Interview with CEO

Mr. Mark Dankberg
Chairman and CEO
ViaSat, Inc. Carlsbad, CA

In our interview, ViaSat Inc. Chairman and CEO Mr. Mark Dankberg speaks passionately about his business strategies for worldwide satellite communications in Ka-band broadband applications.

Space Japan Review (SJR): Thank you for taking time from your busy schedule for this interview. We appreciate the contribution you've made to AIAA-JFSC.

Space Japan Review (SJR) is a technical communications journal published by AIAA Japan Forum on Satellite Communications (AIAA-JFSC), a subcommittee of the American Institute of Aeronautics and Astronautics (AIAA)'s Technical Committee on Communication Systems (TCCS). It was initially published in hard copy, but is now distributed electronically over the Internet. This column provides an opportunity for CEOs of communications satellite development and manufacturing companies and satellite communications providers around the world to discuss their strategies and aspirations, serving as a reference for AIAA members and SJR readers. ViaSat Inc. was established over 24 years ago. Today we'd like to discuss your strategies for the satellite communications broadband system business.

SJR: First of all, please give us a quick background on yourself and ViaSat Inc., and an overview of your strategies.

Mark Dankberg:

I have an electrical engineering background, with BSEE and MEE degrees from Rice University. Before co-founding ViaSat, I worked as an engineer in digital radio and satellite communications at Rockwell and Linkabit Corporation. Steve Hart and Mark Miller and I started ViaSat back in 1986. While we always hoped to work on satellite communications systems, we started doing small studies, and then worked up to simulators and test equipment before we were able to get contracts for satellite ground equipment. We've always aimed to have the capabilities to work at a systems level – at whatever technical or business problems constrained the ability to design and build better or more affordable satellite networks. Quite some time ago it became evident that the satellite payload designs and

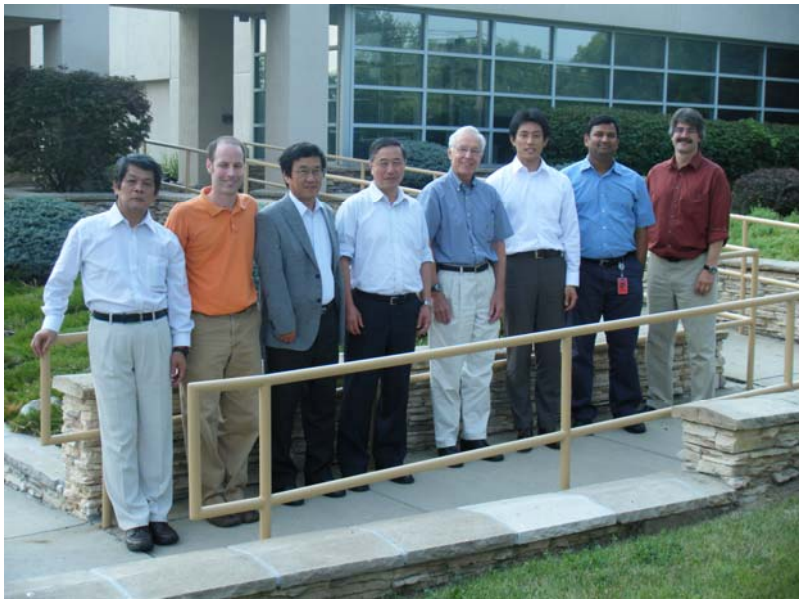
systems held the potential to make satellite data networks enormously more effective. We have been fortunate to have gained expertise in these systems and their associated ground networks. Now, with more than 2,100 employees, our highly effective satellite and ground systems can be deployed virtually anywhere in the world.

▲ ViaSat ECC Facility in Cleveland

SJR: ViaSat Inc. started over 24 years ago as a spin-off of the well known Linkabit Corporation, which led to many telecom startups. It seems you now have a unique mission of "making space technology more affordable, accessible and useful to millions of people on Earth" through your Satellite Broadband Communications network. What is your policy and strategy of business development in this field?

Mark Dankberg:

There is tremendous demand for high speed broadband Internet connections everywhere in the world. In many areas it is really difficult to get a connection that supports both high speeds, and a sufficient volume of data (measured in Gigabytes per month, say). People can have difficulty getting connected because they are remote or just because there is not enough local cable or other wireline distribution infrastructure. Wireless technologies have been enormously successful at mobility and it's got sufficient bandwidth for voice for mobile or fixed site use. But, the mobile wireless platform does not have sufficient bandwidth to support very many Gigabytes per month for fixed users. So, we look for places where there is high demand for broadband connections, and we can find partners that have the interest in satisfying that demand through satellite – as well as the patience and access to capital to bring it to market.



▲ Burst Modem Development Team for Broadband Communication Satellites, with Dr. Gedney, Project Manager.

SJR: How do you expand your business fields? You have had acquired COMSAT Lab. and ECC in Cleveland for R & D activity. And you have completed acquisition of WildBlue for high speed Internet by Satellite. What is your strategy to taking them into your family for both development activity and business proceeding?

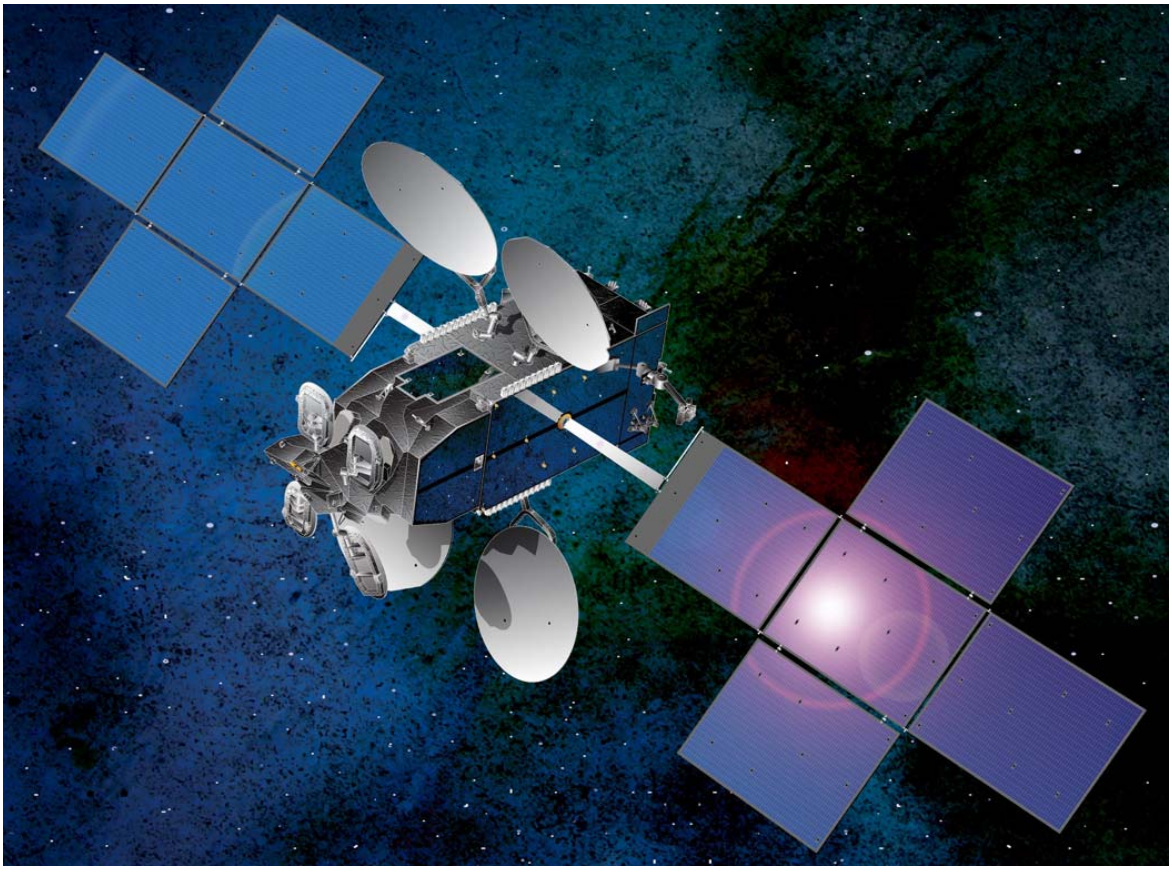
Mark Dankberg:

ViaSat has a fairly wide range of market areas, and an unusually deep set of technical capabilities. We are strong at antenna systems, Ka-band microwave integrated circuits and systems, digital chips, modulation, coding, network design, information security, and even anti-jam radio systems. We always aim to compete with new technologies and ways of meeting user needs. We have always placed a very high value on engineering talent, and when we find opportunities to acquire talented people, and different technical skills, or even just different ways at looking at similar problems, we try to take advantage of that. Also, we have worked hard to create a company culture that is very technology oriented, so we have found that when for one reason or another, a small company reaches a stage in its development when it is seeking to be acquired or integrated into a larger company, that they think of us as a good potential new parent organization. These are the common factors that led us to acquire Comsat Labs, ECC, WildBlue, and others, as well. In each case we acquired new technical skills, or access to new markets where we could use our existing technical skills, or sometimes both.

SJR: Now, you have plan to launch ViaSat-1 to expand satellite broadband service in north America. Please explain your ambitious plan.

Mark Dankberg:

Satellite broadband has already been more successful in the United States and Canada than anywhere else in the world – with about 1 million home subscribers. So there is good evidence there is a market need to reach subscribers with satellite broadband, and these subscribers are willing to pay for high speed connections. But "high" speed is a relative term. The Internet has moved beyond the early applications of web pages and e-mail. Video and other more bandwidth intensive media are the fastest growing applications – and they need



▲ View of ViaSat-1 Satellite in Orbit

higher speeds and more Gigabytes. Also, there is growing reach for mobile wireless and DSL. So we see two drivers to make satellite more successful – providing better service to our customers who have no other choices for broadband, and being a better choice for customers who might otherwise consider lower end DSL services or mobile wireless connections. We view a satellite like a "factory" that makes bandwidth in space. In designing ViaSat-1, we knew we needed much, much greater efficiency and productivity than any other satellite had ever provided. That's what ViaSat-1 does. It's the lowest cost producer of bits, and it allows us to deliver much faster service, and more volume, than any other satellite ever has before, and at lower subscription prices. And, as a bonus, we can also bring those same levels of performance to other satellite data markets like enterprise VSAT, government applications, mobile broadband, wireless backhaul, and others.

SJR: Could you introduce the main performance advantage of upgraded satellite broadband your business is developing? And how do you expand your capability for markets worldwide?

Mark Dankberg:

The main performance advantage of our form of satellite broadband is the ability to deliver more total bandwidth in coverage areas that have the greatest user demand. ViaSat-1 has almost 130 Gbps of capacity in areas with high demand for connectivity. We don't see that throughput as the end, by any means. We are working on satellite designs with much higher capacity, and more flexibility to deliver the capacity where and when it is needed.

SJR: What gave you energy to succeed in the new field of satellite business development and which market area is your company focused on as an initial starting point, and how did you get the resource and educated manpower?

Mark Dankberg:

We have worked in satellite networks for a long time, and we are always trying to understand what customers really need to get better service, or better value. For many modern applications, the answer is lots of bandwidth. So, we worked slowly and steadily, over many, many years to understand all the aspects of the technology, and business skills, and financial resources we would need to enter the satellite service area. It took a long time. We developed expertise by winning contracts in each of the different technical and market areas, and eventually we had all the resources we needed together on one team.

SJR: What are your next series of business development initiatives world wide? And what are your international business development strategies including Japan?

Mark Dankberg:

We believe that there are market opportunities similar to those in North America all around the world. We are very interested in these international markets – especially including Japan. But, we know that it takes several factors to successfully develop business in international markets – including the right partners that understand each market and have the regulatory approvals, sufficient capital, and market access, and patience to develop and deploy the right satellite assets. We are looking forward to working with partners to help develop business cases, develop new satellite concepts and services, and provide ground networking equipment in the most appropriate way for each international market.

SJR: Could you introduce your Carlsbad Facility in California area to our readers in Japan who are interested in understanding excellent performance of satellite broadband communication equipment.

Mark Dankberg:

We started the company in Carlsbad, which is a suburb of San Diego, in Southern California. It is a very good environment for technology start-up companies, and a good place to continue growing. There are a lot of technology companies nearby, including aerospace, satellite manufacturers, satellite broadcasters and wireless technology leaders. There's an excellent university with a strong electrical engineering and communications department. We have created a work environment that is very comfortable, and emphasizes teamwork, and an informal atmosphere. We strongly encourage engineers at all levels to mingle and share ideas across programs. We have a loose organizational structure to help that. We try to get people to interact in non-technical ways, including community support, sports teams, and other events. But, our people work very hard, and we provide the best tools and lab facilities to support innovation and undertaking very challenging and complex technical projects.

▲ Sky view of ViaSat Carlsbad Facility in California

SJR: Satellite broadband services have begun to emerge in the marketplace. Japan recently launched the high-speed Internet satellite so called WINDS on February 23, 2008, and its use is steadily increasing, while overseas there are such spacecraft as iPStar, WildBlue-1 and ViaSat-1. What do you think about the satellite operator business using developed satellites and what are your strategies for cooperate with them?

Mark Dankberg:

We think broadband spot beam satellites can gain share in markets where applications require a lot of bandwidth, and that such satellites can also substantially increase the market for satellite services in total. There are a number of different applications that need a lot of bandwidth. Direct to home broadband is one of the biggest. But there are several other market factors that have to be considered, including the penetration of terrestrial broadband in those locations, government regulatory policies, the economics of terrestrial broadband services, the ability to find effective customer acquisition and distribution channels, and even the ways that television and telephony services are delivered. Our strategy is to cooperate with satellite operators around the world that are interested in opening these new markets.

SJR: the Basic Low and Basic Plan for Space Policy in Japan was established 2008 and 2009 respectively and new activities in the field of space development are expected, what is you and ViaSat Inc.'s strategy to get in this field?

Mark Dankberg:

When we consider participating in space markets anywhere around the world we always think first about partners in each country that understand that market, and see a benefit of working with ViaSat to help solve needs there. We will be interested in working with companies in Japan that see value in what we are doing, and would like to work with us.

SJR: On the whole business is growing steadily, and although the share price has not performed well in general, perhaps due to the fallout from the subprime loan crisis in the U.S and currently EU crisis. You've been proactive in your investor relations program and other activities. What successes and setbacks have you had in this regard?

Mark Dankberg:

There are always many factors that affect the share price of public companies, and they include the overall financial market environment, the U.S. government defense and aerospace budgets, as well as perception about the potential success of our company. Obviously there have been many challenges in the financial environment, and in the business environment. We try hard to communicate our view of the broadband markets in general, and our place in those markets. We feel like we made a lot of progress in explaining our strategy and the opportunities ViaSat has in the global broadband satellite market. Overall, we feel we have had more success than setbacks, and we are grateful for the reception that we have received.

SJR: The AIAA Japan Forum tries to keep abreast of developments in the satellite communications business, such as competition among satellite Internet, mobile communications and fiber optic service providers, as well as remain up-to-date on the state of R&D for satellite communication. What sort of technological development do you think is necessary for Japan's space development in future? We appreciate your kind suggestion to our reader.

Mark Dankberg:

It is kind of you to ask our views on this, but we understand that we touch only a relatively small portion of the space industry. Still, we can see a few important areas. There is always a need for innovative launch capabilities. Also, there seems to be opportunities for more modern and more highly integrated communications payload components, and flexible subsytems. While Ka-band is becoming more accepted in the mainstream, we anticipate that higher frequency bands will be used more in the future. We also think that one of the most

▲ Giga Bit Technical Team of JFSC visited ViaSat Carlsbad Facility

important elements for satellite communications in the future is to better educate the public, and especially public policy makers, about the potential for satellite to provide high quality and high performance connectivity in the future. In many places, policy appears to be very "backwards looking" when assessing satellite's capabilities. For example, there is a misunderstanding that because FSS broadcast satellites have not kept pace with broadband services demands, then people jump to the conclusion that all satellites, of any type, will perform poorly in broadband applications. Many people do not understand that there can be very big differences in satellite missions and designs. There are many different technologies that can be combined. Different orbital strategies can be developed, and combined. Not all satellites are the same! There are many opportunities for innovation in space – but none will be appreciated if the public and government have a closed mind about what is possible. We must invest some effort to help people understand the value that space, especially new innovations in space, can play in their lives.

SJR: Finally, the AIAA Japan Forum is providing wide-ranging support for the AIAA ICSSC 2010 conference to be held in Anaheim this year. AIAA Japan Forum has plan to perform the AIAA ICSSC 2011 to be cooperator with AIAA in Asia probably in Nara of Japan. We look forward to your support.

Mark Dankberg:
Yes, thank you. I will look forward to this also.

SJR: We hope you will continue to cooperate with us in the development of satellite broadband communication systems. Thank you for taking the time to talk with us today and for support to previous issue of our SJR by your executive.

(Planning & Editing: Susumu Kitazume, Special Editorial Advisor)