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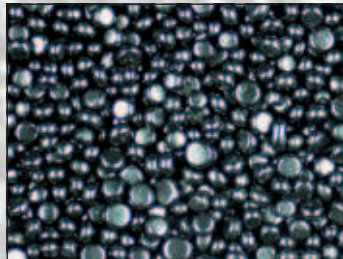
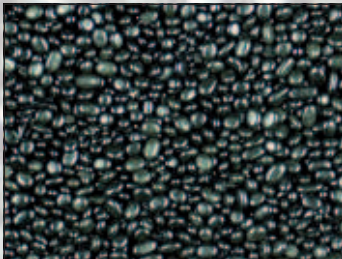
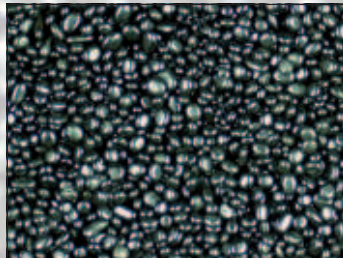
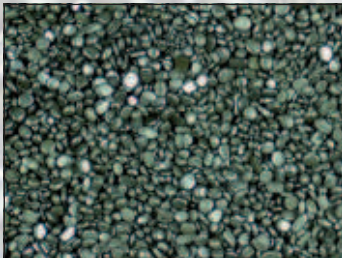
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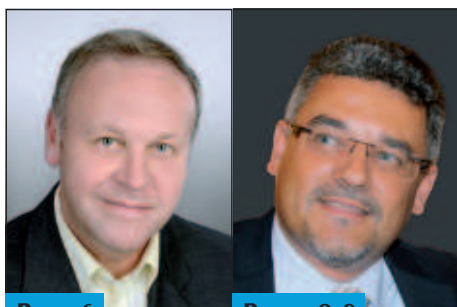
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Dear readers,

The XVI. NATO Days, the largest security show in Europe held on September 17 and 18 in Ostrava and the FUTURE FORCES FORUM 2016, an international project supporting interests of the Czech industry, state authorities, science, research and education

in the field of defence and security, taking place from October 17 to October 21 in Prague, are the most important domestic events in the field of defence and security this year.

On this occasion, we would like to present to you, on the pages of the Review magazine, more than 40 globally competitive companies that can be proud of their top-level know-how and results, but primarily of their national security and defence capabilities.

I would like to make use of this opportunity to invite you to stands of some of the companies and also to the stand of MS Line at the Future Forces fair, where an international jury will again announce and award prizes to the best exhibits.

The "Review" also contains a report on activities and conclusions of the 20th General Meeting of the Defence and Security Industry Association of Minister of Defence Martin Stropnický and DSIA's President Jiří Hynek. We have just started preparing the fourth issue of CDIS Review, which will be published on the occasion of the INDO DEFENCE International Fair, where the magazine will be distri-

buted and where the Czech Republic will have an official national stand.

Šárka Cook, Editor-in-Chief

Note of the editor:

The MS Line publishing house has been preparing the tenth issue of the Catalogue of Security and Defence Technologies for the 2017 – 2018 period, which is available as a hard-cover Czech-English publication and also on-line. It will be presented for the first time at the editorial board meeting in January 2017. All defence and security companies can use the catalogue to present themselves in the form of a business offer and in a photographic product appendix which also contains basic descriptions of the products. If you wish to have a look at the 2015-16 Catalogue of Security and Defence Technologies, visit <http://bit.ly/1UY6c9r>



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Current Security Threats do not Threaten only NATO Member States



In connection with events in the Crimea and eastern Ukraine or the ongoing migration crisis, biased articles and opinions appear which question the North Atlantic Alliance's ability to act or our membership in the NATO. And there are just a few politicians who are able to tell the Czech public, in plain words and without populist hypocrisy, that it is our membership in the Alliance and the European Union which guarantees our security, in particular from the

viewpoint of threats formulated in the Security Strategy of the Czech Republic.

The North Atlantic Treaty is based on collective defence, as stipulated in its Article 5. However, not enough emphasis is placed on its Article 3 speaking about the obligation of NATO member states to build their defence capabilities which can subsequently be used both for own defence and that of the allies. The fact is that the United States account for 73 % of all NATO capabilities, including related expenditures. Another fact is that only five nations out of 27 meet the requirement to allocate 2 % of GDP to defence. Let me remind you that Chapter 307 (Ministry of Defence) of the state budget is 1.1 % of GDP and that there exists a coalition agreement envisaging a step-by-step increase of defence expenditures up to 1.4 % of GDP in 2020. Let me also remind you that the Senate rejected its own proposal of a constitutional act under which these expenditures were to be temporarily set at 2 % of GDP until 2025.

However, I am not that much after the size of the defence budget; it is the build-up of capabilities against different security threats that I am interested in. The NATO summit in Warsaw has confirmed the strength and cohesion of the allies, as well as their commitment to collectively defend every member of the Alliance. The deployment of four multinational battalions in the Baltic States and Poland strengthens the Alliance's military presence in the east, reacting to events in the Ukraine. On the other hand, a decision has been made to re-establish a meaningful and constructive dialog with the Russian Federation, as current security threats do not threaten only the Alliance, but also a number of other countries. As to the Czech Republic, it has been expanding its military cooperation with the Visegrád Four countries, but also with Germany.

The new Concept of the Development of the Army of the Czech Republic until 2025 reacts to a critical NATO report, especially with

respect to insufficient numbers of our armed forces and non-compliance with the commitment to invest 20 % of defence expenditures into their upgrading and modernization. In my opinion, the reduction of our priority specializations from six to two also poses a problem; the same applies to the failure to spend the entire defence budget in the last few years or the poor state of the acquisition process. Still, there seems to be a light at the end of the tunnel, and not just because of our consistently substantial contributions to international missions and operations of the Alliance. The General Staff is fully aware of the lack of personnel in our army which is 25 % short of ToEs. The renewal of the recruitment process and freshly adopted defence legislation can contribute to a so much needed personnel stabilization of our army. At the same time, the role of active reserves and the responsibility of soldiers are strengthened as well.

Michael R. Turner (USA), President of the Parliamentary Assembly of NATO, issued a report titled "Deterring to Defend: Delivering on NATO's Promise". The publication summarizes, inter alia, global security developments, describes new strategic realities from the viewpoint of guaranteeing security in the 21st century, emphasizes the danger posed by ballistic missiles, changes in Russia's security and foreign policy, as well as new threats, such as hybrid war, renewed nuclear armament or various forms of cyber and information warfare. The President of the Parliamentary Assembly of NATO proposes to strengthen the deterring position, in particular to augment specific capabilities of the Alliance. In this respect, it is necessary to realize that the strengthening of this position goes hand in hand with improved capabilities of each member nation of the North Atlantic Alliance, including the Czech Republic.

The collective defence and the obligations arising therefrom are two sides of the same coin. It is up to each individual country how it will approach these obligations, as security is indivisible and essential for the democratic society and every citizen. The reduction of the number of allied US troops in Europe to 40,000 also means an increase of responsibilities, roles and in particular capabilities of the European part of the Alliance. It need not necessarily mean a new round of armament; it should rather be an increased pressure on effective spending, mutual cooperation and sharing of capabilities for the benefit of the entire Alliance. The outcome must be a functional territorial defence of member states with a capacity to act, guaranteeing the protection of lives of our citizens and the defence of democratic values which our civilization and society are based on.

Dipl. Eng. Antonín Sedlá, Head of the Permanent Delegation of the Parliament of the Czech Republic at the Parliamentary Assembly of NATO, Member of the Defence Committee of the House of Deputies of the Parliament of the Czech Republic, President of EURODEFENSE CZ
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A New Initiative in Support of a Wider Involvement of Czech Industry in a Broader European Framework

It is already a well-established tradition that our magazine annually interviews Deputy Minister of Defence Tomáš Kuchta. He is a very communicative man who combines interest in professional matters and diplomatic skills in his decisions. This time we asked him to answer a few topical questions.

Mr. Deputy Minister, you mentioned the year 2015 as a breakthrough year of international cooperation in the previous interview you gave to our magazine. How are we doing this year?



Last year I told you that we did not stop for a second. Now I might add that we even do not have any time to take a breath. When I look at my Rolodex, I have a feeling that we not only did not slacken our pace, but that we are carrying an increasingly heavier workload.

In my opinion, this is due to two main reasons; a markedly rising

interest in Czech companies and also our inter-governmental cooperation with partner organizations abroad. As a matter of fact, many nations have their ministries of armament production or sections and agencies established for a specific purpose of supporting the industry and its cooperation with foreign countries; these often require communication with us, as we represent a government segment with close ties to the army. Through these formats, we manage to arrange access to technologies and partners for Czech companies that would otherwise be unavailable to private firms.

We intend to carry on with this until the end of the year. The programme of my trips in the second half of 2016, during which I will support interests of Czech industries, can also be found on DSIA's website. All in all, I cannot be praiseful enough about the synergy with the Defence and Security Industry Association.

After all, mutual exchange of information is the key. One of major changes is also the support of the Ministry of Defence through so-called projects of support of economic diplomacy organized by the Ministry of Foreign Affairs in cooperation with MoD. We have supporting 10 such projects this year (until we have supported projects in Hungary, Austria, France, India, Afghanistan, Saudi Arabia, Malaysia and Brazil), and we want to step up our support next year. And we intend to consult the selection of the next year's projects with our defence industry by the end of autumn, to make them as closely matched to interests of our companies as possible.

In addition, we have been preparing a system we could use to certify products of our companies, including those not fielded by the Czech Army. Our state enterprises would issue certificates confirming that such products meet applicable standards and quality requirements needed for their use by armies of NATO nations, which would be a very important reference point for them.

The strategy of defence industry support is now undergoing an in-house review at the ministry. What will the document make possible, when is it expected to be approved, and what steps does the Ministry of Defence plan to make in the event it is indeed approved?

I must first note that, because of the timing and close thematic ties to the nascent armament strategy, we have decided to merge the two documents to produce a "Strategy of Armament and Defence Industry Support". Its draft will undergo an in-house review, which will be finished by the end of autumn, and it could be endorsed by the Government of the Czech Republic by the end of the year.

The strategy is expected to be an umbrella document concerning the approach of the Ministry of Defence to a fundamental issue of the development of the domestic defence industry, and will also contain

clear-cut procedures the Ministry of Defence will use when procuring armament for the Army of the Czech Republic. Whom we will buy defence equipment and material from and who will support all stages of its lifecycle are indeed issues of strategic importance.

The procedures stipulated therein are directly related to objectives of the Concept of the Build-up of the Army of the Czech Republic. They are thus another key piece of the mosaic of strategic documents according to which our overall national defence capabilities and capacities should be developed.

Could you outline a more specific example of the strategic build-up and maintenance of the capacities which the Czech defence industry and especially its state-owned enterprises make use of?

To be more specific – our approach will mean that guarantees of performance and fulfilment of all deliveries offered by the contractor will play a crucial role in the selection of suppliers and supporters of military equipment. The key role will naturally be assigned to our state enterprises, whose orientation will be directly defined by us. Their role will consist in the integration and lifecycle support of a given military/defence system. Right behind them will be Czech companies the reliability of which we can be sure of. Foreign companies will have to look for Czech partners who will act as guarantors of compliance with principles of secure deliveries and, at the same time, will assist in further development of Czech industry through transfer of technologies.

Using the approach outlined above, we will attempt to ensure the development of the domestic defence industry while also building a system of secure deliveries for our armed forces. Its detailed description will be provided in the strategic document mentioned above.

Have we succeeded in fulfilling the planned goal of increasing Czech defence industry exports to CZK 14 billion? Can you give us some specific examples?

At the moment, we do not have any statistical data for this year. It is the Ministry of Industry and Trade which is responsible for these overall statistical summaries, and we ourselves are curious about the numbers for the previous and this years they are going to publish. However, communication with our companies indicates that the recently embarked trend of steeply growing defence contracts for our enterprises will also continue in 2016.

Since the beginning of this year, we have supported the Czech defence industry during direct negotiations at six international fairs abroad and several conferences and industry days in the Czech Republic. We have promoted interests of our industry during negotiations conducted, inter alia, with the following countries and nations: Sweden, Hungary, France, Germany, Austria, Italy, Moldova, Ukraine, Georgia, Armenia, Kazakhstan, Morocco, Jordan, Egypt, Oman, Kurdistan, Iraq, Malaysia, Indonesia, Myanmar, Thailand, Pakistan, Afghanistan, Mozambique, Burkina Faso, Nigeria, Senegal, Kenya and Rwanda. However, the negotiations have also produced some tangible results in the form of pre-negotiated and signed defence contracts.

Generally speaking, it is also possible to say that we have also started to increasingly focus our attention to countries of Western Europe. The general perception may be different, but exports to our allies in the European Union and the North Atlantic Alliance account for a very high share of our total exports. And this is rather a unique phenomenon in our region.

At the same time, we have launched a new initiative to deepen the involvement of Czech industry in a wider European framework. We will organize several technological seminars and industry days with our partner governments and major international producers of defence equipment in Prague as early as this autumn, our objective being to present unique capabilities of small and medium-sized Czech defence companies and help them join suppliers' chains of these so-called "primes". We believe these events will help develop our technological

industrial base and increase overall production figures in the Czech Republic.

Statistical data shows that our industry is in many areas more successful at international markets than at the local one, and we also hear more praise in discussions with foreign users than at home? Do you think anything can be done about this?

This is exactly what we try to react to in our Strategy. The Strategy is expected to contain a mechanism for evaluating strategic suppliers which are essential in the process of building up capabilities of our armed forces. In short, new procurement mechanisms incorporated in the Strategy should bring more success in the domestic market to Czech companies.

We are also changing the overall perception of the defence industry as a specific sector crucial for national defence. In this respect, communication with the public is of key importance, and we plan to intensify it in the years to come. People need to be explained that the domestic defence industry must be perceived in the context of the rapidly deteriorating security environment, in which the reliability of suppliers will be an absolutely essential criterion in any defence acquisition. People must realize that the defence industry is not about exporting arms to conflict zones, but that it is a fundamental tool for being prepared and equipped for own defence in an emergency.

We have been cooperating very closely with the Ministry of Foreign Affairs in appropriate setting of the license policy and compliance with arms embargoes imposed on countries or regions where defence equipment could be ill-used. As a matter of fact, conflicts harm even defence manufacturers, because we simply do not give them export licenses – so the adage “the worse, the better” definitely does not apply in this case. We also want to present our industry as technologically very advanced and capable of strengthening and building up defence of countries desiring stability and fighting against terrorism. In this respect, we also fully abide with the foreign policy line set by the Ministry of Foreign Affairs.

Another thing that one should be aware of is that the defence industry is a major employer, a hotbed of innovation, and an important contributor to the state budget. In most countries with a capable defence industry, the above facts are a good enough reason for governments to develop and take care of it.

How do you view this year's general meeting of the Defence and Security Industry Association of the Czech Republic and benefits of being a member of the Association?

It goes without saying that the most important benefits include the involvement of government and state administration representatives and pro-active attitude of DSIA members and their constructive proposals for further development of our successful cooperation. The Defence and Security Industry Association is our main partner in communication with the Czech defence industry under an agreement on cooperation. Organizing a trip abroad requires a lot of effort and skills that are hard to come by. This is why I appreciate the cooperation with the DSIA team in the preparation of major events in the Czech Republic and abroad.



The membership in the association also means that companies receive information from us, that they can be included in our delegations, that we notify them of other activities in the Czech Republic or abroad, or that we reflect their interests in our priorities.

Indonesia will host the INDO DEFENCE international exhibition this November, which is an event in which the Czech Republic will officially participate. The editorial staff of our magazine are also preparing an English version of the CDIS Review. What opportunities of cooperation with the Czech defence industry do you anticipate in the years to come and what support can the Association expect from the Ministry of Defence?

Indonesia is a very promising market for our defence industry. I could see the interest in our products myself during the trip of Foreign Minister Zorálek to Jakarta in February. And there will certainly be an official delegation of the Ministry of Defence at this year's INDO DEFENCE.

Indonesia is even the most important export destination for some of our defence companies. Due to its geostrategic position, the growing expansionism of the People's Republic of China and the need to ensure stability in its vast territory, the country is forced to increase its armament budget.

These security needs combined with rich oilfields result in a growing interest of many countries in Indonesia. We are in the process of negotiating several very promising contracts there, and others have already been signed. We have, for example, very advanced discussions concerning radar technologies or deliveries of different types of aircraft. The company Excalibur Army has already delivered new Vampire multiple rocket launchers based on the RM-70 MLRS and mounted on the Tatra truck chassis to Indonesia.

This is also a proof of the successful cooperation between the Czech defence industry and Indonesia and of the high standard of products of the Czech defence industry.

Mr. Deputy Minister, thank you for the interview.

Šárka Cook

Svitap

- Military tents – hospital, large – spacious/one soldier tent
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- Textile warehouses with steel/aluminium frame
- Anti Flooding Barrier System
- Floating Barrages
- Pipeline Stopper
- Decontamination bath
- Big bags for bulk materials
- Military/humanitarian blankets

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 Josef Kleinbauer +420 605 700 635
 vertrieb@svitap.cz +420 461 568 419

Meeting of Leading Representatives of the Visegrád Group Countries Responsible for Civil Protection

On May 17 and 18, 2016, the Czech presidency of the Visegrád Group hosted a meeting of leading representatives responsible for civil protection. The main topic of the meeting was the assessment of risks at the national level and its use within the Union Civil Protection Mechanism.

The introduction of the article provides basic information on the Visegrád Group (also known as the Visegrád Four, or simply V4). It is an alliance of four Central European countries: Czech Republic, Hungary, Poland, and Slovakia. The Visegrád+ format also includes Slovenia and Austria. The V4 alliance is inspired by the meeting of three kings in the Hungarian town of Visegrád in 1335. At that time, Hungarian king Charles I of Hungary, Czech King John the Blind, and Polish king Casimir III the Great had agreed to close cooperation in political and trade matters and eternal friendship there. 656 years later, their meeting was a source of inspiration for yet another successful Central European initiative. The modern-history Visegrád Three was born on February 15, 1991, ten days before the demise of the Warsaw Pact, at a meeting of Hungarian Prime Minister József Antall, President of the Czechoslovak Federative Republic Václav Havel, and Polish President Lech Wałęsa in Visegrád, where the three politicians signed a declaration of close cooperation of their respective nations on their way to European integration. The Visegrád countries jointly strove the demise of the COMECON and the Warsaw Pact. After the division of the Czechoslovak Federative Republic, the name of the alliance changed to the Visegrád Four (V4), as the membership passed to both successor states, Czech Republic and Slovakia. For six years, cooperation within the Visegrád Group was dwindling and was restored only in October 1998. When all the four nations joined the European Union on May 1, 2004, activities of the group in the field of international policy increased even more, and the alliance was focusing on promotion of stability and cooperation in a broader region of Central Europe. Cooperation with Austria and Slovenia has been taking place in the framework of the so-called Regional Partnership; as to other central and eastern European countries, there is a so-called V4+ programme. The term of presidency of the Visegrád Group is one year, and the office is always handed over to the next nation at midnight of June 30/July 1. In 2015/2016, the presidency was held by the Czech Republic; in 2016/2017, the office will be held by Poland, and in 2017/2018 and 2018/2019 by Hungary and Slovakia, respectively, which means the Czech Republic's next presidency will fall into the 2019/2020 period.

Insofar as the area of civil protection is concerned, there is an unwritten rule that the V4 presidency organizes a meeting of General Directors on a topical issue, which is discussed with relevant

responsible experts. The meeting is concluded by a memorandum or joint declaration signed by all the parties. Recently discussed topics included:

- Principles of preparation and execution of exercises of crisis management bodies (2008),
- Cooperation in the field of implementation of relevant elements of the Union Civil Protection Mechanism at the EU level; Uses of the financial tool of the Union Civil Protection Mechanism for the implementation of joint projects in the field of prevention of and preparedness for emergencies; and Exchange of information on structural changes in national civil protection systems of the V4 countries (2009),
- Variability in united Europe, various tools and common objectives of V4 (2010),
- Safety and security against CBRN threats, improved prevention, detection and response to emergencies and serious incidents involving CBRN substances; and Cooperation in the preparation and implementation of joint projects focused on improving V4 civil protection capacities and preparedness for potential cross-border emergencies (2011),
- Discussion on disputable points of the draft of the Union Civil Protection Mechanism (2012),
- Enhancement of capacities and capabilities reacting to disasters occurring both on and outside own territory (2013),
- Critical infrastructure – national and European legislation, exchange of lessons learned in this field; and Cooperation in the field of crisis management during floods (2014),
- Prevention of, preparedness for, and reaction to natural disasters caused by geophysical changes (2015).

The topic chosen by the Czech presidency for 2016 was “The Assessment of Risks at the National Level and Its Use within the Union Civil Protection Mechanism”. The meeting was attended by General Director for Crisis Management of the Republic of Hungary, Major General Tibor TOLLÁR, Deputy Commander-in-Chief of the National Fire Service of Poland, Colonel Marek JASIŃSKI, and Director of the Civil Protection and Contingency Planning of the Ministry of Interior of the Slovak Republic, Colonel Miloslav IVICA, all with their respective entourages. The meeting was chaired by General Director of the Fire and Rescue Service of the Czech Republic, Major General Drahošlav RYBA, as the representative of the host nation. Presentations of the Fire and Rescue Service of the Czech Republic were delivered by managers responsible for different civil protection sectors.

The first presentation dealt with reasons why the European Union demands risk assessments from its member states and what it intends to do with the data. Delivering results of national assessments was also a condition for the disbursement of structural funds under the so-called ex ante 5 conditionality, and the European Union thus made sure that the task was fulfilled by most of its member states. The obligation to send national risk assessments is stipulated in Article 6 of Decision No 1313/2013 EU of the European Parliament and the Council of 17 December 2013, on a Union Civil Protection Mechanism; this is not the only obligation the decision imposes upon EU member states.

The natural disasters considered to pose the highest risk include:

- Floods – 25 member states;
- Extreme weather – 21 member states;
- Wild and forest fires – 18 member states;
- Pandemics and epidemics – 18 member states;
- Livestock epidemics – 14 member states;
- Earthquakes – 14 member states;
- Droughts – 12 member states;
- Landslides – 10 member states;





- Volcanic eruptions – 7 member states;
- Cosmic weather – 4 member states.

The man-caused disasters considered to pose the highest risk include:

- Industrial disasters/elimination of energy sources – 18 member states;
- Terrorism – 17 member states;
- Nuclear/radiological accidents – 17 member states;
- Traffic accidents – 17 member states;
- Cyberattacks – 14 member states;
- Loss of a critical infrastructure element – 12 member states;
- Coastal, marine and environmental pollution – 10 member states;
- Refugees/uncontrolled migration wave – 6 member states;
- Major public riots – 6 member states;
- CBRN attacks – 5 member states.

Furthermore, the presentation mentioned statistical conclusions of a report published by the risk prevention and assessment group, which show that natural disasters which occurred between 2002 and 2014 killed more than 80,000 people and caused economic losses exceeding EUR 100 billion. Another piece of information contained in the report is that each euro invested into prevention will save EUR 4 to 7 in disaster response and relief costs. The issue of prevention has spread into many political areas of the Union, namely: health, environment, adaptation to climatic changes, development, cohesion, agriculture, transportation, and research and innovations. Some of the discussion was also dedicated to EU's support of and initiatives parallel with the Sendai Framework for Disaster Risk Reduction 2015 – 2030, as well as the steps the European Union intends to take towards its implementation.

The next item on the agenda was information about the analysis of risks in the Czech Republic. An analysis of threats for the Czech Republic and a conversion of its conclusions into methodological and strategic documents in the field of national security are determined in the Concept of Protection of Population until 2020, with a view until 2030. The deadline of the task is the end of 2016, and the responsible authority is the Ministry of Interior, which cooperates with other ministries and central administrative authorities concerned. The analysis was prepared by a team of experts consisting of members of the Fire and Rescue Service of the Czech Republic, who used analytical information provided by and discussed with relevant ministries and other central administrative authorities. The analysis has identified 22 threat types in respect whereof a declaration of an emergency can be reasonably expected. In such situations, it will be necessary to adopt, within the contingency planning system, measures eliminating risks and mitigating impacts of emergencies. The next step should be a preparation of a new generation of type plans replacing the existing documentation.

The next presentation was delivered by our Hungarian colleagues who stated that the first national risk assessment in their country had already taken place in 2011, with just 6 principal risks identified. The next national risk assessment round, whose results were sent to the European Commission, took place in 2014; the updated



assessment identified 12 principal risks. The Hungarian presentation also described the assessment methodology and risk categories used. It was interesting to hear that the Hungarian government receives a regular quarterly report containing percentage estimates of emergencies which may occur.

The next presentation was that of Poland. In Poland's case, the risk assessment preparation was coordinated by the Government Security Center (Rządowe Centrum Bezpieczeństwa – RCB) and the Polish National Fire Service only provided some supporting information and documents. The Center was established in August 2008 by the Polish Crisis Management Act as a supporting organ of the Prime Minister, Council of the Ministers, Ministry of Interior, and Public Crisis Management Administration. The Center also acts as a secretariat of the Polish Central Crisis Management Staff. In 2015, a national risk assessment report was drafted, but it is a classified document. As it was necessary to send risk assessment information to the European Commission, an unclassified version of the report was also created. The report lists about fifty threats, evaluates the level of risk posed by each of them, and defines preventive and preparatory measures. Conclusions of the report have been implemented into national crisis management measures and will also be used in the development of new measures.

The last presenters were our colleagues from Slovakia. Their presentation was approached in a somewhat broader form, containing general information about Slovakia, legal framework of civil protection, number and types of emergencies, responsibilities of various ministries for emergencies, and Slovakia's civil protection system organization. The next part consisted of maps showing average precipitation, snow cover, wind-threatened areas, avalanche risks, seismic risks, and risks of floods and forest fires. The final part focused on the preparation of risk assessments in Slovakia; the risks are divided into natural disasters, man-caused disasters, sociogenic disasters, and risks related to disruptions of critical infrastructure.

The event took place in the Spiritka facility of the Ministry of Interior and its programme also included visits to the Firefighting Unit of the Prague Castle and to a new facility in Jihlava, the latter including a demonstration of special vehicles and equipment and a sightseeing tour of the humanitarian aid base. Foreign representatives appreciated the quality of the event and the visits, and the Polish colleagues promised to organize another meeting of general directors of civil protection during their V4 presidency.

All in all, it is possible to say that each of the V4 nations has approached the national risk assessment in a somewhat different way, although the risks that may be encountered in Central Europe are similar. Each V4 country can draw from experience of its neighbours, which can be used, for example, for an analysis of deficiencies in capacities and capabilities needed to respond to large-scale disasters and emergencies. According to Decision No 1313/2013 EU of the European Parliament and the Council of 17 December 2013, on a Union Civil Protection Mechanism, the analysis should be prepared and sent to the European Commission by the end of 2018.

Col Mgr. Jiří Musílek
Photo František Špaček

EVPÚ Defence Lays Emphasis on Quality

The technology of monitoring systems ranks amongst the very important factors of defence for both military and civil needs and customer's requirements for monitoring systems grow bigger every day. Thanks to its effort for continuous improvement and development of its overview, the company EVPÚ Defence, which influences the market over fifteen years, belongs amongst the world's top in this field.

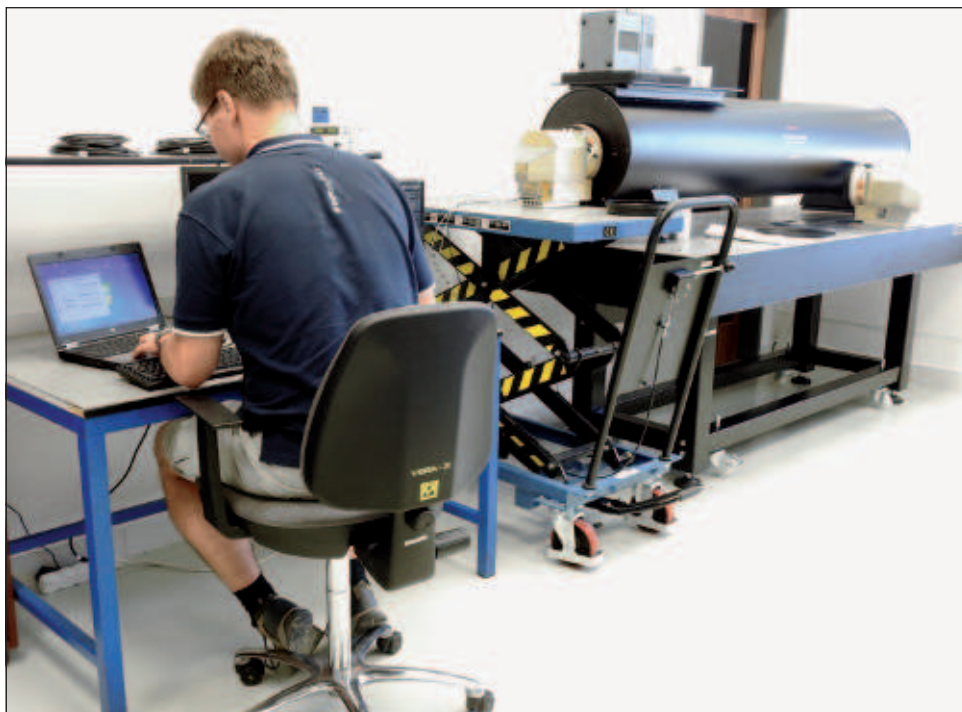
Recently, the company has bought a new, advanced device for daylight and infrared camera optical attribute's measurements. Thanks to this device, collimator DT250, we are newly able to test optical attributes of daylight and infrared optical systems without further increase of our product's price, or test already complete optical devices in case of interest of the customer.

One of the main tested parameters, characterizing monitoring system quality, is MRTD characteristics (Minimum Resolvable Temperature Difference) for infrared and MRC characteristics (Minimum Resolvable Contrast) for daylight cameras. EVPÚ Defence company sticks during its measurements with unified rules given by the international standard STANAG and thanks to that, the results of detection, recognition and identification ranges according to precisely stated conditions are ensured during our measurements, allowing to find a suitable solution for every individual customer.

Amongst the other tested parameters of our monitoring systems are MTF characteristics, spatial and temporal noises determination, geometrical and TV distortion measurement, daylight camera systems sensitivity, or verifying of field of view dimensions.

Thanks to professional and individual approach the company EVPÚ Defence guarantees optimal solution's achievement for each individual problematic and our customer's contentment is our priority.

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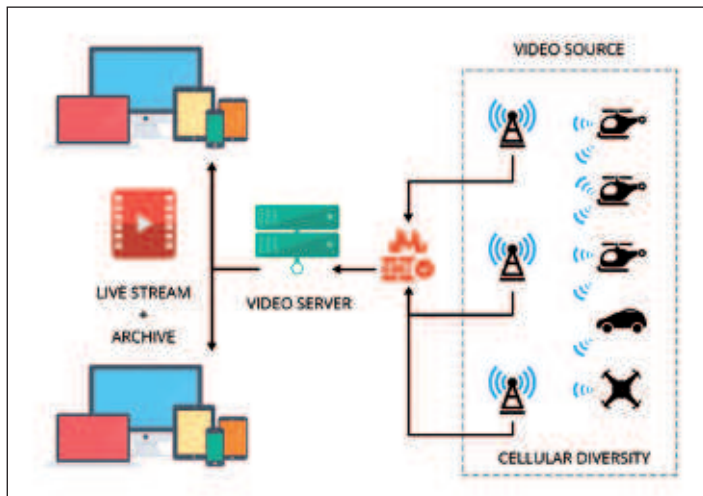
Global Surveillance System

The system is designed for covering entire countries or, as the case may be, large compounds, state borders, high-voltage distribution lines, gas pipelines, etc. It provides the possibility of real-time video monitoring of air and ground surveillance in special control centres or by means of mobile equipment.

The transmitting system comprises surveillance equipment (helicopters, airplanes, UAVs, ground vehicles, etc.) fitted with digital video transmitters and cameras; customer's existing systems may be implemented as well.

The receiving system comprises several receivers, installed within a monitored area, a central server and the special S.O.V.A. application.

Special Operational Video Assistant - S.O.V.A. - provides a full integrated video solution for air and ground units alike.



It includes video distribution and a recording system that is highly flexible, scalable, interoperable and easily configurable. The user interface of the system offers a wide range of functions and monitoring parameters whilst maintaining the controlling simple, well-arranged and intuitive. This system provides a great assistance especially in border surveillance activities, but also in solving emergency

situations where timely reaction of a control centre to actual conditions is especially needed.

It fully integrates all supported video equipment into a web platform accessible from any device connected to a secured network. User's access is secured by encrypted connection enabling single sign on login by integrating directory services of the Microsoft Active Directory and LDAP types. Individual users may be granted access to video content based on fully definable access rights.

The platform includes a high performance and fully autonomous map server, which enables users to carry out visual monitoring (connection indication, signal strength, selected channel) of active video devices, including their geographical position and infrastructure status.

It provides to users life-transmitted HD video, supporting advanced encrypting (AES) and with minimum time response. Video can be automatically or manually archived for later playing and it is immediately available when a mission has been completed. When archived, video records can subsequently be played, downloaded and edited (script).

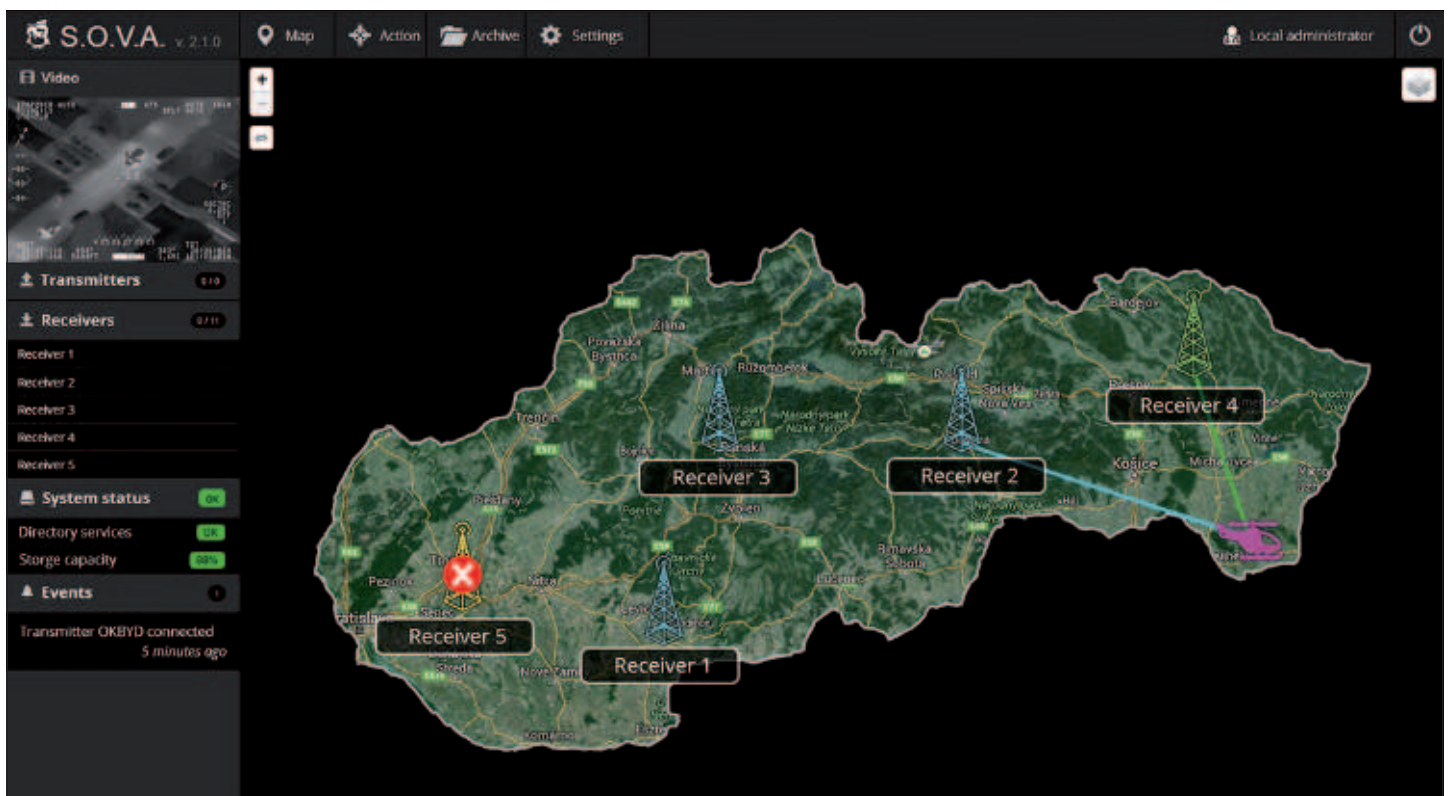


The full diversity core of the system, processing the video signal, ensures continuous video transmission free of undesirable connection failures. In this way it prevents subsequent degradation of video content and it makes efficient use of infrastructure transmission bands.

This system can be integrated into an existing infrastructure, among other, by connecting to outputs of external applications. The modular design of the platform enables its extending by further functions, as requested by the client.

The representatives of company Audiopro which has developed whole the system are ready to introduce it to you and share the experience they already have from real deployment of this system.

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Pinnacle is the Top – Literally!

Pinnacle Solutions is a growing aerospace company with approximately 210 employees established in 2008 by the famed special operations aviator Michael Durant. With Mike at the helm, Pinnacle has established itself as a leader in the U.S. aerospace industry.

In support of its customers, Pinnacle is able to leverage its broad range of experience in each of its four primary business areas – Aircraft Modernization and Sales; Engineering, Development and Light Manufacturing; Program, Training and Technical Services; and Integrated Product Support – to offer solutions tailored to the unique requirements of each customer. Pinnacle maintains a fleet of fourteen aircraft and five full flight simulators supporting the following platforms:

Rotary Wing: A/MH-6, AH-64D/E, AW159, Bell (212, 407, 412), UH-1, M/CH-47F/G, OH-58D, M/UH-60A/L/M, UH-72

Fixed Wing: KC-10, A/H/MC-130, B-200, C-12, C-23, CASA 235, P3, T-34

Tiltrotor: CV-22

As a testament to Pinnacle’s capabilities and experience, Pinnacle is the vendor of choice for providing simulator, training, and technical publications support to one of the most demanding customers in the world, the 160th Special Operations Aviation Regiment (SOAR). Likewise, Pinnacle was recently awarded a prime contract to provide simulator and training support for the U.S. Air Force’s fleet of fifty-nine KC-10 aerial refueling tanker aircraft. Pinnacle’s motto is “On time, every time” and it is our commitment to this motto that has fueled our continued success and rapid growth. Pinnacle’s staff of instructors trains over 5,500 students annually for the U.S. Air Force, U.S. Army, NASA, U.S. Special Operations Command and international customers.

In early 2015, Pinnacle developed an affordable, low-risk program whereby it is able to field a fleet of fully-modernized UH-60 Black Hawk helicopters, to include all associated logistics and training support to the Ministry of Defence of the Czech Republic. Through this program, Pinnacle will procure excess UH-60A aircraft from the U.S. government, refurbish the aircraft to “like-new” condition, and equip them with a state-of-the-art digital cockpit and a full complement of specialized mission equipment. In honor of the customer, Pinnacle has named this version of the Black Hawk the “UH-60CZ.” The intent of this program is to establish the Czech Republic as an independent operator of Black Hawk helicopters. If the UH-60CZ is selected as the Czech Air Force’s multirole helicopter of the future, the Czech Republic will field a world class Black Hawk capability at a fraction of the cost of new aircraft.

In addition to the UH-60CZ, Pinnacle is developing a Virtual Maintenance Trainer (VMT) for the Black Hawk. The VMT is a sophisti-



Virtual Maintenance Trainer: Exploded view - from the rear

cated, computer-based training device that will be used for aircraft systems familiarization as well as fault identification, isolation, and remediation. The VMT makes use of a high-fidelity virtual model of the Black Hawk to deliver comprehensive qualification training to new maintainers or sustainment training for experienced UH-60 repairers.

The VMT system is divided into two components, a Student Station (SS) and an Instructor Operator Station (IOS). From the SS, trainees can practice all maintenance and repair tasks required to maintain the actual aircraft. The IOS allows the instructor to monitor student performance and control all training scenarios. From the IOS, the instructor can insert faults or malfunctions that require the student to perform troubleshooting procedures and take corrective actions in accordance with the appropriate maintenance manuals. The VMT system provides the same level and detail of training as actual “on-aircraft” training, however, the virtual nature of the device allows training to be directed by an instructor or self-paced by a student working independently.

Use of the VMT provides students with valuable experience prior to training on the actual aircraft. This minimizes the probability of a student damaging an aircraft due to a lack of experience. Furthermore, use of the VMT maximizes the number of available aircraft to support flight operations as assets are not tied-up for use as training devices.

With proven cost, schedule and technical performance on a number of successful prime contracts, Pinnacle has demonstrated the capability to deliver innovative solutions to the highest standards and on schedule every time.

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Virtual Maintenance Trainer: Upper Console



Virtual Maintenance Trainer: Main Instrument Panel and Lower Console

Reliability, Tradition and Honesty – that's OMNIPOL

It is generally known that OMNIPOL has been active in the defence and security industry around the world since 1934. "However, our history started in 1919, when a separate sales department was created at Škodovy závody in Plzeň with the aim of supporting Czech and Czechoslovak mechanical engineering exports," said the company's chief executive officer Michal Hon. Fifteen years later the company's sales activities were dealing with such volumes that the decision was taken to establish an independent trading company, OMNIPOL.

"In our sector, tradition is one of the most important parameters. Our business partners – not only around the world – have known OMNIPOL for several generations and for them cooperation with us is a guarantee of a reliable, honest, serious and professional approach. We are a partner that provides its customers with individual, effective and, in particular, reliable and functional solutions," added Hon.

At the current time the sales portfolio of the OMNIPOL group is completely dominated by the defence and security industry, with a specialisation in aviation and defence and security electronics. In 2011 the OMNIPOL group purchased a 100% interest in ERA a.s. (a manufacturer of passive tracking systems) and, thanks to a reasonable reinvestment policy after taking it over from its previous US owner, literally saved it from bankruptcy. Today, ERA Pardubice, as part of the OMNIPOL group, has some of the best economic and sales results.

"Yes, it is very pleasing, but it is good to realise that the main reason is reinvestment in research, development and modernisation of production. For OMNIPOL, as the owner, it is fundamental to achieve the long-term competitiveness and profitability of its companies," said OMNIPOL group CEO Michal Hon of the highly progressive results of ERA a.s.



A strategic agreement with the Swedish company SAAB shows the promising development and international attractiveness of ERA a.s. (a member of the OMNIPOL a.s. group). It is focused not only on co-operation on the potential delivery of a mobile air defence radar for the Czech Republic, but also on a whole number of other areas. In addition to other things, thanks to it winning a NATO tender to supply the VERA-NG passive tracking system ERA a.s. has very valuable practical experience on the implementation of its systems to NATO standards.

The conceptual and strategic approach of the OMNIPOL group is shown by its 50 % share in the development of a new generation of the L-39 trainer jet aircraft. In this project OMNIPOL is also a strategic business partner. It is no secret that the aircraft has a successful past. Since 1971, when the first mass-produced Albatros (L-39 aircraft) was produced; almost 3,000 of them have been exported around the world. OMNIPOL CEO Michal Hon adds, **"Business experience, contacts and long-term professional reliability are OMNIPOL's strategic contributions to the L-39NG project. But they are not the only things. As we really believe in this project, we are contributing half the financing to its development."**

For more than 80 years OMNIPOL has been a stable, trustworthy and reliable business partner, operating in more than 60 countries around the world. In addition to aviation products, it also supplies defence and security electronics. OMNIPOL a.s. is a systems integrator and a supplier not only in the defence and security industry, but it is also active as a supplier and business integrator for deliveries of food manufacturing equipment and various technology units. The OMNIPOL group is a genuinely Czech company that focuses its activities primarily on the building and development of business relations between Czech companies and the global market.

Milan Řepka, Spokesman, OMNIPOL a.s.
Photo OMNIPOL and Anna Vacková

ERA Introduces the Novelty in its Portfolio: ERIS C2 – Integrated Air Command and Control System

ERA Company has acquired R&D company C.D.K.K. REAL and thereby broadened its product portfolio -up until now focused on passive radiolocation sensors - with command and control systems and civil and military Air Traffic Management systems. ERA's strategy has been to approach the market with its own C3i and ATM solutions and the abilities of C.D.K.K. REAL experts precisely satisfy its demands and expectations, because they have a great deal of previous experiences with developing such systems. With a long term focus on civil and military surveillance and reconnaissance technology, ERA has now strengthened its market offerings.



Cooperation between ERA and C.D.K.K. REAL has already brought about some results: the brand new AirC2/ATM system called ERIS (ERA

Integrated Systems) providing enhanced architecture, central configuration and a new approach to software interface. The ERIS C2 System is primarily intended for performing Air Force Command and Control (C2) functions as an essential part of national sovereignty. One of the main functionalities is providing a Global Recognized Air Picture (GRAP) for an early warning and fast decision-making process during Air Defence operations at both tactical and operational levels.

ERIS C2 is based on a modern sophisticated and modular design to meet all the requirements for a support end to end solution from planning and execution up to analysis. Each C2 system is tailored for the specific needs of the end user composed of standard modules. Thanks to the modularity and scalability of the C2 system, ERIS can be configured from regional C2 posts to nation-wide C2 systems adaptable to any radar/sensor and to any national air defence need including Air Traffic Control (ATC) functionalities.

ERA has already offered the command and control system to defen-

ce and security company Saab to use it with their Giraffe radar in hope that the integration into one advanced, comprehensive system will have significant export potential. ERA and Saab have recently signed an agreement for future cooperation in research and development of air defence surveillance and air command technologies. This agreement involves a strategic partnership between Saab and ERA regarding the integration of active and passive radar systems and includes calling a tender for 3D Mobile Air Defence Radars (MADR) for the Czech Republic.

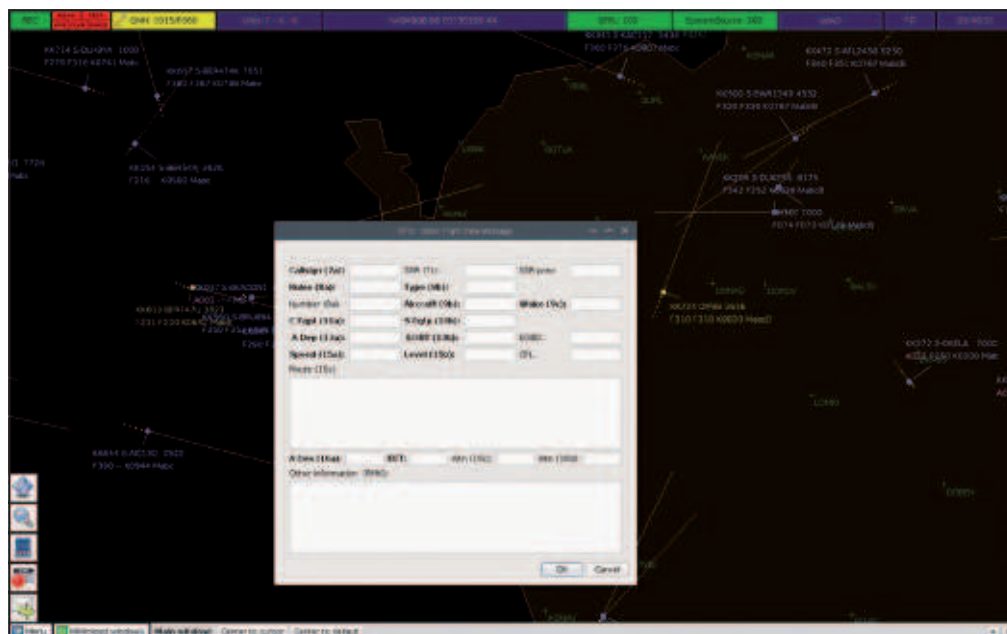
Operational functions:

- C2 Resource Management.
- Surveillance.
- Providing a Global Recognized Air Picture (GRAP) for an early warning and fast decision-making process and high accuracy local RAP supporting Weapon Systems activities.
- Force Management (Supporting the decision-making process of the Air Force Commander in operations and missions during the whole Air Tasking Cycle.
- Airspace Management.
- Air Mission Control (incl. transmission of C2 text messages, Orders, Reports & Requests).
- Military ATC.

Benefits:

- The modern sophisticated and modular design of the system.
- End to end solution from planning and execution up to analysis.
- Compliance with NATO and non-NATO Command and Control Procedures, data exchange solutions and system architecture.
- Excellent military-oriented Multi Sensor Tracker.
- User-Friendly and Configurable HMI.

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EXCALIBUR ARMY Delivered Modern RM-70 Vampir Multiple Rocket Launcher Systems to the Indonesian Marines



EXCALIBUR ARMY, a part of the CZECHOSLOVAK GROUP (CSG) holding, recently delivered modern RM-70 Vampir MLRSs to the first customer. This is the first time in decades that a modern artillery system capable of operating and communicating in today's digital battlefield has been developed and manufactured in the Czech Republic and fielded by one of the world's armies.

From the viewpoint of the Czech and Central European defence industry, this is an extremely important project. As a matter of fact, the delivery of the Vampir MLRS to the Indonesian Army was a result of cooperation with Slovak enterprises which supplied support vehicles. The development and characteristics of the RM-70 Vampir system, which permit building up complete artillery units linked to digital command and control systems show that, after 25 years, the Czech Republic again possesses manufacturing and technological capacities capable of designing, manufacturing and selling advanced combat systems. The Vampir system is also an example of cooperation of enterprises belonging to CSG Holding and truck manufacturer TATRA TRUCKS. Moreover, the sale of a complete artillery system to the Indonesian Army brings a high added value to the Czech economy, as well as references for future customers.

Complete Artillery Batteries for the Indonesian Marines

The complete package delivered to the Indonesian Marines includes RM-70 Vampir MLRSs, munitions vehicles, AV 15 recovery vehicles, and TATRAPAN armoured vehicles used as fire control system carriers, all on TATRA chassis. The package also include Alligator II light armoured vehicles. EXCALIBUR ARMY also arranged the training of soldiers who will serve the multiple rocket launchers. Another component of the package is a fuel bowser on a TATRA TRUCK chassis. It is worth mentioning that the Indonesian Marines have been using dozens of TATRA T815-7 logistic support vehicles for quite a few years. The price of the contract has not been disclosed, but the contract is definitely a financially attractive project both for CSG Holding and the Czech industry.

Apart from other things, EXCALIBUR ARMY has for many years been specializing in upgrades of proven combat systems and development of their new versions. Let us mention, for example, the upgraded DANA M1 CZ self-propelled howitzer or the JACKAL IFV.

Many armies, including the Army of the Czech Republic, phased out their artillery systems in the past. However, recent conflicts show that they are still valuable fire support assets. There are thus many potential customers, especially among the armies which previously used the original version of the RM-70 MLRS on the TATRA T813





chassis. This is also the case of the Indonesian Army, which purchased decommissioned original RM-70s, previously in the inventory of the Army of the Czech Republic, in the past. Now its soldiers have acquired their successors.

Modern Rocket Launcher on a Proven Chassis

The original RM-70 multiple rocket launcher was mounted on a TATRA T813 chassis, but the Vampire is installed on a brand new platform, TATRA T-815-7. It is equipped with an armoured cab, which also guarantees protection against chemical and biological weapons and is designed to enable the installation of add-on armour. The drive train consists of the eight-cylinder TATRA T3C engine delivering 270 kW, whose output is transferred to wheels by the TATRA 10TS 210N gearbox with the semiautomatic TATRA Norgren gear-shifting system and the TATRA 2.30TRS auxiliary gearbox. The tactical range and maximum road speed of the Vampire are about 1,000 km and 90 km/hour, respectively.

The RM-70 Vampire multiple rocket launcher can provide concentrated fire on areas occupied by the enemy and destroy both personnel and combat equipment. It can fire single rockets or salvos; the crew operate the weapon system from the vehicle's cab, or from a protected trench nearby, using remote control. The

Vampir carries a set of 40 launch tubes with 122 mm rockets loaded even when the vehicle is in a travel configuration. An additional supply of 40 rockets is stored in a loading device mounted on the vehicle, bringing the total basic load to 80 rockets.

The rockets are high-explosive projectiles, spin-stabilized as they exit the tubes, and kept on course by primary stabilization fins. The maximum range is 20,381 m; a single rocket can effectively achieve a destructive effect on an area as large as 3,000 m². If all rockets are launched in a single volley, they can cover an area of up to 3 hectares. The weight of the empty launcher vehicle is 18,080 kg; with the full basic load (80 rockets), it increases to 24,140 kg. The basic configuration of the vehicle is the same as that of the original RM-70 Grad MLRS, but most of its electronic systems have been either overhauled or completely upgraded. All the cabling is new as well.

The building of the first prototype started in February 2015 and the Vampire successfully passed firing tests eight months later. Now the company has manufactured complete MLRS batteries, including battery command vehicles and a vehicle of the battalion commander. The vehicles are interconnected by a modern fire control system and the equipment of each battery also includes a Forward Observer's (FO) kit.

www.excaliburarmy.cz



VOP CZ – 70 Years of Experience and Tradition



Military repair plants have always held an important place in the history of the Czechoslovak and later Czech defence industry. During the last 70 or 80 years, they have undergone many changes and restructurings. These topics, but also more current issues, were the subject of our interview with VOP CZ's CEO, Dipl. Eng. Marek Špok.

Mr. Director, has there already been a final decision that VOP CZ will not be privatized?

When I took over as CEO two years ago, there were indeed whispers about the privatization. However, the corporate strategy prepared by VOP CZ's management and approved by the supervisory board of the company does not take this option into account. Even Minister of Defence Martin Stropnický said during his recent visit at VOP CZ that the Ministry of Defence wanted to repair military equipment using predominantly its own capacities. Any considerations of a privatization are thus a thing of the past – there will be no privatization.

The abbreviation "VOP" is perceived by most people as denoting a military repair plant. Looking at your current portfolio, it is obvious that repairs are not the only thing that you deal in now. Can you briefly characterize other activities and businesses of VOP CZ?

Due to economic changes of the 1990's, the management of the company had to make a decision, in cooperation with the founder, i.e. the Ministry of Defence, to diversify VOP's portfolio toward non-defence engineering production. In the light of the experience and technical orientation of the company, it was a logical step to make. The mechanical engineering segment of our production kept growing and in 2014 even accounted for 97 % of VOP's sales. However, the purpose of the diversification was to retain production capacities and workforce for repairs and production of military equipment. The strategy was later proven correct. Nowadays we offer, in addition to production, upgrades and repairs of military equipment, products protecting personnel or critical infrastructure elements, non-defence cooperation-based production, part-assembly work, or final assembly of complete units. We now have more legs to stand on, which mutually support and complement each other, thanks to which we do not depend on just one segment.

What is the current role VOP CZ from the viewpoint of tasks for the Ministry of Defence?

We are now finalizing a draft maintenance strategy for the fleet of ground vehicles of the Army of the Czech Republic, the purpose of which is to transfer the responsibility for combat readiness and serviceability from the army to another entity, so that the former can focus on its priority and strategic tasks. At the moment, we



repair and maintain T-72M4 CZ main battle tanks, VT-72M4 CZ armoured recovery vehicles, TATRA T-810 trucks and ACHR-90M decontamination trucks for the Ministry of Defence of the CR.

The acquisition of defence contracts was the principal objective of your business activities in 2015; at the same time, the non-defence production segment was to be retained. Have you succeeded in meeting this objective?

Actually, we have been doing better than we expected. In 2015, we signed a major defence production contract with a non-European customer. It was also thanks to this contract that the share of defence production in the total sales revenues of the company climbed to 30 %. In 2014, the share of defence production was just 2 percent; it rose to 10 % a year later, and to 30 % this year, thanks to our business strategy. Our long-term objective is to have at least 50 percent of defence production. At the same time, I should emphasize that we have no intention to abandon the non-defence production segment. In this respect, we have been trying to improve productivity and develop cooperation with our key customers, including Kion Group companies, Caterpillar, Kleemann, Kramer or NiftyLift, etc. Here too our goal is a long-term partnership and cooperation, with efficient costs and deliveries of top-quality products.

Our priority is to achieve a higher level of finalization, and thus more favourable transfer prices reflecting our added value.

As to our overall economic performance, we realistically envisage a year-on-year growth of sales revenues to the tune of almost 25 percent this year, i.e. to CZK 1.3 billion.

To what extent are innovations and upgrades attractive for you? Something like the Pandur project or the upgrade of T-72 main battle tanks?

We have our own on-site modern development center on the premises, which is focused on both defence and non-defence projects. As to the military segment, we are developing, for example, an autonomous unmanned robotic vehicle, UGV TAROS V2, with a patented unique modular concept, in cooperation with Czech universities. As to the non-defence production segment, we have developed and are now marketing a versatile loader named DAPPER 5000, and we are now adding a smaller sibling, DAPPER 3000, to our



portfolio. Both models are intended mainly for municipal maintenance, agricultural and construction industry applications.

During the last two decades or so, the role and importance of state enterprises in the defence sector were more or less diminishing and their activities were often intentionally suppressed. With the presently increasing security risks and threats, the Czech government and the Ministry of Defence are realizing that the role of military state enterprises has to be restored. Are you prepared to meet this situation halfway?

Definitely. We have been preparing the maintenance strategy, already mentioned above, and a possibility of taking care of the entire lifecycle of ground equipment fleet of the Army of the Czech Republic. We have also been taking steps toward making the company able to play a key role in acquisitions of new ground equipment, including maintenance and lifecycle support. In cooperation with the Ministry of Defence of the Czech Republic, we have been looking for opportunities to make use of our development capabilities, capacities and know-how for the benefit of the Army of the Czech Republic. In addition, we have been successful in developing and marketing products for protection of personnel or critical infrastructure elements, which are in demand now.

You will celebrate seventy years of your existence this year. What are your future plans?

Seventy years ago, VOP CZ was established to deal in defence production, and this is where its future lies as well. We possess experience and know-how supported by state-of-the-art technologies and



development activities; we possess skilful and professionally capable workforce, which means that the company has a potential for further growth, in terms of both its size and its profitability. At the same time, we do our best to maintain a high standard in what is called corporate social responsibility. Apart from many other activities, we organize regular meetings of our management with all employees of the company, we abide by a Code of Ethics applying to both employees and managers, and we have strict anti-corruption rules. In this respect, for example, we cooperate with Transparency International on setting all mechanisms ensuring continuous transparency and openness of our company. We intend to be a stable and modern 21st century enterprise in every respect.

www.vop.cz



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READY TO MEET YOUR NEEDS
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70 YEARS OF EXPERIENCE AND TRADITION

- ↗ Development of tracked or wheeled combat, transportation, special land vehicles.
- ↗ Repairs, refurbishments and upgrades of tanks, vintage equipment, engineer equipment, armoured personnel carriers, infantry fighting vehicles and vehicles.
- ↗ Development and production of UGV TAROS V2 ground robotic systems.
- ↗ Development and production of critical infrastructure protection products, 2D and 3D scanners.
- ↗ Development and production of NBC protection means.



Agados Trailers have Proved themselves Even in the Most Difficult of Conditions Serving the Army and Emergency Services

AGADOS spol. s r.o. company from Velké Meziříčí will celebrate 25 years in the market this year. For many years it has been in the position of one of the biggest European trailer manufacturers and the leading manufacturer in the Czech Republic, thanks to not only its focus on its customer needs but mainly one hundred and twenty years of tradition of Czech engineering production. By combining quality processing and modern design it becomes a real number one in the market.

The Agados Trailer Development Centre has been an important innovator in the market in the long-term view. The designers and developers follow the trends in the field but they also listen to the needs of their customers. Thanks to that they come with more and more quality products which can transport virtually anything. The development always follows its own path and after dozens of years of experience the company has a very wide range of goods which are offered by means of its branches in many European countries.

Agados trailers are not only a series of quality trailers for the transport of goods, materials, vehicles, animals or liquids. Regularly they also manufacture various special trailers made to measure. With regard to the growing interest from security and emergency services, they have focused even more on development and production of robust trailers



for difficult conditions and after several successful projects they have proved their position in this area.

Everybody who does not choose a trailer from a wide range of their braked and non-braked types of

various applications, sizes, materials used and ample accessories can have a turnkey concept made for them. For example armed forces often need variable chassis for its various vehicles. Whether it is a universal carrier for ammunition, material and equipment or a chassis for vehicles, drones, robots, a tank truck, a mobile laboratory or an electricity generator, Agados is able to satisfy these needs.



To mention some important deliveries, Agados has had successful cooperation with the Army of the Czech Republic, Police of the Czech Republic, Military Police, Fire Brigade of the Czech Republic or for example special products manufactured for the needs of the Swedish Army in Qatar. A custom made moulded cover from hardwearing plastic looks like new even after five years of its use in hard African conditions and the other parts of the trailer also do not show any signs of wear and tear. The company aims to supply trailers to its customer that can be used for many years and therefore they also provide complete servicing and sale of spare parts, even for older types.

Numerous positive references prove that Agados is a reasonable choice when you need to extend your transport possibilities and use your current vehicle fleet at the same time. Buying a trailer is less expensive than buying a special vehicle. It is also the reason why there is an increased demand for trailers at the moment.

If you need a trailer, choose Agados. Quality trailers from a Czech manufacturer which has been a market leader for 25 years.

For more information, visit www.agados.cz.

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- all made to fit the requirements
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- the possibility of skis instead of wheels

WHY AGADOS TRAILER?

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- availability of spare parts even after years

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EXPLOSIA – Important Exporter mostly to EU Countries

The company EXPLOSIA a.s., a large manufacturer of industrial explosives, smokeless powders for hunting and sports purposes, rocket motors for rescue systems used in ultra-light aircraft and explosives for military applications, known not only on the domestic market, but also on the foreign one, continues this year in successful economy.

In the segment of military spherical powders for calibers from 5.56 to 12.7 mm we start the cooperation leading to large-volume orders. The extended production capacity of the spherical powders plant is used for the realization of these contracts.

In the segment of smokeless powders we extended trade relations with Mexico with a view to further expansion into areas of Central America. Furthermore we managed the break through with smokeless powders for civilian use into the long resisting US market. Within Europe itself, we have renewed relationships, or there was an increase of interest, with large manufacturers of ammunition, such as the German MEN or Polish MESKO where there has been an increase in supplies of smokeless powders for medium caliber ammunition.

Even the production of industrial explosives is outdone and despite the decline in supplies for the largest domestic buyer of dynamites (OKD) we manage to keep the total volume sold. For example, it helped a renewed interest of Greece on our dynamites.

During this year we made an adjustment in production technology of PETN, which is the main ingredient for the production of detonating cords, detonators and some plastic explosives, and there has been an increase in production capacity by 30–50 %.

In the segment of large caliber ammunition the company EXPLOSIA a.s. is the producer of bi-modular charge system for 155 mm gun-howitzers (BMCS) which can replace old bag charges and which won few prestigious prizes on international exhibitions. BMCS is the system of the second generation and is the successor of previous successful system, containing three types of modules and sold in big quantities to several countries (Slovakia, Cyprus). BMCS consists of two different types of modular charges - BC-E for short range (zones 1 and 2*) and TC-F for long range (zones 3 to 6*). The maximum range in the 52 caliber weapon and with shell with base-bleed unit is more than 40 km. TC-F modules contain wear reducing agent and cold nitroguanidine powder which extend the life of the barrel. (* Zones mentioned above are according to JBMoU.)

During 2015 the military acceptance tests of BMCS took place in Poland, including shooting tests on the new Polish 155 mm self-propelled gun-howitzer KRAB. Due to the lack of suitable space in Poland, two vehicles were relocated to Slovakia, where there were at a shooting range in VTSU Zahorie tested to the maximum range of the system, which overcome the distance of 40 km. Currently we realize of long planned large contract for Polish company Dezamet which will, after partial "polonisation", supply BMCS along with shells from Slovak company ZVS Holding to the Polish Army.



Spherical powders plant manufactured by EXPLOSIA a.s.

The demand for modular propelling charges BMCS is not waning and there are prepared supplies also for Slovak company KONŠTRUKTA Defence, which currently tests the newly introduced weapon systems EVA, first presented at IDET 2015 in Brno, and DIANA, presented at MSPO 2015 in Kielce.

The field of large caliber ammunition also includes production of solid propellants for various rocket motors. Here it is worth to mention the delivery of more than 30,000 elements for German company Rheinmetall, which are essential for small rocket engines, for example in flares.

It is necessary to mention two large areas in the segment of specialties. The first area of specialty are the elements of the aircraft rescue systems for light training and combat aircrafts Aero. The second area of specialty are demolition charges based on the plastic explosive Semtex® PI SE M, mainly cutting charges Semtex® RAZOR. Semtex® RAZOR is a flexible linear shaped charge capable to cut various materials by directional jet of metal. Currently Semtex® RAZOR charges are produced in seven different sizes - 6, 10, 15, 20, 25, 30 and 40 when the number corresponds to the cutting ability of the charge in the steel. The charges Semtex® RAZOR are used by special army units and police bomb disposal experts.

The Bundeswehr and Polish special forces are the large buyers of special demolition charges.

Also the brick charges from plastic explosives are good commodity for sale. The plastic explosives portfolio of company EXPLOSIA a.s. contains many types, including tried and tested old Semtexes, surrogates of American composition C-4, British PE-4 and PW-4, or new types of plastic explosives, like sheet explosive Semtex® PI SE M or Semtex® 90 applicable in extended range of temperatures. Last mentioned Semtex® 90 is the part of large contract with Czech Army.

The special products portfolio of company EXPLOSIA a.s. is wide – more information on company web www.explosia.cz/en/ – and can expand by relevant requests of customers.



Polish 155mm SpGH KRAB during maximum range shooting (left) and shooting tests of new Slovak 155mm SpGH EVA (right).



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CZ – Partner for Professionals



Interview with Lubomir Kovarik, CEO of the company

CZ is celebrating the 80th anniversary of its founding and at the same time, you are celebrating ten years as the leader of the company. What direction has the company taken under your leadership, what have been its greatest successes and what are the plans for the future?

The company's 80th anniversary is certainly a great opportunity not only to celebrate but also to look back upon

the years. After all, how many major firearms manufacturers with such a long continuous tradition are there?

We could spend many hours talking about our company's interesting history. Over the years, we have made many popular small firearms, from airguns, pistols, rifles and rimfire rifles to assault rifles, submachine guns or machine guns.

If I focus on my time as the head of the company, my main goal in the first stage was to get CZ back into the spotlight for the armed forces. As you probably know, after 1989, when many were lulled into thinking that the period of major conflicts had ended, the company dropped automatic weapons from its portfolio. As a result, supplies for the armed forces from our company consisted essentially only of pistols. Otherwise, the focus was placed on the civilian market. Although we are very successful in both sectors, with that move we lost one of the traditional pillars of our production programme.

Nevertheless, CZ has the advantage of a developmental, manufacturing and commercial independence. Therefore, after my appointment as the CEO we decided to once again re-introduce weapons for the armed forces into production. Over a relatively short time, we managed to design, manufacture and launch a completely new assault rifle, a submachine gun and a grenade launcher. In addition, I must not forget the new models of modern pistols.

Other changes took place concurrently. We have significantly modernized the production facilities at our main factory in Uherský Brod and increased the number of product lines from 8 to 12.

Today, CZ ranks among the top ten world producers of small arms. Our products are exported to nearly one hundred countries all over the world (prior to my appointment as the CEO the number was 69). In the last ten years, we have increased our sales threefold. We keep increasing the number of employees, originally there were 1200 and currently we have approximately 1800 employees. We are the largest employer in the region, with a salary about 15% higher than is customary in this region, plus we also have an extensive social pro-

gramme. Besides our daughter companies, CZ-USA and Zbrojovka Brno s.r.o, it has been two years since we acquired a "daughter" in Slovakia.

As for my future plans, regarding the service sector, I want to fulfil the vision of: We are the partner of professionals and fulfil their expectations.

In recent years, in line with new trends, you have ceased to present yourself as just a straightforward arms manufacturer. Nowadays, for customers from the ranks of the armed forces you also offer comprehensive solutions to their requirements. What does your portfolio currently include?

Yes, we strive to provide our customers with maximum service. Therefore our portfolio offers not only the weapons as such, but also all the necessary accessories and other related products and services. Apart from the traditional holsters and magazines or slings, we also offer, for example, optical sights, ballistic protection, ammunition, and we train armourers, we provide expert presentations and training according to the needs of each particular customer. Basically, we are able to meet any requirements.

Anyway, the key to success of CZ are still the firearms themselves. What are the main this year's novelties in this field?

There are lot of novelties in our portfolio, when I leave out those with which we complement already running product series, then the most important new models are the CZ Shadow 2 pistol and the CZ BREN 2 assault rifle.

The first case deals with a completely new handgun, where development and production of took great advantage of extensive experience accumulated with the bestseller named CZ 75 SP-01 Shadow. The CZ Shadow 2 dramatically outperforms its famous predecessor in all key factors, while at the same time maintaining wide affordability. The best evidence are those excellent result achieved by the CZ Shooting Team in IPSC events at Production Division, where our new pistol expressly shines from the very beginning of this year's season.

However, for your magazine is certainly more interesting the CZ BREN 2 assault rifle. Also with this weapon we did not start from scratch, but our proceedings were based on findings learned in the design and manufacture of the CZ 805 BREN weapon family, adopted into armament of the Armed Forces of the Czech Republic and supplied also to other armed forces. Thanks to this we have been able to launch to the market in a short time the new, highly modern model with really outstanding performance and parameters.



Equipment and Services by Professionals, for Professionals



At the 2016 exhibitions the renowned Czech gun manufacturer CZ will continue to enhance its range of both hardware and support services that were introduced to acclaim and attention at DSEI in London last year.

In particular, building on the presentation of the new CZ ballistic vests (see CDIS Review 3/2015 issue) the company takes the 2016 exhibitions as opportunity to engage with the first responder community, offering a level of protection that is not only the lightest in its class, but is also buoyant in water, making it ideally suited to counter-terror and homeland defence missions – including first responder, police and customs officers – on or near water.

Specialist training is a new component in CZ's inventory, and includes training in the uses and applications of the vests.

This new string to CZ's bow – specialist training and support – is enhanced even further in respect of the company's traditional activities.

In addition to being able to set up at a customer's own facilities, CZ now has a complex of ranges throughout the Czech Republic with which customized training programmes for the entire shooting community can be created and conducted: from basic shooting to highly-demanding Gunsmith and Armourer training, from static to mobile training, from open area to built-up (FIBUA) training – and even indoor / outdoor training: all are available. Beneficiaries of



CZ's in-house expertise (most instructors are former military with recent, extensive combat experience) range from gun designers and builders right up to Grand Masters in the art of the most complex repairs - and this expertise is now being offered to CZ's partners and customers.

As a company CZ has a very significant number of specialists who are actively looking to engage with the customer and to accompany them in the journey of CZ product ownership; and the combat experience and lessons learned that these veterans are able to pass on will directly impact not only the customer's organisation-wide selection and use of the weapons available, but also down at the individual level both tactics and survivability in-theatre – wherever that theatre may be.

In offering a complete through-life support solution to its customers CZ will be able to track, measure and ultimately improve the long-term performance of its weapons, while the owners, be they military, police or first responder, will have the full-spectrum benefit of the most expert, knowledgeable people in the world – the manufacturers – supporting them. Closer engagement of the company with the owners of its products, from initial acquisition, through training and in-service support, to final disposal, will enhance the complete ownership experience and reinforce the true through-life engagement and partnerships that the company is now offering.

www.czub.cz



Mikov's Products for Armed and Rescue Corps

For many decades, the Czech manufacturer of knives Mikov, s.r.o., has been supplying knives that have proven their worth both in armed forces and elements of the Integrated Rescue System. All of them were developed in cooperation with either combat and survival specialists or professional rescuers. The "genetic code" of the knives thus contains not only workmanship and design skills, but also the experience of those who use them every day in difficult situations.

The UTON assault knife is a traditional product of the company, and very popular among soldiers and policemen. Its development started as early as in 1973, and it was fielded by the then Czechoslovak People's Army in the mid-1970's. It is still successfully used by units of the Army of the Czech Republic today. The forty or so years of use are proof positive of the quality of design and workmanship of the single-blade knife with a central tip.

Lessons learned in training and combat have shown that a grooved blade top near-handle segment which the thumb rests on, with the second half of the blade top ground to a false cutting edge, stainless steel, and a plastic handle with a textile or leather sheath are an ideal combination for army uses. For example, reconnaissance units appreciate silent handling of the knife and its efficiency in combat. All military personnel highly praise practical supplementary tools – a file and a saw blade, both of which are kept in the sheath and can be used together with the knife thanks to a special adapter.



The UTON variant currently on sale bears a designation 0007. It is marketed and sold in sets – from the simplest one, comprising just a leather sheath, to a set with a sheath made of durable camouflage fabric.

Another well-proven tool manufactured by Mikov is a model named **Rescue**. It is a representative of a class different from the UTON assault knife. Its concept is based on Mikov's popular spring knife named **Predator**. The **Rescue** knife was developed in cooperation with the Fire Rescue Corps, but its users are not only firemen, but also city policemen and other elements of the Integrated Rescue System. Rescuers can carry the folded knife safely, but it can also spring into action very quickly, even when the person using it wears gloves.

Apart from professionals, the **Rescue** model has also found its place among common accessories of passenger cars. As a matter of fact, its special blade is ideally suited for recovering victims of traffic accidents from vehicles, as it is an absolutely safe, 100 % effective tool for cutting safety belts. It has proven extremely useful for firemen, who use it to cut fire hoses or as a practical helper during disaster-relief operations in flooded areas.

The **Rescue** model comes in several versions. The basic one, with one special blade, can be supplemented with a glass-cutting diamond, a key for opening power distribution boxes, a glass-breaking tip, and a classical jackknife blade.

The **Patron** model is a representative of a new generation of Mikov's knives, the so-called Progress model line. It is made of tough and hard steel N690 and its handle is plated with hard material designated of G 10. In the standard version, it comes with a tailor-made Kydex sheath and a Tek-Lok versatile belt clip.

The quality materials it is made of, robust design, and high durability enable the knife to be used in harsh survival conditions, but also as a combat and tactical knife, as confirmed by tests conducted by independent combat and martial arts experts, in which the knife was evaluated as an excellent weapon for self-defence and combat.

Just like all other models of the Progress line, the **Patron** knife too offers variability and a possibility to be delivered with a variety of accessories.

The **Patron** model also has a special recess on the blade, known as choil, which offers the knife's users a safe grip for more accurate and detailed work, while having no adverse effects on the knife's robustness or durability.

In addition to the UTON, **Rescue** and **Patron** models, the factory in the North Bohemian town of Mikulášovice manufactures dozens of other types of folding, fixed-blade, outdoor, hunting, or craftsmen knives. All of them are born thanks to efforts of experienced cutlers, toolmakers and other specialists, whose work follows on the local hundred-year tradition of industrial and cutlery production. Together with the courage to develop new products and innovate technologies and manufacturing processes, these have always been typical characteristics of Mikov's cutlery production. The emphasis placed on material quality and workmanship allows Mikov to deliver all its products with an above-standard, seven-year warranty.

This is also one of the reasons why the company has never considered a transfer of its production to Asia. It knows all too well that its products – if they are to remain what they are – must not be separated from the tradition and uprooted from the place where they originate.

www.mikov.cz

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INTERLINK CS Ltd (ICS) cordially invites you to the above mentioned exhibition held at the PVA Expo Exhibition Grounds, Prague 9, Czech Republic from the 19th to 21st October 2016. ICS stand will be located in Hall 3, stand no. 312.

ICS is a supplier of leading-edge communication, monitoring and antenna systems for Government professional users in Central Europe. Harris Communication Systems (HCS) is one of ICS major partners, HCS is a leading global manufacturer of tactical communication systems, ensuring reliable encrypted communications from dismounted soldiers up to strategic systems. The Falcon III family of tactical radios meets the requirements of NATO Armies at all levels of tactical C2 Command and Control.

Harris Corporation in numbers

- Annual turnover 8 billions USD
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RF-7800H-MP - Wideband HF/VHF Tactical Radio System



Within category of HF-NB/WB Manpacks, HCS has developed a new tactical system based on the RF-7800H-MP. The frequency range 1,5 – 60 MHz, an automatic dynamic channel spacing modem ensures effective

use of the frequency band with data rates up to 120 kbps. RF-7800H-MP continues the success of HF R/T PRC-150 used by most NATO Armies, enabling operation ALE 2G, 3G and 3G+. In the frequency band 30-60 MHz RF-7800H-MP and PRC-150 provide communications with VHF - FM networks.

RF-7850S (SPR) – Advanced Wideband Secure Personal Radio



HCS has completed development and started to manufacture the most advanced handheld tactical radio in the world. When developing the RF-7850S, HCS utilized many years of experience in the development, manufacture and feedback from many users of its tactical radios; PRC-117F/G, PRC-152/A, and RF-7800S. The frequency range 225 MHz – 2 GHz, output 3,2 W, operation; NB, WB, FH, Full Duplex, connectivity; IP, RS-232, USB 2.0, AES & Citadel crypto, GPS, MANET, S-TNW, VULOS, data rate up to 1Mbps.

Harris tactical systems provide for the ACR and OSSR interoperability with NATO Armies at C2 level. Increase combat effectiveness and security by ability to call on CAS, artillery, medical and logistic support. The most significant advantage is connectivity with NATO C4ISR networks. Another advantage of Harris radios is the ability to create the MANET - Mobile Ad

Hoc Network system that ensures the automatic omnidirectional communication of mobile radio devices. MANET network do not need infrastructure they are completely independent, enabling distribution of location, and status of own and Allied Forces.

More on: www.interlinkcs.cz or www.harris.com



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Multifunction Tactical Terminal CDU BVIS-M

CDU BVIS-M is primarily designed for military truck/wheel vehicles as the main part of HMI (Human Machine Interface) system. The CDU BVIS-M includes color 1280x800 pixel WXGA 12" display, with touch screen, programmable 2x8 softkeys, on-touch screen keyboard and warning green-orange-red light display. Operator controls the unit via softkeys according to the on-line menu on keyboard and/or the touch screen. Black-out function is also implemented.

Dimensions:

343x242x80 mm, Weight: max. 4 kg, Power: 18-33V DC / 1 A max, Operating temperature range: -30 °C to + 50 °C

CDU BVIS-M terminal is based on a non-windows/embedded Linux software tailored according to the end user's requirements in order to integrate all digital systems in the vehicle and fulfill command/control system tasks. The implemented command/control system provides all basic functions to support decision-making (e.g. knowledge of the tactical situation, friend/foe position, and target distribution) and ensures availability of combat information. This function offers an efficient use of combat command and to provides the overall battle view with the use of fire power incl. wireless data transfer in the company.

CDU BVIS-M provides/supports the following main functions:

- status and alert information (vehicle systems status, warning, alert)
- position information (maps, friend/foe position, tactical situation)
- cooperation with weapons station (status, ammunition, bidirectional automatic transfer of targets, traverse and elevation, video transfer)
- navigation (way points, distances, driver's director, traveled path, built-in GNSS receiver (GPS/GLONASS/SBAS/Galileo/Beidou), built-in lightweight inertial unit, DAGR connectivity)



- diagnostic/vehicle control support (analog/digital/pulse inputs, power switch outputs, operational data storage, voice output)
- data communication management (wireless company communication control, intra vehicle data communication)
- integration vehicle systems via milCAN, Ethernet 1Gb, RS232, RS422, RS485, WiFi b/g/n
- display of HD video stream incl. picture records (jpg)
- management of air condition and crew protection systems incl. LWR/radar warning
- switching between Czech and English versions during operation is possible

Flight Instruments Prague, Ltd.

Main activities

- Development, production and service of diagnostic and navigation systems and command/control systems for on ground moving military vehicles
- Development, production and service of flight instruments
- Certificates: ISO 9001:2008, AQAP 2110 (ČOS 051622), various Approvals of CAA for production, repairs, testing and design of flight instruments used in general aviation, Security clearance "CONFIDENTIAL", Approval for foreign trade in military material



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Modernization of Tank Intercom Systems

As the requirements on main battle tanks are developing, the demands made on their equipment are increasing as well, including the modernization of the means of communication used. Tactical radio communication systems of the RF23 and RF40 Series in combination with the VICM 200 COMBAT software-defined digital Intercom System from the MESIT holding companies respond to the needs of today's missions because their design is based on knowledge obtained from their users.

A modern internal communication system of the current tank should enable:

1. voice communication between the crew members inside the tank;
2. voice communication between the crews of the tanks operating in the battle group and with the higher level of command posts;
3. voice communication via data networks (VoIP).

The other essential features provided by these systems are:

- easy and intuitive operation;
- "plug and play" installation with the possibility of modular add-on components addition;
- extensive possibilities regarding the connection of other peripherals produced by various manufacturers;
- a built-in control and test mode (BIT);
- the possibility of transforming signals from combat and vehicle information and diagnostic systems into audible warning voice messages.

Figure 1 shows the VICM 200 COMBAT set suitable for tanks based on the T-72 platform (three crew members + infantry). A version for a tank with four crew members (e.g. Leopard 2) is shown in Figure 2.

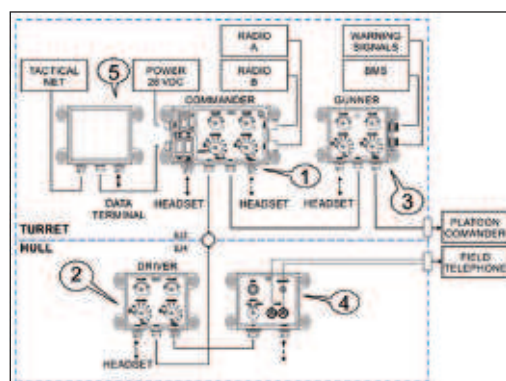


Fig. 1 – VICM 200 COMBAT set for the T-72 tank

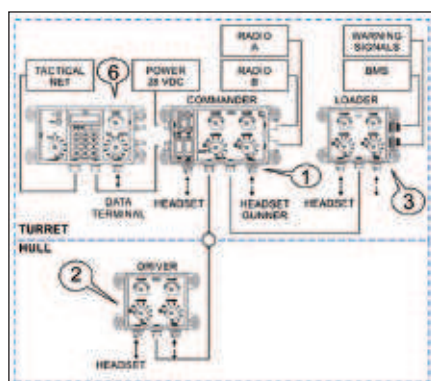


Fig. 2 – VICM 200 COMBAT set for the Leopard 2 tank

In both cases, the Intercom System is based on three units – VICM 201 Central Communication Unit (CCU, position No. 1), VICM 202 Basic Communication Unit (BCU, position No. 2) and VICM 208 Audio Data Interface (ADI, position No. 3). Such intercom system can interconnect up to six crew members together with 2 tactical radios. The CCU is intended for the commander and, in the case of a four-member crew, also for the tank gunner. The vehicles' radios and the other system units are connected directly to CCU. The advantage of this design is that even in the event of a failure or damage occurring to all of the other Intercom System components the most important members of the crew will still have a connection both between each other and also with the other command posts. The driver's BCU is connected with CCU via rotary slip ring. In the event of any requirement to connect the Intercom System to the field telephone, the VICM 212 Field Telephone Interface unit (FTI, No. 4) is also located in driver's area. The gun operator's position is equipped with an ADI to which it is possible to connect digital and/or analogue outputs from various systems like Battle Management System, Vehicle Health and Usage Monitoring Systems, Nuclear Biological Chemical and other sensors etc. For the purposes of today's digital battlefields the Intercom System is supplemented either by the VICM 204V Basic VoIP Unit (BVU, No. 5) or by the VICM 204 Telephone Interface Unit (TIU, No. 6) enabling the voice/data connection via Internet protocols (VoIP), while it also provides an interface for connecting either a PSTN line or a field telephone.

The VICM 200 COMBAT represents the third generation of digital intercom systems developed and produced by the MESIT aerospace company which as one of the world's few manufacturers of these devices has its own headsets equipped with an Active Noise Reduction system (ANR) and its own system for sound announcement to the vehicle's surroundings (known as Public Address System). Together with the tactical radio systems from its affiliated MESIT defence company it is therefore capable of offering a comprehensive vehicle communication system with features and support which can only be obtained from manufacturers who have many years of experience in military and aerospace technology.

Dr. Tomáš Mazúrek, www.mesit.cz

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Cybernetic Security in 2020

In accordance with the schedule, I was supposed to sit and write something as an essay, this is now a modern word also at the state school-leaving examinations, about the history of information and cybernetic security. But an article came to my mail box that I became interested in so much that I stopped writing and started reading it instead. For the years when my work has been accompanied by Internet, I became subscriber of a great number of mainly professional or at least professionally looking electronic periodicals that are now filling my e-mail box and that I am not usually able to even go through, not speaking about reading them. I cancelled subscription of some of them, while I still store the other ones based on my nostalgia or naive self-deception that I will sometimes be able to read them.

Cybernetic security in 2020, as the headline of the article was announcing, looks allegedly gloom. In the article, the author summarizes possible scenarios of the future long-term development in the area of cybernetic security, prepared by the specialists from the Center for Long-term Cybersecurity (CLTC) of the University of California, Berkeley. Long-term means by 2020, after that year, nothing will probably matter. Or it is difficult to make any prediction of. The scenarios are really not any optimistic reading, and in the original document, they are provided in a great detail. So I decided, instead of the introduction, and also because I would like to outline at least a bit the "serious nature of the issue" that we are going to deal with, to summarize and present the scenarios a bit. There are total five scenarios; each based on a different assumption and each resulting in the different, quite varying conclusions. Of course, their intersection can be reached only with difficulties. By the way, consider this yourself, here they are.

Scenario 1: New normality

After the years of useless fighting concerning the lost data, the Internet users in 2020 will conclude that their data will be stolen anyway and their private information will be published anyway. The law ombudsmen will seek keeping up at least with the ongoing extensive cybernetic attacks, while the small attacks will continue growing. By that time, nobody will write a clear legislation concerning cybernetic crime that will practically prevent from any efficient control by government authorities. Cybernetic jailbirds of all countries, as opposed to their govern-

ments, will gradually join their forces and organize joint attacks with no regard to borders or government system. Institutions as well as organizations will respond in a different way. Some of them, but they will not be many of them, will stop using Internet, the other ones, and we can assume they will be more of them, will publish all that can be stolen before someone tries stealing it, and the rest will decide to fight.

Scenario 2: Omega

By 2020, scientists will prepare extremely powerful models capable to predict and control the behaviour of individuals with a high level of accuracy. Instead of considering the trends and behaviour of individuals with similar characteristics, the new models will prepare quite precise predictions of the behaviour of individuals even in the very complex situations. A polarizing discussion of the decade will be going on whether this is the sign of the fact that humanity handed over its control, freedom, and mysteriousness to digital technologies or if it means that it concerns an amazing development allowing society to resolve the long-term disputes, fighting, and conflicts in a more efficient way? The discussion will take place at the academic level, however, the powerful predictive systems will quite legally and realistically develop new types of vulnerabilities that the existing principles and methods of defence, dealing more increasingly with people than with the infrastructure, will not be able to cope with, resulting in the extreme damage and not only in the financial consequences.

Scenario 3: Bubble 2.0

Two decades after the burst of the first dot-com bubble, the business models of majority of the companies based on promotion are breaking down. The collapsing companies those value derived from profits, seek compensating their losses by selling, perhaps valuable or not, data activities to anybody who will pay in the adequate way. Especially to criminal elements. Under the worst circumstances: financial stress, panic, unclear ownership rights, non-transparent markets, and globally present data attractions; the data war is going on. The criminal elements use two key values: the data that is the principal goal of their attacks, and the people who are ready to cooperate with them as the collapse of the industry left a number of specialists with no job.





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Scenario 4: **Vulnerable Internet of things**

In 2020, the Internet of things is becoming a massive driving force ready to resolve the issues of education, environment, health, work efficiency, and quality of human life in general. This is generally considered a huge benefit. Technologies are quickly moving from the areas of domestic benefits to the tools of climatic changes control or health support. Smart Cities change from the dreams to reality; conurbations accept the Internet of things in the surprisingly fast way. Cybernetic security becomes the independent area of interest. As the digitally interconnected technologies become part of everyday life, their security is considered the integral part of personal as well as national security. While, however, the world offers fantastic benefits for public life and it is again renewing the role of governments, tremendous vulnerabilities of the Internet of things appear while the Internet of things becomes a significant tool of state functionality and sustainable public welfare. The opponents use them very fast, and instead of misusing individual devices, they get under their control and misuse directly the whole networks of the Internet of things.

Scenario 5: **Internet of emotions**

In 2020, intelligent clothes will read much more than only heartbeat or

number of steps. Suits and accessories will monitor the levels of hormones, face expressions, voice tone, and a number of another data. Internet will change to a huge reader of emotions, concerning many intimate aspects of human psyche. Technologies, including all resulting security consequences, will allow monitoring and following mental, emotional as well as physical state of individuals. And, of course, also the control of them.

It is not possible, you say? With the ongoing exaggeration directly from the authors, I have to state that the only thing that can be expected is that the cybernetic space by 2020 will be a new Wild West. Everybody who enters it expecting security and law, will have to take care of them himself.

Anyway, now already quiet seriously. I promise that in the next part, we will deal with cybernetic security including all respect belonging to it. And we will start, how else, by a trip to history.

Dag Jeger

(The contribution was taken over from the webpage of KYBEZ.cz, the platform of cybernetic security.)

GORDIC has Become the Member of the Cybernetic Security Section of the DSIA of the CR

The company GORDIC has become the Member of the Cybernetic and Information Section of the Defence and Security Industry Association of the Czech Republic. The specialised sections of the Association play the role of advisory body of the DSIA Presiding Committee and important expert platform for negotiations with government bodies, foreign partners, and other entities.

The Cybernetic Section and its members deal with the issues of ensuring data security from the point of view of legal regulations and application practice in this area as well as the support of public education and warning of the risks as the consequence of current development of information society. For GORDIC, its membership in the Section represents a welcome possibility of information exchange with the security experts and the opportunity to present the opinions and comments of its more than 6,000 clients within this platform.

www.gordic.cz



AURA has Successfully Implemented MC CATALOGUE – the Codification Software for the Australian Department of Defence



Brno based company AURA, which develops and implements software to support codification has been successful again. Its codification system MC CATALOGUE docked on another continent – after Europe, Asia, America and Africa, there is now also Australia.

AURA has successfully won a public tender announced by the Australian Government



In July 2016, live operation of MC CATALOGUE, AURA's software for materiel codification, commenced in Australia. This software is based on the standards of the NATO Codification System. A contract was signed between the Australian Department of Defence and a Czech company AURA, s.r.o. (Ltd.) after AURA successfully

won a Public Tender announced by the Australian Government. The Australian National Codification Bureau and other areas within the Department of Defence are now using the latest version of **MC CATALOGUE 5** in the form of "Software as a Service" (SaaS). Suppliers of the Department of Defence are now also users of MC CATALOGUE which enables greater efficiency and increased productivity. The implementation of MC CATALOGUE in the form of SaaS for the Department of Defence of Australia is one of the first SaaS projects for Australian Defence. AURA worked closely with the Department of Defence project team to implement MC CATALOGUE, which was developed exclusively by AURA, to ensure all the requirements of the Australian Department of Defence were met. The Australian National Codification Bureau, one of the largest and most important institutions of this kind in the world, has become an important member of the MC CATALOGUE User Group.

MC CATALOGUE 5 – aimed at users

The journey from the first version of an information system for cataloguing MC CATALOGUE to the codification system

MC CATALOGUE 5, which is now being used by the Australian Armed Forces and AUS NCB was very difficult, but also entirely consistent, continuing and progressive. It has always been a high quality codification tool with a rich array of features, built on the latest technologies. The new version of MC CATALOGUE 5, however, is truly exceptional in several aspects. AURA aims to promote in it maximum productivity, efficiency and the best comfort for users. The aim is to make MC CATALOGUE not only a quality instrument, but also a convenient helper for codification. In the narrow area of specialized information systems, where the most important asset is data, the user comfort focus is not a common thing. MC CATALOGUE 5, however, is marching this way. In today's highly competitive environment there is no option to stagnate on one spot and offer software, which insufficiently reflects workflow and user comfort. The development of the new version took a few years, but some first signs of a re-design already appeared in previous versions. This included only small changes not visible to end users. Fundamental changes came up with the current version. MC CATALOGUE 5 is developed to directly communicate with the user and guide him towards a positive result. Users are then shown, for example, only the fields and option menus, which are relevant the very moment. Automation of frequently performed tasks and an option of bulk data operations have been added to the application. The search form was noticeably changed too, which is one of the most used features in the codification systems. The work environment across the whole application was together with User Experience specialists redrafted to create a modern, clean and intuitive graphical interface with an emphasis on efficiency and user comfort. The overall stability of MC CATALOGUE has improved too and the software has undergone intensive stress and safety tests. This allows the application to provide customers not only with the traditional way in the form of installation on a local server, but also with a highly available and secure service (SAAS) via the cloud. Both variants are able to handle hundreds of concurrent users, while maintaining system performance and user comfort when working with the application.

* * *

MC CATALOGUE is currently the most used software of this type worldwide – it is used in 16 countries on 5 continents. The quality of the software and the constantly growing interest in it multiplies not only excellent services, but also comprehensive systems of training and education of users at all levels. AURA not only provides individual training to everyone who is interested in corporate codification software, but also supports the education and training of the entire NATO Codification System. In this respect, AURA is one of the founders and supporters of the international course NCS (NATO Codification System) College, whose third edition takes place in August and September this year at the University of Defence with the participation of lecturers and students from many countries.

Antonín Svěrák
www.aura.cz



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“Technology is the foundation. Cyber security is all about people.”

We are very strongly aware of modern threats, which break down myths of passive defence which has been here for so many years. A security strategy must reflect changes in the environment. It is necessary to go into active mode, proactively monitor the systems functionality, analyze traffic behavior and respond adequately. It can be done only with a team of well-trained experts.

In the world of modern ICT threats it is not possible to rely on random acquisition of technologies without long-term vision of ICT



security. Security solutions planning must be implemented strategically and take into account current and future threats and risks. We offer building of individual strategy for planning an effective cybersecurity development - **ICT SECURITY ROADMAP**.

Cyber threats are constantly changing, the impacts are devastating and organizations respond to current risks very slowly or not at all. Moreover they do not train their employees in cyber security issues. New trends indicate the need for active participation of ICT specialists in the process of detection methods of attackers. This way they

can successfully defend the organization. The unique concept of modern training in combating cyber threats - Cyber Defense Exercise – is divided into two levels. The first part you learn to identify security threats in your environment, and then apply the second active defensive techniques in a prepared LAB environment. Meet the real motives of the attackers and protect the value of their organizations through exclusive cyber training - **CYBER DEFENSE EXERCISE**.

New cases of cyber attacks with serious impacts on organization business functioning is indicative of highly sophisticated and complex attack scenarios. Companies are losing pace with the attackers and they lack professional cyber defense for the deployment of effective security processes. Monitoring of security events requires a high level of expertise, experience and knowledge of cyber threats across countries and segments of different industries. We offer services of active cyber defense by means of **SECURITY OPERATIONS CENTER**.

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ternational faculty is lead by directors of first-class U.S. PPE programs at Duke University, Michael Munger and George Mason University, Peter Boettke. Studying offers, among other things, the platform to critically assess and analyze political and economic problems faced by modern societies and its philosophical underpinnings.

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The Prestigious Award for IMPROMAT-COMPUTER in the Field of ICT Security

IMPROMAT-COMPUTER altogether with the distribution company AT Computers have become a winner in the category Project of the year at Kaspersky Lab's annual Emerging Markets Partner Conference in Barcelona.

The Conference took place from May 30 to June 2 2016 attended more than 100 visitors from 42 countries from the Middle East, Latin America, Africa and Eastern Europe. Only eight highest-performing partners were praised in several categories within the Award Ceremony. Company IMPROMAT-COMPUTER together with the distribution company AT Computers were the only awarded companies from the region of Eastern Europe. The event allowed partner among other to learn about the changes and trends happening in cybersecurity. Kaspersky Lab is a global cybersecurity company founded in



1997. Kaspersky Lab's deep threat intelligence and security expertise is constantly transforming into security solutions and services to protect businesses, critical infrastructure, governments and consumers around the globe. IMPROMAT-COMPUTER holds the highest Kaspersky Lab partnership status - Platinum partner.

About IMPROMAT-COMPUTER

IMPROMAT-COMPUTER have operated in the field of information and communication technologies (ICT) since 1992, and is a significant provider of infrastructure services in this field – from the proposal of the solution, implementation up to the operation, administration and renewal, up to full outsourcing including security technology aspects. ICT security technologies are one of company's main business activities that include following services:

- The safety analysis, consultancy, counselling;
- Implementation, operation and technical support for standard and sophisticated security technology;
- Simulation of DDoS;
- Data loss/lead prevention (DLP);
- Network infrastructure security (VPN (Virtual Private Network), firewalls, etc.);
- Global solutions for antivirus and antispam protection of the ICT infrastructure, DDoS protection;
- Global Endpoint Security;
- Remote Security control;
- Emergency plans, safety plans for Backup and Recovery.

For further information or cooperation please contact e-mail: obchod.computer@impromat.cz

More information about the company: www.impromat.cz

ICZ GROUP – Crucial System Integrator and ICT Solutions Supplier

The ICZ GROUP belongs among the leading CEE system integrators and suppliers of integrated software and infrastructure solutions. A wide portfolio covers customer-specific application software, IT security, IT infrastructure and communication.

With its defence, aerospace and security portfolio, the ICZ GROUP is a trustworthy partner for national ministries of defence, for air and ground forces, for emergency & rescue services subjects as well as for air navigation services providers.

The ICZ GROUP military portfolio in brief:

- Military air traffic control systems
- Radar system integration and radar data distribution
- Air defence command and control (C2) systems
- Ground forces command and control (C2) systems
- Stationary / transportable / mobile command and control centres (posts)
- Interactive virtual simulations training
- Participation in international NATO projects and programmes
- Specific IT security military oriented solutions
- Consulting services, studies and analyses within research and development programmes
- Computer equipment and networks delivery

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- ISO 9001
- ISO 13485
- ISO 20000
- ISO 27000



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- NATO AQAP 2210
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- Approval Certificate "to develop, design installations, produce, tests, installations, maintain, repair, modifications, structural changes of the military aeronautical ground facilities and education and drill (training) of the military aeronautical ground personnel"
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Security and Defence Technologies Catalogue

Czech-English publication providing comprehensive summary of possibilities and capabilities of Czech firms engaging in research, development, production and commerce of military and security technologies and materials, or operating in the related spheres. The MS Line publishing house has been preparing the tenth issue of the Catalogue of Security and Defence Technologies for the 2017 – 2018 period, which is available as a hard-cover Czech-English publication and also on-line.



Visit: <http://bit.ly/1UY6c9r>



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TTC Marconi: Operation Command in Dynamic Network

The basic premise for successful operation is quick decision-making of commanding officers. New technologies and unmanned vehicles are welcome helpers. However, without dynamic network are just likeable toys.

In real operationally tactical environment or in crisis situation is proper and quick decision-making of commanders or commanding officers crucial. Nevertheless, it isn't just about leading military or intelligence operations, but for example, about rescue actions in rugged terrain. For specific examples isn't necessary to go far. It is primarily about activities during ensuring of protection of the state border, for example, with the use of drone or providing communication infrastructure in abroad missions for mobile and military units. Effective screenplay of use are found even in civilian sector. For instance, within rescue operations of all civilian units IRS during solving crisis situations.

Reaching the destination in these crisis situations has one common denominator. It is needed to use reliable and adaptable radio communication infrastructure. This infrastructure has to know how to ensure immediate and flawless transmission and receiving of data messages. Concretely, it is about data transmission from sensors (biological, physical and chemical variables). Similarly, it is necessary to relay voice and image flawlessly. The video meaningful about real situation and condition of individual or emergency unit in terrain within effective leading of operation (intervention) is essential information not only for leading operations, but even for cooperation with other units or teams.

TTC MARCONI evolve and deliver integrated control center for this purpose. These centers integrate specialized radio solutions by Mobilicom MESH with technology 4G-LTE inside them. The result is dynamic and transparent radio network without necessity of support by some local data infrastructure. The terminals, end and transit sta-



tions of the system allow to optimize mutual proportion, power, range and permeability in behalf of the user in the effective way.

The basic parameters:

- The transmission of the live image in HD quality (up to 40 Mbps)
- Up to three HD cameras for user
- Units in terrain create infrastructure on their own
- The infrastructure is made dynamically without any intervention of operator
- The max. distance between units in terrain is 10 km (35 km)
- The communication runs at secure frequency range
- A commander sees on the screen live image of units in terrain
- The individual network components are rugged and lightweight
- The communication is coded

Vojtěch Motáň, Security expert TTC Marconi

www.ttc-marconi.com

ELDIS Pardubice, Ltd. will Deliver Four Sets of Airport Radars to Czech Ministry of Defence

The Ministry of Defence & Armed Forces of the Czech Republic has chosen the Czech manufacturer of active radar systems, the company ELDIS Pardubice, as a supplier of new airport radars intended for operation at military airfields.

Each of the four sets consist of a primary surveillance radar RL-2000, monopulse secondary surveillance radar MSSR-1 and precision approach radar PAR-E. "We are very pleased that we can deliver the most advanced radar systems to the Ministry of Defence, because the currently used equipment RPL-5 / RPL-5M are already at the end of their service life. With this supply of radars, the MoD can provide continuity for the safety of air traffic in the airspace of the Czech Republic and surrounding areas," said Zbyněk Sirůček, CTO of ELDIS Pardubice.

The complete sets of radars shall ensure the operation of JAS-39 Gripen, L-159 ALCA, Mi-17 and Mi-24 helicopters and army transport planes at the airports in Čáslav, Náměšť upon Oslava, Pardubice and Praha-Kbely. It is possible to provide the radar information to the Czech civil ANS organisation.

The company ELDIS Pardubice has 25 years of experience with the



radar technology and delivered its products to more than 20 countries worldwide. For example, they have recently completed the delivery of several radar systems to the customers in Poland, Indonesia and India.

www.eldis.cz

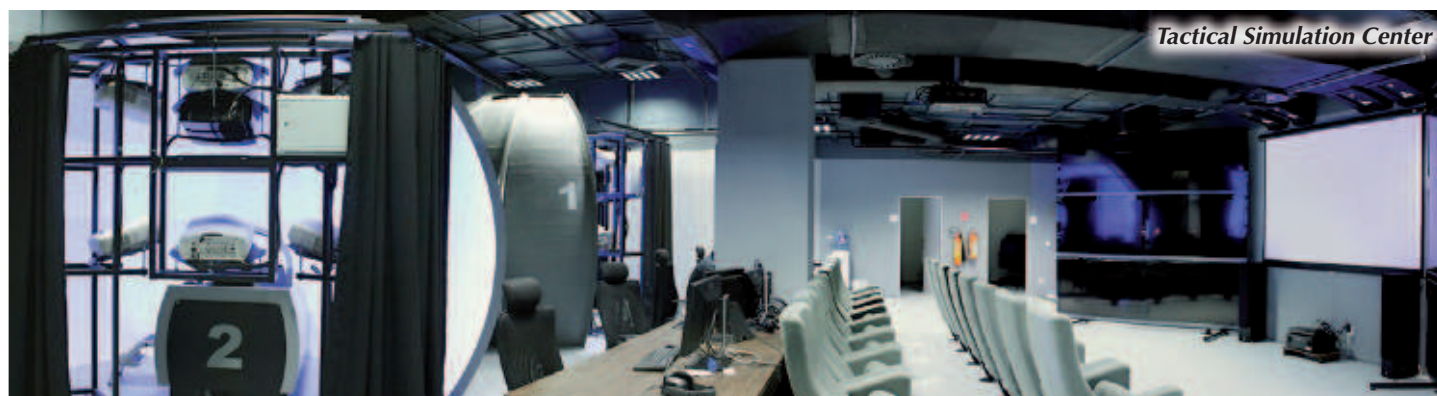
LOM PRAHA s.e.

LOM PRAHA s.e. focuses on complete overhauls, upgrades and modernizations of Mi-8/17/171/24/35 helicopters and their dynamic components TV3-117/VR-14/VR-24/APU lifecycle support. We



also provide pilot trainings (Mi-17/L-39) in our Flight Training Center and a tactical pilot trainings on simulators in our Tactical Simulation Center. VR Group, a.s., the company's subsidiary, is providing the complex solution regarding the simulation technologies.

www.lompraha.cz



Simulation System for the Tactical Training of Helicopter Crews



VR Group is a Czech supplier of comprehensive simulation solutions for defence and crisis management forces with a history since 1998. The company was founded with a focus on the Czech market, over

time, we started supplying to other European countries, and today we supply simulators worldwide. VR Group is subsidiary of LOM Praha, Czech traditional aviation industry enterprise.

During this September our company starts to market a modular tactical training simulation system for training of helicopter crews. The system continues in the highly successful solution of tactical training system for tactical air force, which is for the needs of Czech Air Force and also foreign trainees over a long term period successfully operated within the Air Training Centre in Pardubice. The newly developed simulation system is intended for the joint training of the entire helicopter crew, comprising of two pilots, flight engineer, and two gunners, enabling support of a forward air controller. The modular concept allows smooth extension of other helicopters or other cooperating air forces or ground forces.

The basis of the simulation system is a mock-up of the Mi-171 cabin with high fidelity replicas of control elements. Instruments and controls of cabin are simulated by a set of touch screens,

positioned so as to faithfully represent real cabin. This solution allows very efficient simulation of several variants of cabin configurations via software. The cabin is equipped with a mock-up of the front part of the airframe that ensures adequate out of the window view for pilots with six-channel visualization system on large screens, which completely covers the pilots' field of view. Gunner module is designed as a mock-up fuselage of Mi-171 with emphasis on the faithful representation of the door space and weapon hinge. Training participant is equipped with virtual glasses with high resolution and viewing angle that gives very realistic view of the simulated scene. Tracking system allows shooters to freely move around the fuselage, including leaning out of the door and watching around the helicopter. Important elements are highly configurable dynamic training scenarios and training situations that can be created according to customer needs. Instructor operating station records running of whole training and afterwards enables comfortable evaluation.

The first customer, where the system will be put into operation between August and September this year, is HTP Ostrava, which over a long term period provides individual simulated training. The solution will thus enable further significant expansion of the company's services in the area of simulated tactical training.

For more information please visit our webpage www.vrg.cz, or contact us directly.

Modular Shelter IGLOO

Military Research Institute developed for the Czech armed forces modular expandable shelter with excellent ballistic and blast protection. The shelter IGLOO protects against wide spectrum of threat like blast (IED), fragments (mortar mines, rockets and artillery shells) and AP projectiles.

Technical parameters of IGLOO basic version:

- internal space: 19 m³,
- length: 5.0 m; width: 4.1 m; height: 2.4 m,
- weight (unfilled): 3,500 kg,
- assembling: 4 soldiers for 4 hours.

www.vvubno.cz

IGLOO is lightweight, modular, expandable, easy to assembly and transportable.

The shape of the IGLOO has been specifically designed to mitigate the blast effect from explosions. Protective structure is based on panels from Al alloy with air gap. Air gap is possible to fill with aggregate from local sources or with alumina balls according to specific threat. The protection of the shelter can be increased by sandbags covering.

Weight of the individual parts allows fast manual assembly. Basic version of IGLOO is determined for 6 soldiers and can be easily enlarged to extended versions by insertion of additional middle parts.

The shelter IGLOO is designed for easy transport via air or land in assembled state (without filling material) or in individual parts in pallets and ISO containers.



Specialized Transport Vehicle for Transport of Infectious Patient

At the end of May was introduced to the professional public health specialized vehicle designed for transport of patients with occurrence of highly dangerous disease in the Development and Innovation center EGO Zlín, Ltd. On its own solution was contributed the experts and specialists of Tomas Bata University in Zlín and a research and development center of company EGO Zlín. This is an illustrative example of connection of university campus and industry practice, when the results of research and development are immediately put into practice.

will be also presented at relevant medical trade shows like "MEDICA Düsseldorf" in Germany, "ZDRAVOOCHRANĚNÍJE Moscow" in Russia and others.

Involvement in this specialized development means an immediate response to the global situation caused not only with the occurrence of highly dangerous epidemics, but still increasing refugee crisis, which raises the risk of possible spread of dangerous infections. It is also necessary to take into account the increasing number of terrorist attacks, which represent a significant threat to the population and it is to be expected the usage of weapons of mass destruction, including biological weapons. The transport vehicle for infected patient is applicable not only for medical units as well as for defence.

www.egozlin.cz

The specialized transport vehicle is equipped with special equipment which allows safe transport of infected patient, safe manipulation, personnel protection, but also the subsequent necessary decontamination. Directly for protection against infected patient is used the transport device BIOBAG EBV-30/40, where the patient is placed. At the same time it allows monitoring of the patient, breathing support, giving the medication and insertion of infusion without endangering the environment of infected patient.

The great interest of this type of product confirms the participation of foreign delegations at the first presentation from countries: Bosnia and Herzegovina, Iran, Kazakhstan, Russia, Saudi Arabia, Slovakia, Serbia etc. This year the new type of transport vehicle for infected patient was presented at the International Conference "Disaster Medicine" in Slovakia and



FUTURETECH

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19th-21st October 2016 at PVA EXPO Praha-Letňany.

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E-mail: futuretech@karcher.cz

www.karcher-futuretech.com

Development of a Fightsupervision has a Significant Influence over a Present Progress of New Technologies

The development in the manner of conducting combat operations in connection with technical development of new defence and attack systems for the needs of individual armies and according to the chosen combat tactics and military or defence strategies is a major factor influencing the current development of new technologies and consequently requirements for soldiers' new personal equipment.

Development efforts to find solutions for the "soldier of the future" are evidently dominated by the objective to equip soldiers with the best available electronics, optics and communication systems



with an emphasis on the weight of the full equipment. The soldier – individual thus becomes the carrier of service devices to conflict zones and the individual's mobility and ability to respond physically will be very limited.

Unfortunately, these projects mostly disregard the fact that the individual is the main and the most important unit and it is therefore vital to first ensure the development and production of equipment capable of providing adequate comfort and protection against adverse effects on the individual's physical and mental abilities.

To illustrate this point, we have included the results of a mini survey carried out among former and current soldiers of the Czech army, who have long-term experience with using military equipment at home and during military missions abroad.

The current requirements of soldiers serving in combat for equipment materials according to priorities of the soldiers: airy and comfortable – vapour-permeable, non-rustling, sufficiently durable – easily maintained (washing, cleaning, etc.), fast-drying, fire-resistant, and protective against heat radiation.

As the demand of foreign armies for special vapour-permeable, water-resistant and light fabrics increased, the SILK & PROGRESS, NANOMEMBRANE and INTERCOLOR companies started to develop two and three-layer integrated fabrics with requirements for water resistance, vapour permeability and reduced rustling.

This process lead to the creation of fully functional laminates with a nanofiber membrane produced by NANOMEMBRANE, providing in particular excellent vapour permeability – 1.6 Pa.m².W⁻¹ with 5,000 mm water column for two-layer laminates and 3.5 Pa.m².W⁻¹ with 23,000 mm water column for three-layer laminates.

www.silkandprogress.cz

STAP a.s. – Narrow Fabrics Manufacturer from Czech Republic

Our products are tailored to meet exacting specifications established by a number of NATO military forces. STAP a.s. is a major webbing manufacturer of military webbings, bindings and elastics to meet specifications in both IRR webbings and non-IRR webbings.

We are one of the few webbing suppliers who can offer our own in-house dying facilities to colour match to forces exacting shade requirements.

Our Multi Colour Camo printed webbing (up to 5 colours) is widely used on a variety of PLCE (Personal Load Carrying Equipment), MTP Webbing Systems & Pouches, Molle Webbing along our latest IRR Camo printed binding, designed to be used in conjunction with The Multi-Terrain Pattern (MTP) camouflage print.

We can offer bespoke custom printed webbing to match your military camouflage textile pattern.

Special treatments can be applied to the webbing straps including anti-bacterial, rotproof, water-repellent and flame-retardant finishes.

Webbings are cut to length and heat-sealed using our automatic machines and we are also able to offer a cutting and holing service using our ultrasonic facility.



Here we are able to create a wide range of made-up units, sewn webbing straps also with buckles.

We can also offer wide range of commercial products, like webbings, elastics, binding tapes, zippers, woven labels, jacquard ribbons...

www.stap.cz

New Tactical Helmets Ops-Core for Police and Armed Forces

Gentex Corporation continues to advance protection and performance capabilities of helmet systems for global defense and emergency response forces with new innovations, including those in Ops-Core, its line of combat helmets designed for special ops forces.



To address the growing demand by law enforcement, security personnel, and non-special ops forces for the advanced capabilities found in the Ops-Core line, Gentex created the new Ops-Core LE model. Using weights and ballistic protection suitable for these applications, the new LE model has the same revolutionary Ops-Core design, which allows users to quickly and easily add or change capabilities,

such as NVGs, visors, mandibles, and ballistic appliques. Available in both the Ops-Core FAST high-cut and Sentry mid-cut lines, the LE model provides enhanced, scalable protection against a full range of ballistic, blunt trauma, and blast threats at an economical price. Gentex also designed a new Ops-Core Handgun Face Shield to specifically address the growing threats encountered by law enforcement and military personnel during forced entry and breaching operations. The single hit configuration provides protection against 9 mm handguns, and the multi-hit protects against both 9 mm and

44 Cal Magnums. Made of hybrid-acrylic and polycarbonate materials, both versions are compatible with all Ops-Core ARC-configured helmet systems. Czech company Glomex MS is an exclusive distributor of OpsCore helmet systems in Central and Eastern Europe.

Helmet Ops-Core Fast Bump

The non-ballistic variant Fast Bump has been designed for operations with low risk of injury or non-armed actions. It is made of Lexan polycarbonate.

Helmet Ops-Core Fast Carbon

Non-ballistic Fast Carbon model is designed especially for challenging actions, training, but also for reconnaissance operations, including operations in the water environment. It is also suitable for fast rope abseiling method.

Helmet Ops-Core Fast MT

Ballistic Helmet Fast MT is manufactured by combining high performance carbon and aramid fibers. Thanks to this technology it shows about 42 % less weight than conventional helmets of the US Army ACH series.

Headset mounting system

In situations or during operations when members of the police or task forces are not in danger of ballistic injuries and are not exposed to risk of injury to the head by blow or impact, the headset fixing system Skull Crusher UFP is suitable.

For the helmet Ops-Core LTE the manufacturer offers additional protective cover of lower jaw and transparent ballistic shield on the eyes.
www.glomex-ms.com

Koutný Ltd.

Koutný Ltd. company established in 1995, is a manufacturer of uniforms and professional clothes for various security units.



With its size it belongs to medium - sized companies and its assortment consists of jackets, trousers, skirts, divided skirts, waistcoats, anoraks, overalls, coats and special action clothes made of aramid fiber. The uniforms are made of good quality top materials, combined of wool – polyester – lycra.

Koutný Ltd. is a supplier of service uniforms, combat dresses and other uniforms for such organizational units as for example the Army of Czech Republic, Dutch army, Austrian army, Prison Guards of the Czech Republic, Customs Office of the Czech Republic and Police



of the Czech Republic. The company confirms its quality by the introduced quality management system according to ISO 9001, whose certification was achieved in 2001.

Pavel Koutný jr.
www.koutny.cz

IDEB 2016

Between May 10 and May 12, 2016, the exhibition grounds in Bratislava hosted the 6th IDEB international fair of defence technologies, which was held under the auspices of the Ministry of Defence of the Slovak Republic. Altogether 152 exhibitors from twenty countries presented their products on an area of 24,000 m².



This year's event was primarily focused on modernization of armed forces, police and intelligence services, but also on today's global security situation.

During the ceremonial opening of the fair by Slovakia's Minister of Defence Peter Gajdoš accompanied by Chief of the General Staff of the Armed Forces of the Slovak Republic General Milan Maxim, a group of MiG-29s and L-39s of the Slovak Air Force flew over the exhibition site.



On the first day, the exhibition was visited by a delegation of the Czech Ministry of Defence led by Deputy Minister of Defence and Head of the Armaments and Acquisition Division Daniel Košťoval and Army General Josef Bečvář, Chief of the General Staff of the Army of the Czech Republic.



The Czech exhibition was dedicated mainly to a presentation of the 25th Air Defence Regiment based in Strakonice, including the new Tatra 810-V-P-MBS truck and V-SHORAD module, a state-of-the-art and effective system designed to protect ground forces. The regiment is one of the best-equipped units of the Army of the Czech Republic.

Other participants from the Czech Republic included, for example: Česká zbrojovka Uherský Brod, Retia, Interlink CS, Quittner &



Schimek, MESIT Aerospace, FENIX Protector, Audiopro, EXCALIBUR ARMY, Nides, Pramacom, STV Group, and TATRA. Some of them shared their views on the exhibition with us.

Šárka Cook, photographs by the author

Commenting on the IDEB fair

Petr Novák, RETIA: "Organization-wise, the event was prepared and supported very well. We could communicate directly with the organizers and we got necessary information and support in good quality and in time. When preparing for the fair, RETIA focused on those products from its portfolio which could, in our opinion, draw attention of representatives of the Slovak Ministry of Defence or other defence ministries in the region. On a scale of international defence fairs, the exhibition is a smaller event in terms of the number of visitors; the reality thus did not meet our expectations, particularly as regards representatives of the Slovak Ministry of Defence. We had practically no information about other registered representatives of armed forces of other countries. The event could certainly benefit from a higher level of cooperation with the Ministry of Defence of the Slovak Republic, so that we could present our products to its experts and principal officials. If one looks at the fair as an ideal meeting opportunity for representatives of defence industries and defence ministries (including those of the V4 countries), then the event fell short of our expectations in terms of expenditures vs. what we expected. We would definitely welcome seminars and workshops on, for example, future development of the Armed Forces of the Slovak Republic or the use of new technologies in the concept of the build-up of Slovakia's army."

Česká zbrojovka a.s.: "The armed forces of the Czech Republic and Slovakia rank among the most important business partners of Česká zbrojovka a.s. There is already some ongoing business cooperation, as well as extensive discussions and negotiations on potential contracts. The IDEB exhibition is an ideal opportunity to present innovations, to meet and discuss important business matters not only with leading representatives of armed forces of both countries, but also with representatives of government institutions which the armed forces are subordinated to, who attend the event in their respective capacities. Last but not least, it is necessary to mention practical experience of end users of our products, who attend the exhibition either in their line of work or privately and who are happy to share their experience with us."



Workshop of the House of Deputies of the Parliament of the CR and the DSIA of the CR

On June 22, 2016, the House of Deputies of the Parliament of the Czech Republic hosted a seminar/workshop named "The involvement of the Czech defence and security industry in strategic projects essential for the defence of the Czech Republic".

The event was organized by the Defence Committee of the House of Deputies of the Parliament of the Czech Republic in cooperation with the Defence and Security Industry Association of the Czech Republic and under the aegis of MP David Kádner, Chairman of the Defence Committee, and MP Dipl. Ing. Václav Klučka. The speakers included, inter alia, Deputy Minister of Defence Daniel Koštoval and President of the Defence and Security Industry Association Jiří Hynek. Both spoke very openly about current issues and



perspectives of cooperation between the Czech defence industry and the defence sector. The speech of Filip Engelsenmann, CEO of AURA, on the company's cooperation with the Ministry of Defence on the strategic project of the informa-



tion system for logistics, also drew a lot of attention. Other speakers included representatives of Česká zbrojovka a.s., ERA a.s., and AERO Vodochody AEROSPACE a.s. The participants concluded that successful strategic projects of the armed forces relied on close cooperation of representatives and experts of Czech defence industry companies and the Ministry of Defence.

Antonín Svěrák, photos by the author

Žofín Forum on the Army, Security, and Role of the Defence Industry



The 201st Žofín Forum, the topic of which was "The Army, Security, and Role of the Defence Industry in the Context of Today's International Situation", which took place on June 28, 2016, presented the current state of the defence sector and planned modernizations of weapons and military vehicles.

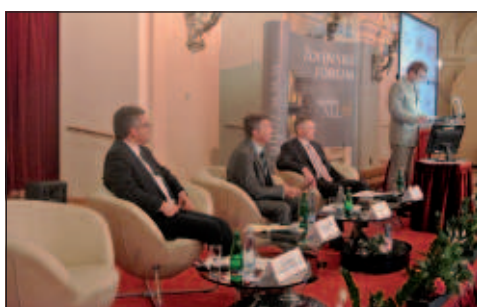
One of the issues discussed at the event was the "brexit". According to Minister of Defence Martin Stropnický, the exit of the United Kingdom must lead to a greater self-reflection of the European Union. President of the Defence and Security Industry Association of the Czech Republic Jiří Hynek, emphasized the common objective of the Czech government, Ministry of Defence and Czech defence industry, namely guaranteeing security and defence capabilities of the Czech Republic in today's time of increasing security threats, but also of the need of dialogue and cooperation in the light of Britain's withdrawal from the European

Union. Army General Josef Bečvář, Chief of the General Staff of the Army of the Czech Republic, outlined planned developments and projects of the Army of the Czech Republic, which include new a modern versatile helicopters, mobile air defence radars, armoured personnel carriers or artillery systems. He stressed that even the best state-of-the-art equipment could not entirely substitute the human potential, adding that the highest priority in the near future would be assigned to recruitment, education and training of professional soldiers.

Antonín Svěrák, photos by Šárka Cook and the author

Note of the editors:

Our editorial staff thanks the organizers of the Žofín Forum for their excellent cooperation in the distribution of copies of the "Review" magazine to all participants and also for presenting the MS Line publishing house as the media partner of the event.

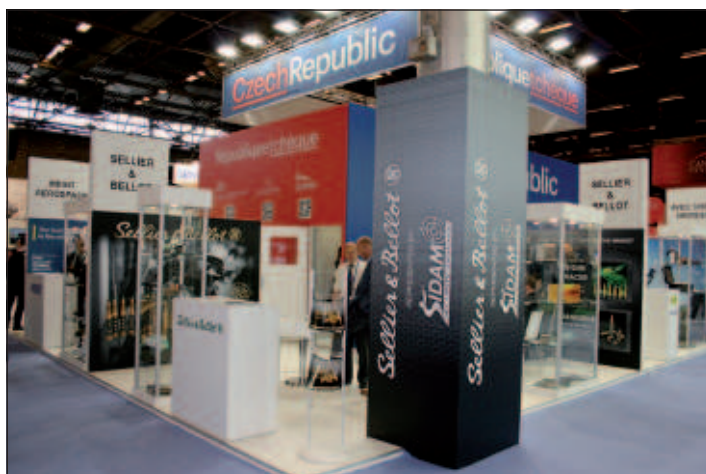


Presence of Czech Companies at the EUROSATORY 2016 Exhibition

Supported by the Ministry of Industry and Trade of the Czech Republic, the Czech defence and security industry presented itself at one of the biggest-ever Czech national stands at this year's EUROSATORY fair in Paris. There were altogether more than 30 Czech companies present at the event. An unquestionably new feature of the Czech national stand was the presence of some Slovak companies at display stands of Czech companies, in particular CSG. Not even the entire issue of the magazine would not be enough for a detailed account of the exhibition, as there was really a lot to see, and thus a lot to offer to the world, at the Czech defence industry's stand. We will therefore focus on what was perhaps drawing most attention.



Of course, the most prominent Czech presence was the Czech official stand, with Mr. Bomberovič representing the Ministry of Industry and Trade of the Czech Republic and supported by CzechTrade, CzechInvest and Defence and Security Industry Association of the Czech Republic. In this respect, we must appreciate the twenty or so Czech companies which presented their products and services at the official stand. The exhibits that attracted us most (and we expect that not just us, but also foreign professionals and businessmen) were those displayed by OMNIPOL/ERA, Česká zbrojovka, MESIT holding, EVPÚ Defence, Sellier and Bellot, or Oritest.



Right next to the Czech official stand was an area where CSG, or Czechoslovak Group, was presenting its new partners, products and services. It was definitely not lost or overlooked because of the nearby official stand; on the contrary, its attractive products were drawing visitors in. Apart from the inclusion of Slovak companies, there was yet another new interesting fact, namely the presence of the truck manufacturer AVIA or the Czech watch manufacturer PRIM.

However, Czechoslovak Group was displaying its products not only indoors, but also out in the open, in a very attractive stand of TATRA TRUCKS and KARBOX. We were pleased to find the TATRA stand again in the same place as ever since the EUROSATORY exhibition had been moved from Le Bourget to Villepinte.



It goes without saying that the official Czech stand and the stand of CSG were not the only signs of Czech presence. In Hall 6, there was an unoverlookable stand of the Přelouč-based company SVOS, which also believes in being always in the same place, just like TATRA. SVOS was naturally displaying its flagship - the excellent Czech product VEGA, this time on a 6x6 chassis, but also its other capabilities and strengths.



Unfortunately, comments and reports from Paris seemed to neglect MEOPTA Přerov a bit, at least in our opinion. What we were able to see and what we were presented were absolute global leaders in the segment of optical systems for small arms. Meopta displayed a broad range of its excellent products at its stand, but the real innovations were represented by MeoNight 1.1, MeoTac 3-12x50, MeoRed T-mini or ZN4 LYNX devices.



We must apologize to other companies for not mentioning their specific and excellent products here, but we can revisit them in future issues of the magazine.

What to say by way of conclusion? The Czech defence and security industry definitely does not have to be ashamed for its presentation at EUROSATORY. Our companies have confirmed that they are absolutely competitive in many segments, and their products are in many cases world-beating.



Unfortunately, we were a bit disappointed by the official ceremonial opening of the Czech stand. During the previous exhibition, the act was performed by prominent representatives of the Czech Republic - Czech Ambassador to France, Deputy Minister of Defence of the Czech Republic, Czech Defence Attaché in France, and President of the Defence and Security Industry Association of the Czech Republic. This time the whole act was downplayed due to the presence of only stand-ins. Companies are very sensitive about this, and this is perhaps the only rebuke concerning the presentation of the Czech Republic at the EUROSATORY 2016 fair.

Written by Miloš Soukup
Photos by Eva Soukupová

Opinions of Exhibitors

Milan Jurek, Deputy CEO i/c Business Development, OMNIPOL:
“The OMNIPOL Group presented an integrated business offer of defence and security systems and technologies, including passive surveillance and radiolocation, at this year’s EUROSATORY. In my opinion, our participation this year was very successful, thanks mainly to ample presence of our business partner. I have just one complaint concerning the organization, namely that our expectations and promises about the number of official delegations which were supposed to visit our stand were not met.”

Igor Valníček, Chief Executive and General Manager, EVPÚ Defence:
“Traditionally one of the biggest exhibitions in the world, whose size



impresses every time. As years go by, it is increasingly difficult to see everything and find what our competitors offer. This year’s EUROSATORY was more focused on heavy equipment and vehicles than on demonstrations of sophisticated electronic devices. Compared to previous years, there were many more experts among visitors, who came with a clear idea what they wanted to buy and were prepared for discussions with representatives of our company. The appearance of and impression made by the Czech pavilion is a specific issue. Its preparations and standfitting were indeed demanding this year; the concept was changed many times, and the final overall impression was significantly different (and in our case worse) than that suggested by the initial design. Still, the five days in Paris were full of interesting experiences, we came to know a number of new potential customers and had a number of pleasant meetings with our colleagues both from the Czech Republic and from abroad.”



Česká zbrojovka: “Česká zbrojovka, a.s., presented the complete military programme and a portfolio of ballistic vests at the EUROSATORY fair in Paris. Actually, it was the first time ever that its new modern automatic assault rifle, CZ Bren 2, was presented to the public. It was received very positively and there was a lot of interest among visitors in this weapon. The CZ Bren 2 assault rifle has been designed for the most demanding users from the ranks of special units and armed forces operating anywhere in the world.”

Cihelna 2016 – Almost 20,000 People were Watching a 1938 Mobilization/End of War Fight for the Border Reenactment



On Saturday, August 20, 2016, the event known as “Cihelna” took place for the nineteenth time at the town of Králíky.

The main topics of this year’s event was the 1938 mobilization of the Czechoslovak Army and a dynamic reenactment of a combat scene from the final days of WWII – fight for the border. Taking part in the event were more than 200 professional soldiers, over 50 members of active reserves, as well as the Fire Rescue Corps of the Czech Republic, Prison Service, Customs Service and dog handlers. There was also a static display of historical military vehicles; the army brought around a hundred of its vehicles, and the event was



opened by an overflight of two Gripen fighters and an Mi-24 Hind helicopter.

The event started already on Friday morning, with a column of historical vehicles driving through villages around Králíky. An afternoon dress rehearsal came next, and the evening cultural programme was concluded by singer Věra Špinarová.

The Saturday event was attended by Governor of the Region of Pardubice Martin Netolický, high-ranking officers of the Army of the Czech Republic, representatives of the Senate and House of Deputies of the Parliament of the CR and many other prominent guests.

Eva Soukupová, photos by Ing. Miloš Soukup





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■ **Review for Defence and Security Industry**



■ **CDIS Review**



■ **IDET NEWS**



■ **Security and Defence Technologies Catalogue**

Publishing Plan of CDIS Magazines in 2016 and 2017

REVIEW for DSI (czech copy and czech + english on-line edition on www.msline.cz)

Review for Defence and Security Industry 4/2016

Deadline: 8. 12. 2016 Put into print: 22. 12. 2016 Expedition: 11. 1. 2017

Available at the annual editorial board meeting in Ministry of Defence resort in January 2017.

Review for Defence and Security Industry 1/2017

Deadline: 3. 3. 2017 Put into print: 17. 3. 2017 Expedition: 24. 3. 2017

Available at annual general meeting of DSIA CR.

Review for Defence and Security Industry 2/2017

Deadline: 5. 5. 2017 Put into print: 19. 5. 2017 Expedition: 26. 5. 2017

Available at the annual of IDET 2017.

Review for Defence and Security Industry 3/2017

Deadline: 25. 8. 2017 Put into print: 8. 9. 2017 Expedition: 15. 9. 2017

Available at the annual of NATO Days.

Review for Defence and Security Industry 4/2017

Deadline: 1. 12. 2017 Put into print: 15. 12. 2017 Expedition: 22. 12. 2017

Available at the annual editorial board meeting in Ministry of Defence resort in January 2018.

CDIS REVIEW (english copy and english on-line edition on www.msline.cz)

Czech Defence Industry & Security Review 4/2016

Deadline: 23. 9. 2016 Put into print: 7. 10. 2016 Expedition: 14. 10. 2016

Available at the annual of INDO DEFENCE (Indonesia) – 9.–12. 11. 2016.

Czech Defence Industry & Security Review 1/2017

Deadline: 13. 1. 2017 Put into print: 27. 1. 2017 Expedition: 3. 2. 2017

Available at the annual of IDEX (Abu Dhabi) – 19.–23. 2. 2017.

Czech Defence Industry & Security Review 2/2017

Deadline: 11. 8. 2017 Put into print: 25. 8. 2017 Expedition: 1. 9. 2017

Available at the annual of DSEI (London) – 12.–15. 9. 2017.

Czech Defence Industry & Security Review 3/2017

Deadline: 27. 10. 2017 Put into print: 9. 11. 2017 Expedition: 16. 11. 2017

Available at the annual of MILIPOL (Paris) – 21.–24. 11. 2017.

Publishing plan will be in the course of the year 2017 updated of any other shows.

GLOBAL SURVEILLANCE SYSTEM



More inside the issue on page 14

14TH INTERNATIONAL DEFENCE AND SECURITY TECHNOLOGIES FAIR



31. 5. – 2. 6. 2017

BRNO, CZECH REPUBLIC



31. 5. – 3. 6. 2017

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