

SCENAR
has
changed
lives of
millions
of people
all over
the world
for the
better,
bringing
them
NEW
QUALITY
OF LIFE

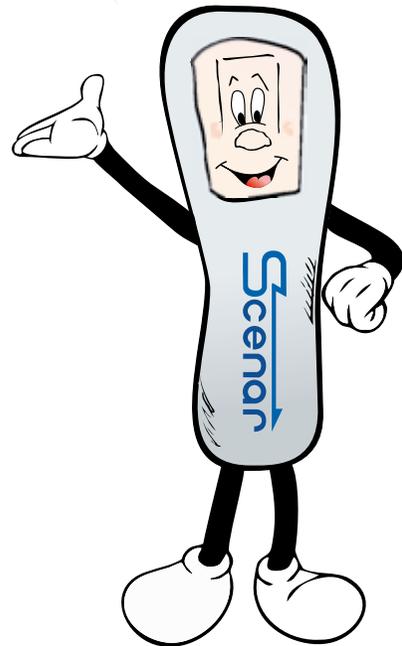
We gave Scenar to the world



Taganrog
2015



Hello, I am SCENARic... I will accompany you along the pages of the magazine to amuse you on your journey. During this time many serious men, doctors and engineers are going to tell you about the most important things: how I was born, how I was growing up and how I help people. I have a huge family. In 35 years they impacted a lot to make me well-known all over the world. Although a lot of smart books were written about me and scientists made many discoveries during these years I want everybody to know: SCENAR therapy (or science about me) is easy and interesting: the simple stroke of a genius. Moreover I am user-friendly and can communicate with anyone: even not a scientist or a doctor. And help him. So, let's go!



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Introduction



I do well remember a patient suffering from complicated diabetes mellitus. The doctor applied all the schemes known to him to alleviate the woman's state. But no improvement obtained. I looked for new alternatives to make her feel better. SCENAR became such alternative.

The impossible has not occurred that day. The impossible occurred after some sessions had been taken and the patient's health suddenly improved. The woman that had not left her house within a significant period of time began to move, to go by herself. Thus, I realised that almost any human disease can be cured using unique internal resources of any organism. My medical practice includes many such examples for 17 years.

Today, I manage the company which gave SCENAR and SCENAR technologies to the world. Now these devices are popular and requested not only in Russia but all over the world: in EU countries, USA, Canada, Mexico, Australia and South Korea. A vast number of prototypes of our invention appear everywhere but SCENAR is the best and most effective.

RITM OKB ZAO engineers work hard on SCENAR modernization to make our devices more effective and easy to use.

The successful presentation of the flagship product—SCENAR Super PRO—give us cause to believe that SCENAR Super PRO will become one of the most requested instrument in various areas of the medical practice. As of today, RITM OKB ZAO keeps its new development secret however it will be revealed at the earliest possible time. This year RITM OKB ZAO celebrates 35 anniversary. More than thirty SCENAR device models have been developed for this period, and such models are successfully used in Russia and abroad; some of these devices are applied by experienced doctors up to now. Under the government contracts RITM OKB ZAO produced the equipment for the RF Ministry of Sports. Therefore, I must say that we made a contribution to splendid results of our sportsmen's appearance at the most important international competitions.

The RITM OKB ZAO's goods include many developments in various areas of medicine. We celebrate not only the company's anniversary and restoration of the exclusive rights to use the SCENAR trademarks in Europe but a new period of development. The intellectual property of the company will be properly protected from now. The entire world saw the true value of the SCENAR mark capitalization. So, nobody can use it to conduct personal business.

*Yury Starovoytov,
Therapist, Director General of RITM OKB ZAO*



Yury Starovoytov
with the staff

Universal Therapist

ACCORDING TO MANUFACTURER'S FORECAST SCENAR BRAND AWARENESS WILL REACH 95% IN RUSSIA BY YEAR OF 2016



Reference:

Yury Starovoytov, born on April 07, 1969. Upon graduation from the Rostov Medical University became a practicing physician. He began to use SCENAR in therapeutic practice at Rostov MicroBiology Institute from 1997. In 2003 incorporates "SCENAR Association" together with RITM OKB ZAO. The company became one of the best distributors of the SCENAR devices for less than two years. "Association" performs the active teaching activity: shoots teaching films, issues specialized papers, conduct training courses for SCENAR-therapists. In 2012 after Yakov Grinberg (former RITM OKB ZAO general director)

retirement, the board of directors unanimously approved the appointment of Yury Starovoytov as a General Director of RITM OKB ZAO. In May 2014, two new modifications of SCENAR for professional and home use are presented in USA. The US-based company RITMSCENAR OKB Inc was established in the US. The majority of shares belongs to RITM OKB ZAO. He initiated the legal proceedings in order to take the SCENAR trademark back into the ownership of RITM OKB ZAO. In 2014, upon Resolution of the Supreme Arbitration Court, Rospatent acknowledges the company's exclusive rights to the brand name. Married, has a son. Hobby: collecting, hunting, fishing.

The fate led a successful therapist and businessman Yury Starovoytov to a leading position in RITM OKB ZAO when the company was on the brink of collapse because of an internal crisis and disagreements between shareholders. It needed strong anti-recessionary measures. At the year of the company's 35th anniversary we asked Yury Starovoytov, Director General of RITM OKB ZAO, about how he is intended to manage business processes, to restore a distribution network and coexist with competitors.

—RITM OKB ZAO had a great potential upon its foundation. But the most part thereof was measured with technical genius of its employees. Unfortunately, few people could appreciate actual capitalization of their own developments.

But we have to live (and survive) within the period of market relations. Unfortunately we had no adequate business strategy. We paid no attention to marketing. We focused on quality of treatment and on further technical developments, but did not think about how to promote and sell our great inventions.

• WHEN I BECAME A DIRECTOR OF RITM OKB ZAO, ONLY
• TWO PERSONS AMONG ALL THE EMPLOYEES WERE EN-
• GAGED IN SALES. WHILST THERE WERE 89 ENGINEERS
• AND DEVELOPERS! ALMOST ALL THE THINGS THAT HAVE
• BEEN MADE BY THEM BECAME INAPPRECIABLE (AND
• USUALLY FREE) CONTRIBUTION TO THE SCIENTIFIC-TECH-
• NICAL PROCESS. SUCH UNIQUE DEVICE AS SCENAR
• WAS ACTUALLY PRESENTED TO THE WORLD.

There was no way out... We had a lot of 'juicy' developments but our customers knew nothing about them! However our concurrents who promote the copies of SCENAR devices under their own trademarks are well informed about SCENAR possibilities and potential benefits. Pseudo "improved" pulse devices are nothing else than old SCENAR models of previous generations that are packed in new plastic cases.

It is demonstrative that SCENAR has been being sold without any strategy for 25 years. This points to the fact that if marketing technologies are applied to the device, the company



will grow rapidly. In tens of times better. My principal mission as a director today is to spread the information about the company, full and useful information on the device among as much people as it possible.

I am sure that we will deal successfully with all the tasks that we face.

WE ARE ABSOLUTE LEADER IN DEVELOPMENT OF DEVICES WITH A NEURAL-LIKE PULSE. THIS FACT IS PROVED BY THE LARGE AMOUNT OF IMITATORS AND FOLLOWERS ALL OVER THE WORLD. WE ARE FOUNDERS. WE ARE PIONEERS. WE GAVE SCENAR TO THE WORLD. IT IS QUITE GOOD THAT WE HAVE IMITATORS, FOLLOWERS, COMPETITORS—THAT IS BETTER THAN WORSE. THEY HELP US TO THINK IN A DIFFERENT MANNER.

— Are you planning to expand into new selling markets?

— Everything old is new again. In our case everything old is formatted again. We have to admit that we almost lost our key foreign distributors because of disagreements between shareholders and legal proceedings for the trademark. The most difficult situation is in European countries. We have to build a new dealer system taking into account company's business interest. And we should do it with reference to observance of the company's business interests. Unfortunately, our intellectual property was frequently used by other persons with the purpose of making profit, for example in USA. In 2000s American joint company was incorporated. We invested our scientific resources in it. However our US



partners intentionally drove the company to bankruptcy and finally destroyed it. After that they started to sell our devices under the other name. Unfortunately, the bureau has such experience. And I am intended to use every effort to exclude such precedents in the future.

Today we sale our products in more than 30 countries: Austria, Australia, USA, Canada, Mexico, the South Korea etc. Our company is certified to comply with standards ISO 9001:2008, ISO 13485:2003 and EN ISO 13485:2012 (3 certificates) relating to development, production and sale of electrostimulators, healing blankets, diagnostic complexes for rehabilitation and other areas of medicine.

SCENAR devices and external electrodes are very popular and requested. We have already certified the devices of SCENAR series to be sold in EU countries (CE-mark), Australia and Pacific Region countries (TGA), USA (510K FDA), the South Korea (KFDA), Mexico. We were the first company in Russia who get the certificate allowing to sell medical devices in Canada. We have entered into distribution agreements for the total amount exceeding \$100 in USA—these facts constitute links in one and the same chain.

— Which flagship developments are you intended to use to surprise the market this year?

— Our work is continuous, we improve ourselves every day. Situation sometimes runs to the absurd. We have two new inventions but we are not going to patent them because of the possible leakage of technology! You should understand that every SCENAR device is not a sequenced-flow stamping but it is a personified sample assembled and adjusted manually—that is why it is so valuable. One may steal an idea. One may copy a device. And it will operate (does no harm, I am sure). However it would be only a model, a ghost. This 'toy' will never have all the options that original SCENAR devices have. Only our engineers can preset and adjust the device.

Now we are bringing to the market five new models of Home devices and one new professional device for doctors, RITMSCENAR Super Pro.

By the way, according to the US laws SCENAR can be bought by a patient only on prescription. I like this idea and think that our devices should be used and maintained by medical community. The technology, even the most ingenious, can not replace a "genuine sympathy". I am a doctor and I understand that if SCENAR is operated by a medical man—this will do a patient good.

— The market of medical devices develops rapidly. A vast number of novelties appeared and the consumer is simply showered with propositions of "devices for the health". It is fashionably and profitable to make such production. The idea of treatment to be performed without drugs has been well established mentally. And each seller is intended to have a panacea. How to get its own direction in this flow?

—We have produced the medical equipment within 35 years. Upon its foundation RITM OKB ZAO was engaged in development of medical systems and devices for diagnostics and treatment of diseases, and also systems for evaluation of a patient’s psychophysiological state. The Cosmonaut Training Center became one of the most significant customer. The organizations specialized in preparation of aviators, seamen, divers and other specialists of high risk profession use our methods. NASA astronauts use SCENAR devices during their ‘business-trips’ to orbit.

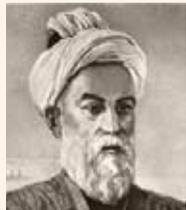
It is better to trust proved manufacturers. Actually our invention was the one which started to form a mass market of personal medical devices.

More than 80 doctors came to the conference on SCENAR therapy we conducted in Las Vegas last year. Most of them have been using SCENAR devices for a long time. They were pleased to share their SCENAR experience. Besides almost all of them sure that this success is his merit and he was the pioneer shared this unique method (actually invented in snowy Russia) with his patients, his state, his country. Although there were more than thirty years of development performed by engineers and doctors from RITM OKB ZAO.

Each of my colleagues using SCENAR in their practice has one ‘SCENAR tale’ or even more. The essence is always the same. After long, comprehensive and unsuccessful treatment SCENAR therapy leads to significant improvements.

First of all every doctor is a personality, it is natural for him or her to set ambitious goals and challenging tasks, to draw on expertise and experience. It is natural to be based on experience and knowledge that have been obtained within years of hard work. The doctors with lack of experience usually think that pharmaceutical drugs are the only way to treat any patient.

SCENAR-therapy is usually applied by experienced doctors, the professionals looking for new opportunities. I am sure that a doctor with SCENAR is pre-eminent in his profession. Why? SCENAR-technology, first of all, teaches a doctor how to put a different complexion on a disease. Then, it gives a unique opportunity to help a patient without using standard treatment schemes. SCENAR therapy is based on the innate resources of the body. SCENAR is a genuine universal therapist. ●



However, getting older, the best of us come to understanding that treatment is something more than making a right diagnosis and prescribing drugs. A good treatment requires an understanding of the fact that each patient is unique. Do you know what Avicenna wrote in his biography? “When I started to study medicine I completed reading with patients observations because a lot of methods could not be find in books”.

Irina Ershova:

Medical Investigator



—I have been working as a radiotherapist for many years. This branch of medicine deals with X-rays diagnosing various diseases. Having an interesting specialty, I started to lose my professional interest, and experienced health problems as well. I started to think about changing my career. I am still very grateful to Tamara Ivanovna Litvinova, my medical director, who took an active role in my professional life that days. She advised me to learn new technologies. That is how I discovered SCENAR. Soon I realized it was an amazing, universal, however individual method of diagnostic and therapy for a wide range of diseases in acute and chronic states. The treatment method could be used either independently or in combination with other treatment methods. It was a rehabilitation and disability prevention method. SCENAR-therapy is not only a new treatment method but a totally new philosophical concept of disease pathway.

*Graduated from Sverdlovsk State Medical Institute, “General Medicine” Faculty.
Speciality—the therapy.
Experience: 4 years—a doctor, Head of Emergency Department of City Clinical Hospital, 11 years—a radiotherapist in Sverdlovsk City Hospital.
Started SCENAR practice in Yekaterinburg in 1996.
From 2000 up to now—Chief Doctor of “SCENAR” Medical Center in Moscow.
Teacher of SCENAR-therapy;
Speaker at international conferences.*



Within the framework of conventional medicine all the patients with the same diagnosis are treated with the same methods. Take peptic ulcer, for instance, with the following treatment methods: symptomatic, pathogenic and etiological. And there are the first, the second and the third medications affecting each disease component. This therapeutic scheme will be applied to every patient, being 10, 20 or 100 in total. The treatment prescription and medical evaluation are pulled apart by the time. The main controlling unit is a doctor with his (her) experience. SCENAR-therapy is a direct contact with a patient. The procedure lasts for 30-40 minutes and I am always near the patient, being sensitive to feelings, changing the tactics, making decisions based on body responses. A unified system is created comprising a patient, a device and an operator. The controlling unit is a patient, his (her) “here and now” complaint and dynamics of this complaint. It is another method and another philosophy. Not every doctor would like to apply the method breaking the “wrote a prescription and forgot about it” habit.

But for all that, it is fair to say that there is a fair bit of doctors wishing to treat their patients in a different way...

Do You Still Remember How it All Began...

I ruined my personal health in 1995 due to a professional disease. I got acquainted with SCENAR being both a medical professional and a patient.

I lived in Yekaterinburg at that time and SCENAR seminars have been conducted by Aleksandr Revenko and Yury Gorfinkel; there I visited my first training course. Tell the truth, I have understood nothing at the first day! And then... I saw and heard Yury Gorfinkel

(one of the developers of the device prototype, the author of one of two basic methods of SCENAR-therapy—editor’s note). He made an impression on me as a scientist and a practitioner with a wealth of experience. After the impression the professional interest arose.

I discovered enormous possibilities, diagnosis and treatment combined in one device. That led doctors to take patients’ difficulties in a different way than prescribed by the canons of classical medicine. I was inspired.

I fully realized performance function of SCENAR from experience. Together with my friend Galina Reshetnikova I completed the training course. We treated each other... Honestly speaking, we acted not having a clue. They said that it was relatively easy to put SCENAR against one’s skin, and it would work. That was how we worked.

When SCENAR-Centre named after Gorfinkel had been opened in Yekaterinburg, I had been working there since the foundation; I started enquiring in greater depth about the technological process. I came through the whole cycle starting from the primary school and up to master classes. By that time, I had a specialty in physiotherapy treatment followed by the studies on acupuncture and emergency homeopathic treatment. Additional education was not out of place.

Since 2000, I have been teaching for 15 years. I teach doctors and lay users, in Russia and abroad. My level of English permits teaching without a translator.

Higher and Higher

Today I work for RITM OKB ZAO acting as a medical investigator. Constructors design new models with further setting of new software. A medical investigator is required to evaluate their efficiency. By the way, there is no such profession as the Russian nomenclature of medical offices does not include a “SCENAR therapist” specialty. It takes a long way to obtain a SCENAR therapy license. At first, one should graduate from the medical institute and receive the specialization in general medicine (or any other medicine profession). Further on, one should get another specialization in physiotherapy (the device was certified as a physiotherapeutical equipment). After that, the specialist is authorized to act as a SCENAR therapist. It explains why there are few specialized medical centres with active methods within the huge country. The know-how slowly emerges into medical practice.

Slowly but surely the business develops basing on enthusiasm and experience. There is a special department in RITM OKB ZAO dealing with SCENAR implementation in complementary medicine. There is also an order issued by the Public Health Service of the Russian Federation allowing the representatives of all medical professions to use SCENAR in their medical activities. The neurologist can use it in neuropathy treatment, the pediatrician can use the device treating kids. Nowadays there is such a professional in every hospital...

New professional device SCENAR SuperPro.

Inner Resource

I have been practicing for years and human inner resources, an unfailing potential of self-recovery and self-healing never fail to amaze me. The only thing required is the proper help! There is a lot of examples, and they can be discussed forever. Every day brings unique cases.

Once I treated a patient suffering from severe bronchial allergy. Any provocative caused asthma. Breathing cold air caused asthma. Pumping the wheel up caused a stroke. Strong animal odour caused asthma again... Bronchial allergy is an inextirpable asthma. Hormonal drugs are prescribed even with a light bronchial spasm. Hormonal drugs indeed remove inflammation, oedema and give the chance to breathe. But the long-lasting usage threatens with severe aftertrouble. The patient was unwilling to become hormone-addicted, he was searching for any other option or alternative.

No, it was not a miracle from the first touch of SCENAR to the skin. There were three medical courses of SCENAR-therapy. Now the young and healthy man lives the full life. He swims in an ice-hole, skies, a cat could sleep on his breast ... He is able to afford everything that he missed earlier.

The second case is a man in his 70-es, having a high position in a bank. An apoplectic attack resulted in disabling his leg. We had a general medicine course, something changed but there was no terrific results. One day he called and told me that he had turned his sick ankle and then it swelled and tumefied. He refused to come. I insisted (using an ultimatum demand) on his son taking the father to the clinics. When the procedure was over, the man walked to the exit having left his stick, he had used to rest on, at the table. The pain, swell and oedema disappeared, as well as the post-attack paresis!

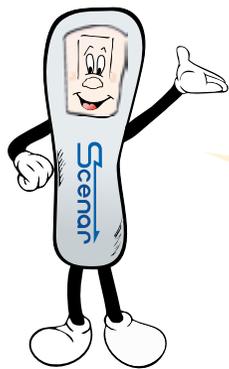
Sometimes the specialist working with SCENAR should have enough courage not only to treat a patient but also to insist on having the proper procedure in case the patient's condition recrudesces. Recrudescence is a specific SCENAR-therapy character and the shortest way to solve the problem. It happens that a long-term illness is treated with no dynamics, but as soon as there is a recrudescence, applying SCENAR contributes to a quick and impressive effect. ●



SCENAR. Makes the doctor's work easier.

- ✓ Fine tuning of the impulse impact based on organism reaction dynamics;
- ✓ Menu with "quick navigation" function;
- ✓ Automatically selects the necessary parameters;
- ✓ Two in one. Combination of manual and automatic functions;
- ✓ Special presets: stomatology, cosmetology, sport, rehabilitation.





In my early childhood I thought that I would become a cosmonaut! And I was really qualified for this job. Taganrog scientists who had brought me to life realized that I had a great future. I could work at a space station and help cosmonauts. There is no time to be ill in space! Or I could go on expeditions together with scientists or work at a polar station. Or I could accompany submariners in long-term sailings. When I have grown up I understood: all the jobs are great. And I will be useful everywhere. And I will master them all. I can be a doctor's assistant, I can help sportsmen to set records, and I can even help old people crossing the road and take care of little children. You just don't forget to call me for help and I will come through!



Scientific Achievements of OKB in 35 years

29 patents have been obtained and about 50 research works have been prepared by specialists and employees of RITM OKB ZAO over 35 years of its existence

At least 25 theses have been defended pursuant to results of scientific researches performed with devices of RITM OKB ZAO

More than 500 publications have been issued, and a part thereof was translated into foreign languages

The engineering designs created by RITM OKB ZAO were awarded with two certificates at the Moscow International Salon of Innovations and Investments



History of Making and Improvement of SCENAR

The designers of RITM OKB ZAO made 44 models of the SCENAR device for all the years of its existence. The device named as ENS—an electroneurostimulator—was a so called «fore-goer» of SCENAR. It was different from modern devices but it already provided anesthesia.

SCENAR-033 made in 1985 was the first from the famous device family. The device was quite simple in comparison with the modern models. It had two frequencies, a button to set pauses, two LEDs, an ability to set a stimulation power. However it was unequalled because of the unique SCENAR signal.

SCENAR therapy researches inspired engineers to new improvements. Each model was better than previous. The quantity of fixed frequencies was increased, the amplitude modulation was added, and the “oscillating frequency” option was invented.

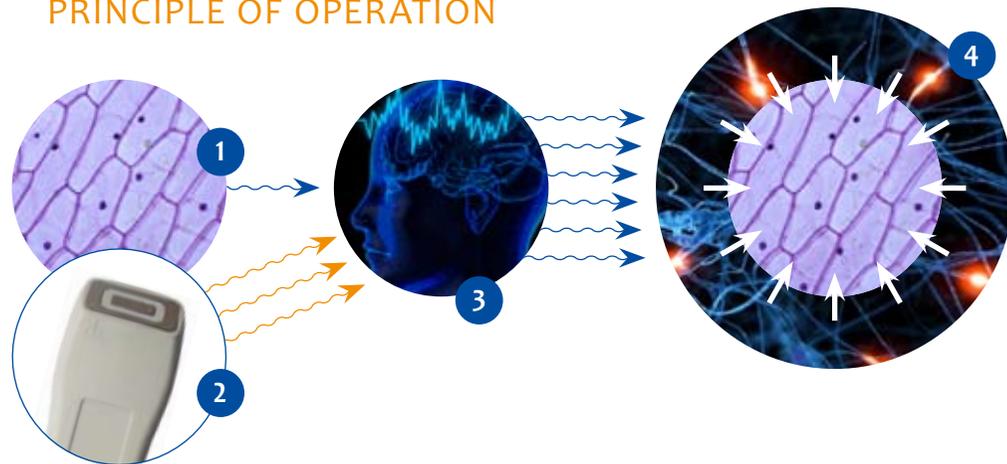
The last device modifications had functions which SCENAR of the early century “had been dreamt of”. Such functions included an option to voluntarily change a frequency from 1 up to 500 Hz, provision of presets (presettings), automatic settings and, at last, biofeedback.

The first SCENAR-033 and a peak of the developments by designers, the modern SCENAR SuperPro, differ from each other as an aeroplane by Wright brothers from a modern airliner. But, the one thing unites them—a unique SCENAR pulse that has already cured hundreds of thousands of people all over the world. ●

SCENAR—

Self-Controlled Energo-NeuroAdaptive Regulator

PRINCIPLE OF OPERATION



1 The sick cells send a signal to the brain but their capabilities are limited with damages.

2 SCENAR “helps” sick cells: the device generates a neural-like signal and attracts the “brain’s attention” to unwell organs or tissues of the organism.

3 The human brain perceives an impulse generated by SCENAR-device as a signal obtained from its own nervous system.

4 The brain activates the mechanism of restoration of an unwell place, and simultaneously irritates general regulating functions of all the organism.

1987

The first energoneurostimulator “SCENAR” has been designed and assembled under the order of the Cosmic Authority of the Union of Soviet Socialist Republics

1990

The first devices of SCENAR family are permitted to be applied in the Union of Soviet Socialist Republics upon completion of technical and clinical investigations.

2014

The monograph “Physical basis of SCENAR-therapy effectiveness” is recommended to be studied in medical institutions of higher education.

HOW DOES IT WORK

MODELS OF SCENAR DEVICES: WHY SO MANY?

The principle of SCENAR-signal stimulation is the same in all the models of the device, the only difference is a right method of application. After the SCENAR stimulation is completed, the patient’s brain provides control over a problem zone and activates the self-restoration mechanism. If the stimulation is provided under the method specified, this mechanism will be activated quickly. But even if you simply move the switched-on device on the skin, the stimulation will be effective but will take more time.

INDICATIONS

To provide anesthesia and accelerate restoration in injuries, fractures, burns, arthropathies and diseases of the locomotor system. Restoration after surgeries, diseases of the nervous, respiratory, cardiovascular systems, gastroenterology and others. But: SCENAR is not a magic stick! In particular, the device can considerably alleviate a patient’s state in cancer diseases but not to cure them.

CONTRAINDICATIONS

- SCENAR should not be used for treatment of patients with implanted electronic cardio-stimulators or other electronic devices (insulinic pumps, cochlear acoustic endoprosthesis and others).
- Alcohol or drug intoxication;
- Manifested individual intolerance of electric stimulation (extremely rare);
- Acute infectious diseases of uncleared diagnosis.

EFFECTIVENESS

Effectiveness depends on a type of the device, age of a patient, competence of an operator, nature of a disease, and also individual features of an organism. The children reacts on stimulation more quickly, older persons – more slowly. Acute pain can be relieved within the first session, chronic pains require more time, at this, a SCENAR-therapist should participate or give advices.



Sergey Pivovarov:

SCENAR cannot be mastered on impulse!

*a doctor, SCENAR-therapist:
Graduated from the Faculty of Military
Medicine of Zaporozhye State Medical Institute
and Saratov State Medical Institute;
Internship training at Northern Fleet
decorated with the Red order in Severomorsk;
Specialization in Reflexotherapy
and vertebro-neurology.
Moto: "Do not stop, go ahead, learn, implement!"
Makes a practice at SCENAR-therapy Center
in Arkhangelsk.*



—I became a SCENAR-therapist by chance. Moreover, this step was preceded by active practice as a neurologist, whose experience included active use of reflexology, vertebro-neurology, manual therapy. In 2002, according to age, the period of my service came to end. And, despite the entreaties, I left with no regrets my last place of work—the chairman of the military-medical commission of citizens liable for military service in the Arkhangelsk Region. Neither prestige nor earnings could justify in my eyes a complete lack of imaginative ability. What to say when you deal with 100 recruits a day?

Just then, one of my former co-workers (by the way, he was not a doctor) told me about SCENAR. He learned about it from his friend—a doctor of our ball hockey team “Vodnik” who bought SCENAR when they were at the training camp in Yekaterinburg, and only used it for pain relief. They came up with the idea of creating a SCENAR-center, and I was offered to be a director.

My Past and Thoughts

I agreed, though not immediately. At first I had a strong distrust of machine therapy methods as a consequence of their glut in the market and aggressive advertising tools. Each manufacturer claimed that his instrument is an absolute panacea for any disease! So, as a first step I read all the available literature about SCENAR and compared the new knowledge with my previous experience. I had a dream one time—to open a reflexology office. This is also a kind of bioinformation medicine methods as well as SCENAR therapy. However, I blew out the idea when finally understood that only the Chinese can get the desired effect in needle therapy as they are engaged in it since childhood! When I realized that I would not be able to achieve similar results I gave up the idea of a reflexology office.

But SCENAR is a different story. After reading and analyzing different articles, I realized that the device combines the capabilities of all the other methods! Think, for instance, of vertebro-neurology. It is nothing else but an intervention into the natural processes of the abnormal focus, accompanied by pain. So when we remove it we break elaborated movement pattern. Therefore, we achieve only temporary improvement of the patient's health state that does not insure him from even more serious problems in the future.

In SCENAR-therapy, everything happens physiologically. Figuratively speaking, at the right time the wound heals, the muscles relax themselves, all the joints become unlocked, and the pain goes away. My previous knowledge of vertebro-neurology and reflexology certainly helped to make the choice in favor of SCENAR. It combined all! So I gave SCENAR a green light.

Step by step

Those who went through the official opening of medical centers will understand me. They inevitably experienced all the ‘tang’s of bureaucratic barriers related to certification, licensing and documents execution. Doctor Olga Permina, who was specially sent to Arkhangelsk from Yekaterinburg, helped our newborn team to enter into the spirit of SCENAR. Today we have 7 employees in our center. Among them—an army doctor, cardiologist, neurologist, internist and two nurses. All have medical education. For all of them it was difficult to accept such SCENAR-worldview at first, because it was necessary to literally rebuild the consciousness and once again rethink everything we were taught by canonical approaches to the treatment and diagnosis.

However, each of the employees had not only basic education, but also got some additional specialization. Yet our clinicians overcome complexity. Last September our center celebrated its second anniversary. Now I think of not external, not the front side of the day but my internal state. I asked myself: what is doctor's point in choosing any speciality, no matter whether he is a surgeon or cardiologist? The final purpose is always to help a patient.

We were taught to do it with medication that does not always help. SCENAR gives a result in the treatment of any disease, and therefore, we all feel a deep sense of professional satisfaction. A dream that we had in the academic school came true by virtue of SCENAR. Definitely, I am not just satisfied. I am happy. We are all happy.

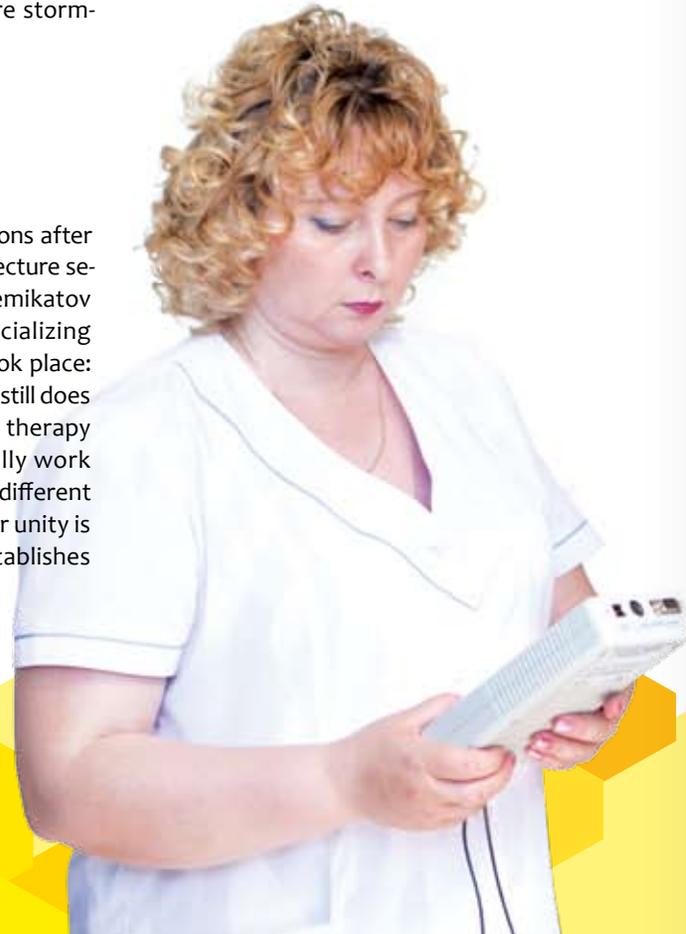
Advertising is an engine of progress. Isn't it?

80% of our patients come to the Center as a result of rumors spread through “word of mouths”. Sometimes I think that dentists are lucky as they may hang a “Dentist” sign and there will be no problem! But how can we explain in a few words what is the basis of non-drug method of SCENAR-therapy? We are not rich enough to buy broadcast time or newspaper strips.

However, we decided to conduct a free diagnosis at chemist's shops. When a person gets a result, there arises a question: what to do? A person decides for himself either to buy some medicine, or to try to be treated by SCENAR, which we immediately giving full information about and that is on the shelves of the same chemist's shop. So the great quantity of clients were storming our Centre.

Thoughts aloud

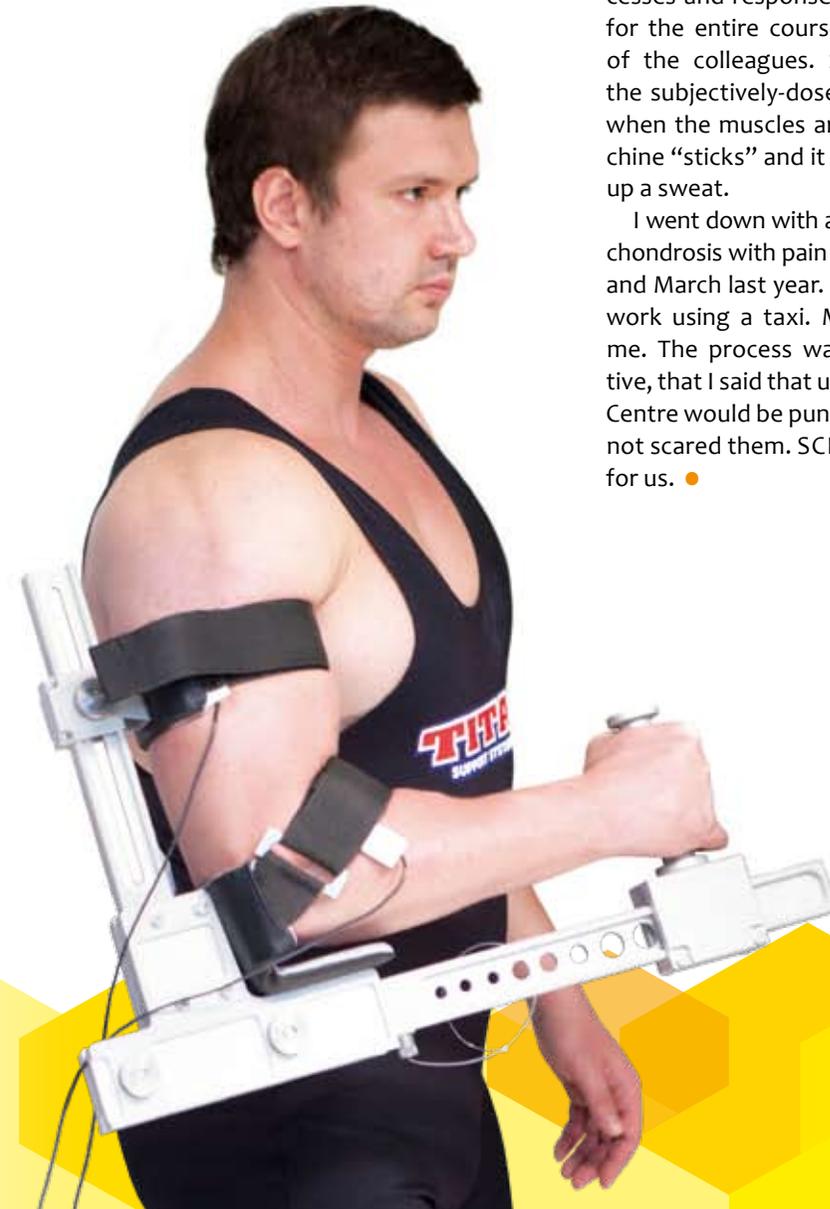
One of the most striking impressions after the trip to St. Petersburg, where lecture series of a visiting doctor Joseph Semikatov (famous SCENAR therapist specializing in reproductive dysfunctions) took place: such a huge city like St. Petersburg still does not have a fundamental SCENAR therapy center! SCENAR therapists usually work in medical rooms spread around different clinics and hospitals. However our unity is our strength, and our Centre establishes a different status.



My children (daughter and son, who graduated from the Military Medical Academy) respect the fact that I keep on the road, always study and participate in conferences. They understand and accept the fact that you will not master SCENAR quickly. Unfortunately, I cannot say this about all physiotherapists I faced. Vice versa many of them refuse the idea after one or two lectures, saying that it is not their way. It is clear, they are used to working differently: have a look at the diagnosis, turn the device on, instruct the nurse—and you are free. Approximately the same situation is with doctors in clinics: they put on medication, a patient takes the assigned medicine, and nobody knows what is happening with him during the course. We communicate with our patients every day

for an hour, maybe more, tracking processes and responses on the procedures for the entire course. It frightens many of the colleagues. Still, while applying the subjectively-dosed mode, it happens when the muscles are tense and the machine “sticks” and it is necessary to work up a sweat.

I went down with a nasty form of osteochondrosis with pain syndrom in February and March last year. I had to come to the work using a taxi. My colleagues cured me. The process was long bus so effective, that I said that using medicines in our Centre would be punished. However, I did not scared them. SCENAR is number one for us. ●



Aleksandr Tarakanov:

SCENAR made its way in Emergency Medicine by taking immediate effect

*Professor,
Member of Emergency
Doctors Association.
Head of Clinical
Pharmacology
Department of Emergency
Hospital, Deputy
director for medical
trials of RITM OKB ZAO.
Specialist in emergency
medicine and clinical
pharmacology,
the author of more
than 170 scientific
publications,
three inventions.
Author of the manual
for emergency doctors.*



A reasonable combination

Today I am working at the emergency hospital-based department. This is a thousand-bed hospital with the departments of toxicology, ambustial and purulent surgery, traumatology, therapeutics, cardiology, gynecology, neuro-reanimation, neuro-trauma.

Our hospital admit from 100 to 300 patients per day. Specialists from the Department of clinical pharmacology advice and help in treatment of patients suffering from serious diseases. Seven physicians from our hospital use SCENAR in their practice.

When I started to use SCENAR my colleagues were quite easy on my whim because I was already a professor and Doctor of Medical Science. They started to take it seriously only after a range of small miracles like a reducing of an edema, pain relief, healed decubitus.

At the first time, SCENAR made his way in Emergency Hospital by showing immediate results. However a little bit later we started to use the device working with serious patients with spinal cord breakage and trophic disorders. At first we started to treat three of them. These patients were at hospital for more than a year. They were not able to move arms and legs and suffered from disorders of pelvic organs and pressure ulcers of different sizes. In fact, they were doomed. They would be paralyzed for life or worse. But even in these cases, we achieved excellent results! It is much more effective to treat patients immediately after the injury. Such our patients have already started to walk.

Of course, we had to fight a lot with the paradoxes of the medical system, which is prone to extreme values: either pharmacology, or non-pharmacology. It took a very long time to “unite” SCENAR with orthodox medicine.

In case of heavy fast advancing infections, blood and plasma losses, pronounced pain syndromes, cardiogenic shock it is impossible to get along just with SCENAR. So, we opted for a judicious combination of SCENAR technology and medicine. We met a great challenge to show statistically the results of conventional treatment, of its combination with SCENAR and of SCENAR therapy itself. We study biochemistry, immunology and so forth.

After all, I am an orthodox clinical pharmacologist, the specialist who deals with medicinal drugs. However, when I saw the results, I reached a turning point! During my practice, I saw many situations where just drugs could do nothing.

Like many phisytians at a certain age I began to ‘burnout’! But when I saw the results, I got a second wind. The only thing I regret about is that I started too late. After all, I want to do more. But life is short...



✦ PERSONAL EXPERIENCE / Aleksandr Tarakanov:

From disbelief to understanding

I cannot say I “discovered” SCENAR at once. At least two aspects coincide: a sense of inner “burnout” that is typical for a doctor with a great experience and acquaintance with the people who showed me something new. Boris Zaydiner was the one who said the word ‘SCENAR’ to me for the first time. We are old friends, from our student years. He has been dealing with SCENAR for 20 years.

He took me to Taganrog and acquainted with Yakov Grinberg. That day we were talking for more than an hour. When we met for the second time he gave me the SCENAR. I joined RITM OKB ZAO in 1999. Three years later, we have already created a department of medical trials, a virtual research institute, which I headed.

What else affected my decision to to work with the device? Perhaps the fact that ‘Why?’ is my favorite question.

We pursue several approaches simultaneously. We began to treat insomnia of emergency doctors (professional sleep deprivation affects up to 60% of doctors!). The first group (40 people) was treated with drugs, the second group we treated with SCENAR.

We studied some of the biochemical correlates during the action of SCENAR in various pathological processes and observed patients, who we treated with SCENAR from hypertensive crises, in such group we gathered twenty people. Studying intimate biochemical mechanisms made us sure that SCENAR really helps.

Gradually people started to believe in SCENAR. It is especially difficult to persuade people from academic community, as they are professionals. They know a lot, that is why they do not believe. Their view is understandable because they are PhDs, doctors of higher category who knows everything in their professional sphere. And suddenly somebody demonstrate them a plain looking device...

The conference we attend to promote SCENAR attract diverse audience. New people are sometimes aggressive. Some of them heard about SCENAR before, some did not. They are absolutely sure that they are right. On one conference on Emergency medicine I demonstrated the efficiency of SCENAR treating a professional scientist with back pain. The audience of 300 people were watching this show, and it was very enlightening.



SCENAR made its way in Emergency Hospital by showing of immediate results

Daily necessity

I never go anywhere without SCENAR. This policy helped me as well as other people many times. Once I even saved my neighbor's life. She got cardiogenic shock. I treated her with SCENAR. Therefore, we held out up to the moment when ambulance came.

Once I was going to visit the chief physician of Moscow Emergency Medical Service, professor Irkis. Going down to the subway I saw a crowd. There was a girl approximately 13-14 years old with her mom. The girl was unconscious, in a sweat, pale and with almost blue lips. All around them were giving advices. When I said that I am a doctor the crowd dispersed. I treated her with SCENAR for about 15 minutes. She returned to consciousness and her lips became pink. So we said goodbye and wished to be careful. Sometimes such situations take place. They are memorable and give emotional support.

I believe that everybody should have a small device for his own reassurance. I know people who are not doctors and who are more than 80 years old. They neither go for a walk without SCENAR, nor stay home alone. Because they realized what it was. Sounds banal, but it is really a clinic and an “ambulance” in the pocket. ●



Yury Perfiliev:

Candidate
of Medical Science
and Assistant
Professor
at the Department
of Pediatrics,
Rostov State Medical
University (RSMU)

I realized that I had no other choice than to get to know SCENAR better



—Curious to relate, but for the first time I met SCENAR thousands kilometers away from Taganrog in the Republic of Guinea, where in 1997–1998 I taught Childhood Diseases at Conakry State University and treated children.

Many Russian specialists: mathematicians, physicists, chemists, biologists and doctors worked at the university those years.

ONE DAY, AN ENGINEER FROM TAGANROG RADIO ENGINEERING INSTITUTE (NOW A PART OF SOUTHERN FEDERAL UNIVERSITY) SHOWED ME A FLYER WITH A PHOTOGRAPH OF SEVERAL INSTRUMENTS UNKNOWN TO ME. HE SAID THAT HIS COLLEAGUES FROM OTHER FACULTIES HAD CREATED A DEVICE CAN BE APPLIED FOR TREATMENT OF ALMOST ANY DISEASES.

My background at that time included a classical medical education, a Candidate's thesis, a more than five years' work experience in Emergency Medicine Department and then in Clinical Pharmacology Department. Honestly, any stories about

a “healing device” were of zero interest to me. It was like someone enthusiastically telling a physicist about the eternal engine.

On arrival to Russia two years later, I found out that a friend of mine, whose daughter was about to graduate from Medical University at that time, had purchased some device, which successfully treated many diseases. I must say that the friend was a well-off woman, and the purchase was very expensive (the second half of the 90s was a time of almost total poverty in Russia).

As I went on working as a lecturer at the Childhood Diseases Department of the Faculty of Advanced Training for physicians, I forgot about the device entirely. Until a fairly clever girl, quite passionate about pediatrics, joined our department for an internship.

One day she brought a device she bought for an unthinkable sum of money she borrowed on her friends. As you might have guessed, that was SCENAR. Slightly stumbled at her adequacy, I, nevertheless, began to study the user manual. “SCENAR therapy” and “SCENAR expertise” collected papers followed. It was then that I remembered the engineer from Taganrog as well as the daughter of my friend...

I REALIZED THAT I HAD NO OTHER CHOICE THAN TO GET TO KNOW SCENAR BETTER. “MAYBE THE OTHERS CAN DO THIS, AND I WILL FAIL?” I THOUGHT. THE ANSWER TO THIS QUESTION COULD ONLY BE FOUND THROUGH LEARNING FROM THOSE INVOLVED IN SCENAR THERAPY ON A DAILY BASIS.

doctors, academics, and researchers. At the conference I met my friend and colleague Alexander Tarakanov, with whom I had once worked at the Department of Clinical Pharmacology. It turned out that he is the Deputy director for medical trials in RITM OKB ZAO, where SCENAR was actually being developed.

At the same time I was able to talk with Jacob Grinberg, who was then general director of RITM OKB ZAO. He took interest in my proposal to study the effectiveness of SCENAR in various fields of pediatrics and gave his go-ahead for that. On the same day I met Yury Starovoytov, the acting head of RITM OKB ZAO. The acquaintance eventually turned into a close friendship.

That is how I met SCENAR. For many years we have been together: at work, at home, on vacation, at the patient's side. And I think we are pleased with each other... ●

I THOUGHT IT WAS JUST A WHIM, AN EXPENSIVE TOY, BOUGHT BY LOVING PARENTS FOR THEIR BELOVED CHILD.



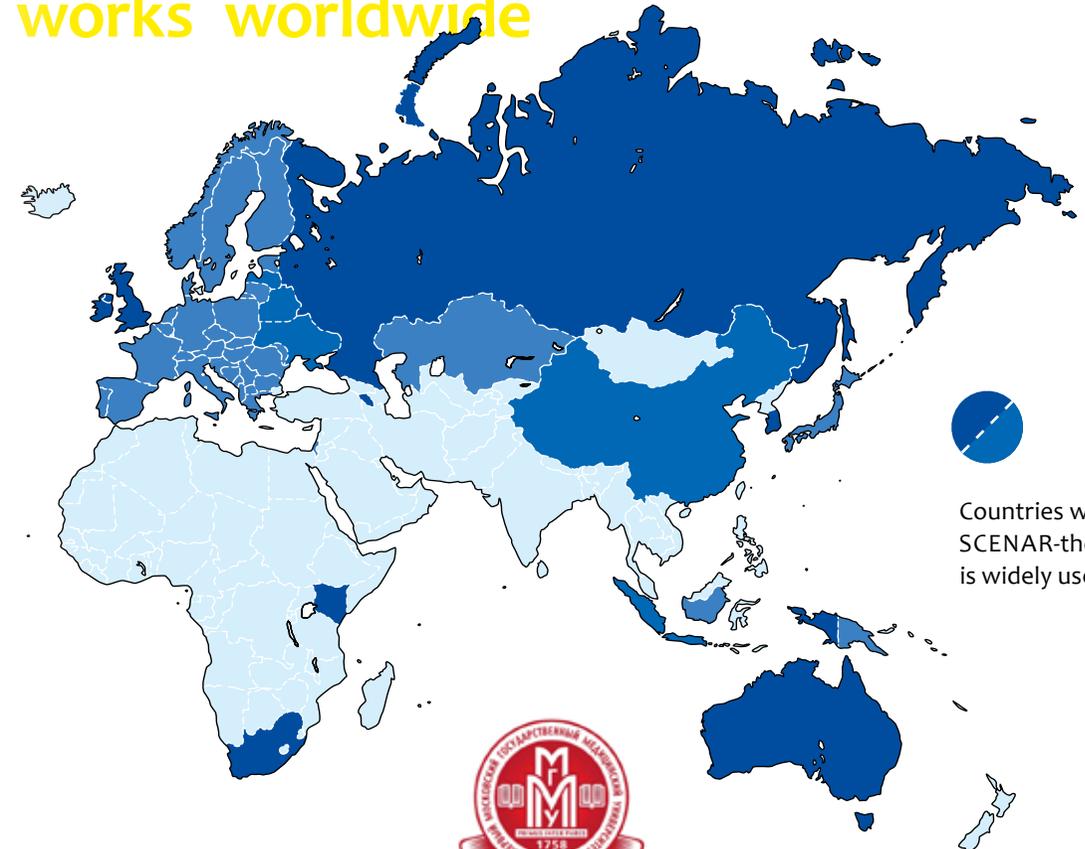
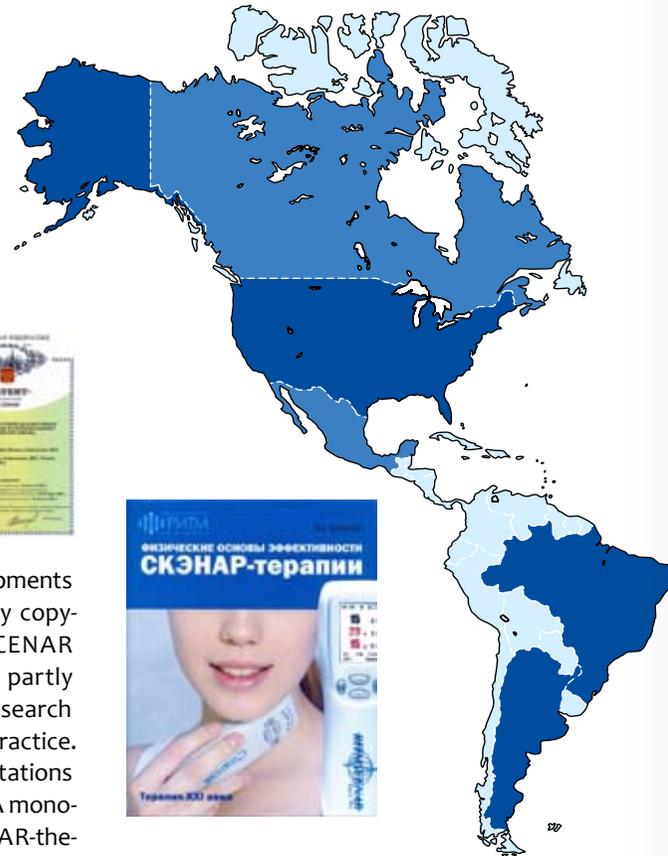
SCENAR Gains International Recognition Invented in USSR — works worldwide



The novelty of the scientific developments of RITM OKB ZAO is confirmed by copyright certificates and patents. SCENAR devices are constantly improved, partly as a result of steadily ongoing research work, partly as a result of clinical practice. A lot of scientific papers and dissertations were written on SCENAR therapy. A monograph “Physical principles of SCENAR-therapy effectiveness” by Jacob Grinberg, one of the leading SCENAR developers was issued in 2014.



A book by Yury Starovoytov “Treat yourself at Home” has been published for the successful use of SCENAR.



Countries where SCENAR-therapy is widely used



CLINICAL TRIALS

The first clinical trials of SCENAR devices were conducted in 1988 by the decision of the Commission on New Medical Technologies of the USSR Ministry of Health. The trials confirmed safety and effectiveness of the devices, and since the beginning of 1990-s they have been licensed for use in clinical practice.

In 1995–1996, by the initiative of RITM OKB ZAO, SCENAR devices were tested at studied in following departments of Sechenov First Moscow State Medical University: Clinic of Nervous Diseases, Surgical Faculty Clinic, Department for the Study of reparative processes in the skin, the Department of Traumatology, the Department of Microsurgery of Scientific Center of Surgery of Russian Academy of Medical Sciences, the Department of Pathophysiology. The devices were also used and tested on individual patients with various forms of pathology.

SCENAR devices have been certified to meet the most stringent international and national medical standards.

A wide range of SCENAR devices for professional and home use



Michael Unakafov, Ph.D., a chief developer of SCENAR

SCENAR makes the doctor's work easier!



—Professional device RITMSCENAR Super Pro is on the top of the range of our devices today. It substantiates the most effective groundworks of medical supervisors and engineers of RITM OKB ZAO made in the past three years. All of the innovations implemented in the device are intended to improve the effectiveness of SCENAR therapy. For the inexperienced user the new device has the factory presets (special operating modes), which allows even those doctors who are making their first steps in SCENAR therapy to reach high effectiveness of treatment. It is, first of all, about the doctors who have not yet fully mastered the techniques and methods of digital subjectively-dosed mode.

SCENAR Super PRO has a double biofeedback mode. This is the key unique feature of the device, adapting the influence to the parameters of patient body's response. The light version of this feature is available in RITMSCENAR Home Expert and RITMSCENAR Home Success, the highest models of Home Devices.

Digital techniques allow patients to use SCENAR on their own (without professional help), having no fear of so-called

Why does the doctor need SCENAR Super PRO:

1. The standard treatment combined with SCENAR therapy are always better for the quality of life purposes. SCENAR is indicated for the situations when standard treatment is ineffective.
2. SCENAR service is a new offer to clients of any medical clinic.
3. Application of the device in medical practice will allow carrying out research, making new discoveries, getting the opportunity for professional development.
4. A SCENAR therapist is a SUPER DOCTOR. It helps to improve reputation in the professional community and among patients.
5. Application of the device in clinical practice and its promotion of its revitalizing action in the daily life is an additional and stable source of income, without a global education.



“SCENAR exacerbations”, that is symptomatic phenomena (increased pain and other symptoms), a kind of body's response to the initiation of treatment. In fact, this is a part of recovery process when the body points out what is worth paying attention to at the moment.

For more than ten years professional SCENAR devices were being produced with black and white screens. Now SCENAR Super PRO has got a bright, high-contrast color display. We have also managed to improve user interface, making the device even more ergonomic and convenient. Since touch screens are trending today, so we are working hard to introduce this feature into a new generation of devices.

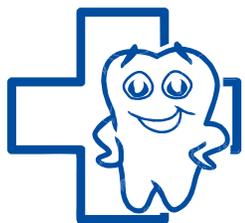
Current SCENAR models undergo multilayer testing and certification. Everything is tested, from the degree of the user protection to toxicological safety of all the materials used.

We are continuously introducing new versions of the device and work on the broadening of its performance options. It is safe enough to say that the quality and high effectiveness of our developments has been confirmed not only by clinical trials, but also meets the most stringent certification standards. ●



The uniqueness of the SCENAR Super PRO:

1. Two in one. Combination of manual and automatic modes.
2. The key unique feature is dual biofeedback mode. The device automatically selects the necessary stimulation parameters for the treatment of acute states.
3. Easy to use. The device has a user-friendly quick navigation menu.
4. The device has a number of special preset modes that can be applied in cosmetology, before and after athletic loads, in rehabilitation programs, in procedures for the elimination of myofascial pain (when used with conductive “gloves” electrodes).



Orthodontist, orthopedist of the highest category, Doctor of Medical Science, Professor, Head of the Department of Orthodontics of the St. Petersburg Institute for Postgraduate Dental Education;
Professor at the Department of Pediatric Dentistry with a course of oral and maxillofacial surgery at Pavlov First St. Petersburg State Medical University;
Professor at the Department of Operative Dentistry and Maxillofacial Surgery at St. Petersburg State University;
Professor of Dentistry at Yaroslav-the-Wise Novgorod State University.
Professor Fadeev graduated from the Faculty of Dentistry, Pavlov First St. Petersburg State Medical University.
1995 he defended his Candidate's dissertation, and in 2001 he defended his Doctoral dissertation "Diagnostics, planning and forecasting results of the treatment of adult patients with dentoalveolar anomalies".
From January 2006 to March 2014 he was Rector of the St. Petersburg Institute for Postgraduate Dental Education (SPbINSTOM).
Professor Fadeev is the author over 270 scientific publications and five textbooks, co-author of the textbook "Prosthetic dentistry. Faculty Course", as well as "National guidelines for pediatric dentistry", and 23 patents for inventions. He is the Chairman of the Scientific Society of Dentists in St. Petersburg. He is also Chief Specialist in Dentistry in "Romanovsky Medical-legal Center" in St. Petersburg, practitioner.

PERSONAL EXPERIENCE /

Roman Fadeev:

We will expand the field of SCENAR application

—The RITMSCENAR Super Pro device has been being used in our clinic for a bit above two months. Now all of our practitioners use the device.

Currently, the most popular sphere for its application is lowering the tone of facial muscles, muscle relaxation and pain relief.

The human face is full of muscles, and in a number of situations they are too tight. Bruxism (muscle spasm), which manifests itself in teeth grinding and facial muscles hypertonia is a common example.

Such disorders are accompanied by pain and other unpleasant sensations; they are just shot at muscle relaxation.

Most of the patients of our clinic suffer from temporomandibular disorder and masticatory dysfunction. For the most part (75%) the patients are female, aged from 35 to 65.

Doctors use a variety of methods: drugs, reflexology and physiotherapy to treat the problem of masticatory muscles hypertonus. Now we have a new opportunity to use SCENAR to relax the facial muscles. Subjectively, patients have reported



ELECTROMYOGRAPHY IS A METHOD OF HUMAN SKELETAL MUSCLES INVESTIGATING. IN DENTISTRY IT MEASURES CHANGES IN THE FUNCTIONAL STATE OF THE MUSCLES AT REST AND UNDER DIFFERENT LOADS. THIS METHOD ALLOWS YOU TO OBJECTIVELY ASSESS THE SEVERITY OF THE PATHOLOGICAL PROCESS IN PROSTHETIC DENTISTRY, IN PAIN SYNDROMES OF MAXILLOFACIAL AND THE ADJACENT AREAS, ETC.

muscle relaxation and pain relief, with the amplitude of mouth opening increasing. When used as a part of complex treatment, SCENAR accelerates treatment considerably. The device is used individually (as monotherapy) or together with muscle relaxants, depending on the diagnosis and the severity of the case.

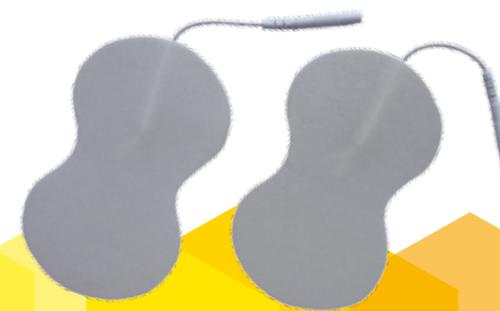
About 15–20 patients have already tried the beneficial effects of SCENAR.

The results have convinced us to expand the scope of SCENAR in orthodontics and dentistry. We will continue its implementation to try other methods of exposure. Today, we are also becoming familiar with the experience of our foreign colleagues who practice SCENAR therapy. I think that the device may have a much more facilities than the range we use today.

Was I sceptical about SCENAR when i started to use it? Of course I was, however we should not consider only patients' and doctors' subjective feelings. We have an electromyography, which confirms that SCENAR treatment is effective.

Therefore I would like to recall one historical anecdote. A visitor to Niels Bohr's country cottage, noticing a horseshoe hanging on the doors asked him: 'Can it be true that you, of all people, believe it will bring you luck?' 'Of course not,' replied Bohr, 'but I understand it brings you luck whether you believe it or not!'

So is the case with SCENAR: if EMG confirms the effectiveness of the device, how can one doubt? ●





I have learned that I have a huge family... Despite the fact that I can help everybody I am not the only one useful device! My friends and relatives who were also born in the RITM OKB ZAO in the town of Taganrog which is in the south of Russia are real masters. Everyone does his own job. The scientists will tell you in detail about the areas of their expertise. And I will help them. But the main things which make us a family are safety and quality. It's our family trait and pride.

The Energy of Our Body

A **MYOGRAPH** IS AN APPARATUS USED TO STUDY BIOELECTRICAL ACTIVITY OF MUSCLES AND NERVES. IT CAN HELP IDENTIFY THE CAUSES OF SPASMS, PARALYSES, AND PARESSES.



MYOGRAPHY (also known as *electromyography*, further—EMG) IS A DIAGNOSTIC MEDICINE TECHNIQUE FOR RECORDING THE ELECTRICAL ACTIVITY PRODUCED BY MUSCLES AT REST AND DURING CONTRACTION. IN MANY DISEASES, AN EMG IS USED IN ORDER TO VERIFY THE EFFECTIVENESS OF THE TREATMENT AND SEE IF THE PATIENT'S PHYSICAL STATE IMPROVES.

In the 19th century, the burst of scientific interest in physiology of a living organism resulted in a possibility for the Homo sapiens to measure the electrical activity of human muscles. That happened due to some great achievements and discoveries such as verification of the Law of Conservation of Energy which clarified the role of the energy in a human body that had been a mystery before. Significant results were also obtained due to development of the electrical stimulation techniques and graphic recording of the functions of human body organs. Among other discoveries, such device as myograph was designed.

Human muscles consist of many cells called muscle fibers. Any action (either when typing these words using the keyboard or hitting the ball in a soccer game) requires a complex coordinated movement of a set of muscles and precise control over their contraction via a myriad of electrical impulses in the nerves and muscles.

Every muscle fiber contracts due to the electrochemical reactions occurring in it. This is when an electric potential appears. Whereas it is very weak, a special device called myograph can amplify the electric potential and display it as a curve on the computer monitor. Having deciphered the result, the doctor understands which pathological changes take place in the muscles and nerves.



The hardware-software complex “MIOKOM” is designed by ZAO “OKB “RITM” in cooperation with the scientists of the North-Western State Medical University named after I. I. Mechnikov. The device is to be applied in prosthetic dentistry for studying the electrical activity of human muscles.

—Currently, electric myography is increasingly used in everyday medical practice,— says Boris Khlabin, the company's leading developer of MIOKOM products.— Myographs have long been manufactured in Russia as well as abroad. As a rule, they are quite versatile and expensive devices with a great number of functions which are often of no use.

A new practical dentistry oriented device has no unnecessary functions. Moreover, its cost is reduced. This software has been developed specifically for techniques and tasks of dental orthopaedics. That is how MIOKOM appeared.

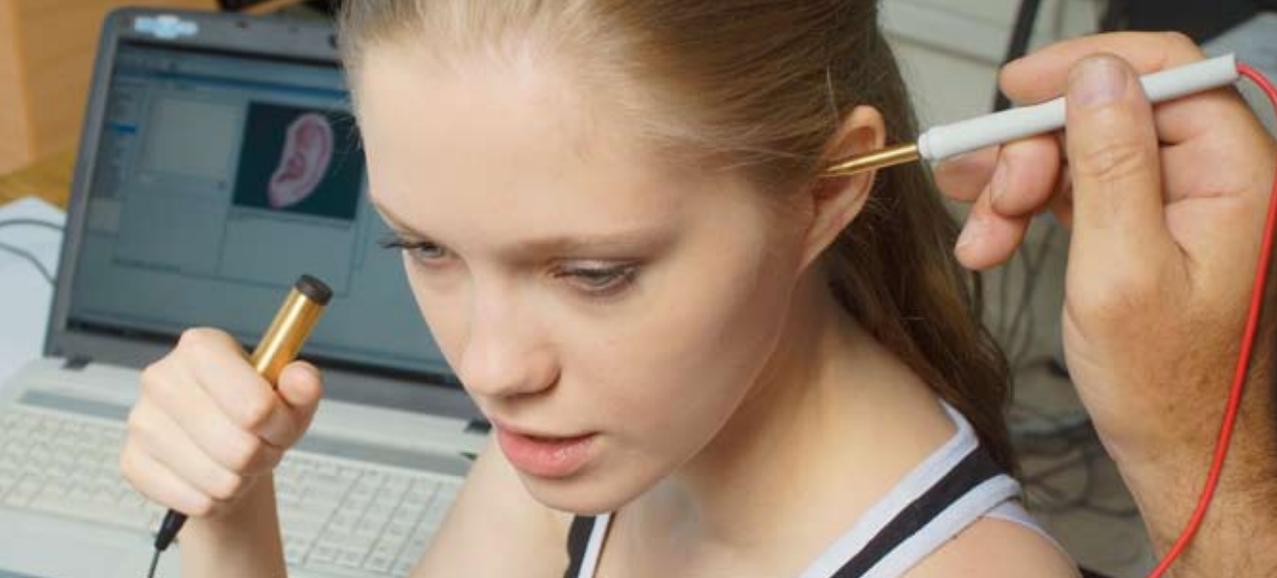
According to Tatyana Lopushanskaya, Associate Professor of Prosthetic Dentistry at the I. I. Mechnikov North-Western State Medical University, the cooperation of scientists and medical engineers has yielded good results.

—We use MIOKOM at our department. It can be used to evaluate the functional state of the masticatory muscles. The employees of RITM OKB ZAO specially redesigned and improved the device with respect to our objectives and needs. For many years we have been in cooperation with our partners when developing the myograph. Their engineers are in charge of the technical aspect and our department is responsible for the clinical part of the project. As a result, we have designed the device perfected for the needs of dentists. It is much more effective than its imported analogues.

Our department has developed and patented a chewing efficiency test, and employees of RITM OKB ZAO has designed the software for practical implementation of the test by means of the myograph. This chewing efficiency test allows the practitioner to determine the rate of useful work of the muscles during chewing and reveal pathological phenomenology. All indicators are estimated in points. This simplifies and improves the diagnosis accuracy of the results.

In 2011, the hardware-software complex “MIOKOM” passed certification tests and received permits for its application in medical institutions in Russia. ●





I hear, therefore I am

AUDIOMETRY (from the Latin “hear and measure”) IS A TECHNIQUE THAT HELPS TO OBJECTIVELY ASSESS HEARING ACUITY AND POSSIBLE DISORDERS AS WELL AS THE DEGREE OF PERCEPTION OF DIFFERENT SOUNDS. IT MAINLY BOILS DOWN TO THE DETERMINATION OF SOUNDS OF DIFFERENT FREQUENCIES PERCEPTION THRESHOLD, I. E. TO THE DETERMINATION OF THE LOWEST INTENSITY LEVEL AT WHICH A SOUND BECOMES AUDIBLE

The serial production of audiometers for home use is about to be launched in Taganrog. They have no equals. According to RITM OKB ZAO, its own developments in the field of audiometry have a good chance to take a worthy place in the market of domestic medical technology.

What is a “hearing disorder”? It is a serious social and medical problem which may mean a large number of different diseases. Each of them reduces the auditory perception in their own way. According to a research of the World Health Organization (WHO), by 2020 the number of people with hearing disorders will increase by 30% to reach 9% of the total population of the globe. This accounts for the growing stress laid on the hearing loss early diagnosis.

Today RITM OKB ZAO audiometric developments are represented by devices of three types: screening, diagnostic and clinical audiometers. They differ in terms of functionality.



ECHO-C01

screening audiometer is the simplest device in the line of professional models designed for mass control of hearing for a lot of people at a time. It is used in kindergartens, schools, businesses and clinics. Hearing assessment is performed by air conduction. The device operates in two modes: manual and automatic. The signals, normalized in intensity and frequency, are served in the headphones. And then, on the basis of a patient’s responses, the curve characterizing the level of hearing loss is constructed.



ECHO-D01

diagnostic audiometer occupies the next position. It is a little more sophisticated. It is used in hospitals and clinics. In addition to all the screening functions the audiometer is capable of measuring the hearing by bone conduction. It has a number of built-in above-threshold tests that evaluate not only the level of hearing loss, but also its possible causes. It allows carrying out speech audiometry, in which the speech intelligibility threshold is determined. With this method of study voice messages are fed to the headphones of the patient. According to the patient’s response and the number of recognized words the ability to recognize words is analyzed.



ECHO K01

clinical audiometer is the most complex model. It is a two-channel, air and bone conduction, portable device. It has a range of advanced features that allow you to make a detailed assessment of hearing. It is used for full hearing tests in specialized clinics and audiology centers. The process of such a measurement may take dozens of minutes, sometimes even hours.





— There is every reason to believe that our professional audiometers will replace their foreign counterparts, says Vyacheslav Kapustin, RITM OKB senior development engineer for audiometric equipment. — The reason is clear: they are by no means inferior in quality, while much cheaper than their foreign counterparts. In addition, the system of service and warranty repair works well, because everything you need is available in Russia..

Hearing assessment is possible not only in standard range (from 125 Hz to 8 kHz) but in wider one (from 125 Hz to 16 kHz). It is equipped with extra inputs for supplying signals from external acoustic media (tape recorder, computer). Prepared and recorded in advance word lists can be used. The use of word lists, unified in timbre, volume, diction and other parameters, greatly facilitates the work of the doctor and has a positive impact on the accuracy of hearing tests.

— Our device is not only as good as its foreign analogues, but also has a unique feature. Moreover, there is one consumer quality that clearly distinguishes it from all the others, says Vyacheslav Kapustin, development engineer. It is a two-way hybrid audiometer-computer connection. Thus, it is possible not only to immediately save the results of the research in the computer, but also to manage the process from the computer keyboard without the use of the device controls. All measurement parameters are simultaneously monitored, and data are stored.

The device is small and portable, it weights only 500 grams. This is, indeed, an important advantage. Especially when using the audiometer, for example, in remote parts of the country where medical facilities are not equipped with professional audiological equipment.

Each coming year sees a growing number of people willing to carry out regular tests of their own hearing without visiting the clinic. Trying to meet this demand, the engineers of RITM OKB ZAO have developed an audiometer for home use, so far unparalleled in the medical equipment market.



— It is an easy-to-use screening device, says Vyacheslav Kapustin. — No special training is required to use it, so it is available to anyone and can be used at home. It is designed for all those concerned about their hearing and needing to check it periodically and frequently. They are the people in the process of rehabilitation after diseases, those working in industries that are hazardous to hearing, or live in zones of intensive auditory radiation. This device has not yet been commercialized, but we hope that this will happen in the nearest future.

A device for the subjective tympanophonia analysis is another unprecedented engineering development by RITM OKB ZAO.

Tympanophonia is one of the most common complaints with which patients go to ENT doctors. Most often it is the elderly. Most people describe it as ringing, hissing, humming, squeaking or rattle in your ears or head, although there is no external source of noise. Tinnitus can be a symptom of various diseases, from inflammatory processes in the ear to cerebral arteriosclerosis. The evaluation of these subjective sensations will be subjective as well, ranging from “light” to “catastrophic” according to its impact on the quality of human life.

The device developed by OKB enables to simplify and structure the complaint. Its functioning is based on the following principle: the patient is exposed to different noise samples, which characteristics can be adjusted according to the patient’s response. Of these, she/he selects the most appropriate: pulsating, low-frequency, intense, etc. On this basis the doctor constructs a “portrait” of the subjective noise, which provides for the diagnosis the probable causes identification.

— Russian consumers have appreciated our products; we are now working hard to meet the growing demand. The orders’ geography extends to the whole of Russia, as well as the neighboring countries — says Vyacheslav Kapustin. — Today, the company has every reason to believe that in the near future our developments will get mass distribution, so — we must be prepared to cope with the increasing number of orders. ●



DURING THE DAY, RESIDENTS OF LARGE CITIES HAVE TO WITHSTAND 65–70 DB AND MORE NOISE LOADS. PHYSICIANS BELIEVE THAT THE NOISE OF 60–80 DB CAUSES DISORDERS OF THE AUTONOMIC NERVOUS SYSTEM IN HUMANS, AND 90–110 DB NOISES CAUSE HEARING LOSS. A 115–120 DB NOISE IS THE “PAIN THRESHOLD”, WHEN THE SOUND ITSELF IS NOT HEARD, BUT PAIN IN THE EARS IS FELT. AT 140–145 DB NOISE LEVEL EARDRUMS CAN BURST. 150 DB NOISES ARE UNBEARABLE, 180 DB NOISES ARE DEADLY TO HUMANS.



By body language

The pilot who flew the Germanwings plane at the moment of Airbus crash into the French Alps suffered from depression and hid his medical condition from employers and inspection authorities...

As a result of nuclear disaster at the Fukushima I Nuclear Power Plant in spring of 2011 vast areas were polluted by radioactive contaminants. Tens thousands of people were evacuated from their houses and exclusion zone was established around the reactor...

In 2014 on Serpukhovsko-Timiryazevskaya line of Moscow Underground Railroad the train driver fell asleep, that's why the train overshot the stop mark at the Mendeleyevskaya station by 9 meter. The train stopped only after the emergency brake system came into action. Than to that the train could avoid head-on collision...

What is behind all these accidents? According to investigation results the reason of all these disasters is a human factor.

A human being is the most perfect and complicated among all known systems. However, unfortunately its unique character does not exclude defects. Not always psychological and psychophysiological features of a human being correspond with the difficulty level of the tasks completed by him. Emotional tension, depressed mood, soreness, illness— everything can lead to impaired concentration, superexcitation or vice versa to the mental block. Which means that the risk of mistakes that might be committed at the expense of dozen of human lives is increasing multiple times.

It is possible to give the full and comprehensive assessment of the man's psychoemotional state with the help of the device named Stabilan-1, a computerized force plate with biological feedback, developed by RITM OKB ZAO, Taganrog. The stabilometrical complex is almost indispensable for diagnosis of diseases of power station operators, pilots, machinists and representatives of other professions, on whose actions human lives depend.

—The express-diagnostics lasts two minutes. During this time we can assess any affect on a man caused by stress, physical activity or unhealthy work. From how a man keeps erect posture it will become apparent, if he is fine or not,—says Andrey Sliva, Head of Computerized Posturography Research Area of RITM OKB ZAO.

ACCORDING TO INTERNATIONAL LABOUR ORGANIZATION (ILO) AND WORLD HEALTH ORGANIZATION (WHO) THERE ARE OVER 150 CLASSES OF PROFESSIONAL RISKS AND ABOUT 1000 OF THEIR KINDS, WHICH MAY BE INDEED DANGEROUS FOR 2000 VARIOUS PROFESSIONS. HOWEVER IT IS NOT THE ENTIRE STORY...



—Everything is bumped into psychological unreadiness for the large-scale implementation of this technique,—Andrey S. Sliva says.—Though the results speak for themselves and the development is recognized to be useful by all the participants of the process, but—not yet...

In the civil aviation the situation is more complicated. It is an extra private professional caste that prefers to use its inspection methods mostly limited to the measurement of temperature and pressure. It will hardly be possible to reach out to them with a message that we do matter of moment. We need a Man. The higher echelons Man, ideas man, who is personally interested in using this method. Only then the system will probably make concessions.

GENERALLY SPEAKING STABILOMETRY IS ONE OF THE WAYS TO DETERMINE PECULIARITIES OF THE HUMAN INTERACTION WITH THE EARTH'S GRAVITATIONAL FIELD. IN TERMS OF ENGINEERING IT CAN BE DEFINED AS THE RESEARCH OF FLUCTUATIONS OF THE PRESSURE CENTER MADE BY HUMAN TO BEARING AREA WITH A SPECIAL DEVICE — FORCE PLATE.

On shank's mare

The principle of force plate operation is based on the system of physiological movements ensuring posture and body equation under the conditions of gravity force. This medical knowledge area was named Posturology (from Latin *postura* — posture). It goes back to the beginning of the 20th century and inseparably associated with the name of French scientist Rudolf Magnus. The publication of the book 'Posturology. Regulation and Disorders of Human Body Balance', by Gagey P.M., Weber B. gave a powerful impulse to physiology development both abroad and in Russia. The Russian translation of the book was edited by Prof. M.D. Vladimir Usachev. Due to this book doctors of various specialties gave a pass to this knowledge area. In Russia this system was named Stabilometry.

Stabilan-1, a computerized force plate with biological feedback, developed by Taganrog design engineers was firstly dedicated for incoming-outgoing inspection over flight operators of the military transport aircraft of the 61st air force. However gained results found to be a little unexpected both for the designer and for the customer.

By the moment of data summarizing it became obvious that the psychoemotional state of the flying personnel, putting it mildly, leaves much to be desired. The scientists were shaken hands and thanked for the work. But any other investigations were rejected. About ten platforms purchased for the diagnosis are most likely still gathering dust in army depots.

The statistics of the world's large-scale air disasters for 1974–2015 shows that the main reason of the aviation accidents is a human factor (crew or operator's error).

Today the Russian Federation takes the second place globally (after the USA) in terms of the aviation accidents amount and the number of deceased (according to Aviation Safety Network).

Annually about 300–350 pilots graduate from the educational institutions and approximately 700 persons should be decommitted. And this comes with an increasing passenger flow.

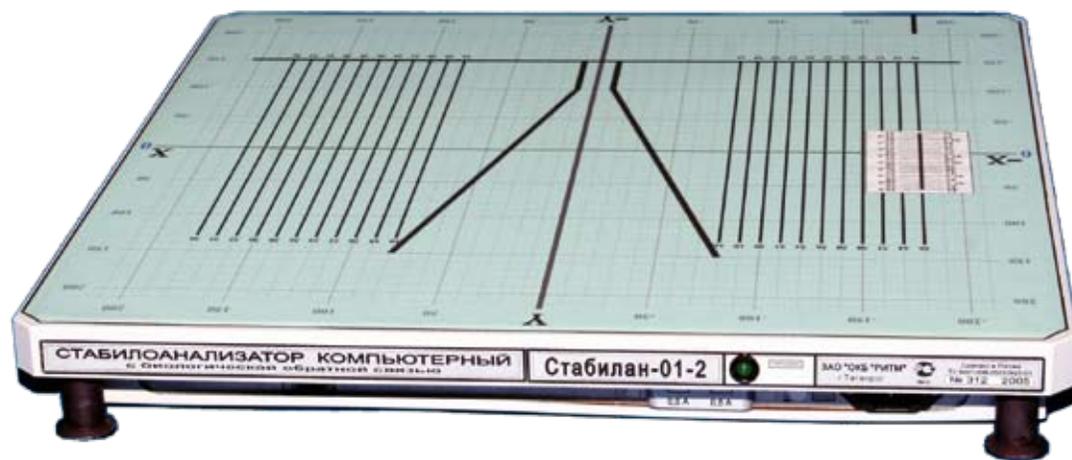
Loads on flying personnel lead to overtime works resulting in excessive psychophysical tiredness of crews at the last. However, according to experts' opinion, the air companies do not always think about safety in chase of the profit.

A drop in the ocean

Currently the possibilities of force plate “Stabilan-01” are completely discovered only in neurology. It was developing by efforts of Ludmila Chernikova, a professor of clinical medicine, head of neurorehabilitation and physiotherapy department of Research Institute of Neurology of the Russian Academy of Medical Sciences State University.

—She managed to see the benefit as well as to abandon the foreign facilities and start to use home-grown technologies—explains Andrey Sliva.— She was able to consider company potential, possibilities to be implemented for special-interest tasks. Thus, the neurological hospitals started to apply our facilities which performance contributes to a successful rehabilitation of patients in the recovery period till now. Besides, a health assessment and treatment progress are carried out by the force plate.

An outcome of computer force plate “Stabilan-01” applied in the neurology hospitals surpassed all expectations of developers from the positive side. The force plates were included in the standard for equipping the neurological medical institutions and drug rehabilitation clinics by Ministry of Health of Russian Federation order. Moreover, the physicians are able to cure light and middle phase of spasmophilia by pressure center controlling due to “Stabilan-01”.



Gradually, stepwise the force plates are embedding and filling the space in the neurology. Nowadays, the force plates perform ingoing/outgoing inspection of motormen of JSC “Russian Railways” rolling stock. Major part of equipment is installed in the capital and big cities of Russia but it constantly spreads over.

—A next step will be an equipping of each railroad depot— says Andrey Sliva. We are going to create a single control network ensuring on-line monitoring of psychoemotional state of each motorman through the whole railway road system by means of software.

Reference:

Posturography is in a wide and prospective use in the high performance sport. Posturography system is applied for motor function assessment. This method is admirable by Michail P Shestakov Ed.D, professor, head of analytical administration of sport training center of Russian picked teams. He issued the book depicting an experience of computer force plate “Stabilan-01” used in the sport.



Unified Energy System of the Russian Federation launched an implementation of force plates “Stabilan-01” into the dispatch control system at the electrical power plants. However, domestic electrical energy reorganization has made some adjustments in the process. Currently the managing staff of RITM OKB ZAO has to find out the solutions of psychoemotional state monitoring improvement at power engineering facilities by own forces. Peculiarly it concerns the nuclear power plants. For example, the nuclear experts of Rostov nuclear power plant agreed for force plates demonstration and even considered the development impressive. However they refused the proposal to equip the power plants with plates. One should only guess at real causes.

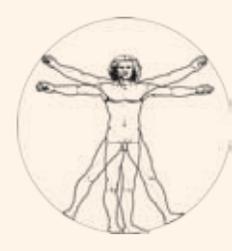
— The nuclear experts confirmed an absolute necessity to implement the provisional monitoring measures, — tells Andrey Sliva. — However they showed neither initiative, nor desire to implement the system right away. It requires financial expenditures. Unfortunately, our people have a special mentality: better to spend for something else... As a fact at each nuclear power plant about 50 workers deal with a reactor being in a special control zone. Each of them has 40 minutes to be prepared for a shift. The monitoring test by force plate requires 2 minutes. It would easily fit in with the system. But... we should continuously bang against a wall of misunderstanding to attain even a little result...

“STABILAN-01-2” MANUFACTURED BY RITM OKB ZAO COMPARED WITH THE ONES PRODUCED BY USA, FRANCE AND GERMANY IS MORE COSTLESS (AVERAGE COST OF DIFFERENT MODIFICATIONS VARIES FROM 200K TO 1,5 MLN. RUB AGAINST \$1,5 MLN. FOR AN AMERICAN VERSION), EQUIPPED BY MORE ADVANCED PROBES AND ENSURES ACCURATE MEASUREMENTS SUPERIOR THE DATA OF SIMILAR DEVICES, WIDE RANGE OF DIAGNOSTIC TESTS AND RECOVERY TRAINING FACILITIES.

About 20 force plates are in common use in the departments of Russian State Institute for Physical Culture, Sport, Youth and Tourism—one of RITM OKB ZAO partners.

The stabilometrical plate is applied by FC “Spartak” for the junior picked team. The negotiations to procure a stabilometrical plate for FC “Rostov” (they already use SCENAR device), FC “Locomotiv” and other clubs are in progress.

Furthermore, “Stabilan-01” software enables to adjust the methods for each patient and set his personal rate. ●



Many years have been required to realize that there is a connection between violation of system function controlling our standing position and those violations occurred in the standing position which are considered static distress of corporal axis and scoliosis.

“Posturology. Balance control and disorder of man’s body.”. P.-M. Gazhe (1995)

Hardware and software complex for myoelectrical activity evaluation



Science turned into practice!

- ✓ Miocom is designed for myoelectrical activity evaluation;
- ✓ Fields of use: orthopaedics, traumatology, stomatology, neurology, posturology, rehabilitation medicine;
- ✓ High level of interference immunity, synchronization of data acquisition;
- ✓ Simple signal pick-up, registration and computer processing of data, high accuracy of the complex.



Accumulator of vital forces

A BIT OF HISTORY

In 1567 the scientists arrived at the idea that invisible and insensible, but aggressive influences on a human being are not only limited to radiation. The magnetic field of the Earth, cosmic and other rays have a significant impact on health, immunity and the general state of a human.



Austro-American doctor and a psychologist Wilhelm Reich was one of the scientists who

were obsessed with the idea of the device protecting human's body from harmful radiation and preserving its biological energy. He is most widely known as a Freudian, Father of Sexual Revolution and an inventor of body-oriented psychotherapy. In 40th of 20th century in order to prove his own theory Reich started to work on the 'vital power accumulator'. In fact it was a wood-covered metal box. Working as a sexual health specialist, Reich used this camera for treating patients with sexual disorders. The list of diseases which symptoms were eased by this device were increasing in time. However the inventor was not able to see his invention implemented in medical practice in his lifetime. Moreover, he closed his days in prison, accused by Federal Government of illegal use of his devices and fraud.

After eight months of his imprisonment Wilhelm Reich died in the Federal Prison of the USA. His laboratory was ruined, the books and the devices were fired and the files were classified. Only in 1967 in the USA a ban on printing of his books was lifted. In Russia the books by Reich were first published in 1997.

Cut out the unnecessary

In spite of the tragic fate the works of the American doctor found many followers. Most commonly enthusiasts obsessed with the idea of a healthy influence of 'orgone' energy on the body, made cameras for their own use.

In Russia, in Southern town Taganrog the Reich's idea was picked up by Alexander Datchenko. He modified the 'vital power accumulator' and gave its functions to the most comfortable item of daily use... a blanket!



This is interesting:

Despite the fact that Reich's ideas were not recognized by the scientific community, they were picked up by his followers headed by the Doctor of Medicine Elours Baker, the founder of the American College of orgone energy, and by James de Meo from the laboratory of the biochemical studies of orgone, which is located in Ashland, Oregon.

For a long time the possibility of increase of argon accumulator capacity engrossed minds. It was supposed that semi-sphere of pyramid shaped accumulators accumulate the 'orgone' energy more effectively.

In the ancient ideas of Daoism (Dao) the whole world was made of Chi energy. One of the purposes of this philosophy was to find means of ruling the energy and providing the harmony between a man and his environment. In the system of feng shui two polar constituents are emphasized. Similar components of energy are available in the system of Reiki, the therapy of polarity and in a number of other theories.

∴ ACCUMULATOR OF VITAL FORCES

The scientist completed it with a metallic film which protect a human body from a harmful radiation and provide influence on the patient by his own electromagnetic radiation.

RITM OKB ZAO developed many forms of the 'vital power accumulator'. They were called as a RITM-ULM healing compound multilayer devices based on metalized film.

The developers not only performed a large amount of work on modernization and improvement of the invention of Mr. Datchenko. They also collected data of clinical researches and confirmed its effectiveness in preventative care and treatment of different functional system abnormalities.



— Our latest development is a device with two screens. Its outer layers are electro-thermally insulating, the inner metalized layers are made of the finest aluminum,— says Mr. Vitaliy Grigoriev, the head of a sector, which is responsible for the manufacture of ULM devices.

The device can be used to regulate psycho-emotional functions of the patient, improve sleep, improve stress tolerance, relief muscle tension etc. All indications and contraindications comply with the system of recommendations of the Ministry of Health of the Russian Federation.

In spite of the increasing reflective power there is one more advantage of two screens. Wearing qualities of these devices are also improved. One also does not need to bother which side one should put it to the body.

But of course the most important thing for us is a feedback from doctors and patients. They all agree that RITM-ULM devices are genuine 'vital power accumulators'. After this procedure one feels a surge of energy and very fresh.

— Of course the main universal RITM ULM device is a blanket,— explains Mr. Grigoriev. It was decided long ago to develop other products. The procedure should not be stopped just because the patient need to move, work or sit! The range of products, from a cap to slippers was developed with this express purpose. Pelerine, waistcoat, oversleeves, belt are only a few devices of a wide range. For example, a very comfortable form is a sleeping bag. It can be used by both adults and children. On the one hand it does not hinder your movements, on the other hand, you cannot be afraid that a patient exposes. ●



The RITM-ULM devices are patented and clinically tested.

- In the institute of general pathology and pathophysiology of RAMS,
- In the institute of neurology of RAMS,
- In the Russian scientific center of rehabilitation and physical therapy,
- In Research Institute of clinical psychiatry of CMH RAMS.

Additionally (within the frames of the scientific and practical cooperation):

- In field the conditions of filed therapeutic hospital of All-Russian center for Disaster Medicine "Protection" of Ministry of Health of RF.
- After the treatment the improvement was noticed in 83% of cases, insignificant improvement was noticed in— 12% of cases, 5% were unaffected.

For the prevention and treatment:

- of functional and organic diseases of nervous system;
- borderline state in neurological practice;
- a wide range of cardiovascular diseases;
- diseases of the musculoskeletal system of different etiology.

Reference:

RITM-ULM devices are designed to be used in healthcare centers and on doctor's order at home. They are compatible with drug therapy. Following therapeutic complexes are the most effective:

- ULM + massage;
- ULM + SCENAR (individual treatment protocol for each patient).



We gave SCENAR to the world



Personal devices range



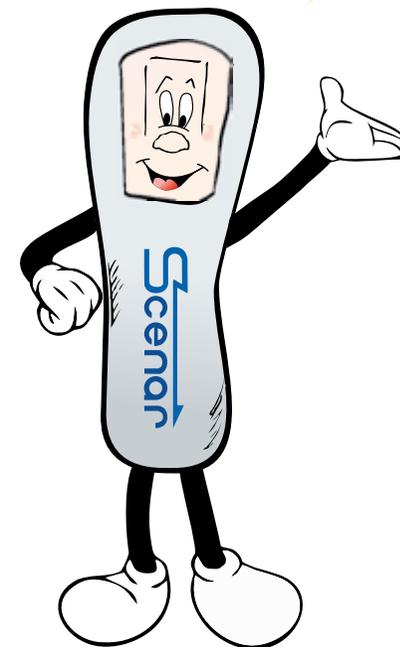
- ✓ SCENAR is not instead of conventional medicine, but hand in hand with it. Can be applied together with medications.
- ✓ Support, care, rehabilitation, recovery acceleration at any age.
- ✓ Management of any type of pain, anti-edema action, acute states treatment.
- ✓ Comfort of life regardless of disease.
- ✓ Good for home accidents (traumas, burns, cuts etc.)

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www.scenar.com.ru, e-mail: sales@okbritm.com.ru

Dear friends, it was nice to meet you! Those who I met before now know me better. How did you like the journey? As for me—I liked it a lot. I hope to meet you soon: true friends always keep in touch. I don't say goodbye to you and promise to send my regards and to share interesting information and news about my achievements with you! Visit our website.....

e-mail toand even call me!

Best regards—SCENARic.



SCENAR is a transcutaneous electrical neurostimulator which affects the skin with SCENAR impulse. The human brain recognizes this impulse as a signal of its own nervous system and activates the self-recovery process: removes pain, triggers the regeneration processes.

SCENAR has been developed in 90s by Russian scientists in cooperation with medical doctors. RITM ZAO OKB is the developer and manufacturer of SCENAR devices as well as medical systems and devices for the diagnosis, treatment and assessment of the psychophysiological state of a human. This year the company celebrates its 35th anniversary.

Over these years RITM ZAO OKB design engineers have created 44 modifications of SCENAR device. The technology is being constantly developed and modified offering patients effective and safe solutions of health problems. The technological novelty is confirmed by certificates of authorship and patents. SCENAR therapy effectiveness is evidenced by scientific articles and thesis works.

SCENAR is certified as a medical device and successfully sold in more than 30 countries. The device efficiency is approved by medical doctors. Clinical tests have been carried out in the largest scientific research institutes, medical academies and clinics of Russia and abroad.

Unique and original SCENAR technology is patented and protected by the international legislation. Due to high popularity of SCENAR device, new copycat devices appear in the market every year. But only the original SCENAR technology is the guarantee of safe and effective therapy.

SCENAR is not instead of but together with conventional medicine. It is combined with traditional and drug therapy. It is effective and safe for patients of any age. It treats pain, edemas and acute states. It ensures QUALITY of LIFE in various diseases.

Nowadays RITM ZAO OKB products are applied in such areas as physical therapy, cosmetology, neurologic rehabilitation, dentistry, orthodontics and high performance sport.

RITM ZAO OKB developments for rehabilitation and diagnosis such as STABILAN (stabilometric platforms), MIACOM (medical myographs), audiometers, RITM-ULM therapeutic device based on metalized film are approved by the Russian Federation Ministry of Health and recommended for application.

