October 30, 2018



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Abstract

The 2018 Satellite Innovation Symposium was held at the Computer History Museum located in Mountain View, California, U.S., on October 8– 11, 2018. This symposium was the second one held in succession from last year and was hosted by Satnews Publishers, Inc., which provides satellite news, publications, research info, and satellite industry information regarding commercial & military enterprises internationally. About 800 persons were registered for this

Satellite Business Network symposium, and it can be said that the number of attendees has grown compared to the symposium held last year (560 attendees). On the first day (October 8, 2018), events were carried out mainly in the style of training workshops. On the remaining days (9–10, October 2018), events were carried out mainly as panel discussions, along with some keynote speeches. Furthermore, an exhibition corner, titled "Emerging Technology Update," explaining new technologies, was also provided. Outside the site, about 60 companies held their own exhibitions.

The big difference between this symposium and the other ones was that discussions were held among NewSpace and OldSpace companies, gathering at the same place. Both startups and large established companies resided on the same panel and gave exhibitions side-by-side, all focusing on the mandated topic of "Innovation" as the main subject of this symposium. It can be said that this symposium provides an important venue for learning about the differences in business between the old and the new, along with learning how the old and the new can collaborate together.

Impressions

Nowadays, in the space industry, it seems that the word "disruptive" is a common buzzword. Usually, someone starts this off by saying that startups and venture companies will change the space industry via disruptive technologies and business models that they themselves have invented, and that therefore, it is expected that exponential growth, rather than the previous linear growth, will begin to occur in the space industry. Some attendees that participated in this symposium have been expecting this exponential growth. In fact, Morgan Stanley has projected that the space industry will reach a market size of USD 1.1 trillion by 2040. In addition, the symposium organizer conducted an online survey regarding this projection, and 70% of the symposium attendees agreed that this projection is accurate. On the other hand, some symposium attendees felt that the possibility of a bubble occurring is high due to the type of recent investments made in the space industry. The organizer also conducted online surveys inquiring into opinions regarding how long any potential bubble could last amid said recent investments in space-related startups and when such a potential bubble could burst. Even though there were answers replying, "Never!" and "No bubble currently exists," 37% of the symposium attendees answered that any

potential bubble would burst in three years, 30% of while the symposium attendees answered within five years for the same.



One large European company, Airbus Defence and Space, mentioned that it should be assumed that business will always experience ups and downs, and that therefore one or two startups out of 10 will achieve only minor success and that the most of them will fail in their investments. Airbus Defence and Space also said that the recent status regarding startups has been nominal. It seems that it is difficult to alarm Airbus Defence and Space, and one can feel that their long history might have helped form the basis of such comments.

No matter what, the fact remains: no one knows what will happen in the future. However,



companies involved in space-related activities will see a need to collaborate or to participate in development regarding disruptive technologies and businesses, based on their understanding of past instances regarding the successes and failures that have occurred in the space industry so far. The author even has the intention to build a consulting business taking into account the numerous companies and groups involved in the NewSpace, based on his experience as obtained through OldSpace activities. It is not safe for those involved not to participate in new trends or activities. Indeed, if one didn't, they wouldn't be able to maintain the status quo.

Major Discussions (1) Satellite Communications <Omitted Below>

(2) Satellite IoT <Omitted Below>

(3) Launch Services <Omitted Below>

(4) Earth Observation <Omitted Below>

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Other Miscellaneous Comments

Is there a type of food or cuisine that is common to Silicon Valley? The author has been pondering this question and reached the conclusion that the answer to the question is: the "Impossible Burger." On the day after the final day of the symposium, the author visited Stanford University, which is an epicenter of innovation in Silicon Valley, and found this burger on the menu in the student cafeteria. Stanford University has been carrying out various environment-related initiatives, such as installing solar panel batteries on the roofs of its buildings, and the author noticed other similar environmental being concerns designed into the actual "Impossible Burger" itself. This burger is made from materials derived from plants, i.e., so-called

"Impossible Meat." The burger patty is mainly made from soybeans.



The author tried the Impossible Burger and feels that, overall, it is very similar to a traditional burger, and that the patty meat itself tastes very much like plain chicken meatball meat (known as tsukune in Japanese). The manufacturer of this burger has insisted that making it uses 95% less land and 74% less water, also stating that about 87% less greenhouse gases are emitted compared to producing the previously used beef burger patty. Therefore, the assumption is that this burger is a "healthy" one.

However, if one eats this Impossible Burger with plenty of French fries as a side and a lot of carbonated soda containing high sugar content, is it even possible to consider this type of cuisine as being environmentally friendly? What do you think?

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