

A Report on SmallSat Symposium 2020

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SMALLSAT SYMPOSIUM SILICON VALLEY 2020

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Abstract

Over February 3 to 6, 2020, the Computer History Museum, located in Mountain View, CA, USA, one of the cities comprising Silicon Valley, played host to SmallSat Symposium Silicon Valley 2020. This symposium is held every year and is hosted by Satnews, a media outlet that focuses on disseminating information on space-related activities. This symposium focuses strictly on business as pertaining to smallsat

satellites.

The first day, February 3, saw the hosting of "Workshops," consisting of various sessions in which about 50 persons each participated.

Mainly, the discussions carried out in these sessions were held in parallel, and each session



was carried out before and after noon. The plenary sessions, with all participants in attendance, were held from February 4 to 6. In total, more than 900 people participated in this symposium. Many people came to the site but could not gain access due to an already packed venue; therefore, the hosting organization prepared a separate room, known as the "Overflow Room," where the aforementioned could watch what was going on in the symposium via live video. For this symposium, more than 70 manufactures involved in parts and components set up exhibitions.

Impression & Analysis

The author attended this same symposium last year, and the event held known as the "Shakeout," in which evidence of recession regarding investment in space-related activities was revealed, became a big hit. However, it seems that the tables have been turning. This is due to the fact that private companies, such as SpaceX and Amazon, have established large-scale communications satellite constellations. Meanwhile, however, this does not mean that situations have changed for the better, despite such changes.

It can be said for sure that it is common to misunderstand the situation where one categorizes space projects planned by big companies founded by private investors, such as SpaceX (which announced its Starlink project) and Amazon (which announced its Kuiper project), and by GAFA, with the startup projects

planned by existing companies as being part of the overall smallsat business sphere known as "NewSpace." The business cases of the newer and more-powerful entrants, such as SpaceX and Amazon, are especially different than the more-traditional companies involved in said genre. Thus, hereinafter, such big companies as GAFA and those founded by private investors are referred to as the "new and big powerful companies," while the existing, more-traditional companies and their startup projects are referred to as the "traditional companies with new startups."

The space-related projects created by the "new and big powerful companies" are possible to be realized due to a huge influx of funds. It is easy to see that such "new and big powerful companies" have stepped into realms that can capture everyone's attention, having launch plans for a massive number of communications satellites. Compared to these plans as announced by said "new and big powerful companies," the plans announced by the "traditional companies with new startups" are small, with tasks for raising funds and for customer retention becoming urgent issues.

In order to survive, these "traditional companies with new startups" have been frantically raising funds and working on customer retention, and it can be seen that they are relying on governmental and military space activities as their bread & butter. U.S. armed forces have

shown eagerness in using smallsats, and these companies and the armed forces are being seen as comfortable in working together. Previously, few topics involving governmental and military interest have been raised during this symposium; however, the presence of U.S. government and military officials has become noticeable at this year's event. For example, Lieutenant General John F. Thompson, commander of the Space and Missile Systems Center, Los Angeles Air Force Base, California, mentioned that the utilization of smallsats is necessary for the military. During the panel discussion held just after his presentation, some participants raised a question to everyone in the audience, asking "What is the significance of the U.S. government becoming a customer in plans for satellite constellations?" The answers from the audience looked like this: 68% replied "Significant," while 31% replied "Modestly significant." Based on this, one can say for sure that many participants look favorably on governmental organizations becoming clients of such projects. Furthermore, some "traditional companies with new startups" have mentioned that, after necessary technologies are established at colleges and at related spin-off companies, business projects are supported by patronage by the military at first and are then supported by the private sector.

There were also some presentations explaining defense missions utilizing smallsats. Meanwhile, there was another presentation explaining that,

in order to cope with space debris and satellites coming close to other constellations as monitored by early detection, one should position smallsats around existing essential geostationary satellites involved in constellations.

Presentations and Discussions

(1) Success of communications satellites constellation businesses

<Omitted below>

(2) Regulations on investment

<Omitted below>

(3) Mass production of satellites

<Omitted below>

(4) Software-defined satellites

<Omitted below>

(5) Safety in space

<Omitted below>

Other Miscellaneous Comments

Usually, when in Silicon Valley, the author has trouble with cuisine and food. One might say that few dishes have originated here. However, most subscribers show interest in this information; therefore, isn't it possible to find something of note for this section? Well, yes it is.

With that in mind, the author would like to introduce a typical American dish—the hamburger. However, this one is quite different from the burgers provided by major chains. This hamburger, served at an independent American restaurant, was made using aged Angus beef, according to their menu. The hamburger was grilled to a medium-rare condition and was absolutely delicious, much like a thick Japanese-style Salisbury steak, simply because it was so juicy. On this

occasion, the hamburger was paired with an Indian Pale Ale (IPA) by Laughing Monk brewery.



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