



## **Nikkei Business Interviews Top Flight Technologies CEO Dr. Long Phan in their Article “The CEO’s Dream – Becoming a Leading Company in Flying Cars”**

***Interview with Dr. Phan illustrates a long-term passion to develop flying solutions ultimately leading to the creation of Top Flight Technologies and its proprietary hybrid-powered engines that can address the power needs of future flying cars.***

**Tokyo, Japan – July 3, 2017** – The following is a Japanese Financial Analyst executive summary translated into English from the published Nikkei Business article – July 3, 2017

- - - - -

Top Flight Technologies (Top Flight) was featured in an article of Japanese famous business magazine "Nikkei Business" for a 2<sup>nd</sup> time. This time the article was a more in-depth discussion with Top Flight Technology Founder & CEO Dr. Long Phan on developing a proprietary hybrid-powered engine to enable future flying cars.

The title of this special report was “The leading company of flying cars, the CEO’s dream at a place of exile”.

Recently, flying car business has attracted a lot of attention. However, flying cars are different from drones. Drones can carry only light loads like a camera. On the other hand, flying cars can carry heavy loads like a person. However, the biggest issue to realize a flying car is to fly a certain period of time with heavy loads. Although the Top Flight competitors have already succeeded to fly and carry people, their flying time has only been 10 minutes.

Top Flight will be able to solve the extended flight and payload issues by using its “hybrid system” that combines both gasoline engine and battery. Top Flight uses electric power generated by the engine and saves surplus electric power for the battery. This hybrid system enables high performance but is light. For this reason Top Flight was picked as the closest company to help realize the goals of a flying car. Top Flight’s strategy is developing appropriate flying system to carry heavy loads for a long time. After that, Top Flight improves capacity of size and loads. In fact, Top Flight succeeded the test flight of a prototype with 10 kg load for more than 1 hour. The prototype was not enough size to carry a person at this time, but Top Flight is planning to carry loads of more than 100kg for 3 hours 1.5 years later, and to carry 250-1000kg for more than 3 hours within 3 years. Fortunately, Top Flight will launch its flying car in 2019.

Top Flight's target markets are expected to be in the tens of billions dollars which includes some fields like “flying car or taxi”, “military transport aircraft”, “transporter of goods”, “the power for small moving vehicle”. Thanks to the hybrid system, all fields are target markets for Top Flight, so Top Flight could raise much money from many investors.

In addition, Top Flight has a “unique revenue model” which has several options to generate money. Top Flight’s revenue comes from “Patent license” and “Development fee” of flying cars from other companies which needs flying car technology”. In other words, Top Flight is not a manufacturing and sales company of flying cars and not a flying car taxi company. Thus, companies which seem to be competitors might be Top Flight’s clients. For example, UPS succeeded the test of a new delivery system of drones last February, but the system has a serious problem of lack of energy to carry heavy loads. Top Flight can solve its problem by giving Top Flight’s technology license of hybrid system. Therefore, companies which try to develop any business related to drones and flying cars like Amazon and Alibaba are Top Flight’s potential customers. Top Flight estimates \$3MM in revenue within 2 years. Most of this revenue comes from Military industry. For example, it will be unmanned air vehicle to pick up injured soldiers and carry relief goods.

Why did Dr. Long Phan start Top Flight? Top Flight based in Boston was founded in 2014. Long's family was moved from Vietnam to Hawaii when he was 2 years old. Long wanted to be a fighter pilot, because he longed to be “Top Gun”. However, he had to give up his dream due to poor eyesight, so he found a new dream to develop technology for an automated flying vehicle. At MIT, his team (comprised of MIT students and staff at the Charles Stark Draper Laboratory) won the AUVSI (Association for Unmanned Vehicle Systems International) aerial robotics in 1996, because his team was the first team in the world to demonstrate a fully autonomous helicopter. This autonomous helicopter is known as a prototype of what we now call drones. Long has always continued to work hard to realize his dream.

In addition, not only to realize his dream but also to be helpful for people Long established Top Flight. Flying cars are also useful for emergency and disaster. For instance, flying cars can carry relief goods to isolated areas due to flood and tsunami. In fact, Long wants Japan to use Top Flight’s technology. According to Long, a project to carry loads to a remote island has already started with a Japanese company.

Long is trying to realize his dream and help people in need.



