

Hughes CEO Reveals Economics Behind Next-Generation Satellite

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Hughes Network Systems' recently announced next-generation, high throughput satellite, set to launch in the first quarter of 2012, is just another step in the company's 24-year service industry history of evolving technologies to meet customer demand, according to Hughes CEO Pradman Kaul.

In an interview with Satellite News, Kaul expressed confidence in his company's efforts to expand its broadband Internet service across North America with a satellite designed to deliver over 100 Gbps throughput by employing a multi-spot beam, bent-pipe Ka-band architecture to augment Hughes' already existing Spaceway 3 satellite system - an asset that Kaul said will provide an economic edge over competitors.



Satellite News: In these economic times, when people in this industry read about next-generation satellites, they focus on costs and financing. What is the projected cost of your next-generation satellite program?

Kaul: The satellite was approximately \$250 million and the total program including launch and insurance will be around \$400 million. This project is fully funded. At the end of the first quarter earnings call, we told people that we had the cash on hand to build this next-generation satellite and that remains the case. We do not need any additional funding for it.

Satellite News: Will Hughes be able to leverage its existing Spaceway infrastructure with the new satellite?

Kaul: That's a very good question. We are fortunate that we are in the business today and that we have about 470,000 subscribers as we speak. So we have an existing infrastructure and existing organization all over the country to make the new satellite an extension of the currently existing platform. So for example, in terms of gateways, I think the initial seven or eight gateways that we need for this project will be at the same physical sites as the ones we use for the Spaceway network. It will be sharing facilities, the network operating centers, access to the Net, power and the organizations. For those who are new in this business, an organization of hundreds and hundreds of installers, operations, maintenance techs and customer call centers is the largest element to build. We are very fortunate to have all of that in place at a very high level and to have this organization constantly growing.

Satellite News: Why is Hughes sticking with bent-pipe for the new satellite and how do you address the critics of this type of architecture?

Kaul: There were two reasons we chose to go with bent-pipe in this case. The first is that the primary application for this satellite is Internet access for consumers and small- and medium-sized enterprises. For that particular market, bent-pipe architecture makes more sense because they don't need the on-board processor and mesh connectivity for this type of networking application. Having said that, the flexibility of on-board processing may seem desirable, but the economics of that architecture do not make sense. If you were going to build three or four satellites at the same time, you could hope to take the non-recurring engineering costs and amortize them over three satellites. In this case, where we're only building one satellite, bent-pipe is the best economic solution. After all, there is not one type of architecture for everything.

Satellite News: According to the announcement, your satellite will utilize an enhanced version of the IPoS standard. Could you explain what enhancements will be applied?

Kaul: We're in the process of developing these enhancements. The major enhancement is the higher bit rate. In the existing IPoS standard, in which we are currently operating with today's Ku-band satellites, the bit rates are much lower. With the new standard, we'll have higher speeds and higher throughput. We're going to be introducing some new Web acceleration techniques to enhance the user experience and accommodate the demand for higher speeds in the near future.

Satellite News: Why did Hughes select SS/L, who is manufacturing satellites for your competitors, to build your new satellite?

Kaul: Like any major capital purchase, we did go through the research and bidding process. We had some very competitive bids and at the end of the process, we selected what we thought is the best offer at the time. Our Spaceway satellites were built by Boeing, which worked out well for us. But in this case, SS/L won the tender.

Satellite News: Are you working with any other technology partners?

Kaul: SS/L is our only major technology partner. We're developing the new gateway and CP equipment on our own. Being that we are a major developer and manufacturer of VSAT terminals, we expect to provide our own technology to the new satellite.

Satellite News: Some analysts have speculated that Hughes may be able to close the service gap between itself and the launch ViaSat-1 to one year. Considering that you may be a whole year behind ViaSat for next-generation service platforms, how do you plan on maintaining your customers during this time?

Kaul: Customers don't run away on the first day that someone else offers something different if you've been offering them a creative, high-quality service which they are happy with. In terms of our competition, I'm not too worried. Not only does ViaSat have to launch a satellite, they have to launch an entire business that Hughes is already in. I don't know how long that is going to take. I do think ViaSat will do a great job. They are a fine company. However, Hughes has been in the service business since 1985 and in the last 20 years, we have introduced multiple new technologies and platforms, higher speeds and capabilities. Over the years, we have developed a finely-tuned organization and methodology for upgrading our platforms. I think I view this new satellite as another step in that process.

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