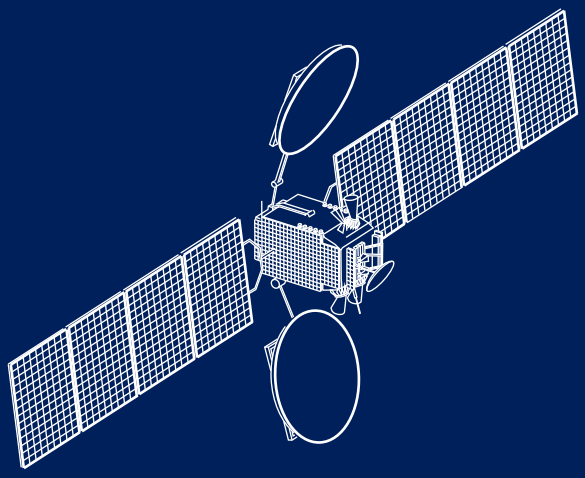
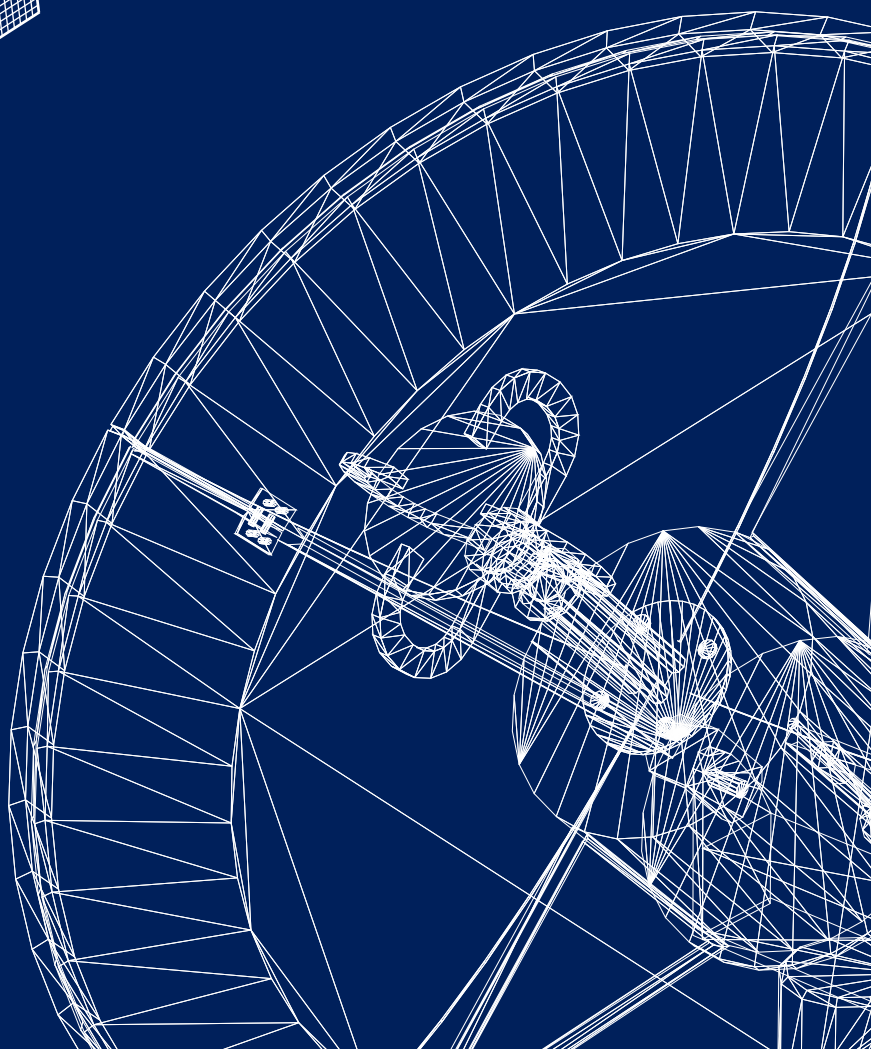
INTERSPUTNIK TODAY No 20

CORPORATE NEWSLETTER OF THE INTERSPUTNIK
INTERNATIONAL ORGANIZATION OF SPACE COMMUNICATIONS





CONTENTS

THE OPERATIONS COMMITTEE WORKS ONLINE AND MAKES DECISIONS BY CORRESPONDENCE

From September 15 to October 15, 2020 the Operations Committee of Intersputnik reviewed in absentia and carried resolutions by correspondence on topical issues of the Organization's activities.

Giving careful consideration to the report of the Director General, the Operations Committee approved steps taken by the Directorate during the period after the joint 47th session of the Council and 22nd session of the Operations Committee held in May 2019, as well as the working plan of the Organization for 2021. At the same time, the Committee took note of the information that throughout 2019 the Organization performed quite well financially and was expected to keep the attained level in 2020 despite the unfavorable conditions for doing business in connection with the spread of the Covid-19 coronavirus infection. In particular, this is evidenced by a stable increase in profits, which helps annually increase the amount of dividends paid to the Members and Signatories of Intersputnik.

Having reviewed the implementation of the Program for the Development of Space Communications Business, the Operations Committee found the experience of the first year of the Program's implementation to be satisfactory after Intersputnik had invested its own funds in the project of Mongolian company Isatcom, the winner of the 2019 tender, which aimed to expand its network of public Internet access points in Mongolia. The Committee reviewed and approved the updated Development Program, which provides for an increase in the number of potential bidders, as well as larger loans of up to USD 1,000,000 for the Organization's Signatories. Taking into account the experience of the first year, the Program was also supplemented with additional clauses regarding measures of financial security and control over the fulfillment of borrowers' obligations.

The Operations Committee reviewed and approved the Directorate's progress in developing the Intersputnik international satellite telecommunications system using new satellites as well as implementing joint satellite projects on the basis the Organization's orbit and spectrum resource. In particular, cooperation with ABS Global continued at 3W and 75E as well as with Spacecom at 17E. The new AMOS-17 satellite was successfully put into operation. This made it possible to confirm the validity of the Organization's frequency assignments at 17E. The execution of the contract with the Bangladeshi partner – the Telecommunications Regulatory Commission - continued, supporting the use of Intersputnik's frequency assignments at 119.1E for the development of the national satellite communications system of Bangladesh.

The Operations Committee reviewed Intersputnik's financials and passed the following resolutions:

- to approve the results of the audit of the financial and economic performance of Intersputnik carried out by the Audit Commission for 2019;
- to approve the report on the implementation of the Financial Plan and distribution of profits for 2019;
- to approve the Financial Plan of Intersputnik for 2021, and to approve an increase, as from January 1, 2021, of the Share Capital of the Organization to $ 5,500,000.

In absentia, there was elected for three years Intersputnik Audit Committee members, including Mr. Hans-Joachim Schemel, a citizen of the Federal Republic of Germany,

Mr. Frantisek Sebek, a citizen of the Czech Republic, and Ms. Le Thi Hien, a citizen of the Socialist Republic of Vietnam. Mr. Frantisek Sebek was elected Chairman of the Audit Committee.

The Operations Committee recommended that the Intersputnik Board accept the invitation of the Ministry of Digital Development, Communications and Mass Media of the Russian Federation and hold the joint 49th session of the Board and the 23rd session of the Operations Committee in Moscow in May 2021.

INTERSPUTNIK BOARD HOLDS ITS 48TH SESSION

From October 19 to November 25, 2020 there took place the 48th session of the Intersputnik Board, which was held in a remote fashion. The Members of the Organization received for review materials prepared by the Directorate for the agenda items, as well as draft resolutions. The materials and draft resolutions were discussed on November 12 in a video conference, which was attended by representatives of the following Member States: Belarus, Bulgaria, Hungary, Germany, the DPRK, Mongolia, Poland, Russia, and the Czech Republic. Following the discussion, the Board adopted a number of resolutions on topical issues of the Organization's operations.

As proposed by the Office of Electronic Communications of the Republic of Poland, representing the Government of this country in Intersputnik, Mr. Jacek Oko, President of the Office of Electronic Communications, was elected Chairman of the Board for the period until the next session.

The Board reviewed the information on the Members of the Organization and noted that the competent state authorities of the French Republic were finalizing the procedure for this country to join Intersputnik. The Board also took into account information about the following newly appointed national Intersputnik Signatories: Republican Production Unitary Enterprise "Precision Electromechanics Plant" for the Republic of Belarus and FidusCrypt-USG GmbH for the Federal Republic of Germany.

The Board considered and approved the report of the Chairwoman of the Operations Committee, as well as the report of the Director General on the performance of the Organization for the period after the joint 47th session of the Board and 22nd session of the Operations Committee of Intersputnik held in May 2019.

Taking into account the resolutions of the Operations Committee previously passed by correspondence, the Council approved the new version of the Program for the Development of Space Communications Business, and also approved measures taken by the Directorate to develop the Intersputnik international satellite telecommunications system using new satellites and implement joint satellite projects involving Intersputnik's orbit and spectrum resource.

Following the recommendation of the Operations Committee and taking into account proposals of the Ministry of Digital Development, Communications and Mass Media of the Russian Federation and Russian Satellite Communications Company – Intersputnik Signatory for the Russian Federation, the Board decided to hold the joint 49th session of the Board and 23rd session of the Operations Committee in May 2021 in Moscow, Russia. At the same time, the Board decided that if the unfavorable epidemiological situation in the world persisted, the joint session would be held online.

Despite the adverse epidemiological situation observed in 2020 Intersputnik managed to keep a high level of international contacts and keep working intensively in the field of international space and telecommunications law. Considering the existing restrictions, organizers of major industry events went online. This helped Intersputnik not only take part in traditional annual events but also visit new sites.

Director General Vadim Belov held an online discussion of the agenda items of the 48th session of the Intersputnik Board, delivered a video address to the Assembly of Parties of the International Mobile Satellite Organization and participated in a remote fashion in the 56th meeting of the Council of the Heads of Telecommunications Administrations of the Regional Commonwealth in the Field of Communications.

Executive Director Victor Veshchunov took part in absentia in plenary meetings of the International Astronautical Congress, the General Assembly of the International Astronautical Federation, and the election of the governing bodies of the Federation. Besides, Mr. Veshchunov participated in the annual conference of the International Academy of Communications where he had been a full member since 2012.

Head of the International and Legal Service Elina Morozova took part in a range of specialized online events, including the Eilene M. Galloway Symposium on Critical Issues of Space Law and the Colloquium on the Law of Outer Space of the International Institute of Space Law, Space Law Webinar Series IV of the Institute of Air and Space Law of McGill University and the International Association for the Advancement of Space Safety, as well as the LegalTech module of the Distant & Digital international conference. Ms. Morozova was a visiting lecturer on international space law and telecommunications law on the Master's program at St. Petersburg University, School of International Space Law at the State University of Belarus, and within the framework of the Strategic Space Law Course offered by the Institute of Air and Space Law of McGill University.

Competent government authorities of the French Republic, in the first place, the Ministry of Foreign Affairs, continue completing the procedure established under national law to make a decision to join Intersputnik. In mid-2020 this was confirmed by the Embassy of France to Russia.

After the May 2019 joint 47th session of the Board and 23rd session of the Operations Committee there were replaced national Intersputnik Signatories for the Republic of Belarus and the Federal Republic of Germany.

By Order 805 of November 27, 2019 of the Council of Ministers of the Republic of Belarus, the 'Beltelecom' Republican Unitary Telecommunications Enterprise was replaced with the 'Precise Electromechanics Factory' Republican Unitary Production Enterprise as the Intersputnik Signatory for the Republic of Belarus. Mr. S.V. Prokopovich, Director of 'Precise Electromechanics Factory', signed the Intersputnik Operating Agreement on January 29, 2020 in Moscow in the presence of Mr. V.E. Belov, Director General of Intersputnik.

On January 2, 2020 the Directorate of Intersputnik received a letter from the Ministry for Economic Affairs and Energy of the Federal Republic of Germany to the effect that FidusCrypt GmbH was replaced with FidusCrypt – USG GmbH as the Signatory for the Federal Republic of Germany.

Pictured: Mr. S. Prokopovich (left), Mr. V. Belov (right)

HIGHLIGHTS OF SATELLITE TELECOMMUNICATIONS IN MONGOLIA

Uranchimeg Andrai

Deputy Director
Communications and Postal
Policy Planning Department
The Government of Mongolia
Communications and Information
Technology Authority

It has been 50 years since the establishment of Naran Station, the satellite communication earth station, in aid granted by Soviet Union in Mongolia. Since, using the satellite communications, international and domestic call service, DTH services were provided throughout Mongolia.

Mongolia is a sparsely populated country with a vast territory and at remote areas, still has nomadic culture depending seasons. Even though mostly all administrative units are connected to the fiber optic network, satellite communication applications are still needed, especially in mining or tourist areas and for nomadic herders.

Currently, Mongolia provides all kind of satellite communication services only through leasing of transponders from foreign satellites. Therefore, in 2012, the National Satellite Program was approved in order to launch its own satellite.

In Mongolia, it provides satellite communications and DTH services leasing Ku-band from Telestar and Koreasat. And there are two DTH service providers, DDish TV and MongolSat.

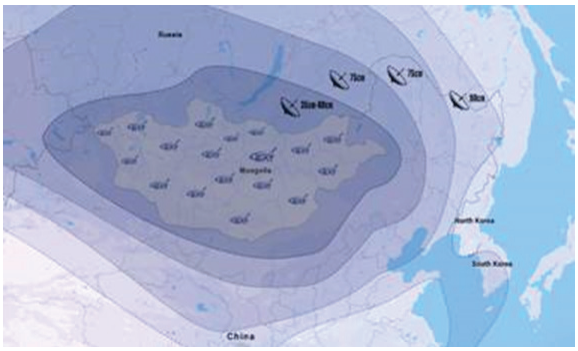
Archive photo: Naran Earth Station of the Intersputnik satellite telecommunications system, Mongolia, 1990s.

DDish TV /www.ddishtv.mn/

Since 2008, TV broadcasting services has been provided throughout Mongolia using Korean Transat-5A satellite transponders.

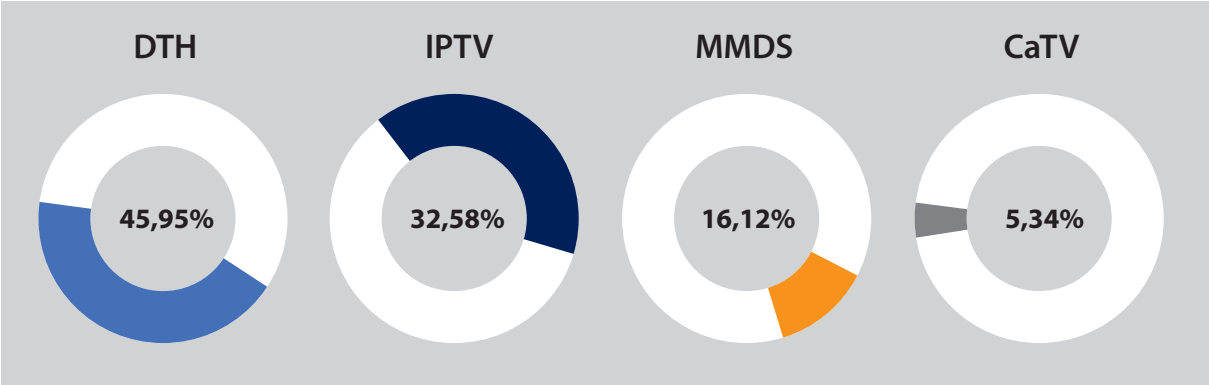
MongolSat LLC /www.mongolsat.mn/

It provides nationwide TV broadcasting services leasing Telestar 18V satellite transponders since 2017.



Companies, such as Aurazon, Anjicom, Isatcom, Orbitnet provide satellite communications services to remote households, customers in remote and mining area through more than 500 VSAT stations. Current total frequency bands for communication satellite in Mongolia are 444 MHz, where of these, 324 MHz are dedicated for DTH and 120 MHz are used for other services.

Number of subscribers of multichannel broadcasting service providers



International cooperation in the field satellite communication

- Fully pledged member of ITU since 1964
- Joined Intercosmos Programme in 1965
- Joined Interspuntik in 1971
- First astronaut of Mongolia, Mr. Gurragchaa Jugderdemid, flight into space in 1981
- Joined Intelsat in 1997
- Joined APSCO in 2005
- MoU with CNES, France in 2018
- Government Agreement with ISRO, India in 2019

RUSSIA'S SATELLITE CONSTELLATION: STATUS AND OUTLOOK

Ksenia Drozdova

**RSCC Deputy Director General –
Head of the Business Development**

(based on a talk with Via Satellite ahead of Satellite 2020)

1 In you opinion, what are the key topics for the international satellite telecommunications sector to address today?

Lots of new developments are underway along the whole value chain in the satellite industry. In the first place, this will be the latest success/failures stories in the development of non-GEO constellations. We all know that some of such initiatives fell through, for example, LeoSat, some have actively started launching satellites, with still many doubts on business models and CPEs affordability; some just have joined the club. A hot topic has been the sector of ground equipment: this will be rapid consolidation of satellite modems vendors happened in just half a year time. Deals involving iDirect / Newtec and Comtech / UHP / Gilat are surely the talk of the town. In the end user segment many people still ask themselves if the integration of satellite and terrestrial networks can be successful, especially, in the coming 5G age. For us – traditional operators of satellites in geostationary orbit (GEO) – it is most important to find new sources of revenue. We are interested in new markets, ideas, solutions, cooperation and applications which may help us to keep the customers and even reinforce revenue growth.

2 There will undoubtedly be a lot of talk about how some of the traditional operators in Geostationary Orbit (GEO) may look to supplement what they are doing in LEO. How would you describe your operator's non-GEO strategy?

Actually, RSCC was one of the first GEO satellite operators that started planning its own proprietary non-GEO constellation long before this has become a hype. RSCC non-GEO fleet of Express-RV satellites will be located in Highly Elliptical Orbit (HEO) and will be regional, covering northern latitude. Our fundamental strategy is to improve the quality of GEO services we provide across Russia using new capabilities and applications offered by HEO. These are new sources of income for us.

In the countries like Russia, located in the Northern hemisphere, polar orbits open great opportunities for providing mobility applications, expanding digital inclusion of the communities leaving above the Polar Circle, as well as increasing quality of service and availability of communications services to people and business. Moreover we plan to use Express-RV satellites to improve availability of broadcasting service in the North, and provide satellite digital radio with nationwide coverage for the first time in Russia.

3 Do you think operators can survive by just having a pure GEO strategy going forward?

It really depends on the market they serve, and how solid are their service offerings to customers. Traditional GEO satellites are too good for a number of applications like broadcasting, consumer broadband, enterprise networks, and digital inclusion programs. But non-GEO is a real breath of fresh air for the industry, as they allow opening new revenue pockets in certain regions or verticals. So a regional non-GEO constellation, like the one RSCC is planning, will be a real game changer for traditional players. This will be a great opportunity for a regional GEO operator to leverage its deep knowledge of domestic markets and open new revenue niches.

4 SpaceX started launching its Starlink satellites. Is this good or bad news for the conventional satellite industry? Will a noticeable part of the customers of 'traditional' GEO operators migrate to them?

As the second oldest satellite operator in the world established more than half a century ago, RSCC pays special attention to all new players. This is not the first time that we come across plans to create global constellations. But since the previous attempt telecom landscape has been dramatically changed, as well as satcom industry and the markets all over the world. The current iteration continues to be affected by too many obstacles: technological, financial, business-related and regulatory. Therefore, it would be premature to predict any success stories for global non-GEO mega-constellations.

5 How do you see the evolution of your business over the next three to four years? How will it change?

In 2024 we expect to have our GEO satellite fleet with traditional wide beam and HTS spot beam satellites, enhanced by a regional Highly Elliptical Orbit (HEO) HTS constellation. We expect to provide connectivity, backhauling and broadcasting services across fixed and mobility user segments, as well as end-to-end IoT, connected transport applications and serving subscriber's connection to Edge or even directly to Core in 5G ecosystem.

6 A lot has been spoken about the video market, and with the onset of OTT it may no longer be the growth market that many hoped it would be. How does you company assess the video market today? Do you think it will remain relatively robust?

In Russia RSCC has always been the largest supplier of satellite broadcasting. Currently three DTH platforms are using our satellites, our Direct-To-Operator platform distributes commercial TV channels to cable headends and Direct-To-Terrestrial (DTT) service distributes nationwide programming to FTA towers all across the country. Apart from satellite capacity, we offer services to process video signals, deliver broadcasting transport streams, and arrange live feeds and transmissions.

Although satellite telecommunications is a reliable means of distributing video because it can cover vast geographic territories, the current video market is more and more leaning toward streaming. Being aware of this, we devoted last year to the development and testing of our proprietary solution aimed at effective use of satellite capacity for streaming. As a result, we will be able to offer a broader range of services.

7 What new markets are you targeting, like 5G, Connected Transportation, etc.?

RSCC is a well-established satellite operator with a long history, solid customer base, vast service portfolio and well-balanced revenues from domestic and international sales, as well as from pure capacity sales and value added services across most of industry verticals. In fact, truly new markets are not so numerous while the verticals remain nearly unchanged. But thanks to development of space and ground segment, satellites can offer higher quality or reduce costs. Therefore, we are definitely targeting all 5G related applications, which require broadband or even narrowband connectivity in the areas or situations where terrestrial service is out of reach, or when a satellite can do the job better than others, like broadcasting. Since we have been working on

expanding our broadband mobility applications and now operate more than 350 maritime vessels, we plan to enhance our product portfolio for mobility users in the sea, air or land.

8 Do you believe the ground piece for example, antennas, is keeping up with operators' ambitions?

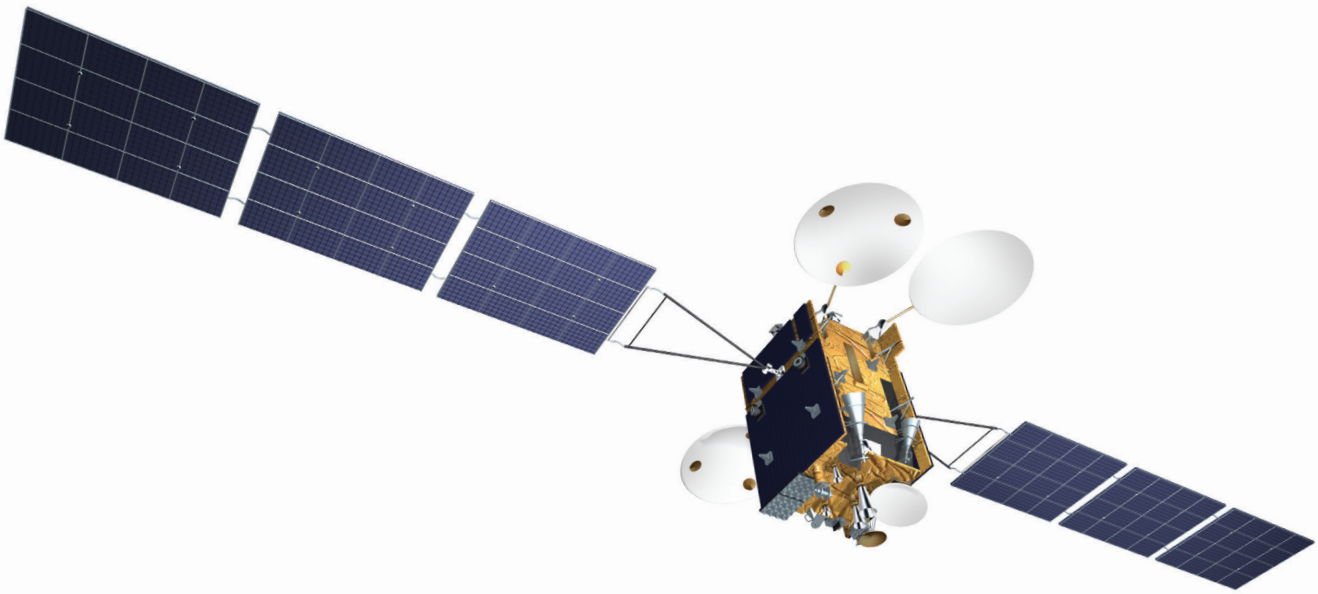
In fact we see a lot of real R&D, testing and improvements made by existing vendors and new players. At least a dozen companies are at work on ESFPA or active/passive phased arrays with a view to making antenna equipment smaller and cheaper. The apex has already been reached and we see that certain leaders are on the right path to success. The question is how affordable the end product is going to be because now it seems that a satellite terminal will not be a consumer grade product. But such terminals will definitely help both GEO and non-GEO operators capture the cellular market.

9 Why do you think that today is the right time to be a top manager of a satellite operator? Simply put, why are you optimistic?

If a top manager has a clear-cut development strategy, an understanding of the market, close communication with the industry and customers, a tight-knit, professional and creative team the manager trusts, then he or she feels confident. And confidence is the key to optimism.

10 Dear Ms. Drozdova, RSCC is a national Signatory of the Intersputnik International Organization of Space Communications for Russia. Next year Intersputnik will celebrate its 50th anniversary. How can you describe today's level of cooperation between RSCC and this international organization, and what do you think about prospects of its expansion?

You know, the question you are asking is a kind of 'catch' – who do you love more – your mom or dad? The point is that RSCC and Intersputnik have been together and intertwined for nearly fifty years. A lot of highly qualified specialists from RSCC work for Intersputnik at its Directorate, and we maintain professional and friendly relations with them. RSCC's cooperation with Intersputnik is multifaceted. Up to the end of the 90s RSCC had no full-fledged sales department and it was Intersputnik that was selling the resources of the Russian satellite fleet. Certainly, the situation has radically changed over the last 20 years. Today RSCC's commercial division is considered to be one of the world's best



as proven by our international awards. In 2019 RSCC became one of the three leaders of the Russian Federation exporting hi-tech services. At the same time, our relations are not only measured by 700 MHz of satellite resources and the use of RSCC's infrastructure by Intersputnik: together we are looking for growth areas, sharing ideas and making plans. It is important that lately the set of like-minded professionals has grown: at all times we keep in touch with our Belarusian, Azerbaijani, and German colleague operators. It is noteworthy that Intersputnik Members and Signatories are located in different time zones from Latin America to South-East Asia, and it is sometimes difficult to communicate online. Not all of the operators have joined our brainstorming yet. In January 2020 we launched "Intersputnik.Online", the Operations Committee's web-portal to exchange information and projects and describe the cultural diversity and beauty of the member-countries of Intersputnik. We are at work on a platform for internal communication among Operations Committee members. I think that shortly we will start testing the system and will be able to overcome the time zone factor.

11 You are not only the Chairperson of Intersputnik's Operations Committee but also head the tender board which reviews and identifies projects to be financed under theProgram for the Development of Satellite Telecommunications Business in the Member-Countries recently launched by Intersputnik. Could you please tell us what this program is aimed at and what the first results are?

The business development program was initially aimed at promoting satellite telecommunications services in Intersputnik's member-countries. The experience of the first tender showed that many bidders acted in a perfunctory manner when preparing the required package of documents and did not clearly understand that the program was no charity offered by Intersputnik. It is a purely commercial project serving the interests of all Intersputnik members. In this connection it is especially pleasant that IsatCom from Mongolia, the first company that was granted a loan, has build a VSAT network in the country and established a satellite system for remote regions using the cash received. Believe me, it is very important for the tender board to learn that our common efforts opened up new opportunities and made someone happier. Reflecting on the experience of the first year the program was in effect, we think how we can apply it to digital startups. As a qualified specialist in this field I am aware that the main problem is that a technological startup as such cannot pay back within three years. During the investment phase and customization it is likely to have a negative return. These are high-risk investments but they sow creativity which is exactly what the program seeks to achieve. We are now closely studying this question to further discuss it with the members of the Operations Committee and hammer out a common standpoint for business.

IMPLEMENTATION AND UPDATING OF THE PROGRAM FOR THE DEVELOPMENT OF SPACE COMMUNICATIONS BUSINESS

As decided by the Board and the Operations Committee of the Intersputnik International Organization of Space Communications, the Directorate kept taking steps to carry out the Program for the Development of Space Communications Business ('the Development Program'). In this line of business, there have occurred the following developments.

I. Assessment of the financial standing of the winner of the first tender and progress in the implementation of its project

The Directorate assessed the financial condition and progress in the implementation of the projects carried out by Isatcom (Mongolia), which won the first tender under the Development Program. There were received, analyzed and appraised quarterly and semi-annual reports on the financial condition of the company. Also assessed was the company's progress in meeting the targets of the business plan aimed at upgrading its Gilat hub station and updating 701 user terminals operating in the Isatcom satellite telecommunications system.

The company used the loan in the amount of USD 300,000 for the intended purpose having purchased equipment for the hub station and 701 user terminals. As set forth in the effective contract, this equipment was pledged to Intersputnik until the moment the loan was repaid. The company spent its own funds exceeding the loan to replace the equipment and put it into operation. Generally, the company's financial condition was found to be satisfactory owing to the positive financial result, but certain parameters of the business plan turned out to be lower than initially projected, among other things, due to the effect of the coronavirus pandemic. Based on the results of the assessment, the Directorate drew up a report, which was brought to the company's notice, and gave recommendations to improve project management and meet the obligations assumed by the borrower.

II. Preparation of the 2020 tender

To make arrangements for the next tender under the Development Program, the Directorate prepared presentation materials describing the experience of the first tender, its results and potential ways to update the Program. In order to discuss these questions, there was drawn up an agenda for an information day, which was agreed to be held in March 2020 in Budapest, Hungary, in the offices of the National Media and Infocommunications Authority. However, that event had to be cancelled after the borders were closed due to the coronavirus pandemic. Still, the prepared materials were circulated to a wide range of potential bidders and entities interested in the next tender. Considering that the coronavirus situation was gradually improving and for the purpose of making

a decision to hold the tender, the Directorate posted on Intersputnik's and the Operations Committee's websites an announcement that preliminary letters of intent were welcome from potential bidders wishing to take part in the next tender. These letters were expected to briefly describe proposed projects and amounts requested. During the period specified in the announcement (August 1 through 31 of this year) proposals were received from two Mongolian companies, including Isatcom – the winner of the first tender, and a company from the Republic of South Africa. More bids are expected from other companies, which consider their participation and have tentatively discussed this opportunity with the Directorate. The tender is planned to be announced in December 2020.

III. Updating of the development program

The Directorate analyzed proposed amendments to the Development Program and drew up a new version of the Program for approval by the Board and the Operations Committee. There were chosen the following key criteria to evaluate any proposed changes: the investment fund of the Program needed to continue being a venture fund with repayment of all loans granted; the Program needed to become more attractive to Intersputnik Signatories; access to the Program needed to be granted to operators from non-Intersputnik member-countries using the Intersputnik international satellite telecommunications system, meaning those doing real business with the Organization. The proposed new version envisages the following:

1. Intersputnik Signatories:

- may be granted larger loans of up to USD 1,000,000 (other bidders are offered the same maximum amount of USD 750,000);
- may use dividends regularly paid by Intersputnik to its Signatories to disburse a loan;

2. users of the Intersputnik system will be able to participate in the Program regardless of the country where they are incorporated and do business;

3. a number of amendments to make sure that a loan will be repaid (setting funds aside to disburse a loan in the future, insuring risks, etc.).

Intersputnik's stake-holding in a bidder's business was removed as a lending option because it was not favored and was fraught with a number of additional risks and complications concerning repayment of loans.

A separate question under review was loans for start-ups. In the opinion of the Directorate, such companies are not able to stick to the key principles such as repayment of loans and financing of steadily operating companies, which guarantee that the loans will be disbursed on the dates set under the Program. To fund a startup, there need to be used other approaches to the appraisal of projects and to the assignment of cash.

The Directorate suggested making it possible to finance start-ups, which benefit Intersputnik's technological and innovative growth, using the Development Program outside tenders, and appraising projects by in-house and outside experts with the required qualification in the field of proposed innovations, provided that decisions are made by the Operations Committee of the Organization. This initiative was approved by the Board.

ISATCOM WINS FIRST TENDER UNDER INTERSPUTNIK'S PROGRAM

Tsedev Dulguuntengis

CEO of the «Isatcom» LLC

The «Isatcom» company from Mongolia has participated in the first tender organized by the Intersputnik International organization of space communication between its member countries and won the tender. Thus they have implemented modern technological progress in their satellite communication network. For instance, citizens now are able to receive internet, TV and telephone triple services at speeds up to 200 Mb/sec, backhauling on 4G and 5G network, also available to use it on mobile objects such as cars, high-speed trains and planes.

MONGOLIAN COMPANY WON THE TENDER

1 Let's start out conversation with the information surrounding the tender, which was organized to support space communications. How many countries participated and what were the criteria for the project?

Before talking about this, I think it is important to talk about the Intersputnik International organization of space communication. This organization, with headquarter in Russia, was firstly established in 1971 together with nine countries. Since then, the organization has expanded its activities and currently there are 26 member countries joined. As regard of Mongolia, Mongolia is one of the first nine countries that joined the Intersputnik. Therefore, Mongolia has been actively involved in space communication's activities. The main function of this organization is telecommunication satellite related activity. In 2019 the organization first time has announced the tender among its member countries. In other words, 26 member countries have participated in the tender. Participating and being selected in this tender are created for us the opportunity to develop our country's satellite communications business.

2 Your company represented Mongolia in the tender. What kind of project did you develop and participate in it?

We always strive to be the first to introduce new advanced technology in our satellite communication network in Mongolia. Therefore in 2012 we firstly introduced DVB-S2 standard in Mongolia. Last year we have participated with DVB-S2X standard modern earth station to introduce in Mongolia, which is the next generation of DVB-S2 standard. As a result, the project was selected; therefore we have installed and upgraded our earth station and started our business activity using the latest advanced technology.

Pictured: Mr. V. Belov (left), Mr. Ts. Dulguuntengis (right)

THE PROJECT HAS BEEN IMPLEMENTED

3 Could you please explain the earth station in detail? What service conditions and opportunities are created by establishing this?

Earth station is a package system that enables delivering and receiving information to and from remote customers via satellite. By upgrading this, citizens will be able to receive all types of communication services. Most importantly regardless of terrestrial networks such as fiber optic or microwave people can get any information technology services they like no matter in which geographical location in Mongolia they are in. For instance, if at certain location in Mongolia it is not possible to install mobile phone network, then using only satellite communication enables introduction of such network. In the same way it will be possible to introduce internet wherever it is required in Mongolia using satellite communication only. In addition, technological update gives us an opportunity to offer highest quality services in shortest time throughout the country.

4 Does this mean that there is an opportunity to use Internet in every edge of Mongolia? What are the features and advantages of the new standard?

Exactly. DVB-S2X standard is capable of generating higher capacity and higher speeds than the S2 standard. As of economy, it means that the satellite capacity will be used more efficiently. And it makes possible to reduce customer service fees.

5 Win the tender is the first step. The next big action is implement in practice. What is being done in this area? Could you please inform us about this?

There are a limited number of companies in several countries that manufacture satellite communications equipment. From these, we have selected the SEII-c X-Architecture hub station to the project, which was developed

and sold in market by Gilat Satellite Networks, Israel. The reason is that technology of the company allows reducing the cost to the end users. They use satellite capacity very efficiently. We have purchased and installed the equipment in the beginning of 2020, it took us only ten days to install new eqipment. Intersputnik has resolved financing due to the fact that the project is selected and met the requirements. Throughout this year, during the Covid-19 crisis, we have worked hard to provide high speed connectivity in remote areas.

SATELLITE IS ESSENTIAL

6 In the telecommunications industry, especially satellite services, we see the latest technological advances. The Internet is now available for high-speed transportation and even for airplanes. But we don't even have a high-speed train. Will such development differences affect the productivity of the sector?

Definitely will affect. Today we have the technology and the ability to implement complicated projects. Unfortunately, other sectors are very slow in using it. The most important element of space communication is satellite. Many countries have their own national satellites. Our country has not got its own satellite; therefore we provide services through leasing a capacity from foreign satellites. In case if Mongolia has its own satellite, we think that we can provide services at the similar price range with fiber optic network, 4G and 5G technologies no matter in which geographical location in Mongolia they are in. In other words, the payment of customers using the internet on their mobile phones living in apartments in Ulaanbaatar city and customers accessing to satellite internet from herder town will be no different.

7 Is the Communications Regulatory Commission focusing on acquiring satellites and how you will rate it on support and cooperation in your activities?

We are always in close relations with the Communications Regulatory Commission and the Communications and Information Technology Agency. We are obliged adhere rules and regulations issued and approved from sector's policy and regulatory organization. We believe that Mongolia will have its own satellite. These organizations are focusing their attention to achieve this goal. From our side we are ready to support this work since we have

Pictured: Isatcom teleport inauguration ceremony

human resource, infrastructure, earth station and most importantly customer base.

ADVANTAGES GIVEN TO CUSTOMERS

8 Human resources and professional staff are needed to carry out activities such as maintaining earth station, supporting customer services. How is the "Isatcom" LLC solving this problem?

Our company was first established in 2004 and started to carry out the activities. Since that time, we have been providing consulting and installation services in the field of space communications. As regard of human resource, our company has big advantage having specialists who have specialized only in space communications for more than 10 to 20 years. Of course, the next generation is always being trained. Recently we have finished installation of a new hub station and our 7 employees attended the training and received professional certificates. It is planning to send 3 more employees to the international training center for advanced training after smoothing the operation of the company.

9 The COVID-19 pandemic has affected the day-to-day lives of nearly of all over the world. How does coronavirus affect your business?

Yes, our business is also affected by coronavirus in some degree. Compared to others our services are not interrupted and we are able to continue delivering quality services. Due to the global Covid-19 epidemic, Mongolia's mining sector is not fully operational, and the stagnation of cross-border companies is having a significant impact on our operations. Therefore, we are paying more attention to retaining our current customers. However, we are confident that good times will come soon.

10 What is your company focusing on now, and what are your future goals and activities?

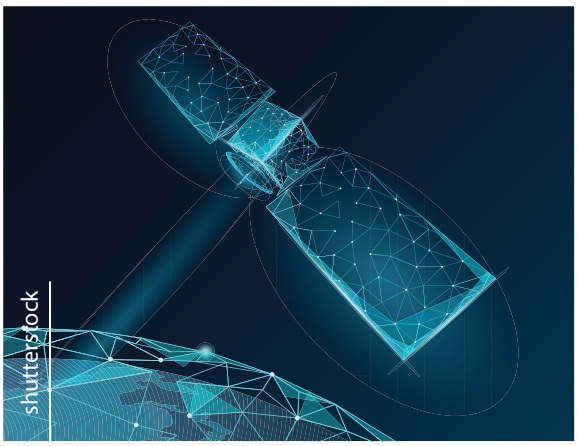
We used to provide services mainly to organizations, but now we are working on providing services to consumer households through new technology of earth stations, further to provide triple service (internet, television, telephone) to herders. In addition, with the advancements of this earth station, it is possible for end customers not only to receive services at a speed of 200Mbps, but also to backhauling 4G and 5G mobile services at high speeds. Besides that, our hub station has ability to operate simultaneously with five satellites. Therefore other service providers in Mongolia may organize their dedicated, managed network through our hub station and deliver their services, which will be very efficient financially and technologically. In addition, organizations using our hub station are able to save their satellite capacity up to 40%, also it is possible to fully control hub station elements and customers. This is a development based on modern technology. We believe that our offer will not be rejected.

Thank you, good luck!


Isatcom

INTERNATIONAL EXHIBITION AND CONFERENCE CSTB-2020

CSTB is the main professional event of the year covering all current achievements of telecommunications and video technologies. On January 28–30 Intersputnik took part in the 22nd international exhibition and conference CSTB-2020.



INTERNATIONAL WEBINAR ON SATELLITE TELECOMMUNICATIONS IN INDONESIA

June 17, 2020 – Intersputnik hosted the first international webinar and open discussion named 'Satellite Telecommunications in Indonesia' to review various growth areas and their potential in the current conditions. The web event drew about a hundred specialists. The audience included regional providers and professionals in the field of telecommunications.

Among the webinar's speakers were lead industry experts, representatives of Intersputnik, Isatel LLC, the OpenTeleport platform, as well as senior management of XSat ZTE and Aurora Group.

INTERSPUTNIK'S FIRST WEBINAR FOR LATIN AMERICA

July 21, 2020 – Intersputnik, Isatel LLC, the Russian National Committee for the Assistance to the Economic Cooperation with Latin American Countries, and XSAT sponsored the first webinar for national space agencies and telecommunications regulators, satellite operators, and manufacturers of ground satellite telecommunications equipment from Latin America. This event drew over 200 specialists from various countries in that region, including Argentina, Brazil, Colombia, Uruguay, and others. Actively involved in the webinar were high-ranking officials of Nicaragua's telecommunications regulator Telcor, which represents the country – an Intersputnik Member since 1987 – on the Organization's Board. Among other participants were representatives of the embassies of Latin American countries accredited in the Russian Federation.

Participants in the videoconference were briefed in detail about the capabilities of Intersputnik and Isatel LLC in providing services across the region: from satellite capacity to full-scale solutions using advanced ground equipment, as well as financial support under Intersputnik's investment program for the development of satellite telecommunications business.

CONFERENCE SATELLITE RUSSIA & CIS

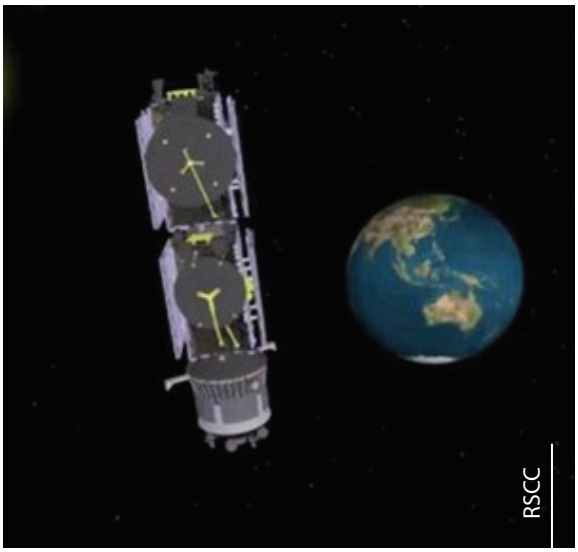
July 23, 2020 – Intersputnik took part in the online conference Satellite Russia & CIS – Constellations and Satcom from Various Orbits in a Time of Post-Covid-19; 5G Networks' Rollout and Reinforcement on New Space Initiatives'.

Among other subjects, the conference addressed the following pressing issues of the industry: the trend for unmanned technologies and remote work in different sectors of the economy; economic crisis and reduction of corporate budgets for the market of satellite equipment and services; ability and preparedness of satellite operators and manufacturers of satellite and terrestrial equipment to address new challenges such as the expansion of optical network coverage, increasing number of commercial 5G networks, and growing demand for broad back channels in view of wide-scale switching to work from home. Participants in the conference showed much interest for the opportunities offered to private companies to do satellite telecommunications business in Russia successfully and safely. There were also discussed other topics related to the operation of GSO and NGSO satellites, use of Ka band on the mass market, and commercialization of space activities.

NEW EXPRESS-SERIES SATELLITES SUCCESSFULLY LAUNCHED

Intersputnik Signatory for the Russian Federation Russian Satellite Communications Company (RSCC) adds Express-80 and Express-103 to its constellation.

Lasting over 18 hours, the longest ever flight of the Proton-M launch vehicle paired with the Briz-M upper stage helped carry out the first dual launch of medium-class geostationary telecommunications satellites in the history of Russian space industry. After separation from the launch vehicle, it will take up to 160 days to insert Express-80 and Express-103 into their final transfer orbit at 80°E and 96.5°E, respectively. Both satellites are slated to be brought into use in early 2021.



Built by Russian company Reshetnev Information Satellite Systems using the Express-1000N bus, the satellites are intended for fixed and mobile service, digital video and audio broadcasting, high-bit-rate Internet access and data transmission over Russia and the CIS countries.

MEETING OF RCC TELECOMMUNICATIONS AND INFOCOMMUNICATIONS OPERATORS COUNCIL

August 14, 2020 – The Council of Telecommunications and Infocommunications Operators uniting major telecommunications companies of the member-countries of the Regional Commonwealth in the Field of Communications (RCC) held its 39th meeting, which was attended by Intersputnik's Commercial Director Timofey Abramov and Head of Operations Group of the Technical Department Andrey Lobanov.

The association of RCC member-countries' telecommunications operators helps deepen cooperation to improve the information and communications infrastructure internationally while focusing on making telecommunications networks more reliable and offering new hi-tech services. Timofey Abramov heads the working group on satellite telecommunications under the Operators Council. Members of the group – Precise Electromechanics Factory (Belarus), Republican Space Communications Center (Kazakhstan) and Russian Satellite Communications Company – discussed the use of the RCC member-countries' satellite resources under new projects.

CONFERENCE SATCOMRUS

SatComRus, a traditional conference, took place on October 8, 2020 attracting, as in the previous years, all major satellite telecommunications market players, namely, Russian and international operators, TV and radio broadcasters, systems integrators, manufacturers of telecommunications satellites and equipment as well as analysts from the largest Russian and international agencies and mass media. One of the key questions the conference addressed was the effect of the COVID-19 pandemic on the satellite industry.

The conference discussed international and Russian satellite telecommunications in current conditions:

- main trends in the development of the satcom industry;
- expansion of satellite constellations operated by the largest players on the domestic satellite market: Russian Satellite Communications Company, Gazprom Space Systems, Intersputnik, Eutelsat, SES, and others;
- changes in Russian laws and regulations which produce an effect on the satellite industry;
- new offers by satellite system developers. Super-high-throughput satellites;
- prospects of non-geostationary systems, choice of the best possible combination of geostationary, LEO and MEO satellite systems;
- development of the Russian HEO satellite system project;
- integration of satellite technologies into the modern 5G infocommunications ecosystem, role of satellites in the future universally digitized world;
- frequencies for satellite communications – will Russian satellite operators have to give up part of C band for ground 5G networks?
- role of satellite communications in supporting advanced IoT technologies;
- satellite distribution of video content, convergence of satellite and cloud technologies;
- satellite broadband access – development and outlook in Russia and the world over.

The conference was attended by speakers directly dealing with the development of various projects, programs, and lines of business. Regulations and laws were described by representatives of Russian government authorities, specifically, the Ministry of Digital Development, Communications and Mass Media. Top managers of operator companies spoke about their vision of market trends and technological progress. Technological companies presented new developments

in the field of satellite telecommunications. Providers of satellite telecommunications services offered a full picture of the Russian market, gave a sense of further steps to expand it, and informed the audience of the service types they found most promising.

INTERNATIONAL WEBINAR FOR AFRICAN AND NEAR EASTERN COUNTRIES

On November 5, 2020 Intersputnik held a webinar for African and Near Eastern countries in cooperation with Isatel LLC and XSat Global.

During the webinar there were given online presentations and there was arranged an additional online round-table discussion.

Our companies' specialists presented up-to-date information on services offered by Intersputnik and Isatel LLC and described the NationSat small telecommunications satellite project, Intersputnik's program of investing in satellite telecommunications business, and the OpenTeleport online platform.

About 100 telecom professionals took part in the event. Among those invited were representatives of Internet providers, manufacturers of satellite telecommunications equipment, and government agencies.

Guests of the webinar actively participated in round-table discussions focused on the following topics:

- effect of NGSO satellites on services provided in the region concerned;
- cooperation between operators and service providers in the conditions of the pandemic;
- the role of the satellite in the digital transformation of society.

The webinar was the last regional online event scheduled by Intersputnik and Isatel LLC for 2020. Such webinars are planned to continue in 2021.

We hope for further cooperation with partners from various geographic regions.

ANNUAL SEMINAR NATSATTEL-2020

November 10, 2020 – Intersputnik's international seminar NatSatTel-2020 took place online.

Under discussion were issues related to the development of national satellite telecommunications systems in the member-counties of the Organization, expansion of the international market and use of new technologies in this area. Geographically, viewers were based in such countries as Azerbaijan, Belarus, Belgium, Bulgaria, Hungary, Germany, India, Kazakhstan, Laos, Mongolia, Nigeria, the United Arab Emirates, Poland, Russia, Somalia, the United States, Turkmenistan, France, Czechia, and Switzerland.

During the seminar, special emphasis was laid on geostationary systems and non-geostationary systems in low earth orbit, frequency coordination of satellite systems with 5G networks, IoT technologies, new opportunities associated with the use of NationSat-series satellites, and other questions. NatSatTel-2020 participants and viewers pointed out that once again the seminar confirmed its reputation as an interesting and constantly expanding platform for contacts among professionals in the field of space telecommunications.

SATELLITE COMMUNICATIONS INDUSTRY AFFECTED BY COVID-19 PANDEMIC

Vsevolod Kolyubakin

The pandemic that broke out at the beginning of this year became a factor, which had a strong impact on the health of all sectors of economy, as well as all aspects of social relations and political institutions – actually, there is no area of human activity left that is not affected by COVID-19.

And the satellite industry, of course, was no exception, having experienced the influence of two opposite factors: a general decline in business activity and problems with project financing, on the one hand, and an awareness of the critical importance of high-quality communications in the context of a massive transition to remote work and distance learning, on the other.

Bankruptcy as a way to keep a business

COVID-19 has caused several high-profile bankruptcies, at least the pandemic and the resulting funding crisis were mentioned as one of the main reasons when filing a restructuring application. The fact that such restructuring helps a company move to a more optimal operating model is indicative of the sustainability of satellite business as such, investor confidence and demand for services.

The most notorious event was the bankruptcy of the operator of the low-orbit global satellite system OneWeb. Although information about the reluctance of the main investor – Softbank Group – to continue financing the project was received at the end of 2019, it was the pandemic that became the decisive factor that pushed the company towards restructuring. Commenting on the events, the company's founder Greg Wyler said that if the company kept its frequency assignments, this could always foster its further growth. He also noted the following feature of OneWeb: with the high cost of the system itself, it will be relatively cheap to operate. And this is in addition to the previously announced advantages: global coverage, low latency, and high transmission speed.

Wyler's arguments resonated with investors, and in July it became known that the UK government and Indian telecom operator Bharti Global Ltd. formed a consortium to acquire OneWeb, investing a total of $ 1 billion in the project. In an effort to retain its contract for OneWeb gateways, technology developer Hughes Network Systems joined the consortium with an investment of $ 50 million.

October 2 this year the court, in which the operator's financial restructuring case is pending, approved the deal with the UK government and Bharti Global Limited, and now UK and Indian regulatory approvals are required for its final legalization. A little earlier (and also with the approval of the court) OneWeb announced that satellite launches for the system would be resumed in December 2020 and that commercial operation would start in early 2021. The court also approved an additional funding of $ 235 million to resume the production of spacecraft at the OneWeb Satellites factory in the United States.

In the midst of bankruptcy proceedings, satellite operator Intelsat acquired the provider of high-speed in-flight Internet access GoGo for $ 400 million. And it would seem that this deal was carried out in spite of the existing situation, when the pandemic landed most of the aircraft and reduced airline revenues 10 times compared to 2019. But Intelsat CEO Stephen Spengler has no

doubts that the pandemic will not affect long-term development trends, and the demand for in-flight connectivity (IFC) services will grow dozens of times over the next decade. And, which is typical, both the court and the shareholders of the company have a similar point of view, since they supported this deal. Apparently, they have no doubt that the IFC sector will regain the growth rates disrupted by the pandemic and will seriously improve the financial position of the operator, which currently has about $ 15 billion in debt.

COVID Dramatically Changes IFC Market Assessment

But not all companies are so confident about the prospects for the IFC market. In this sector, too, COVID-19 wrecked one of the largest mergers in the field of satellite Internet: Comtech Telecommunications Group refused to acquire Gilat Satellite Networks, having paid a compensation of $ 70 million. In a joint statement, Comtech Chief Executive Officer Fred Kornberg and Chairman of the Board of Gilat Dov Baharav noted that the main reason for abandoning the merger was the problems caused by the pandemic. Prior to the outbreak of the pandemic, IFC was considered one of the fastest growing markets in the satellite communications industry. And since Gilat had a very strong position on it, Comtech estimated its purchase highly at $ 532.5 million. But the crash of the air transportation market greatly reduced the attractiveness of the IFC market. The deal no longer looked that attractive, its payback was compromised. COVID changed the real valuation of Gilat so dramatically that $ 70 million as compensation for the cancellation was the best way out of the situation.

Maritime VSAT: overall growth, but decline in certain sectors

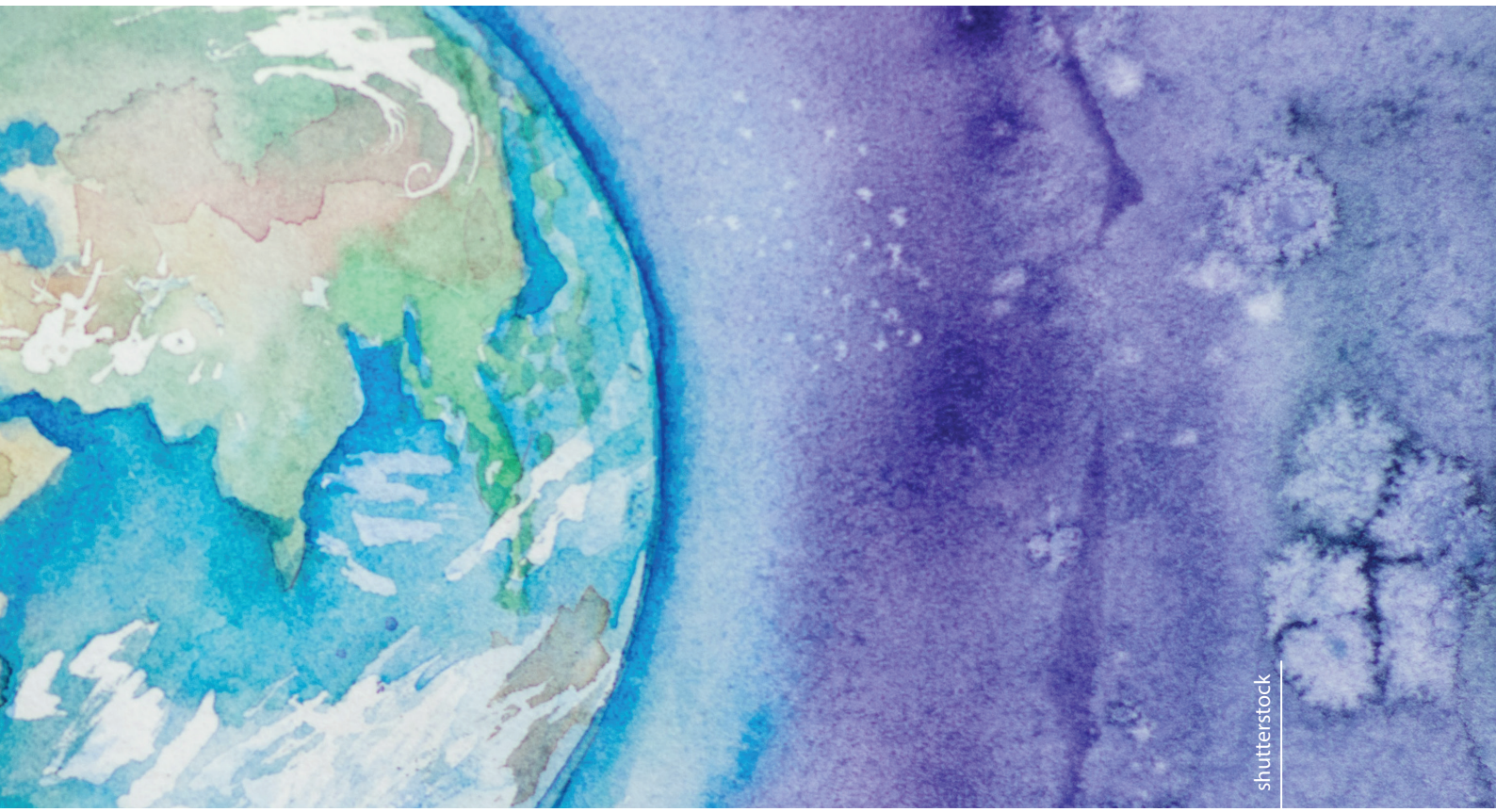
In its latest report, Valor Consultancy noted that the passenger transportation market was nearly ruined by the pandemic, but in other sectors, VSAT revenues even increased compared to 2019. First of all, this is due to the fact that a large number of seafarers were literally "locked" on board their ships, as a result of which the volume of video, messages and voice traffic transmitted by them in the past six months increased. The market was also noticeably influenced by the fact that a

fairly large number of wealthy people self-isolated on board their own yachts, moving their offices there. This also required more traffic. Demand for satellite communications services on fishing vessels remains stable, as the demand for seafood is not falling.

As soon as the need for self-isolation became recognized and accepted, satellite service providers launched programs to support crews forced to stay on their ships for a long time. Nearly all players announced discounts on crew voice services and free access to medical resources.

At least, the need to remotely monitor ships did not reduce the demand for the digitalization of all aspects related to the operation of ships, and some providers also stated that customers started consuming more remote monitoring and cloud services. Following this trend, players in the maritime communications market are beginning to posture themselves as suppliers of end-to-end cloud solutions.

Long-term forecasts for further development of satellite technologies at sea are favorable. According to an NSR report, by 2029 more than half a million vessels will be



equipped with satellite broadband systems, and demand for capacity will grow by 24%.

VSAT and distance learning

The hasty transfer of a huge number of students of all modes of study to distance learning immediately brought to light a huge number of problems with Internet access in all countries and regions. And there is no reason to believe that this problem will be solved by the beginning of the new academic year.

Regional information resources in different countries and regions are full of stories telling what sacrifices teachers, students and their parents make to let schoolchildren and students get a proper education. One can name trips to the nearest access point tens of kilometers away, or a risky climb up a power transmission tower in order to connect to a cellular network, or use of data storage devices and printouts of educational materials.

In the US, VSAT providers claim that in the shortest possible time they will be able to provide high-speed Internet access to remote regions, but in the same regional media users mention satellite Internet as a slow and inconvenient method of access. Steven Hill, President of the Washington Satellite Broadcasting & Communications Association, said that complaints mostly dealt with previous generations of VSATs, right down to the earliest systems that hit the market. It is impossible in principle to demand that they satisfy modern needs. Hill noted that users of modern Ka-band systems were generally satisfied with the quality of service.

Jim Estep, President and CEO of the West Virginia High Technology Foundation Consortium, observed that fiber optic service across difficult terrain (for example, in the mountains) can be disrupted in different ways. primarily due to weather conditions. The maintenance of fiber-optic lines in such conditions may be more expensive than renting satellite capacity. In addition, says Estep, an operator that is laying fiber-optic communication lines in a region with federal support (or state support), becomes a monopolist there, whereas there are at least two broadband Ka-band providers in the US.

Governments are more closely involved in supporting satellite technologies to provide students with broadband access in countries and regions with poorly developed infrastructure. In April, Jamaica launched a

program to provide satellite Internet access to more than 31,000 students in 300 remote communities. The beginning of the new academic year showed that there were much more settlements without the Internet in Jamaica, and besides, not all of them were even provided with electricity. In addition to Internet education and as a palliative for students without Internet access, ReadyTV, a 24-hour educational TV channel, was launched with support from the state. In total, the government intends to allocate $ 1.7 billion to support distance learning, and while the wheels of government projects start turning unhurriedly, charitable organizations are trying to somehow rectify the situation.

The Indonesian government has ordered Satria, a high-throughput (HTS) satellite, which will support 150,000 free Internet hotspots: 93,900 for educational institutions, 47,900 for government, 4,900 for public services, 3,700 for medical institutions. This project is positioned not as a commercial, but as a public-state one. The launch is scheduled for 2023, and before that, existing spacecraft keep being actively used, five of them belonging to Indonesia, and four to global satellite operators. Using their capacity during the pandemic, government agencies have already installed 7,634 free Internet access points.

COVID as a catalyst for government programs and regulatory simplification

The shortcomings of Internet access revealed by the pandemic became the starting point for the launch of several government programs to eliminate the digital divide.

US Federal Communications Commissioner Jessica Rosenworcel, citing Microsoft research, said 162 million Americans do not have proper Internet access. At the same time, in megacities, the provision of broadband access is 95%, and in rural areas – about 50%. American operators have no obligation to provide service to those regions where it is not profitable for them to operate. But against the backdrop of the pandemic, it became clear that such a situation was unacceptable, and one of the campaign promises of the Democratic presidential candidate was to guarantee Internet access throughout the entire United States.

Under the overall guidance of the FCC, there was established the Rural Digital Opportunity Fund (RDOF) to allocate $ 20.4 billion to make sure that every American, regardless of income or place of residence, has high-speed internet access.

But providers of satellite Internet access have to meet a challenging condition: the Commission made it imperative to reduce latency in the network to no more than 100 ms. Therefore, one of the American VSAT operators, ViaSat, announced that it would set up its own LEO system, and another one, Hughes Network Systems, is investing in OneWeb. Advanced low-orbit systems expect funding under the Rural Internet Program, but they have yet to convince the Commission of the reliability of their services.

The RDOF program is expected to be implemented within the next 3-4 years, so some state governments have begun carrying out their own programs. They impose no restrictions on conventional VSAT systems, and the total amount of all preliminary agreements today is almost $ 2 billion.

In 2019 Canada launched a satellite broadband program intended for indigenous Northern communities. In the absence of government support, locals will hardly get reliable Internet services in the foreseeable future because the installation and operation of VSAT terminals become unaffordable given the level of local incomes. COVID-19 encouraged a speedy roll-out of this program as the government earmarked $72 million to provide 10,000 households with broadband access.

The Asia-Pacific region turned out to be the most promising for satellite technologies. It proved to be a quite favorable combination when the geographic factor, i.e. island states with poorly developed ground infrastructure, was accompanied by the appearance at the end of 2019 of a new player in the satellite broadband market – the operator Kacific, which provided the region with available Ka-band capacity. Demand for VSAT services has increased, and government agencies have become the largest consumer. Some countries have begun to simplify the regulation of the satellite industry in order to deliver satellite Internet to remote regions sooner.

The need to quickly rebuild infrastructure after natural disasters played a role. Kacific began installing the first VSATs the day after Hurricane Harold passed over Vanuatu. In order to subsequently coordinate the actions of all participants in this process, the countries of the Oceania region – Papua New Guinea, Vanuatu, Samoa and the Solomon Islands – began to develop a standard set of measures to rehabilitate the communication network.

In Indonesia, the coronavirus has forced the country to speed up digital transformation and consider simplifying the authorization process for communications network facilities. The country's parliament is now reviewing a bill that sets a strict deadline for considering applications for both terrestrial objects for Internet access and satellite broadband stations. An application for which no action has been taken within a specified period is considered approved (i.e. authorization / notification procedure).

In the Middle East, Oman has actively joined the development of satellite broadband access with more than 600 communities to be provided with satellite Internet. The Rwandan government has signed an agreement with OneWeb and is targeting a LEO system to connect remote regions to the Internet. Nigerian government operator NigComSat says that the development of satellite technologies in the country is hampered by regulations and the lack of awareness of the population and business about the opportunities of VSAT technologies. The operator is seeking preferences in the domestic market and restrictions on the operation of foreign providers.

In South Africa, operator MzansiSat, after analyzing the role of the Internet during the pandemic, announced its intention to accelerate the establishment of a satellite Internet network in that country. However, in order to implement the project, it is necessary to take steps to change regulatory laws. But, according to MzansiSat management, the government of the country has awoken to all the shortcomings of the existing infrastructure revealed by the outbreak of COVID-19 and is likely to change the regulations.

For the sake of bridging the digital divide, India's government regulators are ready to reform national space policy and allow private businesses to set up their own satellite systems and give VSAT providers the opportunity to work directly with any international satellite operator. This is what should make prices for satellite broadband access affordable to the population.

In Russia, the pandemic has also exposed deficiencies in existing infrastructure, especially in small, remote communities. Authorities note that all steps to provide the country's population with Internet access are taken as part of the national program to eliminate the digital inequality, and there is no reason to change anything, even in the midst of a pandemic. Satellite communications play an extremely insignificant role in this program, although the use of VSAT technology and the capacity of Russian satellites could dramatically reduce the time needed to extend broadband services to remote regions.

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