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EDITORIAL

Ladies and gentlemen,

This year's first issue is especially published on the occasion of the 25th anniversary of our MS Line Publishing House foundation and also on the occasion of the annual meeting of the editorial board and subsequent ceremonial meeting of the friends of Review magazine with the traditional announcement of the best personalities, companies and defence and security products, which is traditionally held in January. Unfortunately, the meeting did not take place last year and even at the beginning of this year the situation still did not look the most favourable due to capacity restrictions at various meetings affected by Covid.

Right at the beginning you will find interesting interviews, for example, with the Chairman of the Administration of the State Material Reserves, Dipl. Ing. Pavel Švagr, or the Director of the Criminalistics Institute of the Police of the Czech Republic, Luboš Kothaj.

The Czech defence and security industry is able to offer a number of comprehensive solutions, unique technologies or products in the fields of aviation or ground equipment, cybernetics, research and development, etc. The diversity of this industry's production is presented in this issue by more than one third of members of the Defence and Security Industry Association of the Czech Republic which number today over 130 members. I wish you a nice read and, if possible, peace of mind, strength and, above all, good health!

Šárka Cook, Editor in Chief







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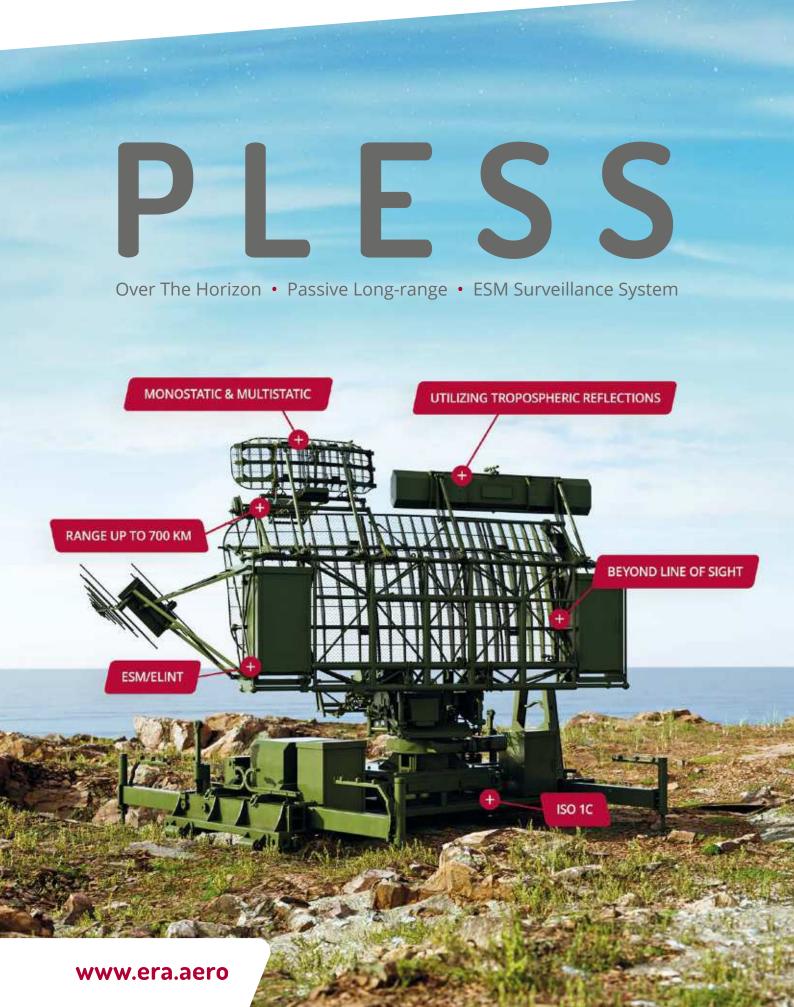
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BREAK THE HORIZON





The Association of the Defence and Security Industry of the Czech Republic has signed an agreement on cooperation with the Administration of State Material Reserves of the Czech Republic

On March 21st, 2022, an agreement on cooperation between the Association of the Defence and Security Industry of the Czech Republic (ADSI) and the Administration of State Material Reserves of the Czech Republic (ASMR) was signed at the ADSI Headquarters in Prague. The agreement was signed by the President and Executive Director of ADSI - RNDr. Jiří Hynek (on behalf of the ADSI) and the Chairman of ASMR – Ing. Pavel Švagr CSc. (on behalf of ASMR). Concerning the common interest in the functioning of the Czech Defence and Security Industry, especially in connection with the provision of economic measures for crisis situations, the ADSI and the ASMR have agreed to conclude this agreement. The purpose and aim of this agreement are to improve the cooperation between ADSI and ASMR in supporting the production potential of Czech entities in the sphere of the Security and Defence Industry and ensuring its high technical level for the needs of ensuring tasks arising from the scope of the legal competency of ASMR.

Mr. Pavel Švagr, the Chairman of ASMR, commented on the agreement: "Cooperation in the sphere of information exchange and legislation is more important than ever in the post-Covid and current security situation. It is becoming increasingly clear that crisis legislation will change and the state must have a well--designed system of material reserves administration because, in times of crisis, reserves are an essential and often the only resource that the state should have immediately available. ADSI has many member companies that are key to the security of the Czech Republic, not only in terms of the army but also in terms of crisis preparedness for emergencies."

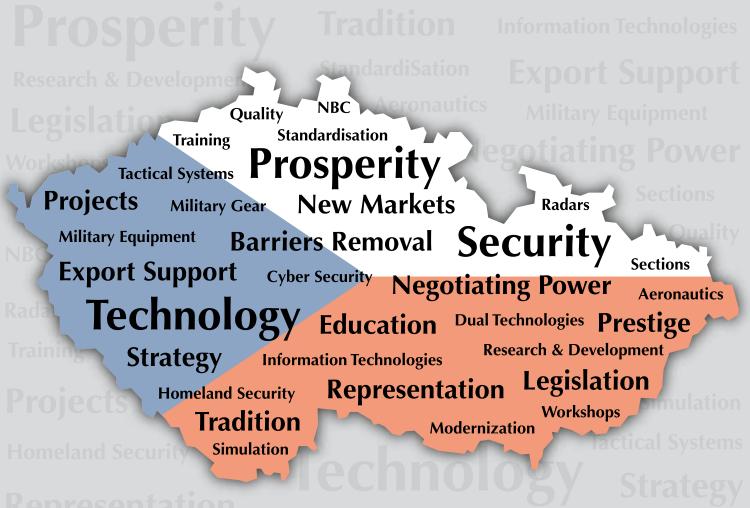
The ADSI has long warned that peacekeeping production capacity is needed to secure supplies in times of crisis. With each deteriorating security situation in the world, the importance of the domestic defence and security industry will increase, as dependence on foreign supplies always poses a security risk. For this reason, the ADSI signed a cooperation agreement with the ASMR today. ADSI and ASMR will jointly promote the strengthening of the role of the domestic defense and security industry in order to ensure the achievement of self-sufficiency of the Czech Republic. The relatively recently adopted Act on Strategic Reserves of the Republic of Poland, which sets out the principles for creating, storing, releasing, disposal, and financing strategic reserves, as well as the tasks and organization of the Material Reserves Agency, the Polish equivalent of the Czech ASMR, can be an inspiration and examplary. It aims to ensure that Poland does not have long--term strategic dependence on someone else and that it is clear what the strategic raw materials are and that the state has them in reserves for self-sufficiency both in times of peace and especially in times of crisis.

The President of ADSI, Jiří Hynek gives an example from the present, related to the crisis situation due to the Covid-19 pandemic: "I will give one example for all. Our member company, AVEC CHEM, manufactures protective equipment, especially filters for protective masks. When a crisis comes, such as the situation with Covid-19 exactly two years ago, reserves of protective masks in civil defence warehouses are deficient. In the event of a crisis or conflict, the demand for certain goods will logically rise and the state must respond to this, ideally already being prepared. However, when the state does not have sufficient reserves of both production material and finished products, it must rely on foreign suppliers, such as China, which makes it dependent and not self-sufficient, and thus increases the security risk. In addition, in times of crisis, the delivery times can be extremely extended, e.g. from one month to half a year. And it may be too late. AVEC CHEM has a decent production capacity if the state needs supplies in the event of a crisis, but the state needs to keep production material and finished products reserves.""

However, the President of ADSI, Jiří Hynek, adds that it is not entirely easy to store the necessary material: "Of course, the production material has an expiry date. But the state must have reserves, not the manufacturer, for whom it would be costly and disadvantageous. But if it is stored by the state, after some time the unused goods will expire. However, when the state buys the necessary material and finished products and stores them in the manufacturer's warehouse, it will have a guarantee of constantly fresh material the state could use flexibly and immediately in the event of a crisis. It is ideal to have a mix of production material and finished products in stock, the specific number of pieces should be determined by the state. When a company takes something away, it immediately replaces it with new material or product. And since it produces daily, there is no risk of material expiring. They can have the stored material segmented, they always remove the oldest and immediately replace it with a new one. The state thus has always new materials and finished products at its disposal, which can be delivered immediately and the new materials can be produced immediately. The state does not risk anything, beyond the normal production, the manufacturer always has fresh material in stock for immediate use, everything can be removed and replaced at any time. In addition, the state has two options - either to say how much it wants to buy and store material and goods according to price, or to determine how much it wants to spend and to calculate the amount of material and products according to price."



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Interview with the Chairman of ASMR, Ing. Pavel Švagr, CSc.



It is impossible not to start with the conflict in Ukraine. How do you participate in helping refugees or helping directly on the spot? And what effects will the war have on the Czech market?

In recent days, we have sent medical kits and other medical equipment worth approximately 85 million crowns to Ukraine. It was 950 pallets of material from our warehouses. It included syringes, needles, medical beds, breathing apparatus, ventilators, and other materials. The transport was provided by over 40 trucks and it was the largest single assistance in the history of Czech reserves. Firefighters and private carriers assisted with the transport. Of course, if the government decides, we are ready to provide further assistance.

We also released some beds, pillows, blankets, and sheets from the warehouses so that the individual regions could take care of refugees from Ukraine. In addition, we must monitor the effects of this war on the Czech market. Now, I am talking mainly about fuel. Every day, I get information from the biggest players on the market on how commercial stocks are being provided. In addition, we have oil and oil products in reserves for more than three months of state operation. But there was no need to release them yet. There is still plenty of commercial reserves.

Will Russia's aggression against Ukraine have any impact on the role and functioning of the ASMR (Administration of State Material Reserves) in the future?

First Covid-19 and now the war in Ukraine. In the last period, we experienced guite a lot of very critical situations. The impacts will certainly be, or more precisely I would like them to be, not only in the area of improving crisis legislation, or in better preparedness of the state for conceivable crisis events, but also changes in our thinking. In recent years, we have had enough of everything, and have felt that "everything is flooded with sunshine", but the last period shows that readiness for emergencies should not be underestimated. And here it is simply about political support, the allocation of funds, including the political emphasis on the creation and frequent updating of crisis plans. I hope that our government will address this as well.

Four years have passed since the previous review in Review magazine. How has your situation in ASMR changed? What are your plans for the future? What have you accomplished in the past period? How would you describe the current state of supplies for the defence and security industry?

The first word that comes to my mind is that we are much more dynamic. Over the last two years, State Material Reserves have learned to respond to crises much faster than before. For example, in the event of a flood, the Ministry of the Interior has a crisis plan, and we know when they will need pumps, portable generators, flood-protection walls, water tanks, or disinfectants for cleaning after such flood. We just know, what to expect.

But no one had any experience with Co-

vid. Although the Ministry of Health updated its crisis plan after the first wave and we bought protective equipment, we still found ourselves in a situation when we had to hastily buy 2,000 medical beds, hundreds of lung ventilators, and over a thousand devices for respiratory support (HFNO) during the second wave. During the following waves of Covid, we again helped the Ministry of Education to purchase antigen tests so that children could go to school. Those needs have been constantly changing and I am proud of our employees in the Czech reserves, how they managed it. No theoretical training will prepare you for this. We had to respond dynamically within only a few days to all requests. And we did it. For example, we even got such low prices when buying antigen tests that others could not get. That is why I perceive the idea of cities and municipalities that we should buy tests also for them as a compliment. But to distribute these supplies to all municipalities in the Czech Republic and to conclude a contract with each of them would be logistically and administratively so lengthy that it would not be an effective rapid help. But for example, at the regional level, I can imagine such a central purchase.

So today we are much better prepared for Covid than in 2020 before it's first wave. But it is not about having warehouses full of protective equipment. And today, about 1,000 medical beds and 2,000 lung ventilators and respiratory support devices (HFNOs) are being borrowed for free in hospitals across the country. The point is that we have people who can do anything and still save the state money when purchasing materials. As for supplies for the defence industry, we did not sell metals, and it turns out to be a good decision. And the pressure to sell them was enormous from the government. When you consider how disturbed those supply chains are, you find it good to have these reserves at hand. Moreover, the view of Europe is changing in this regard, and it is increasingly aware that strategic things and commodities must be immediately available to states for their immediate needs.

We are in a time of the pandemic, which is still interfering in the economic, social, and political affairs of states around the world.



How has the ASMR dealt with this situation so far and what are its greatest achievements? On the contrary, what do you still have to deal with, what cannot be solved and what key aspects need to be focused on at the moment?

I would include the introduction of a system for the dynamic purchase of emergency reserves among successes. This taught us, as I mentioned earlier, to buy supplies quickly. We also tried a new role. Beyond being a warehouse keeper of state reserves, we have also become their distributor for the locations in need. We bought several trucks suitable for the delivery of beds or medical supplies, so we no longer have to rely so much on firefighters or the army when delivering supplies. After all, they also have a lot of their issues to solve and do not always have the necessary capacities at their disposal. But the biggest advantage is the experience of our employees. When we manage quick purchases in a crisis, such as respiratory support devices that patients with Covid are waiting for in hospitals, or the logistics of unloading aircraft, then, to put it bluntly, we can handle everything. This experience is not transferable and our employees can now benefit from it. But that doesn't mean they don't care. What bothers us is the need for a new modern warehouse. The crisis has shown limits in our storage capacities. It is not just about space, but also

about the speed of taking the reserves out from the warehouse. Some of our warehouses have more floors and so we have to transport each pallet by elevator. It makes obstructions. The capacity of the loading ramps is also not so great. If, for example, 15 trucks arrive, we can not load more than 6 at a time. Others have to wait. That's why I think the reserves would deserve a modern warehouse just for pandemic reserves. It would significantly speed up the delivery of this help. This is not a dizzying number. We are talking about an investment of about CZK 250 million. In this respect, I envy our Polish colleagues, who not only have great crisis legislation, but their storage capacities are a really great inspiration and challenge for us.

What do you think are the prospects for the future?

I hope that the situation will probably calm down and we will return to normal life. Perhaps it will no longer be necessary to introduce various restrictions again due to the Covid. Hopefully, the war in Ukraine will end soon and we will all be able to rest. Last year we were able to meet significant differences in prices for personal protective equipment and medical devices, shortcomings in their quality, and problems with transport from abroad. What are the measures/strategies for this year, mainly so that such a situation does not occur again?



On the contrary, we have been successful in this area. Within tenders, we achieved lower prices than expected. This saved the state money, not small. It was about CZK 900 million. Finally, the final report of the SAO, which made an audit in our organisation last year, stated this. Again, I take it as a compliment that we are doing the job well.

Since Friday, February 18, 2022, the new government is beginning to release some measures – end of large-scale testing in schools and companies, changes in payments of PCR tests to citizens, etc. Do you think that changes in measures are only a response/adaptation of the government to the evolving pandemic situation, or do these changes also depend on the state reserves and reserves that we have in the healthcare sector? How will future mitigation affect the ASMR in this area and what is your strategy?

That mitigation must have taken place, and it makes sense. I wouldn't link it directly to our reserves. We must now focus on replacing part of the reserves of these PPEs. One possibility is that we will not hold reserves for two months, but only for a month and a half, or even less. Unlike the beginning of the pandemic, a lot of protective equipment is manufactured here and there is no need to import it complicatedly. This would mean that we will not replace the reserves that expire this year. Another possibility is that we will continue to hold the current amount of reserves and we will continue to buy that protective equipment on an ongoing basis. But it is up to the government to decide what strategy to choose. And then we are still talking about the possibility of a wider application of the institute of "maintaining production capabilities". I believe that we will move forward in this area as well.

An important part of ASMR's work is also to handle raw materials, specifically oil and natural gas. Do you perceive any changes in this part of the state reserves? The ASMR is known to have struggled with a shortage of oil and oil products. The situation improved, but this was due to a slowing economy during the pandemic. How do you perceive this situation? Does the ASMR solve or even already solved any shortcomings that may arise as a result of the complete recovery of the economy?

We don't have gas in reserves. As for the purchase of oil, we have proposed it several times in recent years. Unfortunately, we were never heard. Even during the first wave of the Covid-19 pandemic, when oil prices fell to a historical minimum, we failed to obtain government approval to buy it. It is true that due to



the economic downturn, we observe the legal limit of 90 days. Today's reserves are about 94 days of average daily net imports. However, as the economy grows, this problem will reappear at some point and a solution will need to be found.

In connection with the conflict in Ukraine, we can hear mainly about the Družba oil pipeline supplying the Litvínov refinery. At a time when oil is flowing smoothly, there is no need to release emergency reserves. But we must be prepared for everything. Of course, problems can arise not only here, but also in the supply of "sweet" oil, which is being processed mainly in the refinery in Kralupy nad Vltavou. Here, we are also monitoring the situation. However, we tested the situation when the Druzhba pipeline did not work in 2019. They had to deal with its monthly outage. At that time, we released emergency oil reserves, and the drivers at the gas stations and the Czech industry did not notice anything. Supplies continued to operate normally. So we are prepared for such situations as well. And that why the state actually has reserves. This is how it should work in crisis situations.

The UN Climate Change Conference (COP26) took place at the end of the year. The summit resulted in strategies and subsequent conventions between the Member States, building on previous environmental measures and the worsening climate crisis. One of the measures was so-called climate package Fit for 55.

Will the UN restrictions arising from the Paris Conference somehow affect the strategy that the ASMR will pursue in the future? What are the prospects for the future? Where do you perceive the biggest limitations in your sphere?

This applies to us, for example, with the possible replenishment of oil reserves. There we can respond by purchasing oil or oil products. But it is a strategic matter. It is not just a matter of allocating significant financial resources, but many other factors must be taken into account - from safety to, for example, anticipated changes in transport development due to electro-mobility or structural changes in the industry - all of which can logically have an impact on oil and oil products consumption. An update of the state



energy concept can also be expected, and this is another important input for the government's strategic decision in this direction. The true is that we would be inclined to purchase so-called "sweet" oil, which is being processed in our refineries on an ever-increasing scale and it is important not only for the refinery in Kralupy nad Vltavou. From what I have said, it is clear that the Ministry of Industry and Trade is a strategic partner in this regard for us. Therefore, in cooperation with our main partners (ČEPRO, MERO, ORLEN Unipetrol), we are currently discussing forecasts for the medium-term development of oil consumption and oil products in our country to have sufficient data for the preparation of future government decisions in this sphere.

GENERALLY ABOUT ASMR: What are the latest changes in the ASMR at a time affected by the pandemic and since the last interview? What reserves do we have enough and where do you perceive the shortage?

Examples of failure can be, for example, shortcomings in basic food reserves, as the SAO informs. How does the ASMR deal with this problem and can we encounter the same situation in other sectors?

We currently have food reserves for about 1.3 days of the state operation, which is 1,300,000 meals. Unfortunately, the lower food self-sufficiency in our republic, the more emphasis we will have to place on food security. And unfortunately, we need enough money to provide it, but strengthening the role of material reserves did not have the appropriate political support. So an increase in food security can only be ensured by a higher level of financing for the material reserves and their purchase in combination with a reservation system, where part of the food reserves will be owned by companies, but the state will buy them preferentially if necessary. For example, the United Kingdom has an agreement with manufacturers that in the event of a crisis, they will produce preferentially for the state and receive a so-called reservation fee. Food then does not have to be stored or exchanged anywhere. And it was the Administration that came up with, for example, the idea of a living herd project, which could replace, for example, the storage of frozen meat. While frozen meat must be regularly replaced in the warehouse, the reserved live herd is natural. Moreover, even in the event of a crisis, there should be no delay in the supply of meat. Unfortunately, the introduction of such a reservation model is conditioned by a change in legislation, which has not yet been enforced.

Adriana Jesenská thanked for the Interview

Interview with Col. Mgr. Ľuboš Kothaj, the Director of the Institute of Criminalistics of the Police of the Czech Republic

The Institute of Criminalistics is one of the oldest, highly specialized police departments with nationwide competence, which specializes in the performance of forensic, technical and expert (expertise) activities. We asked its current Director, Col. Mgr. Luboš Kothaj, to tell us more about the activities of this renowned workplace.



The Institute of Criminalistics of the Police of the Czech Republic (ICP) was founded in 1958 and today it is perceived as a top expertise workplace. Could you tell us about its development?

An important day of the Institute of Criminalistics was December 12th, 1958, when the Institute was established by order of the Federal Minister of the Interior as a top expertise workplace. Of course, during its existence, which is now 64 years, there have been several changes in its position and sphere of action in the structure of the Police. The first significant change was the year 1980, when the departments of forensic technology and expertise of the regional police directorates (OKTE) joined the expertise services, which was an important moment, as the services were expanded into three levels. Another important milestone was the year 1993, when the Republic was divided and a separate "Expertise Institute" was established in Bratislava, Slovakia.

In the Czech Republic, the Criminalistics In-

stitute remained, but it was officially "renamed" the Criminalistics Institute in Prague. Other changes, quite fundamental, then took place in 2018, when the Institute celebrated its 60th anniversary. It regained its original name, i.e. the Institute of Criminalistics, received new insignia, and thus its new identity.

What science disciplines do your experts work with?

(smile) With many, because criminology is a multidisciplinary field covering both natural--science and technical fields. At the Ministry of Justice, the Institute is registered as an expertise institution in the fields of criminology, calligraphy, chemistry, mechanical engineering and electrical engineering. These are the basic fields in which we provide expertise activities. The field of criminology itself includes 22 branches, such as genetics, dactyloscopy, trace evidence, tool marks examination, chemistry, special biology, language analysis, etc.

There is a so-called criminological & technical and expertise service in the Police of the Czech Republic, of which the Institute of Criminalistics is a part and supreme body. It is also the main and central department for the performance of expertise activities, a methodologist and guarantor of the training of forensic technicians and experts. At the middle of the pyramid, there are the Departments of Forensic Technology and Expertise (DFTE), which are part of the structure of eight regional Directorates of the Police of the Czech Republic. The base of the pyramid consists of departments and groups of criminalistics technology, whose staff provide work directly at the crime scene, they are experts and specialists in searching for and collecting evidence.

When did you personally combine your professional career with the Institute of Criminalistics?

I started in the executive police departments, the local and border departments. I joined the Institute of Criminalistics as a student in 1994. Here I worked as a specialist in phonoscopy, after about 3 years I moved to a new department of cybercrime (now the Department of Cybercrime and Electrical Engineering, which examines data and data carriers). In 2000 I became the Head of the Technical Development Department and in 2010 I was appointed the Deputy Director of the Institute of Criminalistics. I work as the Director since 2016.

I assume that you also cooperate with expert workplaces from other countries. How is the communication going?

We are members of the European Network of Forensic Institutions (ENFSI) since 1998, which initially included only a few Western European countries. Currently, this organization includes about two dozen countries. I can say that we are active members in terms of exchanging information, experience and practice, especially in the form of direct participation in ENFSI working groups. In addition, there is bilateral or trilateral cooperation with forensic laboratories, e.g. laboratories from Slovakia and Poland, with which we meet regularly and cooperate with each other on projects in the field of science and research or education.

Do the activities of the Institute also include publishing activities and education of new experts?

Certainly. It is one of the basic conditions within the lifelong education of experts and staff of the Institute of Criminalistics and it is an area where we, as the research institution, present the results of our activities. I would divide it into two parts. On the one hand, we are the publisher of "Kriminalistický sborník", which is a specific magazine in which, among other things, case studies are being published - where experienced criminologists pass on their practical experience in investigating cases to junior colleagues. This magazine is published in almost two and a half thousand copies and is intended only for the professional public within the police, courts and the public prosecutor's office. In addition, of course, we publish research and development results in reviewed and non-reviewed professional journals, we publish monographs, etc.

How difficult is it to get experts for the Institute of Criminalistics? Which specializations lack experts the most?

We have purely criminology science branches, for which we train experts ourselves. We often use our own human resources within the Police. Thus, a longer-serving police officer can become, for example, a recognized dactyloscope or trasologist. The situation is different for branches with high expertise requirements. For example, we find it very difficult to get cybercrime experts. In addition to basic knowledge and skills in the field of IT, we require a much deeper knowledge of this field. The expert must be able not only to provide quality expert opinions, but also to go to court and defend the conclusions of his research. And this is exactly what discourages many applicants. Then, of course, there are other, natural sciences, such as genetics, biology and chemistry, for which we find suitable candidates on the labour market, nevertheless, we face competition from the civil sector, especially in the area of financial evaluation.

You mention expert assessments. How many such assessments does the Institute of Criminalistics process per year, and for whom in particular?

Our expert assessments are intended mainly law enforcement authorities, mainly for Police Departments with nationwide competence, as well as for courts and public prosecutor's offices. The already mentioned departments of forensic technology and regional expertise, which carry out expert activities within their territorial competence, play an important role here. Sometimes we are also asked for an opinion by the parliamentary inquiry commission, the Czech Trade Inspection, the Customs Administration of the Czech Republic, the Prison Service of the Czech Republic or other security forces.

The institute processes almost ten thousand outputs a year, three percent of which are expert assessments. It should be noted that OKTE also processes a large number of outputs per year at regional directorates.

It is also interesting that we participated in clarifying many important cases. I can mention the cooperation in the investigation of the explosion of the ammunition depots in Vrbětice or in the investigation of the tragic fire of a panel house in Bohumín, in which 11 people lost their lives. It was here that the team for the identification of victims of mass disasters, the so-called DVI team, whose activities the Institute coordinates, was deployed for the first time.

In terms of equipment, can you keep up with foreign expert workplaces?

Certainly. We may even surpass them in some cases, but this is very individual, because each workplace has a different structure of expert activities in terms of expertise and specialization. In the Institute, we use the most modern technologies available on the market, apply the latest scientific knowledge to forensic practice and develop our own procedures and research methods. As an example, I could mention NGS technology, a special device used in genetics that allows massive parallel sequencing. Geneticists can thus obtain much more information from the sample than just the DNA profile itself to identify the person, but also other information, such as eye colour, hair colour, etc. I would like to mention that our genetics department, as one of the few in forensic practice, managed to determine the DNA profile from skeletal material from the 11th century.

Does the Institute of Criminalistics cooperate with Czech industry?

We do not cooperate directly, but we buy specific products and technological units of Czech origin. For example, in image analysis we use equipment from Czech technology companies, such as Laboratory Imaging, s.r.o, etc. Cooperation with Czech industry takes place at the level of specifying the research needs of security research, which supports the involvement of the private sector and its cooperation with research organizations. In addition, we are directly involved in research consortia, where we act as a full-fledged solver. Here I can mention projects with Czech universities, such as the Institute of Chemical Technology, the University of Pardubice, etc. We also participated in joint projects with the Czech manufacturer of microscopes, TESCAN Brno, s.r.o.

Mr. Director, is there anything that needs to be changed? I am pointing out that after the year 2000, the construction of a completely new, modern institute, so-called "on a green field", was considered...

We have long expected that we will acquire a new headquarters for our department. The existing buildings in which we are based are unsuitable for the performance of our activities. They do not meet the current requirements for the operation of special equipment and the use of sensitive and demanding methods. Not to mention ergonomic and safety requirements. It is therefore inevitable for us to acquire modern and new premises. I am glad that the long-prepared project Development of the Zbraslav complex is at an advanced stage. As part of this project, the construction of a new headquarters of the Institute of Criminalistics is planned. We already have a final zoning decision and also a valid building permit. I am optimistic and I believe that this project will be completed and the Institute of Criminalistics will receive a dignified and adequate background for its 70th birthday. In conclusion, I would like to present some news from our portfolio. In the last 5 years, we have managed to introduce new types of research into our expertise. This is especially the genetics of plants and animals. We have also introduced new research methods and acquired state-of-the-art instrumentation for the departments of chemistry, special biology, genetics and others.

During the modernization of the Institute's and OKTE's workplaces, we are implementing projects financed by European funds with the aim of unifying forensic laboratory equipment. Our goal is to use the same procedures and research methods in all police laboratories.

Mr. Director, thank you for the interview and *I* wish you a lot of personal and professional success.

Jaroslav Jonák

Spectrasol brings in sun-like light where sources are scarce.

Thus, increasing alertness, effectiveness and immunity, improving health.

Spectrasol, a new AOBP member, exhibited for the first time at IDET 2021 Fair, presenting their patented LED lighting technology replacing natural sun light. It is an innovation influencing the non-visual system of our eye leading to improved synchronization of circadian rhythms which in turn raises our mental and physical performance, increases mental resilience, promotes alertness and concentration, general health and vitality, reduces mistakes and so we could go on. We asked Mr. Daniel Jesensky, the CEO, and Mr. Hynek Medřický, who invented the technology in collaboration with an interdisciplinary team of scientists, the manager of the technology and development at the company, about some interesting facts.

Could you explain briefly to our readers, what is this new technology about? And how is it different from the conventional LED lighting?

Mr. Hynek Medřický (HM): LED in general is the best and the most flexible lighting technology so far invented. Its chips have high performance allowing, among other things, adjustments to the light spectrum. This is desirable given the enormous shift of human activity inside into buildings. Conventional lighting producers, however, have been so far focusing only on the visual and economic dimension of lighting, i.e. on its efficiency, targeting only the image-vision system. Nevertheless, our eye has another vision system as well - the non-image forming system (NIF) synchronizing the biological and physiological systems of humans with the daytime, anchoring their circadian rhythm and supporting organism and its cognition. At Spectrasol, we are the first in the world to be able to positively stimulate this non-visual system, that was discovered only in 2003 and awarded the Nobel Prize five years ago. Besides watching the band affecting the ganglion cells of the retina, or rather the circadian rhythms, we monitor two other bands - the Harmful Blue Light, i.e. energy of short waves of 415-455 nm, which at long expositions can damage the retina of the eye, and the photobiomodulating energy around 670 nm, including the deep red light known, for example, from fire.



Mr. Daniel Jesenský (DJ): Thanks to this combination, our light sources are not harmful for the eye, instead, the photobiomodulating property helps to recuperate the eye in real time. Their spectrum as well as other properties promote most of all mental and physical well-being, i.e. performance, endurance, health and vitality. Poor lighting regime on the long run harms the biorhythms that control the functions of our body. Our circadian lighting brings indoors natural lighting conditions meeting the crucial biological needs of the human body. This is even more important in the winter months, when light is generally low, or in premises where the lights are dim due to secrecy and security, especially in the absence of natural light from the windows, such as bunkers, darkened surveillance and control rooms, etc. but even in common offices, education rooms and similar environments.

How can the Spectrasol lighting contribute to better work environment? How can it benefit the defence and security domains?

DJ: Light is just as important as air quality. When anybody dwells in an environment of stuffy air, they are down, they feel tired, their performance is poor, mood is low. It is the same with light. Our light can stimulate people in certain space in the long run. They are more alert, concentrated, they are able to react promptly and recall things from their memory and store into it faster, they make less mistakes, their mental resilience and performance are improved by 10 to 20 % according to research. Moreover, it has a long term positive influence on their health. And last but not least, the atmosphere in such lighted place is much better due to the fact that people produce more serotonin, the hormone of better mood that improves the communication and cooperation in work-teams. Beside other functions, this hormone is the precursor of melatonin - the sleep hormone that controls the regeneration and repair of the organism at night. As the defence and security sector especially fulfils extremely exposed and demanding tasks, pro-cognitive lighting can be a great help here.

HM: There is an increasing number of display devices and monitors in our workplaces, and people are spending more and more time in front of them. Displays emit short waves that burden the sight system. Photobiomodulating energy in our light sources helps to balance the potential just like under the sun. At the same time, our light fixtures ensure optimum visual conditions, in other words they allow perfect visibility including excellent colour rendering fidelity, glare index and other characteristics.

Where have you tested the above mentioned qualities of your lighting?

DJ: The positive effect of dwelling in natural light and its impact on performance and health is proven by many international studies. That is why, in addition to windows,

daylight is introduced into interiors also through skylight systems, whenever it is feasible. Thanks to the LED technology, that is able to mimic the characteristics of the natural light, these benefits can be taken anywhere in a much more effective and handy way.

HM: The impact and effectiveness of our Spectrasol lighting has been verified by a number of studies that were carried out in cooperation with the CTU, the National Institute of Mental Health, the Charles University Faculty of Science and the Biocev Research Centre, which have proven the aforementioned positive effects. The experimental groups exposed to our lighting demonstrated significantly better results in cognitive and memory tests, melatonin rhythm in saliva, or actigraphy measuring. For example the lyceum students exposed to our lights improved their overall school results, seniors moreover had a calmer sleep, their daytime activity increased, and daytime napping was reduced. We have also shown that our lights help regenerate damaged retinal cells in the eye due to the photobiomodulating energy within.

Who exactly are you aiming at with Spectrasol? For whom is it suitable?

HM: We are aiming mainly at spaces lacking natural sunlight where there are people from whom a mental or physical performance is expected. Our pro-cognitive light is helpful also for workers in 24/7 operations, especially at night shifts it allows them perform as if they were working during the day. For example, in control and monitoring centres, duty and emergency rooms, it helps to ensure that workers on duty perform and deliver the same quality of performance at night as they do during the day.

Can you give examples where your technology is already in use? What is the experience these facilities have with it?

DJ: In addition to common applications such as school and social facilities, hospitals, offices, production facilities, labs and development centres, our lights can be found in the defence and security sector, for example, at the Fire and Rescue Corps, the Police of the Czech Republic, the Customs Administration Directorate, the Military Research Institute, the University of Defence or in the new premises of the Association of the Defence and Security Industry. Currently we are negotiating other applications, for example with the Czech Military Corps and several companies in this field.

HM: Regarding other specific applications, under a grant from the Czech Technology Agency, we are currently developing products for psychiatry and photo therapy in cooperation with the Czech Technical University and the National Institute of Psychiatry. We are working on a project for ophthalmology, where we aim on the impact of artificial lighting on the eye and the photobiomodulating energy benefits. We have a long cooperation with the Czech Olympic Committee in supporting our athletes at the Olympic Games. We are also involved in two projects of the space research, where isolation and conditions for the interplanetary flight crews are simulated in special submarines. Last but not least, in cooperation with the University of Defence we are preparing the research on the effect of our lighting on the psychological resilience of soldiers.

What about the economic parameters of your technology?

HM: To give you an idea, we can compare the added value and price difference of conventional LEDs and our lighting system to the difference of a fan and an air-conditioning unit. While the fan is only blowing air, the air-conditioning unit also controls the humidity and the temperature in the room.

DJ: Our technology is more expensive than standard LED lighting, which is however fully compensated by its added value to users. It does not just emit light, but also affects the non-visual system of the eye as an bioactive element affecting among others the work productivity bringing considerable labour cost savings amounting to about less than one year payback-period. Indirect benefits having positive economic impact include lower sickness rates and higher attractiveness of working conditions. We use state of the art components of the highest quality and latest manufacturing technologies, however it is not more demanding to assemble and apply our products in target environments. For organisations in the safety and security area, the modern pro-cognitive lighting constitutes a strong potential for improved activities and achieving better results.

Created by: Kateřina Straková

DEKONTA 🌼 KOS CBRN container system dekonta

DEKONTA, a.s. in cooperation with SÚJ-CHBO v.v.i. and with the support of the Ministry of the Interior, developed a Container System for the safe handling, storage and transport of CBRN materials for deployment at Václav Havel Airport.

The KOS CBRN container system is designed to be chemically resistant and is sealed against the escape of vapors of liquid and gaseous chemicals into the environment. The device enables safe storage and transport of highly dangerous substances. The container is equipped with an internal system for environmental monitoring, which allows monitoring of physical and chemical properties of the transported material in real time for the intervening personnel. Furthermore, the container is equipped with an inertization system for indoor spaces. The container is designed as a vacuum with a filter-ventilation unit. Inside are boxes with special resistance to chemical, biological and radioactive agents. The container is

designed to be energy autonomous.

The device is designed to be stable, but if necessary, it can be moved to a temporary storage location using an ABROLL container truck.

The internal storage space of the container allows to store and secure for



subsequent transport a larger number of pressure cylinders with compressed gases, 4 pieces of IBC containers with a volume of 1 m3 or substances stored in transport containers and barrels.

The container is equipped with a cooling space for storing thermolabile substances. The entire interior of the container is air-conditioned to ensure a stable required temperature of the interior, there is no unwanted overheating or cooling under extreme climatic conditions, or undesirable temperature changes in connection with the type of stored sub-

stance. The internal equipment of the system includes a special composite shielding container for storing radioactive substances.

The container is also equipped with a fire-extinguishing and decontamination system with collection tanks for the resulting wastewater. It is equipped with its own sources of electricity (batteries, power plant) so that it can be completely energy independent in critical situations.

Specifications:

Net weight: 6,730 kg Maximum weight, with load: 12,000 kg Dimensions of the storage part of the container: length 4,080 mm, width 2,230 mm, height 1,955 mm El. voltage: 230 V AC / 24 V DC

Unique mobile drinking water treatment plant

In difficult field conditions or even in the events of emergencies (natural disasters, etc.), operative provision of drinking water is often a problem. Therefore, for these cases TONER s.r.o. in cooperation with its partners, developed devices (also with special modifications for military needs) that solve these problems. It is a mobile water treatment plant that can comprehensively treat water from surface waters, such as a river, pond or stream. The basic characteristic and at the same time the uniqueness of the treatment plant is its design, which rests on a self-supporting frame made of lightweight alloy in the "backpack" design with its own energy source - 12VDC, which allows its eventual mobility in difficult terrain without the need for a motor vehicle.

Use and immediate commissioning is very simple. The treatment plant is located close to the surface water source, where the suction hose is inserted and plant is started with a single button. The result is absolutely clean water, which is completely free of all mechanical and chemical pollution. In the last phase, the treated water is enriched by adding a mixture of minerals so that the drinking water output meets the required Czech and European standards.

The capacity of the treatment plant is 60 - 90 liters per hour, depending on the water temperature (at 5 ° C - 30 L, at 20 ° C - 90 L). The treatment plant is powered by a battery with a capacity for 5 hours of treatment plant operation. In total, the treatment plant is able to produce 300 - 500 L of water per charge. . The treatment plant can remove mechanical impurities and turbidity, microbes including viruses, toxic substances such as ammonia, traces of heavy metals and radioactive elements, as well as organic impurities such as pesticides. The treatment plant will therefore also handle significantly polluted water.

The equipment includes a self-priming pump that is capable of continuous operation, a cascade of mechanical pre--filters up to the level of microfiltration, reverse osmosis, UV lamp, activated carbon and resin. A useful feature is the ability to check the battery capacity in the mobile application after connecting the mobile phone to the battery communication module. The equipment includes spare filter cartridges and osmotic diaphragms.

In addition to the portable treatment plant, the TONER company also supplies large-capacity container treatment plants with a capacity of 1 to 20 m3 / h. It is a modular fully automatic system with an automated process of filter regeneration, chemical water treatment, visualization on the HMI panel of the main switchboard and optionally the possibility of remote monitoring of the treatment plant operation via Ethernet connection or communication modem. As far as is known from public sources, no one in the world has yet produced or supplied similar mobile operating equipment for a drinking water treatment plant.

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EVPU Defence's Turnkey Solutions for Border Protection

As one of Europe's leading electro-optical system producers, EVPU Defence a.s. offers a wide range of products designed for the protection of border zones, coastal areas and objects of strategic importance such as airports, power plants, warehouses, military bases etc.

Security solutions for such areas and objects depend on a number of factors. How big is the area that we need to monitor? Is the terrain flat and clear or hilly and rugged? Is the local weather mostly dry and stable, or will the systems be exposed to water, salt and sand? Is it more appropriate to use a stationary system on a surveillance tower, or does the application require maximum flexibility that can be provided by a mobile surveillance van operated by just two people?

Together with the customer, the EVPU Defence experts are able to find practical solutions which address all the requirements of the intended application. The police and border guards in many EU countries already use



surveillance and monitoring vans with electrical masts that can carry the following systems: LIRA (detection range up to 9.1 km), MIRA (up to 14 km), SI-RIUS (up to 25 km) or MIZAR (up to 28 km, with radar). These systems are also available in stationary versions. Besides day-night cameras and thermal imagers, these systems can also comprise various other optional sensors whose combination creates a reliable 360° surveillance solution for the detection, identification and simultaneous monitoring of multiple targets. In case the armed forces are called up to protect the country borders, EVPU Defence offers ultralight remote controlled weapon stations for up to 7.62 mm and up to 12.7 mm machine guns. These RCWS may be installed on a wide range of combat vehicles and vessels. Other available products designed for light armored vehicles include gunner and commander sights, modular awareness system and laser and radar irradiation detection system. You can find out more on www.evpudefence.com

EGO Zlín spol. s r.o.

For thirty years, we have been developing products for rescue systems, CBRN protection, and tent systems. During this time, the company has gained experience in supplying equipment in the event of natural and industrial

disasters, war conflicts and has developed products that help mitigate the impact on the population. We have our own technical and design departments, which are currently proposing comprehensive solutions to support the IRS, military, firefighters, and other units involved in resolving crises. Due to the increased movement of people migrating from areas affected by the war, we have developed a border protection project,

which aims to enable the effective isolation of people suspected of being at risk of contagious disease or contamination with dangerous substances. The solution includes means of transport, the creation of triage for sorting the affected persons, their safe isolation, and protective personal equipment for the intervening units.

Another current project is the creation of a comprehensive base for the field



hospital. The field hospital is designed as a movable, readily transportable medical unit that serves as a temporary place for delivering medical care to the injured in areas devastated by natural or industrial disasters, as well as in areas afflicted by the war.

Following the experience learned during the COVID-19 pandemic, we designed mobile isolation units that are used to quickly create temporary cen-

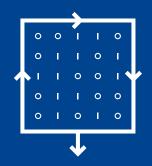
ters, which ensure the safe isolation of patients. In 2020, thanks to our flexible production, we delivered over 1,000 specialized isolation devices to users.

A comprehensive training system is also included as part of our services. We organize seminars and presentations in our training center. Our support includes equipment service and the possibility of practical training of staff and intervening units.

Our company's goal is to save lives and reduce the suffering of those who are affected by unexpected situations, and protect those who provide them with support.



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The Logistics Information System (LIS) supports key areas of military and crisis logistics

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Protective cover for BALBAR

Within the TA ČR project No. FW03010230 Integration of the monitoring system into the BALBAR protective barriers and increasing their resistance, the companies STRIX Chomutov, a.s., GoodPRO, s.r.o., and the Faculty of Civil Engineering of the Czech

Technical University in Prague have been developing a multi-purpose protective cover designed to increase the resistance of the BALBAR mobile protective and ballistic barrier.

BALBAR consists of a pneumatic support structure, a water bag, and high strength composite plates. It is manufactured in two sizes: a large one of 1.8 m height and a small one of 1.4 m height; the volume of the water bag is

0.89/0.76 m³, respectively, the width is 0.98 m and the weight with transport packaging is 22 kg. The weight of composite plates ranges between 21 and 29 kg, depending on the ballistic resistance class FB2 to FB4. It is intended for the Integrated Rescue Sys-

tem (IRS), primarily for the Fire Brigade and the protection of its members and other persons and objects during an intervention. The BALBAR can be assembled into kits. The barriers have been assessed by the TÚPO Authorized Performance Unit, components that are commonly available to Fire Brigade units.

The newly developed protective cover is intended to increase and prolong the resistance of the barrier when deployed, especially against mechanical damage during



Protective cover for testing

which provided recommendations for inclusion of the barriers into practical by the relevant Fire Brigade units. The BALBAR can be fully activated by two operators, using water from a tanker and compressed air in a gas cylinder within 4 minutes using intervention, handling, fire or flammable splash, explosion, and subsequent ignition. A newly developed monitoring system has become a part of the cover, allowing to monitor its surroundings, position, ambient conditions, and movements, and thus increasing the protection of the intervening members of the IRS. The cover was developed from special fabrics and also serves as a protective cover during transport. Currently, labora-

tory and outdoor testing of selected variants of the protective cover is underway. These covers differ in the type of fabric and geometry used. The results show that the protective cover significantly increases the durability of the BALBAR barriers.

Export insurance and export financing: possibilities of the international insurance market

Many companies may now face deteriorating payment morale. Receivables from customers account for up to 40% of companies' assets, while many entities do not secure them and rely on the knowledge of the market and the solvency of their customers. The current situation in Eastern Europe and the uncertain economic outlook for the future increase the level of risk. Due to sophisticated production with a typically longer production cycle, the defence industry has high demands on financing production and supplies. The use of products for export financing is therefore definitely appropriate here.

Possibilities for export insurance and financing

In the Czech Republic and in other developed countries, the state export insurance company (or eximbank) plays a very important role as a tool for state export support. It offers a number of insurance types for exports and export financing. However, these products are not always available for exporters – it is necessary to meet the conditions for state support for exports, and there is also the question of the capacity of the export insurance company. Therefore, it is definitely worth knowing the possibilities of the private insurance market.

Commercial markets offer an alternative to the state export insurance company in terms of products and scope of coverage. In the field of export insurance and financing, this mainly consists of the following products:

- insurance of supplier credit against political risks (risk of non--payment by private or especially public customers)
- insurance of buyer credit
- insurance of bank guarantee
- insurance of assets abroad

The defence industry is very complicated when it comes to export financing insurance, making it useful to have an experienced partner with established relationships with global insurers. RENOMIA, in cooperation with its shareholder Gallagher, is able to address these markets and, thanks to its experience, very quickly assess whether it is realistic to obtain a quality offer from a foreign market and how to conduct further negotiations.

Hynek Rasocha Director of RENOMIA Trade Credit

| | Political Risks (PR) | Trade Risks Political (CF) | Trade Risks Commercial (CR) | Noo-Trade (NT) |
|-----------------|-------------------------|----------------------------------|-----------------------------------|-------------------|
| Lleydra (mUSD) | 1,550 | 1,500 | 1(036)) | |
| Gormany (mUSED) | 2,524 | 2,854 | 2000 | 113481 |



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| Detection Capability | identification of substances classification of substances concentration determination <±15% |
| Alarm Level | freely programmable |
| Operator Interface | 8"Touchscreen (inside) configurable for different applications |
| Dimensions (approx.) | 500 x 210 x 500 mm (length x width x height) |
| Weight (approx.) | 23 kg |
| Interfaces | LAN Ethernet 10/100 Base-T, RJ45 connector Current loops 4 to 20 mA (self-powered) USB 2.0 connectors RS232 / RS422 / RS485 / Modbus Status transmission to external PLC devices |
| Remote Control | Fully configurable via remote maintenance access |
| Operation Temperature | -10 to 50 °C (14 to 122 °F) |
| Storage Temperature | -20 to 60 °C (-4 to 140 °F) |
| Operating Humidity | 0 to 85% relative humidity, non-condensing |
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Local surveillance technology for static and mobile deployments

The system is primarily designed to ensure estate security and the ability of local governments to exercise their powers. Thanks to its self-contained power unit, it can be operated autonomously in off-grid locations. Attached to a vehicle trailer, the system can equally be used for one-time situations.

The unique technology allows uninterruptible and fully autonomous operation, continuous video and data transmission from cameras, measuring equipment and remote surveillance devices. The system is extremely variable. All components can be easily added or removed according to user needs. The ČÁP can carry various video or PTZ cameras, cameras used for traffic monitoring and evaluation, speed measuring devices, license plate readers, etc. Besides excellent optical and mechanical properties, the remote surveillance cameras are also using artificial intelligence.

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network is accessed by using a router that allows connecting all integrated devices via LTE/5G cellular networks. To offer wider bandwidth, that is necessary for reliable transmission of critical information and high-quality camera footage, the router works in various modes and supports multiple SIM cards.

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Ray Service

Perfect combination of tradition and innovative approach allows Ray Service, prosperous company from Staré Město, to have the greatest ambitions.

Being the biggest company of the 3G Holding, Ray Service is an internationally renowned innovative manufacturer, distributor and integrator of cable harnesses, electromechanical boxes, electronic systems, and cable components for a long range of customers. More than 25 years of experience and extensive research led to strong, modern company that is reliable and sought-after partner on an international level.

The top quality is proved by a range of certifications and awards as a caring employer and more importantly as a supplier awarded by long-term strategic partners who keep Ray Service as their closest business partner. Company also strongly focuses on maintaining positive relationships with both suppliers and customers.

For a long time, Ray Service considers highly innovative approach their jewel that allows the company keep up with the global competition and bring a bit of invention and a piece of a Moravian heart into every project they participate in.

Main range of products and services made and delivered by Ray Service consists of: • Development and custom-made systems and own products



- Mil Standard Cable Harnesses
- Electromechanical boxes
- Internal & External Lighting
- Control Units
- Ruggedized Wiring Testers
- Dashboards
 - CAN-BUS Vehicle Control System
 - APU's
 - Delivered subsystems

- CBRN Vehicle Accessories & Systems
 Components
- Track Systems and Running Gear Components
- Fire Suppresion Systems
- Power Management Systems
- Intercom

Company has an extensive experience with every kind of approach: Buil-to-Print, Industrial Design, Make to Spec, Prototyping and Reverse Engineering.

Among others, Ray Service is a renowned integrator of systems delivered by a range of world's best cable components manufacturers, e.g. TE Connectivity, ITT Cannon, Habia Cable, Positronic, Brady or Kissling. That allows them to play great part on a highly competitive military, aerospace, and industrial technology market.

Most recently they significantly participate in projects of research, development and modernization of the Czech Armed Forces.

SOKOL[™] 3.0 Parachute Simulation Training System

e.sigma s.r.o. is proud to announce the new release of the third SOKOL[™] 3.0 Generation.

The Parachute training system SOKOL[™] 3.0 is a high-performance e.sigma, s.r.o. product for the entire spectrum of parachute operations training, from beginners to advanced jumpers, and all-encompassing functionalities of a jump including HALO and HAHO jumps. All the functionalities were developed in cooperation with instructors and professional jumpers with a specific focus on all needs of the advanced training requirements of Special Forces and other parachute jumpers.

With an extensive range of training features, SOKOL[™] 3.0 combines theoretical learning with practical exercises, including a very realistic force feedback system.

The 3rd generation of SOKOL[™] Training Systems comes along with features like



the experience of wind which is created by application of four wind modules, or the improved body tracking which allows tracking of hand movement to steer during the free fall phase more precisely. With the mounted Touch monitor, the instructor can change various exercise parameters during the running training.

Thus SOKOL[™] 3.0 represents a costeffective alternative to traditional training methods such as pendulum rigs, suspension rigs, jump towers and wind tunnels. SOKOL[™] 3.0 helps to prevent injuries, save cost, reduce time, and provides more rounded and flexible parachute training, thanks to its compact design and exercise creation tools.

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Enforce Tac 2022 Trade Fair



After two years, when the Coronavirus pandemic hit the whole world, on March 1st - 2nd, the International Trade Fair Enforce Tac 2022, was held again in Nuremberg, Germany. This year was a record-breaking year. A total of 377 exhibitors exhibited on an area of 13,730 m2 (304 exhibitors in 2019) from a total of 36 countries (30 countries in 2019). The Czech Republic was represented by a total of 16 exhibitors. The number of visitors was also high. 4,071 visitors from the professional public came to see the latest trends in the field of tactical solutions, internal security and in the field of goods and services for police forces.

The following companies took part at the Trade Fair within the mutual exposition: Defence and Security Industry Association of the Czech Republic, AVEC CHEM s.r.o., COMBAT SYSTEMS s.r.o., CzechTrade Agency, EURO SECURITY PRODUCTS s.r.o., EUROLAMP s.r.o., Real Target s.r.o. and REDO s.r.o. Other Czech exhibitors in addition to the mutual exposition included 4M SYSTEMS a.s., Ceska zbrojovka a.s., H Q H SYSTEMS spol. s r.o., Holik International s.r.o., Meopta Systems, s.r.o., MOIRA CZ, a.s., Sellier & Bellot a.s. and also Tilak, a.s.

This Trade Fair is traditionally supported

by the NOVUMM project implemented by the CzechTrade Agency and co-financed by the European Union through the Operational Program - Enterprise and Innovations for Competitiveness. The NOVUMM project provides support in the form of a preferential services for the participation of small and medium-size enterprises at foreign exhibitions and trade fairs, focusing on priority areas of the Czech industry. You can find more information about this project on the CzechTrade Agency website: https://www.czechtrade. us/services/programs-eu/oppik/novumm Also this year, the Association gained the opportunity for its members to participate at the Trade Fair as a visitor, completely free of charge. More than ten DSIA ČR member companies used this opportunity for their employees.

During the Trade Fair, exhibitors had the opportunity to sign up for the next year, which will take place on February 28th -March 1st, 2023. The organizers have announced in advance that the Enforce Tac Trade Fair will move to two new exhibition halls 8 and 9 next year, as the capacity of the hall 12, in which this Trade Fair is held as standard, is insufficient. And because practically all Czech companies are still considering their participation, we will strive to organize a mutual stand within the NOVUMM project in 2023 as well.

Text and photo: Alice Štysová, MPA







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JISR Institute, a.s. je česká společnost poskytující komplexní řešení a schopnosti pro Joint Intelligence, Surveillance, Reconnaissance (JISR), Elektronický boj (EB) a ochranné prostředky proti EOD společně s Anti-dronovým řešením.

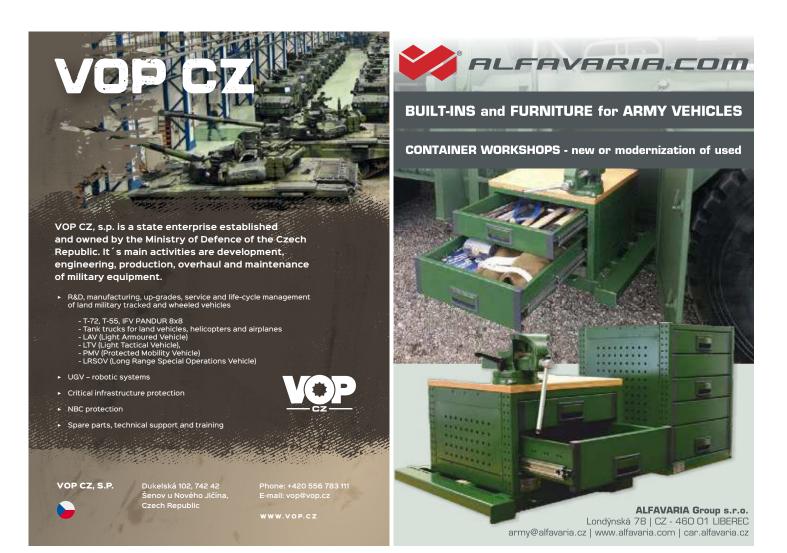
Naše řešení se skládají z bojově osvědčených systémů a aplikací, které mohou být nasazeny v taktických operacích jako jednotlivé senzory a efektory, aplikace velení a řízení (C2) pro různé horizontální a vertikální úrovně operací, až po správu C4ISTAR s komplexním využitím JISR a EB.

Společnost poskytuje svá komplexní řešení, architekturu a odborníky (obvykle s vojenským nebo vědeckým zázemím), osvědčené českými ozbrojenými silami a NATO, v rozsahu řešení pro Taktický EB, bojový Intel & ISR a asymetrické elektronické ochranné opatření a protiopatření (Electronic Protection and Counter Measures – EPM, ECM). JISR Institute, a.s., is Czech company providing a comprehensive solution and capabilities for Joint Intelligence, Surveillance, Reconnaissance (JISR), Electronic Warfare (EW), and Asymmetric Countermeasures including Anti-drone solutions.

Our solutions are composed of combat proven systems and applications and can span basic tactical operations by individual sensors and effectors, Command and Control (C2) applications for various horizontal and vertical levels of operations, up to C4ISTAR management with comprehensive JISR and EW exploitation.

JISR Institute provides own original design, architecture and subject matter experts (usually with military or scientific background), for its solutions, proven by Czech Armed Forces and by NATO, within the scope of solutions for Tactical EW, Combat Intel & ISR, and Asymmetric Electronic Protection and Counter Measures.





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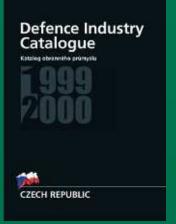














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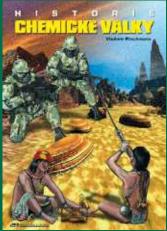


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