



US Army photo by Spc. Charles W. Gill.

## Intelsat General: encouraging dialogue and direction

Dedicated to the provision of sustainable, cost-effective fixed and mobile satellite services to commercial and government customers, Intelsat General is blazing a trail in terms of championing the commercial satellite industry for government use, and encouraging dialogue between the two parties. Helen Jameson spoke to Kay Sears, President of Intelsat General to find out more.

most respects, these applications are video applications and, just like the commercial video world, they are following the same trajectory from MPEG 2 to MPEG 4 and High Definition and of course when you get into the HD world there's a lot more data to move around. It is very similar to the type of quality that we demand in our video at home. The military is trying to get the same kind of high quality with their surveillance sensors.

**Question: What are the primary demand drivers for Intelsat General in the military today?**

**Kay Sears:** I think that the number one demand driver at the moment is what we refer to as ISR (Intelligence Surveillance Reconnaissance), and airborne ISR in particular. Those include the manned Predator and GlobalHawk and unmanned programmes that involve various other types of platforms and planes. There are a couple of things within this area that are driving this demand. The first is the fact that the sheer number of platforms is increasing so you have more manned planes being equipped with sensors. The second demand driver within this arena is the number of sensors used. This is growing exponentially as there are not only more planes and more platforms but also more sensors being put onto those planes. Both of those drive higher data rates and therefore higher bandwidth is required, and that is really what we are seeing driving the demand curve up. In

**Question: How is the partnership between the commercial satellite industry and the US Department of Defense progressing? Are you finding that there is much more acceptance of the need for commercial bandwidth by the US government?**

**Kay Sears:** We just wrapped up a conference in Washington – an SIA (Satellite Industry Association) and DoD (Department of Defense) Satcom Workshop. This event was started about six years ago to improve the dialogue between commercial satellite service providers and the military. We have been making great strides in terms of the dialogue.

The National Space Policy that was issued by the President several months ago is a clear indication that many of the cost-effective solutions that we in the industry have been talking about are being heard, and in the budget environment that we face today, could actually



Kay Sears, Intelsat General President.

be a better direction to go in than traditional miltatcom or large acquisitions we have known in the past. Therefore, I do feel that we have made a lot of progress. However, having said that, there are still some major policy and acquisition policy changes that need to be made by the US DoD in order to really take advantage of what the commercial companies have to offer both in terms of hosted payloads and flexible satellites. They need a new acquisition approach and they need flexibility. We have come a long way, and the DoD has developed a very good understanding of the business model that commercial companies have. We too have learned a great deal about the complexities of the government model. But now we really need action to make the changes that will allow the government to take advantage of these solutions. It could be that the dire budget environment really forces that change, whereas perhaps in the last few years they have been able to spend and get what they need. However, in the new budget environment they will really have to look for efficient solutions and pick and choose things they really need rather than trying to do it all.

I think most of the changes have to do with the acquisition policy - the ability to commit to something that perhaps doesn't get delivered for a few years.

When we go to build an Intelsat sat-

ellite, we take commitments from different customers such as broadcast customers or network customers. The government can't give us that commitment because they cannot commit money to a satellite that is going to be used two or three years from now - which is the normal build cycle of a commercial satellite. So, they really need to have the flexibility to make those commitments. They don't necessarily have to pay anything, but they have to commit to contracts. With those contracts we can customise capacity and ensure that they have access to that capacity when they need it. They basically need some better acquisition tools in their toolbox in order to take advantage of those things, otherwise they are left to buy what is on orbit and available at any particular point in time. However, capacity that they need might not be available and it is going to be more generic in design and may not meet their needs in terms of the biggest demand driver - ISR. There are some unique nuances involved in the ISR capacity and not any transponder works for this purpose. It needs to have very powerful beams and it helps if the beams are steerable, so that if the vehicle is moving or the conflict changes you can move with it. The transponders may also need to be wider - so there is some customisation that we would like to build into our future satel-

lites but the government does not really have a way of coming to us and saying 'this is what we'd like to see'.

**Question: There is increasing demand for hosted payloads today. Do you envisage this demand increasing and will it be sustained? What are Intelsat's plans in terms of hosted payloads?**

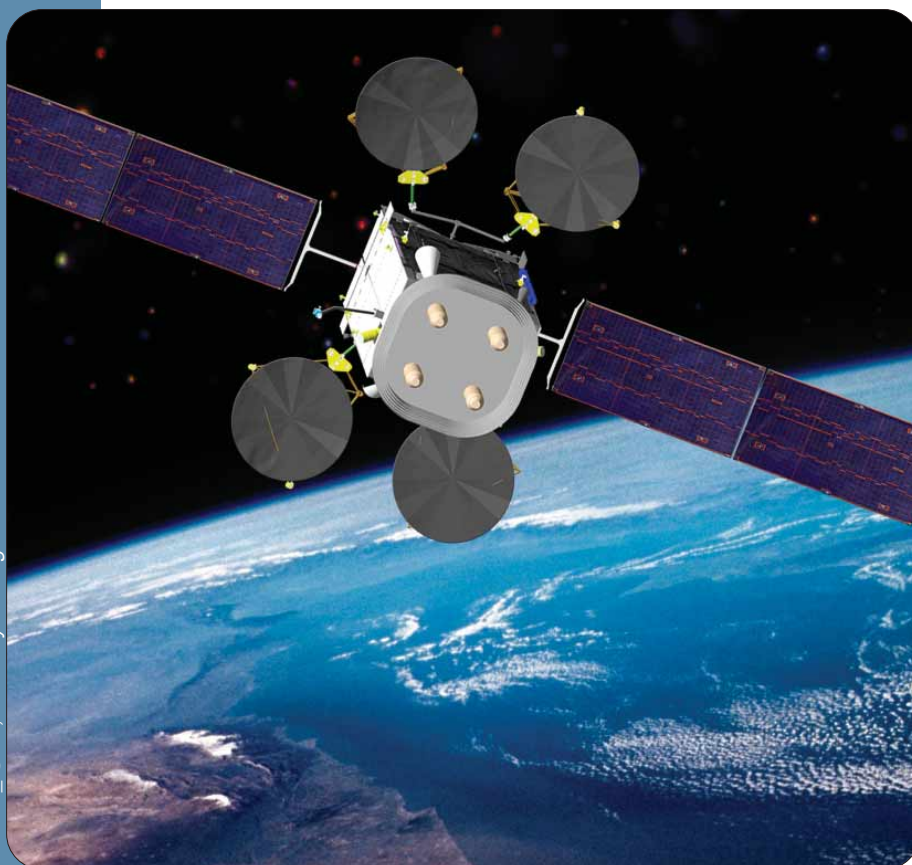
**Kay Sears:** We do believe that this is a business model that is not only well-understood by the US Government, in particular the DoD, but it is something that they are looking at as a more affordable approach for the future in order to solve some of their urgent requirements.

A hosted payload is a kind of meeting point between pure commercial and pure miltatcom because the user can have control and ownership. They can have a custom payload designed for their needs. A hosted payload is meeting them halfway. It's still flown and operated by a commercial satellite operator like Intelsat but there are a variety of ownership control and protection options that can be put onto a customised payload, so it is a good solution for certain applications. It is a rapid and cost effective way for the government to solve particular communication issues that they see in the future like augmenting a military system into a region where they just do not have enough of their own capacity. In situations like this, a hosted payload might make a lot of sense. They can also use a hosted payload to test out a new technology that they want to incorporate into a system in the future, such as a sensor. The concept is well understood, but it is now a matter of helping the government to understand how they take advantage of that offer and how they get the timing right.

The National Space Policy does actually mention hosted payloads. That's why we do feel very positive about that policy. It mentions working with partners to open up the scope of cost-effective options that are available.

**Question: Is this Administration more 'space aware'?**

**Kay Sears:** Since 9/11 and the conflict in Iraq, there has been an increasing awareness that space-based superiority is a very critical component of the warfighting effort and that has really put the spotlight on space and space-based systems and protection and assured access. In the Bush era we were proving the importance of space systems, and in the Obama administration this has been accepted as the norm. That is why there is such an emphasis on space situational awareness. We cannot live



Intelsat IS-22, courtesy Boeing.

without the operation of these systems. Certainly, the adversaries today are not necessarily the adversaries of tomorrow so we have to plan for an environment that maybe is a little more contentious than the one we have today over Afghanistan. They are not really interfering with our space superiority but if this fight was in a different place, we may not have that luxury. We must stay one step ahead. I do think space has got a spotlight on it because it is so important in this conflict. We know it will be important in future conflicts so how do we protect these systems and how do we put together a robust network? TSAT was going to be a very complicated and high performance system but it was all on one satellite. People are now asking what would happen if they lost that one satellite. They are recognising that a distributed architecture is the way forward because when you distribute across several systems and satellites there is more robustness and protection as the risk is spread.

**Question: What impact will the increased number of Ka-band payloads make to military satellite communications?**

**Kay Sears:** I think there is a role for Ka-band in the future. The WGS (Wideband Global Satcom System) certainly has military Ka-band on its satellite fleet and that will eventually drive terminals and

platforms that have Ka-band capability. Again, the commercial solution to that is to really understand the military demand for Ka-band. What applications are going to move to Ka- and why, and which will be satisfied by WGS and which will the commercial operators need to serve? In the workshop I mentioned earlier, we got some good indications. For example, we know that the Predator and Reaper programmes will definitely involve a combination of Ka- and Ku-band platforms in the future. However, not everything is migrating to Ka- and that is important to remember, as there is a lot of hype around Ka- and a lot of announcements around Ka- but not everything that is Ku- is going to go Ka-, that's for sure.

The Ku-band frequencies will be supporting military applications from now until forever, I think. There will be some specific applications where Ka-band makes a lot of sense. There is a lot of frequency and spectrum in Ka-band so I believe it will be a combination of Ka, Ku- and X-band for the government in the future.

**Question: Intelsat General has just been awarded the Future COMSATCOM Services Acquisition (FCSA) contract for Transponded Capacity and Subscription Services. Can you tell us more about this contract and what it will entail for Intelsat General?**

**Kay Sears:** We are very excited about the FCSA structure and contracting vehicle. There is a Transponded segment and a Subscription Services segment, which represents more of a managed approach, similar to the Inmarsat type of system. The contract is going to provide a lot of flexibility for the users. DISA (Defense Information Systems Agency) has set up a vehicle that has not only a lot of bidders, but also a lot of different service offerings within three categories, two of which I mention above. This adds a lot of clarity and adds a lot of cost effectiveness to how those services are purchased.

In terms of the Transponded segment, we are talking more about pure bandwidth and this is really important for a company like Intelsat General because we build those systems that supply the bandwidth. We want to be sure that we are building the right capacity for the right applications. The contracting vehicle is the mechanism for how we will get that bandwidth and new solutions into the marketplace. The contracting vehicle has to be easy to use, it has to be efficient and we, as the providers on that contract, want to have a vehicle where the users can quickly acquire the capacity they need. A four-day turnaround would be a great goal to aim for because I think there are rapid requirements that come up that no-one can predict. There are also long term requirements that can be very easily procured. However, it's the rapid response that we really want to get the contracting vehicle to handle well, and that's the challenge for the FCSA contract vehicle and the agencies that are going to run it. How can we make it easy to use with a rapid response for end users? At the end of the day, if we can't get bandwidth out to the warfighter, we really haven't done our job.

**Question: What do you see as the solution to this problem?**

**Kay Sears:** Right now there are a lot of forms that have to be filled out. There is also a lot of information that has to be duplicated and I think that we have to automate it and create consistency across the various managers of the contract in terms of what information they need. We have to erase the bureaucracy and get to the bottom of what information is required. Automation has to be part of that. This is the challenge right now. It can't be that everyone has their own separate forms and own separate process. The point here is that we all fail the user if that is the case.

The contract is already being used. We've seen the first task order on that contract come out and so I think again there will be some learning experiences

US Navy photo by Mass Communication Specialist 2nd Class Sandra M. Palumbo.



on how that process works so that it can be simplified for the user and the bidder.

**Question: What do you feel are the biggest opportunities for satcom in the future of the military?**

**Kay Sears:** I continue to believe that hosted payloads are a great opportunity as they meet everyone in the middle. The government still has to have its own systems and there are some control and protection requirements that they must have. A hosted payload can start to incorporate those same requirements just on a smaller, more efficient and cost effective way and in a distributed architecture, which seems to be the most suitable for the environment we are currently in – budgetary and adversarial. I hope to see the necessary policy changes that would allow programme offices to take advantage of the hosted payload. We still need some acquisition policy modernisation but I believe we will get there. We are still excited about that and we are excited about using hosted payloads not for communications alone or augmentation, but for new technology.

I am also excited about our IS-27 UHF payload. This is a situation where we felt that we understood the UHF gap well enough to build the payload so that it will be available to government - at the right time - when the users will still have a dire need for UHF capability. I can't

say that we can do that with every requirement that we see. This is an awful lot to ask of a commercial company to move forward at their own risk, but we have been in the UHF business for over 30 years and so we understood the market and it was a calculated risk. We still need a better exchange of critical information with the DoD that will allow companies like Intelsat to make really good decisions and investments in new capability but that will require some type of commitment from the government in the future.

The budget environment is a bit gloomy, and I believe there is still a big role for commercial industry to play - and a cost-effective role. We have to launch satellites that will be utilised, that are efficient and economic. This is something we do now, so we can be the solution to the government in a tight budget environment.

**Question: What have the highlights been for Intelsat General in 2010?**

**Kay Sears:** Definitely the CBSP (Commercial Broadband Satellite Programme) contract for the US Navy. This was a great success for Intelsat General. It also was very unique in that we brought a team of operators together. The programme provides the navy with an unprecedented amount of flexibility and access to capacity worldwide. This has never been done before and we are very proud of our achievements. A lot of

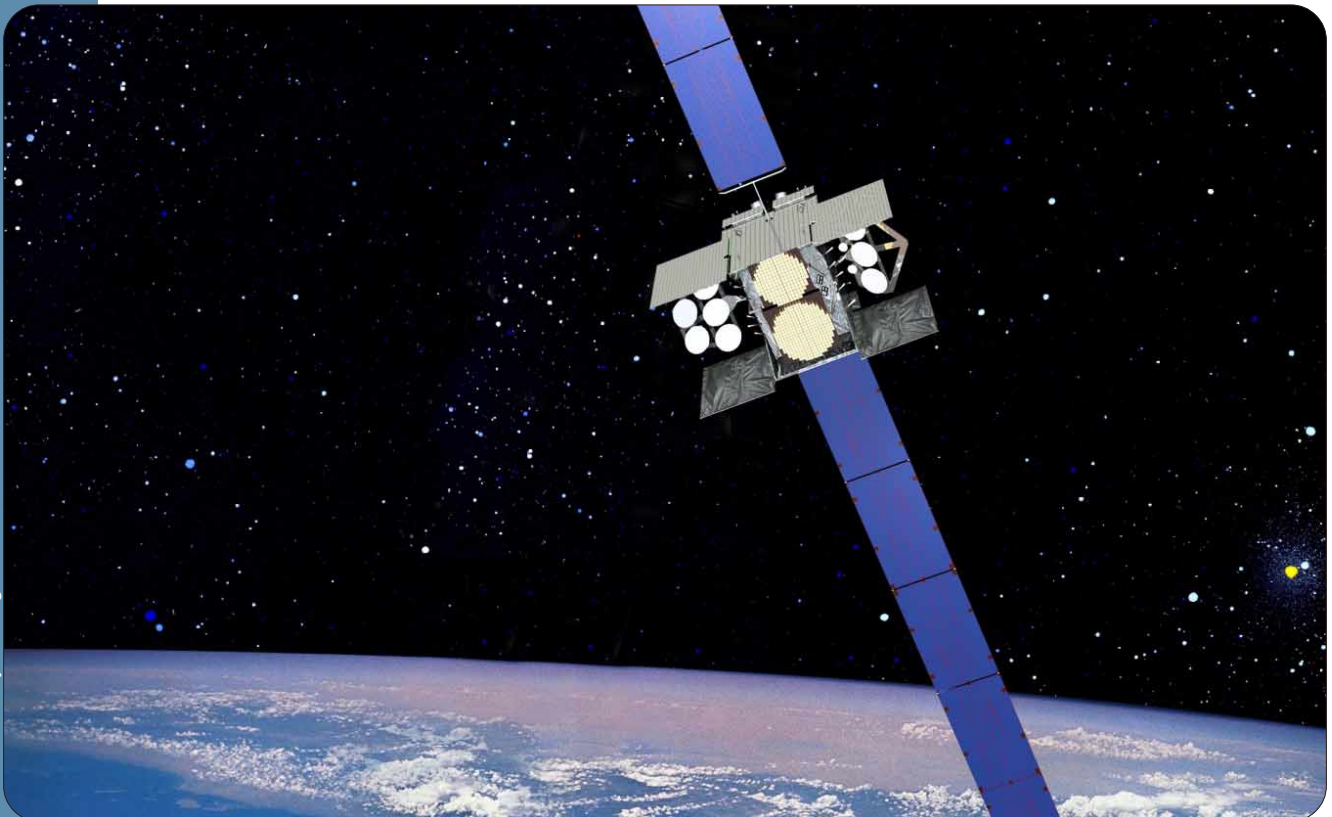
good is coming out of that contract.

That was followed by the FCSA award. This has put us in a position where we can offer that same kind of capacity and flexibility directly to DISA's customers and we also gain a closer understanding of requirements.

I think we are in a position where we can also get a better understanding of future requirements, which will lead us to design better satellites and anticipate those requirements in our future spacecraft.

**Question: What will Intelsat General be looking forward to in 2011?**

**Kay Sears:** In 2011, We will definitely look forward to more hosted payload opportunities. We are responding to a couple of broad area announcements where the military is looking for commercial solutions, and so we will be putting some ideas together for that. We will be substantially progressing the IS-22, which will carry the Australian Defence Force UHF payload and we will be basically wrapping that up in 2011 for a scheduled launch in (early 2012). We will also have our new IS-27, which is being built by Boeing. That will be progressing during 2011 and we will be looking to sell that UHF capacity during 2011. It's busy and exciting. We are moving into 2011 with a lot of great opportunities and we will also continue to expand on the positive dialogue we are having with the DoD. **GMC**



WGS, courtesy Boeing.