

RADIOFIZIKA BETS ON ACTIVE ARRAYS

On the eve of the «AERO INDIA – 2015» opening in the Indian Bangalore, Boris Levitan, Radiofizika's Director General, was interviewed by the «Defense Market News» publisher Yuri Laskin.



– Mr. Levitan, what are the main areas of RADIOFIZIKA's activities?

One of the highest priorities in company activities we pay to the development of radar with fully digital active phased arrays operating in various bands of wave frequencies.

Another area where RADIOFIZIKA is an undisputed leader in Russia is development and production of satellite communication systems for the needs of air traffic control. In this niche, our company supports over 150 satellite communication sets all over Russia, and their number grows constantly.

Our unique R&D and manufacturing potential provides for creation of the most advanced antenna systems



and telemetric tools, microelectronics and radar components, as well as conducting tests in non-echo chambers, while the biggest one of them (80x32x24m) – is one of the largest chambers in Europe.

– What is the reason that particularly «DEMONSTRATOR» was chosen for presentation at he Bangalore exhibition?

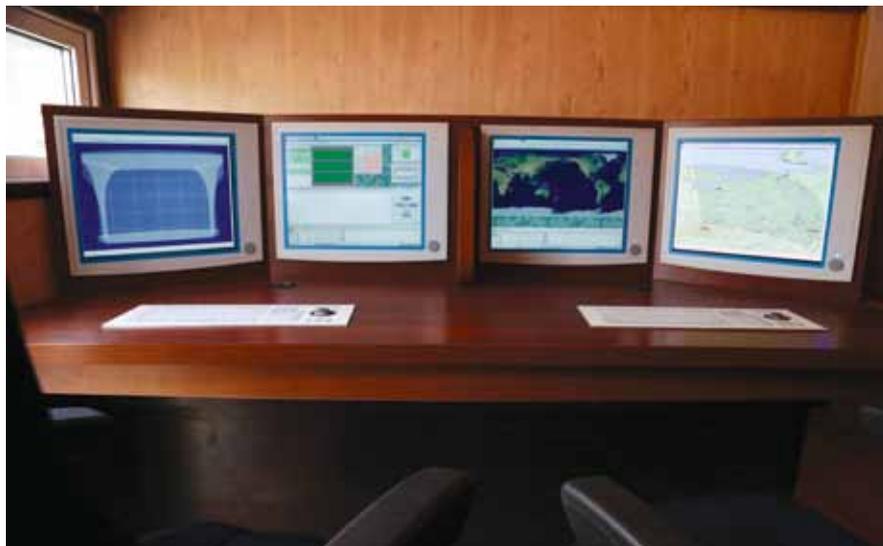
– RADIOFIZIKA considers India to be a very prospective partner, thus we promote our products in this country in a very active way. So, it's already the second time that «DEMONSTRATOR» participates in the Indian exhibitions.

For the first time it was presented at the «DEFEXPO INDIA – 2014» in February last year.

This radar demonstrates our technological capabilities that in the nearest future we are going to implement in larger radar intended for cosmic space control.

As for the «DEMONSTRATOR» itself, it comprises a smaller mobile sectoral radar with short deployment time – around 30 minutes – and with outstanding performance for this size that provides for monitoring air and cosmic space in quite a wide zone.

That was achieved due to application of a technology of active digital



Operator's work site



Demonstrator debut at MAKS-2013 airshow

phased arrays. In fact, it's our first radar that is fully digital for both transmitting and receiving.

«DEMONSTRATOR» attracts big interest of potential Russian and foreign customers. We believe that in India this radar can have good prospective.

– How do you evaluate prospective of cooperation development with companies from BRICS countries?

– Many foreign countries are interested in our radar applications, moreover not only ready products but also individual functional units and prospective technical solutions.

Currently, along with ROSOBORON-EXPORT (Russian arms exporter), we are in process of negotiations on several projects with companies from the BRICS countries.

Rivalry in the international market is very strong, however we have certain advantages. First of all, we propose a lower price achieved due to implementation of advanced technical solutions, secondly – we are ready to share technologies and often we propose joint developments.

– It is known that apart from radar, RADIOFIZIKA specializes in creation of satellite communication systems and antenna systems for air traffic control. What is the progress in this direction?

– In this field, the company has been working for over 20 years already. By today, on the territory of the Russian Federation, we are operating over 150 satellite stations produced by our company. Moreover, we have not only designed them, but we have mounted them key ready and entered into service. Today the whole system for the air traffic control is based on our equipment.

Every year we enter into service around 10 to 12 new stations. Moreover, they are usually based in regions like Far East or utmost North with very severe climatic conditions. Thus, they have to possess very high reliability. This is the sphere where we conduct a lot of special works.

Today I can assure you with confidence that control of practically all flights of both civil and military aircraft is conducted with participation of our equipment.

– How do you develop your production and testing facilities?

– Around 5 years ago we have started active efforts to achieve technological modernization of our enter-

Our reference

RADIOFIZIKA is a company of a radio-electronic profile that specializes in development of radar and radio-telemetric equipment, satellite communication and antenna systems, radar components. It also carries out research and tests in the sphere of electro-magnetic compatibility of radio-electronic equipment. RADIOFIZIKA is a recognized leader in development of antennae for radar, communication systems, power transfer systems and other spheres of application. Considerable share of developments is comprised by phased antenna arrays. Since 1980, RADIOFIZIKA has been conducting development of «mm»

wave frequency band antennae. The company develops feeder (first of all wave-guide) devices of various types, mirror antennae for portative, stationary and mobile satellite communication stations (antenna diameter from 1.2 to 12.4 m). RADIOFIZIKA possesses various emitting devices including the ones with polarization seal and double-band. Cue systems provide for satellite tracking at the geostationary orbit. It has developed antennae for working with low-orbit space vehicles. The Europe largest non-echo chamber (80x32x24m) provides for measurements of parameters of a wide range of antennae in the far zone.

prise. We have established workshops of accurate mechanics and microelectronics. Now we are entering into service a large automated production line that will enable us to apply a technology of low temperature ceramics to manufacture electronic components.

Also this line will provide for manufacturing of fiber-optic sections providing circulation of digital data between components of the active phased array. In prospective we consider creation of a line for production of RF monolith integrated circuits based on GaN.



Demonstrator radar implements brand-new innovation technologies