



KONSTANTIN LANIN:

We Stand Ready to Bring our Technology

Hughes was one of the first western companies to come to Russia back in the early 1990s. In almost 20 years it has accumulated a wealth of experience with Russian consumers and offered them new technological solutions. Our correspondent interviewed Konstantin Lanin, head of Hughes' office in Moscow.



— **Could you please speak about the history of Hughes?**

— In 1971, four men founded a start-up company called Digital Communications Corporation (DCC), which later became M/A-Com Telecommunications Inc., in a garage in Maryland, near Washington DC. All of them had worked for COMSAT Labs, the original source for

developing much of the early satellite technologies. This is how many successful U.S. high-tech companies are founded: People have ideas for something new, they pool their resources, invest their money and time and build their dream. An initial investment of \$20,000 has grown significantly and the company's annual turnover today is over \$1 billion.

In the mid-1980's, Hughes Electronics, a technology conglomerate which evolved from the original company founded in the 1930s by Howard Hughes, acquired M/A-Com Telecommunications Inc. and renamed it Hughes Network Systems (HNS). Around that same time HNS invented the commercial VSAT and launched the global VSAT networking industry, and for the past 25 years has always led in both technology development and service delivery. The senior management team has remained largely intact since then, despite several ownership changes during the past decade.

The first customer of Hughes, and the first to implement a commercial VSAT network, was Wal-Mart, which in 1985 was also early in its history and owned only several hundreds of stores; perhaps not surprisingly Wal-Mart is today the world's largest retailer with many thousands of stores.

And VSAT networking is now a

global industry with a turnover of \$3.5 billion expected to grow to \$10 billion in the next seven years, which Hughes has always led, with over 2.2 million terminals shipped to customers in more than 100 countries. In fact Wal-Mart's selection of a satellite network from Hughes over terrestrial alternatives was judged by Fortune magazine to be one of the 20 most strategic business decisions of the 20th century, since it enabled them to tightly manage their inventories and costs better, giving them a competitive advantage in the marketplace.

Since that beginning, VSAT technology has become part of the networking mainstream of all industries, from retail, oil/gas, banks and financial services, to automotive, hotels/hospitality and lotteries, and for government agencies, small and medium enterprises and consumers.

— **What are some of the applications of Hughes technologies and global activities?**

— Satellite's fundamental advantage is ubiquitous coverage over continent-wide areas, enabling delivery of high-quality, broadband connectivity at costs that are independent of location. This contrasts with terrestrial fiber or cable technologies for which costs are distance sensitive, and impossible to justify in low-density areas. Hence satellite represents a very cost-effective "last mile" solution in ex-



urban areas, which is true not only for Russia, but across the globe.

According to leading analytics firms such as Northern Sky Research (NSR) and COMSYS, in the next 10 years demand for VSAT technology will grow at least 12% compounded annually. Today around 4 million VSAT terminals have been shipped worldwide, with Hughes holding over 50 percent market share.

The early VSATs could only support lowbit rates (for example, 512 kbps on the forward channel and 128 to 256 kbps on the back channel) and were used for narrowband applications such as credit card verification or for transmitting telemetry from gas pipelines, oil pipelines, ATMs and lotteries.

Today's VSATs deliver a wide range of broadband applications, from consumer Internet access, to enterprise VPNs (virtual private networks), to distance learning, digital

signage and video-conferencing, to emergency preparedness for government agencies. More recent emerging opportunities are appearing for broadband-on- planes, trains and boats.

The fastest growing part of our business is HughesNet® high-speed satellite Internet access for consumers, now with over 500,000 subscribers in the USA, and with offerings of from 1 to 5 Mbps, similar to terrestrial DSL rates. Internationally, Hughes owns and operates service businesses in Europe, India and Brazil, and together with its service provider customers, covers more than 100 countries utilizing over 20 satellites, including our own award-winning, Ka-band, SPACEWAY® 3 satellite in North America. We work with many government agencies globally to help overcome the digital divide, including Mexico, South America, Middle East, Africa, Asia Pacific, and Australia.

Russia is no exception, and we are actively working with government institutions and participating in government programs aimed at overcoming the digital divide. As you know, the national projects "Education" and "Universal Communications Service" are now being implemented.

In the U.S., the Federal government is allocating \$7 billion as part of the Broadband Stimulus Initiative to tackle the digital divide. Demand in the consumer market for broadband is huge and in many parts of the country, it is not economical to install landline technologies such as cable modems and DSL. It is estimated that 10-15 million American homes are either unserved or underserved by terrestrial broadband; in EU countries it is upwards of 30 million households, and 3 billion euros have already been allocated to tackle the problem. This

is the market we are targeting.

To push the envelope of technology and offer even higher rate services, Hughes has financed the development and launch of a next-generation Ka-band satellite called Jupiter™, which will operate at 28-30 Ghz and be launched in 2012. With more than 100 Gbps of throughput, Jupiter will enable us to continue to expand our successful consumer business in North America and support several more million subscribers, offering fiber-like data rates of from 5 to 25 Mbps, and with the potential for bundled Internet, VoIP and video services.

We can see that increasing capacity has become the goal in Europe as well. Avanti Communications is launching Ka-band HYLAS 1 this November and has plans to launch HYLAS 2 in future. Avanti chose Hughes as the supplier of its terrestrial segment which includes hubs, terminals and business processes; as part of the first contract, we are already supplying 8 hubs and 50,000 terminals to prepare the infrastructure prior to satellite launch. These satellites will help overcome the digital divide of approximately 30 million unserved and underserved households in Western and Eastern Europe noted earlier. Hughes is actively participating in growing the potential of satellite communications and is developing both technologies and services for national and regional programs to help overcome the digital divide globally.

– What about Hughes activities in Russia?

– Hughes began operating in Russia in 1992. At that time, Hughes had two major business segments: VSAT systems and fixed wireless networks. The first contract, which marked Hughes entry into the Russian market was with Tatincom to create a fixed wireless service in the 800 MHz



band, with up to 100,000 subscribers in Tatarstan. Despite the regulatory constraint of operating with only 4 MHz of bandwidth, Hughes succeeded to deliver a viable solution in Tatarstan. Subsequent contracts were signed in Russia from companies in Vladivostok, Perm and Tula, and this early success justified the opening of our Hughes representative office in Moscow.

The first VSAT contracts were signed during 1993-1996, when telephony systems and on-demand channels arrived. These multi-mesh solutions were implemented by many companies, for example, Satcomtel, InSat and Sattel. In Russia during the late 1980s and early 1990s, satellite service was not only exotic but also quite expensive. Hughes was the only player in this market for a long time and VSAT terminals then resembled small refrigerators. Now VSAT terminals are similar to a small notebook. But the capabilities in terms of data transmission have increased hundreds of times over and the cost of the equipment went down correspondingly.

In the late 1990s, permits alone for a VSAT site in Russia cost around US \$20,000, which was prohibitive. But five years later, when the cost of permits was drastically reduced to around \$5,000, we experienced a strong interest. Today we realize that this was still a very high price.

Our entire industry gained a colossal boost with the start of national projects in Russia. Only yesterday, operators were speaking about \$500 per VSAT and today the cost is literally \$0 for stations eligible for simplified registration. You can say we are on the threshold of entering the mass market.

As is the case globally, in Russia over 50 percent of all satellite network equipment is supplied by Hughes. We estimate there are around 35-40 thousand VSAT terminals in Russia, and our company has delivered over 20,000 to 15 Russian service provider customers.

— **What are some the priorities and perspectives of Hughes in Russia?**

— As with government programs in the USA, Europe, and other regions, Hughes is actively participating in

such programs in Russia.

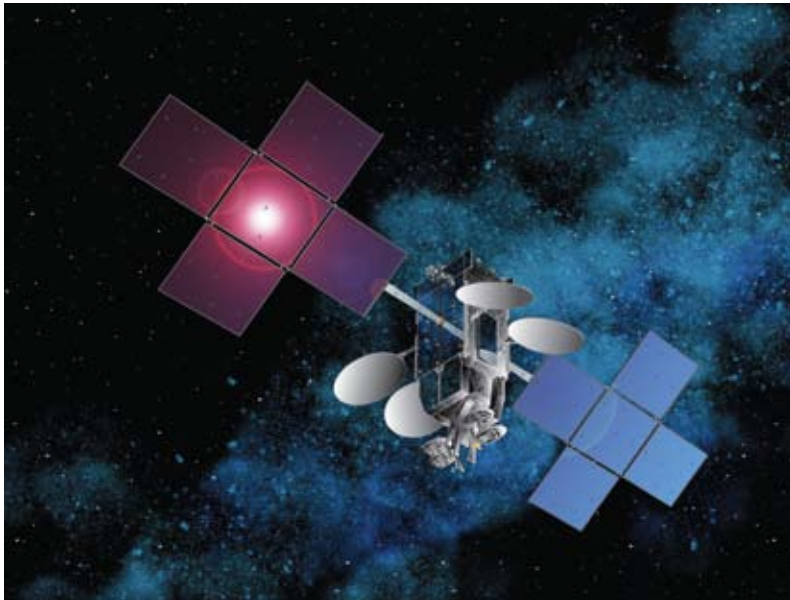
Kosmicheskaya Svyaz is planning to launch Express 4, 5 and 6 which will have Ka-band transponders. Work is being conducted on a system-wide project to create Russia's own Ka-band broadband satellite network. I believe that before the end of 2010 we will know more about how this will be implemented. Express-4 will have only 2 Ka-band transponders, whereas Express-5 and -6 will each have 10. Basically, these satellites will cover all of Russia and we expect to participate in tenders and projects and hope for a positive outcome.

I would like to stress that Hughes is not just a technology leader and supplier of equipment. We are in fact the world's largest VSAT service provider, with over 1 million enterprise and consumer sites on 5 continents, and offering a wide range of broadband solutions and applications. It is one thing when you are building a network for a corporate client, even if it is for several thousand locations. You are still dealing with one customer. When you speak about the consumer market, you are dealing with thousands of different people. This requires a comprehensive customer support capability, with 24x7 on-call service and the full complement of back-end billing and maintenance systems.

Hughes has the most complete portfolio of resources to tackle such large-scale goals. What sets us apart is that we are a service provider that employs our own developed technologies and products, and we follow a very successful strategy: demand for services drives high-volume manufacturing, which allows us to lower costs and invest in developing new products and services, which in turn fuels even more demand in the market. And I do

not mean just in the USA, but also in South America, Europe and India. We are planning to become operators in China and Australia. We believe that in order to be successful you need a synergy of knowledge and experience and also reliable local partners.

As evidenced by our history in this country, Russia is an important strategic market for Hughes, holding significant market potential for



broadband. We stand ready to bring our technology and service business experience and join with the right partners to unlock that potential, and help the satellite broadband industry flourish here as it undoubtedly can. ■

Interview by Leonty Bukshcheyn