLATFORM

All caps?

be utilised in different situations. To conclude this review, each standard configuration will be discussed in it's ideal situation.

Starting with the most application specific, the tilt rotor will only be the most advantageous in a situation that requires flight duration over long distances. With the added need of VTOL, the tilt rotor will trump the conventional fixed wing design. As expected the tilt rotor is also the best choice when it comes to top lateral speed.

The traditional helicopter and the coaxial fulfil a very similar role. They can be sensitive to disturbances and can't handle the payload their multi rotor relatives can. However, their hover efficiency is very high which gives them a significant flight time and that's where the traditional set-up earns it's place. When an application's main criteria is ~~that it needs to have an~~ extended flight time, these should definitely be considered. The choice between coaxial and traditional comes mainly down to size and flight speed. The coaxial will be able to fit in more refined spaced without the additional tail boom assembly, while the traditional will be able to reach higher speeds and fly laterally more efficiently.

The multirotor is the easiest use, can take the biggest payload and is the most stable, but it will have a shorter flight duration as it is a power hungry system. For the case of the aerial photography it's no surprise that the multirotor was chosen as the best choice as flight duration is not as important to a photographer as stability would be. The multirotor is also the easiest to control which makes it the ideal hobbyist platform as no extensive control laws need to be applied.

The tandem has often been cast aside as a suitable configuration [6], Mainly because it sits between the traditional and the multi-rotor on effectively every parameter. So generally one or the other is chosen and the dual rotor set up is neglected. The tandem is suitable for an application that needs a jack of all trades solution. It's a slightly simpler system and will provide a larger payload than the traditional helicopter, While it still has better hover efficiency and overall size compared to the multi-rotor.

not sure this is consistent

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