

Via Satellite's
Satellite Executive

Tom

CEO,

of the Year 2012

Choi

Asia Broadcast Satellite

BY MARK HOLMES

Six years ago, Asia Broadcast Satellite CEO Tom Choi had a bold vision for the operator. He wanted to create a regional powerhouse with multiple satellites. By 2012, Choi built one of the most impressive operators in the market and has continually raised the bar for the industry. The company made early acquisitions of satellites to give it more scale and better ability to serve customers. It commissioned ABS-2 in 2009, one of the most powerful satellites ever commissioned at the time, and a real statement of intent. In 2012, the company joined forces with Satmex in a groundbreaking deal with Boeing to acquire four satellites based on the Boeing 702-SP platform, and potentially usher in a new era of satellites based on electrical propulsion.

Choi's ambition has constantly led ABS to new heights. He has already helped one set of investors make an excellent return on its investment, and is now determined to do the same with Permira, a private equity company with a rich legacy of investing in the satellite industry. He is not done yet though, and is determined to keep building ABS at the forefront of this industry. In around seven years, Choi has built a regional operator of high class, with bold, imaginative decision-making. It is for these reasons we are proud to announce that Tom Choi is Via Satellite's Satellite Executive of the Year for 2012.

VIA SATELLITE: The ABS story, in many ways, began in 2006 with the acquisition of the LMI-1 satellite. At the beginning, what was your vision for ABS?

CHOI: When we first acquired the LMI-1 satellite located at 75 degrees East, I was extremely ecstatic that we were able to do such a transaction, and become a shareholder of a satellite operator. Traditionally, governments and government-supported enterprises own satellite operators. For a purely commercial satellite company to be owned by a few entrepreneurs supported by a financial institution (Citi Venture Capital International - CVCI), it was ground breaking and extremely positive for us. Whilst we were making the transaction of acquiring the satellite, we realized that Inter-sputnik had more spectrum available at 75 degrees East so we included the spectrum rights as part of the transaction we concluded with them. The additional spectrum allowed us to launch an expansion satellite, should we be successful, at 75 degrees East. Thus, the foundation and the business plans for ABS-2 were envisioned as we did the LMI deal. We successfully sold out LMI-1 (now renamed to ABS-1) in 18 months and six months from now, ABS-2, one of the largest satellites for Asia with 89 active transponders, will be launched this late summer.

VIA SATELLITE: Did you have a five-year plan, a ten-year plan? What were they?

CHOI: I used to work with Hughes Electronics, one of the most successful satellite companies. Hughes Electronics owned the commercial satellite operator Hughes Communications International (HCI) where I spent five years of my early career. It owned the Galaxy satellite fleet and it merged it with PanAmSat. I observed that HCI, with more than 20 satellites, generated over \$500 million in free cash flow, which enabled the company to have a wide range of possibilities. They could build and launch a new satellite whenever they needed to organically grow, or they could use the funds to make strategic investments in new businesses such as DirecTV. It also gave them the freedom to develop new technologies such as the Spaceway, the world's first commercial HTS satellite. The other notable technology that it created was the geomobile communications technology, which, ultimately, Thuraya took over from Hughes. With my background in Hughes, I knew that if ABS was going to be successful in the long-term, we had to grow big enough to attain a critical mass of free cash flow so that we could be self-sufficient in the future as HCI was 20 years ago. Replicating the successful business model HCI is the long-term plan for ABS. We plan not only to organically grow to become one of the largest global operators, but we are also planning to innovate new technologies and services. We needed to have a number of satellites so that we could be independent and the cash flow would enable us to replace existing satellites as well as fund expansion plans.

VIA SATELLITE: How difficult was it to do the acquisitions you did to get that extra scale and capacity online?

CHOI: We quickly went from one satellite to four satellites in orbit with three successful acquisitions in Asia. We were able to successfully acquire the Mabuhay Satellite Corporation in the Philippines, which operated the Agila-2 satellite. This satellite was renamed to ABS-

3, and is currently serving Africa from 3 degrees West. We purchased two satellites from Korea Telecom, Koreasat-2 and Koreasat-3, which are now called ABS-1A and ABS-7 respectively, operating at 75 degrees East and 116 degrees East. Those decisions were easy for us. When we moved to make those transactions, ABS-1 was sufficiently full and receiving sufficient free cash flow to allow us to make these smaller incremental acquisitions. We knew the cost of acquiring these assets was not very high and once we put the investment in, we could use these assets to generate cash flow immediately. The return on investment was very short and the payback was very quick. Ultimately, these transactions allowed us to increase our EBITDA in a way that would permit us to take on a lot more debt than with only one satellite. With the increased scale of our business, along with a significant equity investment, we were able to finance ABS-2 and the other 720SP satellites with Boeing.

VIA SATELLITE: At the time, it seemed highly unusual for a new player to commission a big satellite such as ABS-2. Why did you decide to be so aggressive when commissioning a new satellite at that moment? How difficult was it to get the financing and justify the business case?

CHOI: ABS-2 will have up to 89 active transponders. I believe it is one of the largest satellites ever commissioned for Asia. But what allowed ABS-2 to be large is that it is a successful expansion of a successful business at the 75 degrees East position. When we commissioned ABS-2, ABS-1 was 95 percent full and had an extremely high rate of utilization. We had reputable anchor customers on ABS-1 requiring additional transponders on ABS-2. Now, ABS-2 is more than 75 percent full one year ahead of its launch. Additionally when we did the cost benefit analysis, we realized that by increasing the capital expenditure of ABS-2 by 10 percent, we could replace 100 percent of the frequencies on ABS-1. So, it was an easy decision for us to invest the extra money to not only launch ABS-2

but also free up ABS-1 for redeployment in a new location. ABS-2 will take over all the frequencies of ABS-1, plus all the expansion frequencies. The business case for ABS-2 is fantastic. We will quadruple the amount of spectrum we have at 75 degrees East and our revenue will more than double at this location even with only an 80 percent utilization level. Additionally, as I mentioned, ABS-1 will be redeployed to a new expansion location to allow another more than \$30 million of additional revenue growth in the near future. With the launch of ABS-2, ABS will become the largest satellite operator in Asia ex-Japan. Needless to say, financing such a large satellite cannot be done with profits alone; we required a large equity investment. In 2010, CVCI, which funded us for the initial phase of our business, came to realize they had made a return on their investment and wanted to exit. They allowed ABS' management team to work with sponsors, not strategics, to bring in a replacement shareholder. We were so fortunate to have the Permira Funds to come in during this time to become our majority shareholder. They are the most experienced investor in our industry. In the past, they had owned both Intelsat and Inmarsat, and they exited those investments with a substantial level of returns. They had the same of vision of what ABS could become as I did; it was a marriage made in heaven. When Permira came in, they wrote a very significantly large equity cheque. The entire transaction was done with 100 percent equity, which allowed us to take on the bank debt of \$200 million in 2011, as well as the Condosat transactions close to \$200 million, which enabled us to finance ABS-2. In early 2012 Permira agreed with the management team to expand our fleet further by allowing ABS to strike a partnership with both Satmex and Boeing Space Systems to launch the 702SP product line where ABS would take minimum two, out of the four committed satellites. We recently announced the U.S. Export-Import Bank loan of \$463 million to replace the bank loan that was



wet-mass or launch-mass. With traditional bi-prop-based orbit raising, nearly half of the launch mass is used up in the first few hours of the launch. Satellite operators have to pay for that mass for the entire lifetime of the program. The wasted bi-prop mass is a significant cost component as operators have to pay for much bigger rockets and for the additional insurance costs. This dramatic reduction in the program costs allows us to reduce the risk in the investments of new satellites. Satellites that cost \$250 million before are now less than

secured in 2011 for ABS-2 and to fund the expansion 702SP satellites, ABS-3A and ABS-2A. We are extremely grateful to the Ex-Im Bank for their support.

VIA SATELLITE: In a previous interview you said that when ABS-2 was launched, only 20 percent of your revenues would come from Asia. Are you on track to meet the milestone?

CHOI: I think this will ultimately depend on where we send ABS-1. Initially, when I made that remark, Africa and the Middle East were extremely hot growth markets. These two markets have more or less slowed down in the last 18 months. Our decision as to where ABS-1 gets redeployed will be made in the next few weeks and I suspect by SATELLITE 2013, we would have announced where it will be redeployed. If we do decide to move ABS-1 to one of our Asian locations, the revenue contribution from this region will be more than 30 percent of our global revenues.

VIA SATELLITE: At SATELLITE 2012, ABS again made headlines with the deal with Boeing, and you have spoken of a 40 percent reduction in costs be going down this route. Why were you keen to work with Boeing here?

CHOI: At SATELLITE 2012, we announced a multi-party agreement with Satmex and Boeing, as well as SpaceX. For the first time ever, an 8kW satellite will have a launch price of less than \$30 million. We are rolling the clock back in terms of the affordability of launch prices but at the same time launching 50 transponder payloads that the 702SP platform allows. This dramatic reduction in weight and launch cost is the most exciting component of this partnership. Boeing wanted to develop a new satellite system, which would enable all electric propulsion to replace the bi-prop propulsion. This would enable the operator to save 50 percent of their

\$170 million, including the launch and insurance. By going all electric, the only party that loses is the guy selling the bi-prop fuel.

Today, our two 702SP satellites, ABS-3A and ABS-2A have more capability and cost comparably less than ABS-2. The two 702SP satellites will have more on-board and active transponders than what will be available on ABS-2. We will be able to generate more revenue on these satellites than on ABS-2. That was the economic rationale behind this investment.

As part of the partnership with Boeing, they needed a firm order for four satellites. Thus, we needed another strategic partner to work with us, since ABS could not commit to four satellites by itself. Satmex needed to build Satmex-7; they needed to build a new satellite to expand their business and, by partnering with us, they were able to save a tremendous amount of money. They saw the same vision as we did. I think this is fantastic for Boeing because they are able to provide a product that no one else has available in the marketplace. It is also fantastic for SpaceX as they are able to offer geosynchronous launches for \$30 million per satellite. That is significantly lower than anything else in the market; it is half the price of a Long March launch. The Boeing 702SP and the SpaceX Falcon 9 dual launch make the United States the most competitive country for sourcing GEO satellites. Because we have the ability to order more options with Boeing, both Satmex and ABS will be using these satellites to expand our networks and diversify our revenues. This is a tremendous opportunity for ABS and Satmex. For the first time, smaller regional operators are enjoying bulk-buy discounts traditionally afforded to only the biggest players in the industry.

VIA SATELLITE: ABS has moved along at breakneck speed at times in terms of buying and commissioning satellites. Have the financing

challenges associated with this pace been difficult to overcome?

CHOI: The financing of satellites usually comes from two important sources: debt and equity. In order to launch a satellite, you need to have many millions of dollars of equity committed into the program. Based on that equity commitment, the lender will supply the rest; they assign the credit rating and the interest rates. We were able to do two things. First, Permira came in and made a huge equity investment in ABS, which enabled us to expand our debt and complete the financing for ABS-2. And then, on top of that, we innovated a third source of financing. We approached customers who were significantly and financially strong and offered them to own a sub-set of the satellite on a Condosat basis. Instead of only leasing capacity we enabled them to make capital investments for their future satellite requirements. We are selling those Condosat transponders as a profit, which in accounting terms, is called "retained earnings" and counts as additional equity into the program. So, while we did \$200 million of bank financing with a group of five banks when Permira came in, we also raised \$200 million of Condosat financing. This significant amount of Condosat financing allowed us to not only build ABS-2 but also put money towards the Boeing 702SP program. Once ABS-2 is launched and ABS-1 repositioned to a new location, we should start to generate significant cash flow and the economic scale of our company will significantly improve. We should then be able to build, in the near future, two additional satellites on the investment scale of the 702SP satellites. We are working on those plans currently. It may be quite possible that in 2013 we will announce the construction of additional satellites to our fleet. Even without any additional builds, ABS will achieve the critical economic scale with ABS-2, ABS-3A and ABS-2A. We will always have enough sufficient cash flow to organically grow or make investments in new services and technologies. The 10-year plan that I had for ABS when I founded the company has been already realized.

VIA SATELLITE: We are now six to seven years into the ABS story. What would you describe as the number one success in that time frame? What would you also say was the key learning for the company?

CHOI: I think the number one success or the defining moment was when we sold ABS in 2010 allowing Permira to become our majority shareholder. First of all this transaction enabled Citi Venture Capital International to exit the business with a six time return on their investment. As an entrepreneur, I define my successes on how well my investors perform with their investments, so that was one of the proudest moments of my life. But, that success is going to be miniscule compared to the success I am planning with Permira. They came in to ABS while it was going through many transformations in its growth. We were not a utility-like investment such as the previous ones they did in the industry, but rather much more risky and growth oriented.

We still had many milestones to achieve but they believed in our vision. Two and a half years in, we have achieved many of the planned milestones already and have a few challenges still left. I am very proud to be working with Permira as they have given us support, encouragement, and courage for me and the rest of the management team to reach our maximum potential. When Permira exits at some point in the future, as a bare minimum, I want to offer them the same levels of return multiples that we gave to CVCI. I am hoping that ABS becomes a more successful story for Permira than Intelsat and Inmarsat. My goal is for them to make more money on ABS than any other investment they have made in the satellite industry and I have a strong feeling we may just yet achieve that objective.

VIA SATELLITE: The company's global revenue streams and the fact it is present in Eastern Europe, Africa and Asia, is also highly unique. The name Asia Broadcast Satellite can also be misleading given the diversification of your revenue base. What was the thinking behind your geographical approach?

CHOI: We are carefully monitoring the economic growth in the world, and the amount of network infrastructure that exists. When we compare the growth rates of the developing nations to the amount of network infrastructure that is available in developed economies such as North America, Western

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Europe, and Japan, we see low growth, extremely high competition, and high levels of network infrastructure. If you look at the economies in South America, Eastern Europe, Middle East and Africa, Asia, the Pacific Islands, and the BRIC (Brazil, Russia, India and China), and the other economies on their periphery, they grew three to five times faster in the last five years. In the next 20 years, they are going to be responsible

need to be more creative and evolve more. We need to make these changes faster. I believe the cost basis of our industry is too high and the satellites we build are too expensive. Additionally the launch prices are too expensive as well. These high costs result in high lease rates per transponders. We need to bring these costs down in order for us to be more relevant to growing markets. In the last 20 years we have

VIA SATELLITE: Have you seen any changes in the satellite over the last few years? How has the industry evolved?

CHOI: I am encouraged by the costs of the terrestrial hardware coming down. I think the price of VSATs, where they were 10 to 15 years ago, and where they are today, have dramatically reduced. We have seen the price of VSAT technology come down 75 percent to 80 percent over the last 15 years. I am very encouraged by the compression technologies, which is enabling operators to be able to provide video distribution services for a fraction of what they did before. With MPEG4, you can put 50 SD channels on a transponder. I think we are going to see more innovations in compression and hardware, which makes the services more affordable to the end user. This is extremely positive. If we combine the innovations and the cost reductions in the ground equipment with cost reductions in space, we will open up a huge marketplace for people to use satellite communications. If one day a Harvard professor can give a lecture to a million college students in Africa for the price of making an international telephone call, satellite communications will become once again an irreplaceable part of every-day life.

The defining moment was when we sold ABS in 2010 allowing Permira Equity Partners to become our majority shareholder. This transaction enabled Citi Venture Capital International to exit the business with a six time return on their investment.

– Tom Choi

for more than 80 percent of the global growth. These markets tend to have very limited network infrastructure and very limited satellite capacity. Thus, our focus is serving these developing markets with lower network infrastructure but high economic growth. That is why we have the strategy of diversifying into the Atlantic Ocean, the Indian Ocean and the Pacific Ocean regions. We may yet change our name one day to make it more global but we have not decided on this at this stage.

VIA SATELLITE: How do you think the satellite industry needs to adapt to stay relevant in the broadcast/telecoms arenas going forward? What do you think the industry needs to do to ensure its future success? Does the industry need to “modernize”?

CHOI: It is a very tough question. I would say the satellite industry really needs to produce more innovation. We

seen in the terrestrial wireless space, hundred orders of magnitude more efficiency in bandwidth price, when it went from analog mobile to LTE. We have not achieved anywhere near that level of efficiency in the satellite communications field. In the past, satellites were essential to global communications. We cannot say that anymore. We need to be able to reduce our prices, expand our bandwidth and we have to become more relevant to the individual consumer, in order to have long-term successful growth for the next 20-30 years. ABS has some ideas on how we are going to achieve that. Investing in all electric satellites to bring the cost of CAPEX by 40 percent is the beginning but we are just getting started. We will be seeking many more means of creative innovation for our industry.

VIA SATELLITE: In the last few years, we have the emergence of Ka-band/HTS satellites. Are these the game changers for the satellite industry?

CHOI: When I was at HCI 15 years ago, I worked on a high-throughput satellite project, Spaceway. It was the first ever Ka-band, multi-spot beam, high throughput satellite. When it was launched, Hughes Network Systems was sold off, and DirecTV ended up with the first two satellites, which they used to offer local HD programming in North America. HNS also managed to use the third Spaceway satellite to offer broadband services to households and businesses in North America. I think HTS is one of those innovations that enable cost per Mbps to come down for the end user but, I wouldn't say that it's the only application that will drive the future



growth of our industry. I also think a number of the HTS platforms will not be successful in many of the markets in the emerging world because the consumers in those markets are not going to subscribe to these services. In developed markets such as North America and Western Europe, I think there is a great chance for these to be successful. In the emerging nations where the rural population has less than 40 percent electricity penetration in some cases, I am not sure the consumers exist today or over the next 10 years; they may exist in 20 years time.

VIA SATELLITE: How many satellites could the company end up with? Will you continue to build the company at the pace you have in recent years?

CHOI: Our strategy is to use existing satellites to develop an orbital location and to replace them with new satellites that are more capable and affordable. We have ABS-1 and ABS-1A at 75 degrees east, and we are launching ABS-2 to replace them. We moved ABS-3 to 3 degrees west and we are developing a

neighborhood and a distribution network there. We are building a new satellite for that location, ABS-3A. The second of our 702SP satellites will be the ABS-2A satellite and will be at 75 degrees east as our customers have asked for more capacity at that location. Once we develop a new location for ABS-1 and develop new customers and revenue, we will launch a new satellite to replace that one. Also, ABS-7 needs to be replaced in the next four years, which we will do in partnership with Korea Telecom. Above and beyond these slots, everything else is a function of whether we are able to secure new orbital slots and complete coordination of those slots with the neighbors. That is the limiting driver of the numbers of satellites we can have in the future. We can rely on organic growth, and there is always M & A as well; we are open to both avenues for growth. For as long as I am in charge of ABS, and people allow me to run this company, I will never be satisfied with a stagnant level of where we are; we will grow and get bigger. We want to be counted in the top four or six satellite operators. I don't think we will

ever catch SES, Intelsat, and Eutelsat or maybe even Telesat, but we want to be up there in that league.

VIA SATELLITE: What do you see as the high growth verticals for the satellite industry? Where are the real growth drivers for companies like ABS?

CHOI: My feeling today is that the applications that work for satellite communications will not necessarily change much over the next 20 to 30 years because the economies in the developing world are going to need more bandwidth. The numbers of banks and gas stations are going to increase exponentially. The subscriber numbers of cable TV systems in Africa and Southeast Asia, for example, virtually unheard of before, are now expanding into the tens of millions. New DTH platforms will be launched, and multi-language TV channels will be created for local distribution in many countries of the world. LTE backhaul requirements will also increase exponentially. I don't think you are going to see some fantastic new technology or application that will drive demand, I think the economies



Master Control Room in ABS Subic Bay Teleport, Philippines.

of these developing markets will create more demand for the traditional applications. As long as we are focused on efficiencies and reducing costs in serving those regions, the overall satellite market will grow with these economies.

VIA SATELLITE: At SATELLITE 2012, you warned that smaller satellite operators might need partnerships to compete across different markets. What would you say are the key recipes for success for regional operators such as ABS to be successful in the mid to long term?

CHOI: There is the question of regional operators expanding globally and regional operators who may not have the mandate to grow globally. I think ABS is the former that is trying to expand globally. There are other regional operators, which may not have the resources from their shareholders to expand. What is extremely important for regional operators is that they need to be able to stay competitive against the global operators in terms of their costs of acquisition of satellites and launch of services. If you look at Eutelsat, SES, Intelsat, they buy bulk insurance, launch packages, and bulk satellite packages. When they buy in volume, they are a significant financial commitment to the vendors, so they offer better prices and flexibility to the large operators. What we see happening now is a divide between the local and regional operators purchasing insurance, satellites, and launches at a higher price

because they don't have the volume. That is one of the reasons why we partnered with Satmex, so we could actually put the volume advantage on our side. We have offered options on purchasing the Boeing 702-SP, and launching with SpaceX to other regional operators, we are in discussions to see if they want to join us and take that price advantage. To remain competitive, you need to make sure you can build at the lowest cost.

VIA SATELLITE: You also said on the panel in Washington last year that tough times are still ahead over the next three to four years. Do you still maintain that?

CHOI: The prediction I made in 2012 has come true: a lot of the global operators have not seen the same levels of growth that they saw in 2011, and many of the regions are down, such as the Middle East and Africa. Over the next two or three years, you are going to see a number of satellites launched in South America – this region is very hot right now. There are going to be a significant number of transponders launched in that region. A market that is really hot today will become saturated with supply and you will see prices for capacity drop. I don't think that the Middle East and Africa will recover fast enough to overcompensate for the tough times in South America; I see tough times ahead there. So, yes we are still going to be operating in an economically troubled world and there is a surplus of

capacity coming online. I do foresee, for the next two to three years, leaner times for the industry. Still, I don't predict double-digit declines in revenues but we won't see the growth we have seen in the past. Fortunately for ABS, we have already multiple customer contracts on our future launches to ensure that we will be growing an average of 30 percent CAGR for the next five years.

VIA SATELLITE: Finally, as our Satellite Executive of the Year for 2012, what is your message to our industry?

CHOI: The core to ABS' success has been that of forging partnerships. I hope that our industry is able to identify more partnership opportunities amongst competitors and different verticals to better manage its infrastructure investments. I think the investment dollars that are available are going to decline as the market is not going to be as strong as in the past. Regional operators should look to partner with one another, and FSS operators could even partner with MSS operators to cross-sell each other's products. I have spoken about regional operators working together to buy satellites, launches at lower prices. Anything of that nature of looking for partnerships that will improve efficiency will be an attractive endeavor for the next few years. That is how we will seek our growth while mitigating our costs in the future. Moreover, partnerships do not have to stay in space. ABS has succeeded by partnering with our customers in other areas and markets, we never compete against our customers, and try to manage our distribution extremely carefully not to damage our distributors. Ensuring an ecosystem where our customers profit along, side by side, with us has been one of our foundation principles and a foundation of our success. ▮



Mark Holmes is the Editor of Via Satellite.