

# for Defence and Security Industry Review®



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● **Interviewing, State Administration**

With Support of Elements of the Security System, the Army of the Czech Republic...	4–5
We are not an Attractive Partner for the Industry, but we are an Interesting...	6–7
Results and Achievements of CBRN Troops Were the Reason Why the Centre...	8–9

● **Defence, Security**

Our Forte is Our Own Development	10–11
Expansion of the Production of Electric Subassemblies for Military and Aerospace...	12–13
JITKA – New Generation of Command & Control	14
Repairs, Maintenance of Tactical Communication Systems and Life Cycle of Products	16
MESIT Communication Systems for Armoured Vehicles	17
Saabs Ground-Breaking Support Weapons Offers a Solution to Every Situation	18–19
Agados Proved its Quality as a Manufacturer of Special Trailers for the Needs...	20
From Development to Manufacture and Lifecycle Management	22
CBRN Protection Made by VOP CZ, s.p.	22–23
300 AAC Blackout	24
eLTE Rapid – Fast Operational Deployment System	26
TESlink 27 – High Capacity LOS Radio Relay for Non-Civil Use	26
PBS Velká Bíteš – Certified Producer of Aircraft Turbines	27
Traditional Reliable TENEO Connectors in Army Applications	27
Navaho Vehicle Storage System	28
ARGUN Ltd.	28

● **Exhibitions, Conferences, Seminars**

Economic System of the Capital City of Prague: Robust Solution for Financial...	30–31
Successful African Mission of GORDIC	31
NATO Days in Ostrava with a New Defence Industry Conference on Friday...	32
FUTURE FORCES FORUM to Host a Record Number of Experts and Industry...	34
C4ISTAR – New Technical Section of DSIA	36–37

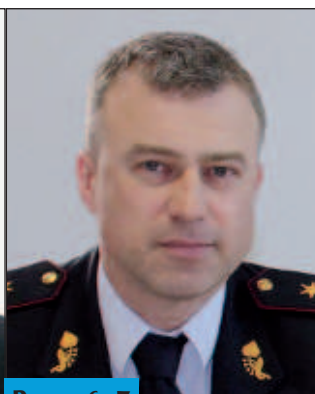
● **Attractions, News**

Accreditation – a Tool to Support Regulators	38–39
Air Traffic Controllers Have Received a Brand-New “Pair of Eyes” on North Sea...	40
BAE Systems Awarded Contract to Refurbish CV90 Vehicles for Sweden	40
Publication Plan of CDIS Magazines in 2016	42

● **In focus**



Pages 4–5



Pages 6–7



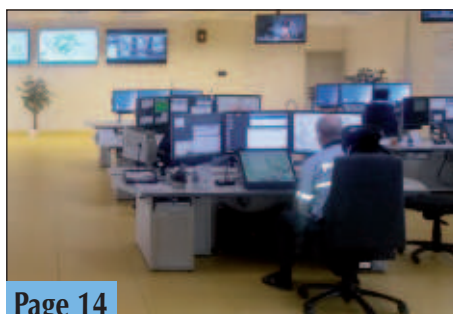
Pages 8–9

**Interview with State Administration Official**



Pages 10–11

**Company EVPÚ Defence**



Page 14

**JITKA – New Generation of...**

**Advertisement at Review 2/2016:**

AGADOS – pages 1 and 20, DSIA CR – page 25, BAE SYSTEMS – page 43, EURO-SATORY – page 33, EXPLOSIA – page 15, FUTURE FORCES FORUM – page 35, MESIT HOLDING – page 17, MSPO – page 32, NEXTER – page 39, QUITTNER & SCHIMEK – page 37, RETIA – page 15, SEVOTECH – page 16, SMI GROUP – page 29, SVOS – page 5, UNITOP CR – page 41, VELETRHY BRNO – page 44, VOP CZ – page 23.

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Dear readers,

In the beginning of what is the second issue of this year and is also available in an electronic form, in both Czech and English, at [www.msline.cz](http://www.msline.cz), you will find an interview with the Minister of Defence, which concerns not only the acquisition plan of and investments into the Czech Army, but also the cooperation of the Ministry of Defence of the Czech Republic on the Future Forces Forum 2016 project, in which the "Review for Defence

and Security Industry" magazine will participate as the main media partner for the Czech Republic. Another interesting interview with Brigadier Roman Hlinovský, Director of the Fire Rescue Corps of the Capital City of Prague, will mention, inter alia, the differences, advantages and disadvantages of Prague's firefighters in comparison with other regions. The JCBRN Defence CEO will celebrate its 10<sup>th</sup> anniversary this October, which was why we asked the Centre's Director, Colonel of the General Staff Jiří Gajdoš, for its brief presentation and evaluation.

I cannot of course forget the exclusive interviews with the Chief Executive Officer of EVPÚ Defence, who was escorting us during our sightseeing tour of their new production facility, and also with the Managing Director of Quittner & Schimek, indicating a major expansion of the firm's production activities, although the company does not make use of subsidies or other forms of support from the EU or the government.

The companies presenting their activities and innovations in the "Defence and Security" section include, inter alia, RETIA, INTERLINK CS, EXPLOSIA, SEVOTECH, MESIT, SAAB, AGADOS, VOP CZ, SELLIER & BELLOT, PBS VB or GORDIC. KOM-CENTRA presents a new software solution code-named JITKA, which coordinates different units of the Police of the Czech Republic and facilitates communication of other regional Integrated Operating Centres.

Early in February, there was a merger of two sections of the Defence and Security Industry Association of the Czech Republic, "Tactical Systems" and "C4/Battlefield Digitization" into one named "C4STAR", whose objectives and past and planned events you can read about in an article on Pages 40 and 41.

In the next few months, our publishing house will participate, either as a media partner or as a supporter of the Czech defence and security industry through the distribution of the "Review for DSI" and "CDIS Review" magazines, at major conferences and exhibitions at home and abroad, including the IDEB fair in Bratislava, Future Armoured Vehicles Eastern Europe, "Crises, Disasters, Collapses: How Can the EU and Czechia Face Them?", EUROSATORY in Paris, "Cooperation and Effective Use of Tools of the Army of the Czech Republic with an Emphasis on CBRN protection", and 198<sup>th</sup> Zofín Forum "Army, Security and the Role of the Defence Industry in the Context of the Current International Situation".

I am looking forward to meeting you at some of the impending events!

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# With Support of Elements of the Security System, the Army of the Czech Republic is Ready to Face Current Threats

*Minister of Defence of the Czech Republic Martin Stropnický found a few moments in his busy timetable and gave us answers to several questions concerning, for example, investments into and contracts and tenders of the Czech Army.*



**Mr. Minister, what investments is our army going to make and how does its conceptual plan look like?**

The world finds itself in the worst security situation in the last twenty years. The situation is also reflected in a worldwide increase of defence expenditures to USD 1.68 trillion, i.e. 2.3 % of the global GDP, which occurred after four years of stagnation.

The share of defence expenditures of the Ministry of Defence in the Czech GDP has been continuously decreasing in recent years, and its real value has been dropping as well. In September 2014, the coalition parties therefore signed an agreement according to which defence expenditures will gradually grow up to 1.4 % GDP in 2020. In 2016, the budget of the Ministry of Defence has been increased by CZK 4 billion, which translates into a year-on-year growth of 9 %, almost the highest increase among all NATO nations.

The economic recession and reductions of defence budgets in the past resulted in all requirements of the army being radically slashed. The lack of funding has been reflected in obsolescence of equipment and materiel. This is why the next few years will emphasize the upgrading and rearming of our ground forces, but also of other branches of the army.

Top-priority projects of the ground forces include acquisitions of command/staff and communication armoured wheeled vehicles and NATO-calibre artillery guns and a replacement of obsolete infantry fighting vehicles. Between 2020 and 2025, decisions concerning the upgrade or replacement of MBTs and additional purchases of light armoured vehicles, individual ballistic protection equipment, bridge-laying vehicles, truck-mounted excavators, laser targeting and surveillance pods, heavy off-road trucks, recovery and tank vehicles, and workshop equipment will be made.

As to the Air Force, the lease of supersonic jets will continue; the Air Force will also procure multipurpose helicopters, 3D mobile air defence radars (MADR), surface-to-air missile systems, aerodrome surveillance radars, L-159T2 two-seat aircraft or personal parachute systems, and implement projects aimed at safeguarding information security and protection of communication and information systems.

We will also focus on the development of reconnaissance, electronic warfare and geographic and meteorological support services. There will also be more substantial investments into neglected immovable infrastructure.

**How are you fulfilling the acquisition plan and how much equipment and personal gear do you expect to buy from the Czech defence industry?**

In 2015, the Ministry of Defence signed 310 contracts related to acquisition programmes, the aggregate value of which was CZK 7.2 billion.

Manufacturers and suppliers from the Czech Republic accounted for 98.3 % of the contracts.

In 2016, the volume of contracts related to current expenses will also be substantially increased. According to the plan, there will be 576 contracts with an aggregate value of CZK 10.1 billion falling into current expenses and 264 contracts funded from acquisition programmes, with an aggregate value of CZK 4.33 billion. It is now impossible to exactly estimate how many Czech suppliers will succeed in the tenders, but I do not see any reasons why there should be any significant difference from the previous year. Czech defence companies remain our principal partners.

**Why doesn't the army launch tenders for some of its acquisition projects, preferring instead a government-to-government approach? I am referring to 3D mobile air defence radars or multipurpose helicopters. Why is the latter option more favourable and can you specify this procedure in greater detail?**

Approaching a supplier through a government-to-government agreement permits establishing a long-term cooperation relationship and support of the operation, maintenance, repairs, and deliveries of spare parts of procured equipment throughout its lifetime. Such a government-to-government agreement enables us to obtain information, experience and knowledge regarding the use of the equipment, training or combat deployment, and can also open a possibility of joint training or use of training systems and simulators. This may significantly reduce future operating and maintenance costs. Another important factor is the compliance with NATO standards and a quality assurance verification guaranteed by the opposite government.

It is in our interest that the domestic industry should play a significant role in contracts like this. The involvement of Czech companies in the development, manufacture or maintenance of a given product or system will always be an important criterion in the selection of the supplier.

**What are the criteria that the Ministry of Defence uses to evaluate bids in public procurement tenders?**

The primary criterion is always the compliance with qualification requirements and technical specifications, and substantiation of parameters of a given piece of military equipment.

The Public Procurement Act clearly says that the basic evaluation criteria include "economic advantageousness of the tender" and "the lowest tender price". Compared to other public procurements, tenders for military equipment are often specific in that we have to evaluate, and very strictly at that, a number of other aspects.

The new act stipulates unambiguous criteria for evaluating the economic advantageousness of a bid in relation to quality. The quality criteria must be determined in a way permitting a comparison of bids and an ascertainment of compliance with the criteria. The act also lays down a new requirement for the inclusion of lifecycle costs, including environmental impacts, in the bidding price.

**Does the bid evaluation procedure take into account whether a particular bidder is the manufacturer of the required equipment, or just a trading organization offering someone else's product?**

The Ministry of Defence must proceed in accordance with the Public Procurement Act and comply with principles of transparency and equal treatment. The act does not distinguish suppliers, trading organizations, or manufacturers. Every bidder that meets qualification requirements, even through a subcontractor, may compete for a public procurement contract. According to the Public Procurement Act, the contracting authority even must not distinguish between domestic and EU companies. The new legislation only allows the contracting authority to exclude any bidder whose track record contains a case or cases of serious professional misconduct and that has not performed well when working for the contracting authority on previous occasions.

**In the light of the current global security situation, is our army preparing for emergencies which could also occur in the Czech Republic?**

As mentioned above, the global security situation has deteriorated considerably in the last few years. Crises in some parts of the world have brought new threats, such as terrorism or illegal migration, which the Czech Republic must perceive as clear and present dangers. The Army of the Czech Republic therefore maintains capabilities needed to support security system elements in the event of extraordinary emergencies in the territory of our country. We know the current threats which the Czech Republic may face in the near future, and we are prepared for them.

**The amendment of the Penal Code will significantly change powers of the Military Police in criminal proceedings. What is the objective of the amendment and which specific consequences will it bring?**

The amendment of the Penal Code expands the powers of the Military Police and, at the same time, reduces the workload of the Police of the Czech Republic. The new thing is that the Military Police will run criminal proceedings until the moment the case file, including an indictment proposal, is handed over to the public prosecutor. Until now, case files have been handed over to police investigators, who had to study them again. We will thus significantly improve the efficiency and speed of criminal proceedings, whose costs will also be reduced as a result of the amendment.

Another substantial change is an expansion of the jurisdiction of the Military Police over state enterprises and semi-budgetary organizations the founder of which is the Ministry of Defence. The ministry invests property and money into military repair plants and military hospitals, and it is therefore logical that the Military Police will now be able to investigate economic crime and public procurement contracts in this environment.

**In October, the international Future Forces Forum project will take place in Prague. How will the Ministry of Defence and the Army of the Czech Republic present themselves on this occasion?**

Supporting the Czech defence industry continues to be our priority and international events such as this on the home turf are ideal for promoting and implementing our strategy of the development and support of the Czech defence industry.

The coordination committee is still discussing how the presentation of the ministry and the army at the FFF 2016 event will look like. The project is supported both by me and the Chief of the General Staff; we also cooperate with the Ministries of Interior and Foreign Affairs and other government agencies and foreign institutions. Our military state enterprises, LOM Praha and VOP CZ, are general partners of the event, and the University of Defence is making a significant contribution to it as well. The FFF preparatory committee also includes representatives of the Division of Industrial Cooperation and Organizations Management of the Ministry of Defence and the Czech Defence and Security Industry Association. The Army of the Czech Republic will demonstrate, both statically and dynamically, a substantial part of the modern technologies in its inventory during the Future Forces Forum.

Of course, there will also be technologies designed for future applications. We will present them in a broad spectrum of different areas, including medical equipment, protection against terrorism, equipment and ballistic protection of the 21<sup>st</sup> century soldier, cybernetic security, command and control systems, or autonomous robotic combat systems, which are so often discussed today. You can look forward to dynamic demonstrations of the TAROS V2 unmanned ground vehicle combined with a demonstration of its cooperation with unmanned aerial vehicles, such as the BRUS UAV developed by the state enterprise VTÚ.

The event will be accompanied by panel discussions of specialists, which will be devoted to current technologies and security-political challenges of today and of the years to come.

Mr. Minister, thank you for the interview.

Šárka Cook

Photos by the archive of the Ministry of Defence of the CR

EXTREME MOBILITY IN HEAVY TERRAIN \* HIGHEST BALLISTIC AND MINE PROTECTION

SVOS





# We Are Not an Attractive Partner for the Industry, But We Are an Interesting and Good Reference for them

*Every day, the Fire Rescue Corps of the Capital City of Prague struggles with specific problems which are utterly different from those of Regional Fire Rescue Corps. We asked Brigadier Roman Hlinovský, Director of the Fire Rescue Corps of Prague, for an interview on this and other topics.*



**Could you give our readers a brief presentation of your work, current tasks and plans for 2016 from your perspective?**

My job can be divided into two basic levels. The first one consists in work within the Fire Rescue Corps of the Capital City of Prague and its objective is to bring the Prague Corps closer to standards implemented by Regional Fire Rescue Corps wherever the implementation of such standards is possible or desirable. Due to historical and political circumstances, Prague differs from the regions in many respects; some of the differences are an advantage, while others rather hamper the development of the Fire Rescue Corps of Prague. The most essential factor is a long-term lack of funds for investments into mobile firefighting equipment and buildings. In 2011, the Ministry of Interior had to implement a programme of substantial savings and budgets of all Regional Fire Rescue Corps were drastically slashed. However, these measures made the regions look for and start using other sources of funding, namely EU funds. However, the Fire Rescue Corps of Prague operates in a region which is not eligible for funding through integrated operational programmes of the European Union. For this reason, there is not any systematic periodical replacement of technical equipment and vehicles. We are now able to deal with emergencies, but we lack modern equipment and back-ups for some of our rapid intervention vehicles. Many of our technical assets are obsolete and their operating and maintenance costs are unnecessarily high. My task is to analyze the current situation, identify risks, set essential priorities and obtain funding from the General Directorate of Fire Rescue Corps of the Czech Republic and the Ministry of Interior. At the same time, I have also been working on changes in the fields of organizational structure, interpersonal relations and communications, internal control and management acts and instructions, salaries and bonuses, professional training and, first and foremost, strategic and conceptual directions. I am aware that it is a long-term mission which depends mainly on good cooperation with colleagues in the corps command, communication across all functions, and also on perseverance.

The second level of my work takes place outside the Fire Rescue Corps of Prague. We closely cooperate with other elements of the Integrated Rescue System operating in the territory of the capital, and particularly with the Municipal Office of Prague and Municipal Offices of different quarters of Prague. I have been working on a draft concept of strategic development of the fire protection system in the territory of the capital, which also reflects new risks threatening Prague. I would like to establish long-term cooperation

in the field of systematic coverage of the capital's territory by personnel and equipment of firefighting units, as well as in the field of grant support of specific fire protection projects and priorities.

**Which stage does the project of construction of new fire stations find itself in now? Will there be any sharing with other elements of the Integrated Rescue System, namely ambulances? If the stations are indeed shared, what advantages and disadvantages will this arrangement bring?**

At the moment, we are designing a new facility of Fire Station No. 3 in Holešovice. It will be a replacement of timber structures dating back to 1942, which were built as a provisional fire station and supposed to last just 5 years. If everything goes as planned, we could start preparing the site for construction works early in 2017. The result will be a modern fire station supporting three firefighting teams, which will also include servicing and maintenance facilities for mobile firefighting equipment and an area for a fire prevention section. In the years to come, we would like to obtain funds for the construction of a fire station in the northern part of Prague, where we already have a land lot for this purpose, and another one in the eastern part of the capital. We have to react to land-use plans focused on the construction of new areas of family houses and shopping and industrial centres. The existing network of fire stations in Prague reflects the history of Prague rather than the growing capital's needs in the field of fire protection.

In the framework of cooperation of basic elements of the Integrated Rescue System and following an agreement with the director of the Emergency Medical Service of the Capital City of Prague, we have checked a possibility of establishing joint bases sharing technical and human resources and maintenance facilities and making use of synergic effects. The fact is that such cooperation already exists at some fire stations – e.g. at Fire Station No. 2 (Petřiny), Fire Station No. 6 (Krč), Fire Station No. 7 (Smíchov). We also plan to include an EMS station on the premises of the future Fire Station No. 3 in Holešovice. We are now negotiating a draft agreement, necessary renovations and of course the funding of the project with the founder of the Emergency Medical Service, i.e. the Municipal Office of Prague.

Advantages of a joint base include shared training and education facilities, shared logistic support, repair or maintenance services and, first and foremost, personal contacts between firemen and rescuers/paramedics, who collaborate during emergencies. There is also a financial aspect, as both IRS elements can substantially reduce their respective operating costs in the long run.

There are of course some disadvantages as well, due to different tasks, needs and priorities of the two IRS elements. However, these can be dealt with, if both parties try hard enough.

**This issue will appear for the first time at the 6<sup>th</sup> IDEB International Defence Exhibition in Bratislava. How would you characterize the cooperation between the Fire Rescue Corps of the Czech Republic and its Slovak counterpart?**

There are long-standing partnership relations between the Ministry of Interior – General Directorate of the Fire Rescue Corps of the Czech Republic and Czech Regional Fire Rescue Corps and the Presidium of the Fire Rescue Corps of the Slovak Republic and Regional Fire Rescue Corps in Slovakia. The two parties have signed a Memorandum on Cooperation and Friendly Relations in the fields of prevention of and dealing with emergencies, identification of causes of fires, joint activities of both nations' firemen abroad, professional training, psychological assistance etc., including organizing and holding conferences, seminars, workshops, competitions and sports events. There were also joint meetings of regional directors; the last one took place in the end of 2015, in the Lešť Training Area of the Slovak Fire Rescue Corps. In addition to profes-

sional contacts, we also enjoy excellent personal relations with our Slovak colleagues.

**As an expert in dealing with large-scale emergencies, you were appointed a member of the Coordination Team put together by the European Commission and sent to the Republic of Serbia struck by floods. Are there any substantial differences in emergency and disaster-relief procedures in the Czech Republic and other countries? And what is your opinion regarding the cooperation of the Integrated Rescue System in Serbia or in Afghanistan?**

The Serbian rescue system is not that much different from the Czech one. Serbia is a country interested in cooperation with the European Union and develops structures similar to those working in our country. I was a member of the EU team whose task was to coordinate international aid and analyze priorities for the deployment from European countries in flooded areas. We were communicating with the Crisis Management Sector, basically a counterpart of our General Directorate, whose people had a comprehensive picture of the situation and managed the rescue and disaster-relief operations.

As to Afghanistan, we were there upon request of the Ministry of Foreign Affairs of the Czech Republic, as members of the Czech Fire Rescue Corps mission. Our task was to analyze conditions of professional training courses of rescue elements in the Logar Province, where the Czech Provincial Reconstruction team had been operating for quite some time. In addition to collecting information on crisis management, we also set up a basic training programme for the firefighting unit of the provincial capital. The situation there is very different from that in Europe. It of course reflects the security and economic situation of the whole country, but also Afghanistan's different history and culture. It is further exacerbated by a complex organizational structure of government bodies; there are no standard rules for requesting, providing and coordinating help during emergencies. The output of the Czech Fire Rescue Corps mission to Afghanistan was an analytical document proposing four levels of organizational and technical measures the purpose of which is to develop the area of crisis management and protection of population.

**How would you characterize the cooperation of the Fire Rescue Corps of Prague with Czech suppliers? In other words, do you buy gear and equipment from Czech companies?**

The commodities supplied to the Fire Rescue Corps are very specific and unique. At the moment, the market offer is very rich and diverse, but our limited funds make any acquisitions very difficult. For this reason, we are not an attractive partner for the industry, but we are an interesting and good reference for them.

**And what about long-term cooperation with Czech companies?**

We have been cooperating for a long time with Czech manufacturers of fire trucks and firefighting equipment. Before 1990, there were many manufacturers of, for example, helmets, footwear and personal equipment, but they capitalized on the relatively closed market. We buy a lot of equipment, particularly items with relatively long replacement intervals, from foreign suppliers. This is not easy, because the lifetime of, for example, a ladder is about 20 years, and supplying a truck-mounted ladder once in two decades is not an attractive business proposition for the supplier. Articles that are used every day and are in fact consumables, such as personal gear, are much more attractive for suppliers. There are two major players in the Czech market which supply replacement personal gear to Regional Fire Rescue Corps. This materiel is specific in that it must meet tough demands and possess certain properties; moreover, certification costs account for a substantial part of total costs, which means the product is very expensive at the end of the day.

Contrary to the police, whose purchases and acquisitions are centralized, the arrangements of the Fire Rescue Corps are different. Every regional firefighting force has different needs. As a rule, every region uses a different basic firefighting vehicle. In the historical part and densely built-up areas of Prague, we need a smaller rapid intervention vehicle which can get through everywhere; on the other hand, forested regions require a higher-clearance off-road firefighting truck capable of carrying its own water supply in order not



to depend on other firefighting vehicles. It is very similar with respect to personal gear. In regions where firefighters mostly operate outdoor, a lighter outfit may be sufficient, as the exposure to heat is not so high. You will need another type of gear in the urban environment, where apartment fires prevail and heat is all around you.

Intervention statistics, environmental analyses and financial budgets are one thing, but planning a budget for reproduction of gear and equipment is something else. The useful life of firefighters' garments is reduced, for example, by contact with hazardous substances. Technical interventions, in particular traffic accidents, account for a substantial percentage of our actions in the urban environment of Prague. Firefighters often have to deal with fluids escaping from various systems of vehicles, which degrade their gear. We try to allocate a certain sum of money for the replacement of personal gear and protective aids every year. Unfortunately, Prague differs from a generic region, where every firefighter has two sets of personal firefighting gear. If one gets dirty or contaminated, he or she can use the other. Because we have less money at our disposal, we cannot finance the replacement of 600 firefighters' personal gear sets in Prague, which is why every firefighter in Prague has, for the time being, just one.

**Does the Fire Rescue Corps of Prague organize emergency exercises reflecting the current global security situation?**

This is a long-time effort. We have specific means for the territory we operate in, a bit different organizational structure reflecting the character of our area of operations, and our training, including emergencies, is based on our own planning and also performed in cooperation with the relevant department of the Municipal Office of Prague which plans and prepares for similar situations. As to specific emergencies, there are detachments for rescue and disaster-relief operations in urban terrain in Prague and Ostrava; each of them comprises a team of experts with special training and special equipment for locating people, which can operate in and around unstable or collapsed buildings. We also have a 24/7 CBRN team of professionals specializing in hazardous substances.

Our response to the attacks in Paris was a proposal for the acquisition of technical means and equipment to deal with emergencies involving a higher number of victims in a relatively small area. We prepared an analytical document for the Ministry of Interior – General Directorate of the Fire Rescue Corps of the Czech Republic, which outlines potential problems that might occur. Dealing with an extensive emergency in the territory of the capital would require supplementary equipment; we either lack the equipment we need, or the equipment we have is obsolete. We have also been preparing for a potential emergency involving the use of a hazardous substance; following an agreement with the Municipal Office of Prague, we would like to organize an exercise of the Integrated Rescue System reflecting such a situation in the second half of the year.

**General, thank you for the interview.**

**Šárka Cook**  
Photos by the author  
and the Documentation Department  
of the Fire Rescue Corps of the Capital City of Prague



# Results and Achievements of CBRN Troops Were the Reason Why the Centre Was Established in the Czech Republic

*The Joint Chemical, Biological, Radiological and Nuclear Defence Centre of Excellence – JCBRN Defence COE – was established in Vyškov in 2006 and was activated by the North Atlantic Council a year later. There are now twelve allies, including the Czech Republic as the host country, which are directly represented in the Centre. The Centre was the first and so far the only international organization of the Alliance permanently residing in our territory. There are altogether 24 NATO Centres of Excellence, each*



*of them specializing in a specific field. These centres represent a link between NATO armies and scientists from many areas that can help with solutions at times of crises or emergencies, and also do so. The Czech Republic has taken over the responsibility for the area of protection against weapons of mass destruction (WMD) and dealing with situations involving industrial accidents or leakages of industrial hazardous materials. The Centre's Director is Colonel of the General Staff Jiří Gajdoš.*

**Mr. Director, could you explain the main purpose and mission of the Centre to us? Why was it established in the territory of the Czech Republic?**

The Centre's activities are focused mainly on support of transformation processes within the NATO, namely the drafting of concepts and doctrines, planning of forces, and development of capabilities within the NATO defence planning process, experiments, support of education and training in the field of protection against weapons of mass destruction. Furthermore, the Centre supports operations through providing strategic consultancy services and collecting information.

The support of decision-making processes is also based on modeling and simulating emergencies and events posing a risk, as well as other CBRN protection-related activities.

The reason why the Centre was established in the Czech Republic were the professional results and achievements of CBRN troops of the Czech Army, including the excellent performance of the 9<sup>th</sup> CBRN company assigned to the Alliance's Rapid Reaction Forces, successful fulfilment of tasks by our CBRN specialists in the Gulf, and professional capabilities demonstrated by representatives of our CBRN troops assigned to NATO and EU structures. These results, including the NATO's call to the Czech Army's CBRN branch to build a first-ever international CBRN battalion as a component of the NATO Response Forces in 2003, outweighed offers of other nations to build the Centre.

**What does the chain of command look like in an international organization such as yours? Who is, actually, the commanding officer of your soldiers?**

The Joint CBRN Defence Centre of Excellence is an international military organization activated by the North Atlantic Council as a military body of the Alliance, but not belonging to its structure. The organization has a multinational management structure, namely a Steering Committee in which each of the twelve sponsoring nations has a representative appointed directly by the respective Minister of Defence. The Centre's Director acts as the "Chairman" of the Steering Committee, but does not have the right to vote. The Steering Committee approves the Centre's plan of work and multinational budget. The Centre's work is governed by binding documents approved by all sponsoring nations. The um-

brella nation, i.e. so-called Framework / Host Nation, is the Czech Republic, which provides full administrative and professional support to the Centre. The Centre's keynote document is the Operational Memorandum of Understanding, which the Czech Republic and other nations signed in Norfolk in 2006. Insofar as the cooperation with the Army of the Czech Republic is concerned, the Centre operates under the auspices of the First Deputy Chief of the General Staff. The Centre also has its "Champion" at the Allied Command Transformation (ACT) in Norfolk, namely the ACT's Deputy Chief of Staff. The two general officers act as mentors and guarantors representing the Centre in their respective positions.

**You have mentioned funding. How is it taking place?**

The costs of the Centre's infrastructure, support and operation are funded both by individual nations and multinationally. Each of the member nations pays costs of its personnel assigned to the Centre. The level of the multinational budget is directly proportional to the number and scope of activities of the Centre in a given year, which must be covered by the budget. The activities are outlined in the Plan of Work which is approved by the Steering Committee together with the budget. The spending must be in compliance with requirements of the Steering Committee; the use of the budget funds is transparent and undergoes an independent financial audit every year.

**You have been leading the Centre since 2012. Where has the Centre advanced since then and what have you managed to achieve?**

I believe our greatest success is the positive opinion on and the general professional recognition of the Centre by the Alliance, sponsoring nations and the European Union. Our Centre is effectively used by almost all NATO organizations, and we fulfil up to one sixth of all NATO requirements addressed to Centres of Excellence, of which there are 24. The Centre's activities cover the entire spectrum of solutions in the field of NATO CBRN Defence, thus also contributing to the prestige of the Czech Republic in this area. The most important projects of the Centre – and this is also the field in which we fundamentally differ from other COEs – include achieving full NATO CBRN Reachback operational capabilities and the Centre's role in assuming responsibility for education and training as the NATO CBRN Defence Department Head. We are also very successful NATO ambassadors for cooperation with the Alliance's partner nations.

**Mr. Director, could you give us a brief explanation of the terms "NATO CBRN Reachback" and "NATO CBRN Defence Department Head"?**







The first term denotes a new strategic capacity for consultancies in the field of protection against WMD. Its operation centre was funded by the NATO Defence against Terrorism Programme of Work. It reached its full operational capabilities this January, and is thus fully included in the system that protects NATO member nations against weapons of mass destruction as an element providing strategic information support. A unique feature of this project is the development of a so-called secondary network (CBRN Reachback Secondary Network) linking hundreds of military and civilian scientific and technological organizations and specialists in chemistry, biology, radiology, nuclear physics, but also meteorology, geography, modelling and simulations, etc. In terms of its mission and capabilities, the relatively new element is unique within the NATO, and there is no European equivalent to it. This newly created capability realistically reflects the ambition of the Army of the Czech Republic to specialize in the field of protection against weapons of mass destruction.

The NATO CBRN Defence Department Head (DH) is a brand new role of the Centre; it is based on a new concept of education and training of the Alliance and its mission consists in the conceptual development, organization and coordination of all CBRN training and education activities, coordination with other disciplines (INTEL, Medical, MILENG, etc.), analyses of training requirements, proposing solutions and, last but not least, specifying evaluation criteria. The objective is to create a realistic training plan meeting NATO requirements in this field, and to determine criteria for controlling the quality of the training and evaluating results achieved during exercises.

**The excellent performance of Czech CBRN specialists is of course related to their experience and professionalism. However, they cannot be at the top without having top equipment. What is your essential equipment and how does the Czech defence and security industry participate in it?**

The needs of the CBRN units of the Army of the Czech Republic assigned to the fulfilment of the most complex tasks following after the use of a weapon of mass destruction are different from those of the JCBRN Defence COE. Our Centre uses specialized software for evaluating the radiation or chemical situation, including modeling and simulating programmes. As to the CBRN Reachback area, our principal tools are knowledge and easily accessible databases of all kinds in scientific disciplines such as chemistry, radiology or biology, software and classified means of communication. We maintain very close ties with the Military Research Institute of Protection against CBRN in Brno, where we make use of their professional scientific capacities and ability to deal with different situations. In many cases, we are required to provide a quick answer to a CBRN-related question or requirement, e.g. to identify radionuclide spectrums measured by different detection instruments. On the other hand, special training courses for CBRN First Responders, i.e. for specialists operating in the field and dealing with complex situations, are something else. We use all available assets, including protection aids, detection and identification instruments, sampling and decontami-



nation equipment, and health protection means, in this area. We try to make use of capacities and products of our defence and security industry and we also maintain very close cooperation with the Fire Rescue Corps and Police of the Czech Republic in this field.

**The Centre will celebrate its 10<sup>th</sup> anniversary this year. What direction should it follow in the years to come?**

Dealing with consequences of the use of weapons of mass destruction is unthinkable without cooperation of civilian and military capabilities of nations. Although the NATO is a military alliance, it does not focus only on protection of troops and strategic or important locations; its task is also to protect the population, territory and infrastructure against consequences of the use of weapons of mass destruction or accidents involving leakages of toxic substances. The Centre should direct its future development toward supporting cooperation between civilian and military authorities in the field of protection against CBRN. It should become an advisory body not only for the military, but also for firefighters and policemen; it should be an indispensable part of the Integrated Rescue System of the Alliance and EU countries.

Mr. Director, thank you for the interview.

Šárka Cook

Photos by JCBRN Defence COE

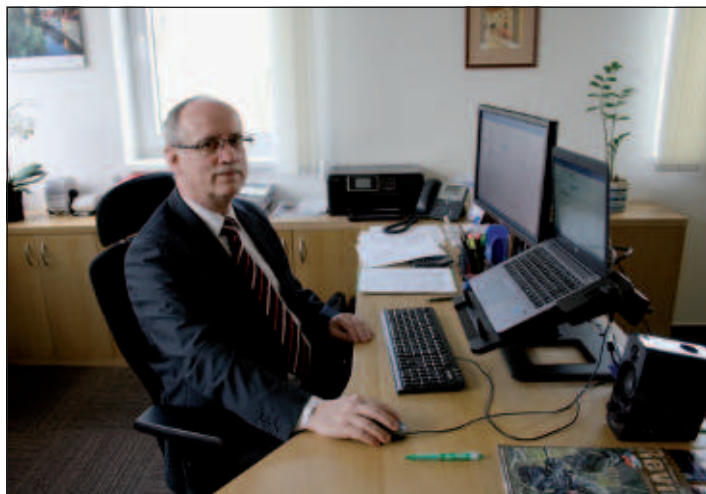
*The Centre consists of both military and civilian personnel from the twelve countries mentioned above (Czech Republic, Poland, Hungary, United States, France, United Kingdom, Slovakia, Slovenia, Romania, Greece, Italy and Germany). The multinational staff comprises relevant experts in the field. The Steering Committee (JCBRN Defence COE Steering Committee) is responsible for in-house management of the organization; its members are representatives of all the nations contributing to the Centre's work. The Steering Committee approves the Centre's plan of work and multinational budget. The Director, Colonel Jiří Gajdoš, who is also the Chairman of the Steering Committee, submits proposals concerning the Centre's future development, topics and recommendations permitting the Centre to fulfil its mission and tasks effectively. The organizational structure of the JCBRN Defence COE comprises the Director's office and the Departments of Transformation Support, Training and Education, Planning of Analyses, and Internal Administration.*

#### Fact sheet:

October 26, 2006	establishment of the JCBRN Defence COE
March 21, 2007	approval of the Centre's accreditation
July 31, 2007	activated as an IMO (International Military Organization)
September 16, 2008	accession of Poland
September 14, 2009	accession of Hungary
March 23, 2011	periodical accreditation assessment
June 16, 2011	accession of the United States
July 23, 2013	accession of France

# Our Forte is Our Own Development

*EVPU Defence, a.s., ranks among leading defence and security companies of the Czech Republic. It regularly participates in major global fairs and exhibitions, and collected many awards there, including ones of international panels of journalists. It has also received many awards at the IDET fair. These successes are backed up by many factors, including high professional standards of most of EVPU Defence's employees, advanced and sophisticated products, increasing market demand, and – first and foremost – own know-how and development capacities. We have asked EVPU Defence's Chairman of the Board and CEO Igor Valníček about the company's history, presence and future.*



**Mr. Director, can you tell our readers something about the history of EVPU Defence?**

In mid-2016, exactly fifteen years will have elapsed from the day when the Slovak company EVPU, a.s., established, together with its partner Mr. Barnett, its subsidiary EVPU Defence, s.r.o., in Uherské Hradiště, Czech Republic. The choice of Uherské Hradiště was not accidental – the town is renowned not only for its wine, slivovitz and cultural traditions, but also for its rich history in the field of precision engineering focused on manufacturing of aerospace and defence products and electronic devices. The proximity of the city of Zlín with its Tomáš Baťa University provided good conditions for further development of EVPU Defence. Our company initially had just a few employees and was basically a trading entity. We then became agents of several important manufacturers of optoelectronic devices; deliveries of their products to the Army and Police of the Czech Republic helped us learn more about needs and requirements of our customers and suppliers. Using the know-how, a dual-axis manipulator was developed, which we started producing in cooperation with our parent company and delivering to our customers. The partners – natural persons – had changed in the course of time, but the parent company, EVPU a.s., remained. The connection with the Slovak parent company was crucial for the development of EVPU Defence, which gradually evolved from a purely trading company into a manufacturing enterprise fo-

cusing on the production of specialized long-range monitoring and surveillance optical systems.

**Can you briefly characterize principal milestones of the evolution of your young company?**

The last fifteen years included some important events which have ultimately led to a dynamic development of EVPU Defence, a.s.. In the end of 2005, we moved from a small office in the centre of Uherské Hradiště to our own building with some manufacturing facilities. Another important moment in the history of our company was the acquisition of ISO 9001 and AQAP 2110 certificates, which unquestionably led to improved quality of our products; thanks to being able to meet army quality standards, we could compete for and participate in orders of the Ministry of Defence of the Czech Republic, as well as in acquisition projects in other countries. In 2008, we launched an information system which interlinked all stages of the process, from orders, manufacture and storage to shipments of complete products, and thus made a significant contribution to higher productivity of labour. Another thing that should be mentioned is the change of the legal form of our company, which took place in 2011; the limited liability company became a joint-stock company, EVPU Defence a.s. The lack of space in our building, which was located amidst family houses, permitted no further development. This was why we decided, eight years ago, to buy a land lot in the Jaktáře Industrial Zone, situated close to the Morava River, where we built a new production site to which we moved in mid-2014. Our decision was proven correct by the results we achieved in 2015. The sales of our own products reached a record level and we were able to satisfy all orders thanks to the new production facility.

**The history of EVPU Defence is relatively short, but its achievements are remarkable. How does its situation look today?**

Due to the research and development base and test facilities of the parent company in Slovakia, we can be sure that our products meet quality standards and can succeed in international competition. Our company now has some 65 employees and its own development department with engineers specializing in HW and SW of manipulators and electronic devices, optics and design of mechanical components and electric cabling. We also focus on the development and manufacture of HD daytime cameras, uncooled thermal cameras and complete optical systems. Our commercial department is now able to offer a complete "family" of small and large manipulators and complete optical systems, stabilized and unstabilized, mobile or stationary, designed for a variety of environments, from deserts to marine applications. We also offer supplementary perimeter protection devices and can react flexibly to various wishes of our customers. Our devices can operate as standalone installations or in collaboration with other equipment, e.g. networked radars and cameras, even in a wireless mode.

**Mr. Director, how would characterize the current portfolio of EVPU Defence?**

It depends on what portfolio you have in mind. If we talk about our







employees, we have a team of highly skilled, industrious people who all pull together and are motivated to deliver good work so that their company can present the best quality worldwide. And it does not matter at all whether they are blue collars or white collars.

If we look at the portfolio of products, our dual-axis MSO, MST and NERO manipulators account for most of our production and sales, followed by other manipulators. We can certainly say that whoever wants a good pan-and-tilt manipulator, he will surely contact us, no matter which part of the world he comes from. Another proven product line is represented by complete electro-optical systems integrated on vehicles or in turrets.

Our product portfolio also includes "elevators" designed for vehicle applications, special system cables, control panels with monitors and computers, and also control software of all electro-optical systems. I also have to mention our cooperation with the parent company EVPU in Nová Dubnica in the manufacture of weapon stations.

#### **Can you briefly inform us about your international and domestic activities?**

Recapping the last fifteen years, I should not forget our meeting with the company FLIR in 2003, which ultimately developed into cooperation which still exists now. The development of our company was positively affected by contracts for the protection of the Schengen Area, in which we participated as direct suppliers or subcontractors of stationary and mobile border protection equipment in the Czech Republic and neighbouring countries. We have also learned from other contracts for equipment protecting airports, transport infrastructure, economically important sites, military installations and camps in army missions, or borders of different countries of the world. We also present our products at exhibitions at home and abroad.

#### **Which are your top-priority territories?**

Our priorities include mainly European countries, Central Asia and Middle East, but also Southeast Asia and North America. We were trying to establish ourselves in Russia, but the promising business there was reduced due to sanctions, and we can see now that Russia has been looking for other suppliers or developing its own technologies. However, we keep looking for other potential partners, which was



why we participated, under the flag of the Czech pavilion and with support of Czech Trade, in the FIDAE 2016 exhibition in Chile.

#### **Which of your products are essential for the defence and security of the Czech Republic?**

It is definitely our cooperation with companies preparing various equipment for special military monitoring vehicles which should be mentioned. We are interested in taking part in tenders of the Czech Police for various types of monitoring vehicles with long-range equipment, as well as for portable containers with medium-range electro-optical systems. We want our police to be able to effectively protect our country and its citizens against unwanted visitors and all those posing a risk to the safety of our homes. In doing so, they should have the latest and most modern equipment there is.

#### **What is your opinion regarding your membership in and support offered by the Defence and Security Industry Association of the Czech Republic to activities of EVPU Defence?**

EVPU Defence has been a member of the Defence and Security Industry Association of the Czech Republic for a long time, and our membership in the association is important for us because of at least two reasons. First, our partners want to know whom we cooperate with and on which platform in the Czech Republic, and cooperation within the association is a very good reference for them. Second, we as a member receive a lot of information, and we also have an opportunity to present ourselves in the framework of the association both internationally and locally.

#### **Can you briefly outline your future plans?**

Of course, we want to make a more significant breakthrough in the manufacture of complete electro-optical systems. We are developing HD optical systems and we definitely want to focus our company on the manufacture and integration of different types of long-range and medium-range cameras, which will require not only more knowledge and equipment in the field of optics on our part, but probably also cooperation with other Czech partners.

**Mr. Director, thank you for the interview.**



*What to say on our visit at EVPU Defence by way of conclusion? First and foremost, we would like to thank the company's CEO for a personal presentation of EVPU Defence and a sightseeing tour of practically all workstations of the new site. We were also pleased with communicative employees and their very positive opinions. The sightseeing tour made a very positive impression on us, as it reflected both high professional standards and the company's efforts to create a pleasant and esthetic environment for its employees, including attractive designs of social facilities, e.g. a canteen or relaxation areas in optimistic colours. We would like to wish EVPU Defence every success in its activities and its CEO, on the occasion of his birthday anniversary, much health and all the best in his personal life.*

Written by: Miloš Soukup

Photos: Miloš Soukup and Eva Soukupová  
www.evpudefence.cz

# Expansion of the Production of Electric Subassemblies for Military and Aerospace Equipment in Nová Paka

*We asked Mr. Jiří Šimek, CEO of the company Quittner & Schimek based in Nová Paka, for an interview.*

Mr. Šimek, a year has elapsed since our last meeting and I would therefore like to ask you what your company has been through during that time.

The last year was very hectic for us. Due to the increased number of orders and the growing volume of production of cable bundles and electromechanical subassemblies, we had to expand our production facilities and hire more workers. As a matter of fact, the number of our employees has increased by 50 since our last meeting, which means we now employ 230 people. The expansion concerned mainly production activities, which fact of course meant an increased workload for our process engineers, production managers and quality control teams in terms of training, preparation and management of production, and naturally also full quality control. Unfortunately, we are able to recruit just a few people that we need from local vocational training schools which we cooperate with. Others come from other industries and have to be requalified. As most of our customers are from the defence or aerospace industries and are very demanding, the quality of our products is our primary priority, and this fact makes the training of new employees all the more difficult. Unfortunately, hiring 50 new employees does not mean just hiring and training 50 people; the success rate of the recruitment process is only 60 to 70 per cent, which means we have to hire more than 70 people. Only the training process then shows that not all of them can comply with our working procedures or master our production technologies. Our production is not an assembly line operation for which you can recruit workers through a job agency, train them for one day, and they can fully perform the next day. Our growth in the past has been steady and regular. Dealing with the recent growth was not easy, but now we can say we have managed it.

**What, then, are you focusing your workforce recruitment efforts on?**

As our company is relocating now, we have to concentrate on stabilization of processes and our team, which means we cannot dramatically increase the number of our employees at the moment; however, we have enough candidates ready for the next stage, whom we will gradually train to satisfy the growing interest of our customers in our products to the maximum extent possible. We would be happy if we were able to hire more employees from voca-

tion schools in our neighbourhood, which is why we are preparing some activities of our own as well, including lectures or internships for students, etc. Unfortunately, the government offers no radical solution of the problem, having long underestimated the problem and not giving the matter of vocational education a high enough priority. If we fail to attract enough – and also better – students to vocational schools, the Czech industry will have a big problem.

**You mentioned an expansion of your production facilities. Can you be more specific?**

Until recently, we were located in five different buildings in Nová Paka, which was an unacceptable situation from the viewpoint of our further development. Last year we purchased a site of more than 5 hectares close to our existing production facilities, where we have two production halls the aggregate area of which is nearly 20,000 m<sup>2</sup>. The renovation of one of them is almost completed and we are now relocating our production there. The second phase, just a few months from now, will consist in relocating our commercial department and completing the relocation of our warehouse. Having all activities under a single roof is expected to facilitate communication among different departments and to bring about an overall streamlining of all processes.

**Coming back to your projects – how has the cooperation with important customers been developing?**

Historically, our principal field of business is aerospace industry. There are many new and interesting projects launched in the Czech Republic, but most of them have recently been focusing on cooperation in metal working or metal processing etc. Complete projects requiring electric equipment (which we could offer) and advancing to the mass production stage are absent.





**The not-so-good situation in the domestic market should not affect your cooperation with foreign partners. How have you been doing in this field?**

Our most important foreign partners include, for example, the Zodiac Aerospace group, although we mostly deliver to their subsidiary in Pilsen. The cooperation with the group is very successful for us and has brought about, inter alia, a shift of a part of our production from electric to electromechanical subassemblies. Thanks to our quality, reliability and flexibility, the scope of cooperation has been expanded, and we now deliver our products to Zodiac's subsidiaries in Germany and United States as well. We thus now deliver subassemblies not only for Airbus A319/320/321, A330/A340 and A380 aircraft, but also for Boeing B-737 or B-777 jetliners.

Other long-standing customers of our company also include, for example, Technify Motors (formerly TAE-Thielert Aircraft Engines), which manufactures diesel aircraft engines for General Aviation. One of our new customers is the Swiss company Marengo Swiss-Helicopter, which is preparing a brand new modern helicopter for which we are supposed to deliver complete cable bundles and other components.

**What is your participation in defence projects, which must also be very important for you?**

Military equipment constitutes the second pillar of our manufacturing and commercial activities. During the previous interview, I mentioned our excellent cooperation with the Rheinmetall group, especially insofar as the PUMA Infantry Fighting Vehicle project was concerned. The vehicle is intended for the Bundeswehr, the planned number of vehicles is 350, and our company will supply almost all cable bundles and some of the electric boxes for it. Last year, the PUMA project also opened a way to another major German defence company, KMW (Kraus-Maffei Wegmann). It also participates in the PUMA project and has handed over a part of its production of cabling and electric equipment to our company.

In addition, our successful cooperation with the companies Honeywell (Germany, Czech Republic, United States), Sagem (France) and particularly Thales (The Netherlands) is continuing. We have fairly broad experience in the field of audio connectors, thanks also to our close ties with the company Amphenol, which manufactures almost all product lines in its subsidiary plants. We rely on this experience very heavily in the abovementioned cooperation with Thales, but also in our cooperation with the renowned manufacturer Harris or in our deliveries for the domestic company Mesit.

**Do you have any other interesting products for military equipment?**

It is a well-known fact that our company also deals in components using optical fibers, in cooperation with the sister company SQS Fiberoptics. In this respect, we make use of the support of the companies TE Connectivity, Amphenol and Glenair as their official partners. These companies cover the full spectrum of optical components used in aerospace and military/defence products, including necessary certifications. With their product portfolios and also with the use of our MIL connector assemblies, we are able to meet most of the requirements we have encountered in the market so far, delivering the best quality products with modern assembly and diagnostic technologies of SQS. An example is the AGS project, for which we have delivered more than 5,000 optical termini of different tech-



nology. Our end customers include, for example, the Italian company Selex/Finmeccanica. However, we also supply optical elements to a number of Czech companies, such as ERA, Retia, Dicom, and others.

**Your continuing growth and development undoubtedly requires substantial amounts of money. Do you make use of government subsidies?**

Insofar as this matter is concerned, I have to admit that, after lengthy in-house discussions, we came to a definite conclusion that we would not make use of any subsidies or any other form of support provided by the government or the European Union etc. The investment into the new site was about CZK 150 million, and we decided to finance it using our own resources and a bank loan. There are more reasons for our decision. We regard the whole system of subsidies and grants as essentially bad, as it favours certain subjects in the market, supports incorrect allocation of resources, and, in a way, make businessmen gundek reality. In addition, we have no intention whatsoever to support wasteful use of resources through their redistribution, or their siphoning off by various non-transparent consulting firms. With subsidy programmes, it is difficult to accurately define the availability of funds in time and, first and foremost, their control mechanisms are not clear enough. The manufacturing sector has recently found itself under pressure of bloated state administration authorities which exert incessant pressure and add to the administrative workload of businesses. In our opinion, spending dozens and hundreds of hours on additional checks and audits or activities that produce nothing makes no sense. We believe the time that would otherwise be spent on the preparation and administration of subsidized projects can be used more effectively!

Mr. Šimek, thank you for the interview.

*The company Q & S ranks among leading manufacturers of electric subassemblies for aerospace, defence, and security applications not only in the Czech Republic, but also on an international level. In 2016, the company from the region at the foot of the Krkonoše Mountains celebrated 25 years of its existence. It gradually expands its technical capabilities and production capacities. The visit to Nová Paka was very inspiring and interesting for our magazine. We wish Q & S many successes at work and in business in the years to come.*

Miloš Soukup

Photos by Quittner & Schimek

# JITKA – New Generation of Command & Control

*From the end of 2013 until May, 2015, new Integrated Communication, Command & Control Centers were deployed in fourteen regional capitals and the Headquarters of the Czech Police. Except for the Capital city of Prague, the project was co-funded by the European Union. It is an innovative concept, re-arranging command from former 78 district centers and concentrating to 14 regional now, which results in significant human resource savings in operation. Software developed by KOMCENTRA s.r.o. (Ltd.) was based on over 20 years of experience running 1<sup>st</sup> generation Mayday 158 emergency handling system.*

Shortly after this multi-regional integrated project deployment, KOMCENTRA s.r.o. delivered similar technology to nine Republic-wide competent special Police units, such as Police Air Fleet, Drug Squad, Border Guard, Presidential Security Service, Government Security Service, Organized Crime Unit and others. A fail-safe unified complex system has thus been established in order to simplify and increase efficiency of Police operations. It is not an administration or documentation helper (though these functions are present as well), but truly real-time command & control system. Data traffic among all Command Centers, Units and local Police stations replicates all records in real-time without significant delay. JITKA (the system's acronym in Czech) is an innovative upgrade with its core re-written from scratch in order to efficiently handle all inter-process (and from users point of view, inter-unit) communications. Fully equipped CCC workplaces for emergency call operators and officers in command, 250 in total, have been deployed in regional centers, and a multiple of these, several thousand simple software clients are used on Police stations countrywide. According to Czech Government resolution No. 981 of Dec 2<sup>nd</sup>, 2015, the "158" emergency line handling (equivalent to 911 in U.S.) was included on the National critical infrastructure list. Last but not least, JITKA is designed to cooperate with Firefighter and Ambulance dispatch centers within so-called Integrated Rescue System.

JITKA is a scalable system, open to further improvements and updates due to legislation and/or process changes. Its authors are ready to reflect any requirements that may apply, as soon as an adequate service contract framework will be set. Expectations of the end-user, i.e. the Police, are identical. KOMCENTRA s.r.o. is a subcontractor of communications (radio, phone) integration of several regional Ambulance dispatch centers, too.

For Crisis management, KOMCENTRA s.r.o. has deployed a special Rapidly deployable command center for indoor use for directorate



**Rapidly deployable command post**

of Police in Ústí nad Labem, regional capital neighboring to Saxony, Germany. This was successfully deployed and immediately used in local measures, as was in case of emergencies like demonstrations or riots. It consists of two fully-equipped workplaces, identical to those of regional Command Center, with own server and communication infrastructure (radio terminals, antenna masts) and can be used in either standalone or integrated mode. In any case, being close to the action theater is a significant advantage. The mobile JITKA center is fully compatible with the rest of the system and can easily be set up in a standard meeting room or larger office.

Foreseen eventual escalation of migration crisis as well as other crises, industrial or natural catastrophes, both intended and unintended explosions, resulting health risks in temporary refugee camps etc may require yet more mobile command workplaces out of reach of standard Police infrastructure nodes, such as former military areas, green border, with possible requirements to cross-border co-operation with other EU member (Schengen area) Police or other armed forces. Understanding these requirements, KOMCENTRA s.r.o. plans to offer a self-sufficient mobile (i.e. truck based) Communication and Command Center for immediate use anywhere in the field. Comfortable working environment for the operating crew as well as elementary social background is natural.

As we can see, KOMCENTRA s.r.o. keeps track with customer needs and is always ready to offer its up-to-date technology and software in order to help facing security challenges in Czech Republic and EU as well.

[www.komcentra.cz](http://www.komcentra.cz)





# IAI ELTA & RETIA

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The ELM-2084 MMR is the key component of the air defence system called "IRON DOME".

www.retia.eu

## EXPLOZIA a.s.

Explosia a.s. is a production and trading company operating primarily in the field of production of explosives and services associated with application of energetic materials for commercial as well as military use. The company was established in 1920 and since then it has existed in a series of various forms and business groups - from an independent joint-stock company through the plant within greater company units back to self-managing company (since June 1<sup>st</sup>, 2002). Company holds an important position in the field of explosives and propellants in the Czech Republic market, and it is also an important exporter, primarily to EC countries.

- Production of Explosives
- Production of Propellants
- Special production
- Research and Development of Explosives



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# Repairs, Maintenance of Tactical Communication Systems and Life Cycle of Products

*Company SEVOTECH s.r.o. celebrates this year 20<sup>th</sup> anniversary. From the beginning is focused for maintenance, repairs and after-warranty support of tactical communication devices used in Slovak Armed Forces.*

In the 1998 was entered into use in Armed Forces first modern radios from company DICOM. For repairs this kind of products was needed permission for sales military goods under the act No. 179/1998. Our company acquires representation this Czech producer in 2005 for support, maintenance and later for sales products. From year 2007 we provide technical support and repairs American radio station Harris. In 2012 we obtained certificate for maintenance and repairs radios from Israeli producer Elbit Systems.

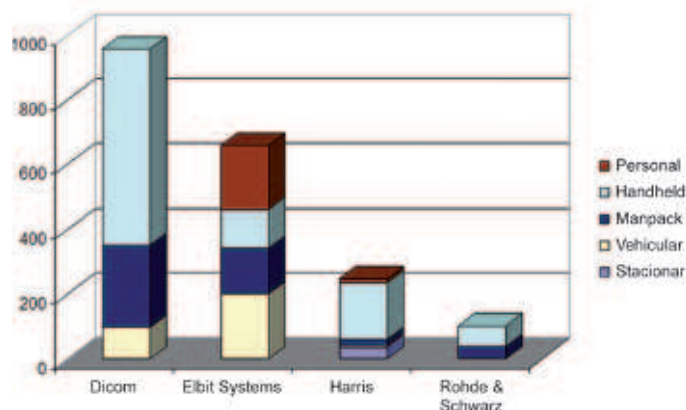
Our engineers have several years of experience with repair special communication devices. We introduced quality management system according to STN 9001:2008 and also certificate of conformity AQAP 2130 by Defence Standardization, Codification and Government Quality Assurance Authority. In this year we obtain environmental certificate STN ISO 14001:2014. In these times was our main partner VOP Trenčín, and we repaired mostly radios used in peace missions.

Company SEVOTECH focused for after-warranty support and services. Our added value is that we cover repair of whole system, means radio, internal communication system, accessories, cables and antennas.

Repairs and maintenance is divided by difficulty for several types. Technical treatment (TO-2) should be executed once per year and includes diagnostics, parameters measurement and replacement of internal batteries, used for store user's communication keys. Common repairs and Finding repairs (BO a NO) includes small repairs, or repairs of accessories, up to replacement of whole modules. Middle repairs and overhauls (SO, GO) was used only for older Russian devices.

Important theme regarding scheduling expenses is replacement of batteries in portable radios. Replacement should be done by results of capacitance tests.

Overview of modern tactical communication systems used in Slovak Armed Forces



\*Note. Graph does not include communication devices from system MOKYS

Military radios stations reaches high technological level, what corresponds with purchasing price. It is necessary to respect life cycle of these products, regularly schedule maintenance by the certified companies. With regular maintenance is increased fighting capacity and lifetime of products. After end of life is suitable to consider modernization, because acquisition brand new products is expensive. For example we offer modernization handheld radio RF-1301 for RF-1302M with secure mode FH = frequency hopping. Abroad is requested modernization of vehicular radio R-173 for R-173M which allows data speed up to 16 kb/s, used in many former soviet vehicles and tanks.

Company SEVOTECH developed own analysis of maintenance modern communication devices used in Armed Forces of Slovak Republic. We compared it with real status and many years of experience in military radios. We have concluded positive results. Service of maintenance and repair of tactical communication systems will be effective provided, while will be scheduled 1,5 % of purchasing costs. We are talking about 2400 pieces of devices and accessories, which needs regular maintenance.

[www.sevotech.sk](http://www.sevotech.sk)

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**After warranty services - maintenance and repairs tactical communication systems used in armed forces**  
**Technical treatments, diagnostics repairs, spare parts**

**SEVOTECH s.r.o.**  
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[www.sevotech.sk](http://www.sevotech.sk)  
[sales@sevotech.sk](mailto:sales@sevotech.sk)



# MESIT Communication Systems for Armoured Vehicles

*The MESIT aerospace, a.s. company's primary business activity is the development and production of electronic equipment, instrumentation and precision mechanics designated for both civil and military technology.*

By 1958 the company had already supplied its own aircraft radio called HRADIŠŤAN to the market. In the 1970's the company produced its first aircraft communication system (intercom system) and personal headsets specifically for the L-410 aircraft. Eventually, based on the experience acquired from the first licenced production of the BCC-600 analogue intercom for tanks and armoured vehicles, the need to develop a newer generation of its own software-defined and configurable VICM 100 digital intercom system has increased. By developing this intercom, the company achieved the rank of the world's most advanced manufacturers of internal speech devices designated for ground military applications. Its VICM 200 COMBAT, the successor to the previous digital communication system, is a simple-to-operate robustly constructed intercom system with minimum space requirements. VICM 100, which can be adapted for use within any combat or other special vehicle, is a versatile communication system that, amongst other purposes, is used by the PANDUR II wheeled armoured vehicles of the Armed Forces of the Czech Republic.

The VICM 100 system specifically enables:

- creating a system for up to 24 crewmembers with full access to combat net radios (CNRs) and independent volume control,
- creating a system comprising a network of up to 4 CNRs from different manufacturers,
- rebroadcasting between all CNRs,
- digital speech processing, data sharing and data communication,
- a full range of communication (voice/data/rebroadcast control) via a cable to distances of up to 1000 m,
- utilising DUPLEX/VOX/PTT intercom operating modes,
- using of headsets with ANR (Active Noise Reduction) with two independent communication channels (for operating and monitoring) accessible for each crewmember,
- creating and using own communication scenarios be the commander of the vehicle,
- using of the Wireless Extension for dismounted crewmembers,
- using of external encryption devices.



The use of such functions as the distribution of warning signals, the option of loud reproduction, the Public Address System and the field telephone interfaces, the security alarm and the Built-in Test with an audible warning output are all a matter of course for this system. Other indispensable features of the system are its robustness and practicability for working in difficult conditions (e.g. when wearing gloves). MESIT aerospace, as the only global producer of these internal communication devices which has headsets with active noise reduction (ANR) of its own design available, their own Public Address System and access to CNRs from MESIT defence, its sister company, is able to offer a comprehensive vehicle communication system including features and user support that can only be obtained from manufacturers who have years of experience in aircraft or military technology.

[www.mesit.cz](http://www.mesit.cz)



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TACTICAL COMMUNICATION AND AVIATION EQUIPMENT



# Saabs Ground-Breaking Support Weapons Offers a Solution to Every Situation

*Dismounted troops need to be prepared for a wider spectrum of operations in dynamic conflicts and environments that bring new challenges to the ground combat arena, especially in urban terrain. That's why Saab continuously develops the capabilities of its ground combat weapon range.*

Securing the soldiers position is always difficult, target exposure times are short and the soldiers need the ability to counter a wide range of threats at a wide range of distances. Firepower, flexibility and easy handling are vital, while failure to secure these parameters could be lethal. More firepower under less loads and a wider range of capabilities with each weapon is given by Saabs 84 mm support weapon range.

## World leading shoulder-launched support weapons

Saab's versatile and powerful shoulder-launched weapons can fill the capability gap between lighter support weapons or personal assault rifles, and heavy on-demand fire support. With greater flexibility in firepower and much-enhanced availability the unit's striking capability can be improved whenever and wherever it's needed.

"Our weapon systems are robust and easy to operate and carry, and no advanced training needed. We provide the ability for soldiers to destroy small buildings, take out enemy troops in open terrain or in positions inside buildings, create new entrance points in buildings, and even knock out one of the most challenging targets - the main battle tank", says Görgen Johansson, Head of Saab Business Area Dynamics.

## Carl-Gustaf - A system for the modern infantry soldier

Saab's weapon systems for Ground Combat have long been world leaders in their kind and the product family continues evolving to meet customer demands. Fired from the shoulder and used in more than 40 countries worldwide, the Carl-Gustaf weapon system is the flagship of the product family. It has a long and successful history and constantly undergoes evolution in order to adapt to users' changing needs.

To make the Carl-Gustaf system even better Saab is constantly working with new features and solutions in order to meet future operational needs, and the newest generation, the Carl-Gustaf M4, was in October 2014 presented at the Association of the U.S. Army exhibition in Washington D.C. The Carl-Gustaf M4 is the latest man-portable shoulder-launched multi-role weapon system from Saab designed to provide users with flexible capability and help troops to remain agile in any scenario.

The new light-weight Carl Gustaf M4, weighing less than 7 kg, offers



significant weight savings to the soldier. It is also compatible with future battlefield technology such as intelligent sighting systems for programmable ammunition. With a wide variety of munitions available, it is a weapon system capable of handling multiple tactical situations, bridging the gap between full scale operations and low intensity conflicts, and providing the modern warfighter with unprecedented flexibility and capability on the battlefield.

"It's lightweight and shorter design, operational flexibility and high accuracy offer a truly powerful combination, not to mention it is as close to recoilless as you can get. It has been developed as a response to the evolving needs of our customers and we were very pleased to show the new capabilities to such a distinguished audience," says Ulf Eriksson, product director at Saab and former infantry commander in the Swedish Army.

## Carl-Gustaf M4 already acquired by three countries

In September 2015, during DSEI in London, Saab announced the first customer of the new Carl-Gustaf M4. The armed forces of the Slovak Republic will be first user of the system which is a great milestone for Saab and the product family. In addition, Saab also announced that system has been acquired by two other undisclosed countries for evaluation/qualification purposes.

"The first order for the Carl-Gustaf M4 is of course very important for us and it is a great milestone for Saab and the Carl-Gustaf system. I am very proud that Slovakia is the first country to implement the Carl-Gustaf M4 in its armed forces and for us here at Saab and business area Dynamics this is further proof of our ability to offer world-leading solutions to our customers," says Görgen Johansson, head of Saab business area Dynamics.

In addition to this, the work continues to develop the ammunition range for the Carl-Gustaf system. HEAT 655 CS, a new type of ammunition, was launched in the beginning of 2014 and this is the first grenade in a new line of ammunition for the system which has been designed to reduce back-blast. The ammunition will allow soldiers to safely use the weapon in confined spaces.







"The ability to fire from inside the buildings is very important for the competitiveness of the Carl-Gustaf system, says Markus Mellkvist, Head of Marketing and Sales", Business Unit Ground Combat, Business Area Dynamics. "The interest from the market has been great and we shipped the first delivery to the customer by the end of last year. Eurosatory 2014 was the first occasion where we showcased Heat 655 CS to a wider audience together with the introduction of our brand new capabilities for AT4, our disposable support weapon, says Markus Mellkvist".

#### NLAW, the optimal anti-tank weapon

Saab's NLAW (Next Generation Light Antitank Weapon) is a unique missile system that has been optimised from the outset to combat tanks and other armoured vehicles. The system has been developed for the British and Swedish need for a weapon that gives individual soldiers the capability to combat a modern tank in all conflict situations and in all environments.

NLAW started being developed in 1999 and has been in production since 2008. The weapon will be used by the majority of forces in the Swedish and British militaries and thereby constitutes an anti-tank complement to the existing light and crew-operated medium range systems. In the United Kingdom, NLAW will replace LAW 80. An additional two countries, Finland and Luxembourg, have chosen NLAW. In Finland, NLAW will be deployed by all of the country's forces, while Luxembourg intends to integrate NLAW in connection with its international operations.

#### Attacks from the top

NLAW is a top-attack, PLOS-guided, fire & forget missile, which is preloaded into a disposable launch-tube. NLAW is handled and fired by one person and can also be fired from enclosed spaces. The effective range is from 20 to 600 metres, which is well within the individual soldier's combat range. The maximum firing range is 1000 m where the missile is designed to self-destruct. The missile requires no target lock or IR signature before firing.

"NLAW is unique in that it is the only one-man weapon in the world with the capability to take out a tank in a single shot in all attitudes, even if the tank is equipped with reactive armour, is hidden in a protected or firing position, located in a built up area or in woodland, or is concealed for example behind a wall of concrete", says Markus Mellkvist, Head of Marketing and Sales at Saab Business Unit Ground Combat.



The system, which has received a large customer interest, has proven its capability in numerous customer demonstrations during recent years.

#### Successful world premiere of new shoots

In the beginning of 2014, Dynamics conducted a unique live test firing of NLAW. The firing was very successful despite the fact that the programme included a number of challenging and new firing tests for the system combined with bad weather conditions.

The entire team from Dynamics and the Bofors Test Centre performed outstandingly, with many preparations in the form of reconnaissance and preparing new firing sites, planning the tests and measurement equipment. Despite their efforts, on the day of the firing test the team was forced to improvise and re-plan almost everything, from the firing order and technical presentations to transport and mealtimes.

"Thanks to tremendous flexibility and a real fighting spirit from everyone in the team, we were able to complete five successful firings, including two that were world-firsts for the system: An 800 m firing against a stationary target and a 600 m firing against a moving target," explains Johan Ekeroot, Product Manager for NLAW.

"Both of these firing tests highlight performance beyond what NLAW was originally specified for and the results really do show the system's outstanding capability", says Johan Ekeroot.

**Text and photo Saab**



# Agados Proved its Quality as a Manufacturer of Special Trailers for the Needs of Armed Forces and Rescue Services

*AGADOS spol. s r.o. company from Velké Meziříčí has been one of the biggest European manufacturers of trailers and a leading manufacturer in the Czech Republic in the long term thanks to its focus on the customer needs. With their one hundred and twenty years' tradition, they are winning thanks to high quality of workmanship and modern design.*

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 standard lines of trailers for transporting goods, material, vehicles, animals or liquids. The company also regularly manufactures various special products tailored to the specific requirements. Due to the recent demand from security and rescue services, they focused even more on the development and production of hardwearing trailers intended for difficult conditions and they also proved their qualities in this area after several successful projects.

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.

For more information, visit [www.agados.cz](http://www.agados.cz).

Development and manufacturing of special trailers and transporters on custom made

## Quality trailers!

**agados**  
TRAILERS

commodity and materials | ammunition | animals | liquid | robots  
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and much more...

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

**WHY AGADOS TRAILER?**

- traditional Czech manufacture | the market leader since 1991
- custom development | quality, design, processing
- availability of spare parts even after years

[www.agados.cz](http://www.agados.cz)



■ **Review for Defence and Security Industry**

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# From Development to Manufacture and Lifecycle Management



*"CBRN protection means, their development and manufacture, but also their complete lifecycle management – they are one of the strengths of our company which we can offer to the Army the Czech Republic and to armed forces of other nations," says Martin Sněhota, Sales and Purchasing Manager of VOP CZ.*

## Why are you engaged in the field of CBRN protection means?

The Army the Czech Republic was looking for someone who would deliver research and development projects for its CBRN units. Thanks to our very successful cooperation with what is now the Military Research Institute in Brno, we successfully delivered the research projects and supplied the equipment which our army wanted.

## Can you be more specific?

It all started with an upgrade of the ACHR-90M CBRN truck in the late 1990s. We then developed a personal decontamination set known as SDO, the EDS decontamination solution mixer, a small decontamination truck designated MDA, and the Line 08 combat equipment decon-

tamination set-up. Our latest product, developed only a few years ago, is the S-LOV-CBRN light armoured reconnaissance vehicle.

## Development must be quite an important part of VOP CZ's activities, mustn't it?

In-house development is now a natural and important part of activities of any company that is looking forward. In addition to our own research, we also cooperate with universities or research institutions. Our current projects include, for example, the UGV TAROS V2 autonomous robotic vehicle, or the VOPTRA cogeneration unit. And I must not forget the RCWS MGC 01 remote-controlled weapon station with a .50 cal machine gun, which is intended primarily for main battle tanks.

## What other defence and security solutions are you offering?

Apart from comprehensive solutions of ground equipment, its development, repairs, maintenance and upgrades, our portfolio also includes solutions and projects focusing on protection of personnel and critical infrastructure elements, such as 3D chassis scanners or perimeter protection systems. We have already installed these products at some important Czech institutions and facilities.

## Thank you for the interview.

Miloš Soukup

# CBRN Protection Made by VOP CZ, s.p.

*VOP CZ, s.p., is a leading Czech defence company and a recognized cooperation partner of foreign engineering enterprises. Its research and development efforts focus on new defence, security and civilian products. Its designers and engineers have been participating in many projects implemented in cooperation with both domestic and foreign experts. One of the areas which the designers and engineers of VOP CZ, s.p., are involved in is the development and manufacture of CBRN protection means.*

Insofar as means of protection against weapons of mass destruction (CBRN) are concerned, VOP CZ offers solutions and products which are compatible with existing, already fielded equipment, thus permitting assembling optimized NBC reconnaissance and personnel and equipment decontamination set-ups. The portfolio includes, for example:

- LOV-CBRN light armoured CBRN reconnaissance vehicle
- MDA small decontamination vehicle
- LINKA-08 (LINE-08) combat equipment decontamination unit

The LOV-CBRN light armoured CBRN reconnaissance vehicle is designed for chemical and radiation reconnaissance on the move and chemical, biological and radiation reconnaissance in a stationary position. Its crew consists of a commander and a driver. The vehicle's hardware and software permits:

- automatic collection, processing and evaluation of information from sensors of its special CBRN role equipment;
- chemical, radiation, visual and acoustic reconnaissance of potentially risky sites by means of a remote-controlled robotic vehicle without the crew having to leave the vehicle;
- staking out boundaries of hazardous contaminated areas and warning nearby units against CBRN risks without the crew having to leave the vehicle;
- automatic generation of a reconnaissance report and its delivery to the superior echelon of command.

The LOV-CBRN is a role version of the IVECO LMV M 65E19 WM – LONG vehicle. To be able to perform its CBRN reconnaissance mission, it is equipped with an onboard information system and a special CBRN superstructure. The crew is protected against adverse effects of toxic chemical substances, biological warfare materials and radioactive dust by a combined overpressure protection subsystem. The vehicle is equipped with a remote-controlled weapon station thanks to which it can offer effective resistance when attacked.

The small decontamination vehicle – MDA – is designed for (small-scale) decontamination of secondary level military structures, such as a combined arms companies, battalions and other (small) task groups of a similar size:





- decontamination of personnel, including selected components, and their personal weapons and gear;
- decontamination of external surfaces of military vehicles, armament and materiel.

The cab offers LEVEL 2b ballistic protection and is equipped with an air-conditioning system and a radio transceiver. The role equipment includes an instant water heater, the EDS mixing unit, and a high-pressure rinsing unit. The vehicle's structure also contains other man-portable items, such as decontamination concentrate and water tanks, a decontamination tent and its accessories, pumps, lighting fixtures etc.

The MDA is a highly mobile, flexible and autonomously operating vehicle which can be quickly transported by air or other means to international missions or anywhere in the territory of the Czech Republic and used by CBRN troops of the Army of the Czech Republic. Due to its weight and dimensions, it is air-transportable by C-160 Transall or larger aircraft.

**The LINKA-08 combat equipment decontamination unit** is used by decontamination troops of the CBRN Corps. Together with the ACHR-90M truck-mounted mobile decontamination spraying unit, it provides rough cleaning of surfaces of military vehicles, spraying of decontamination mixtures and subsequent rinsing in a drive-through set-up. It meets requirements applying to modern decontamination equipment, including rapid redeployment and air transportability. The washing equipment and spraying frame can be adapted to suit the profiles of vehicles moving down the line in order to comply with recommended distances of the washing/spraying nozzles from the surface of the vehicle.



- The LINKA-08 unit is built into an ISO 1C container and comprises:
- shelves for different components of the unit,
  - subassemblies and accessories of the unit,
  - a high-pressure pump set,
  - handling equipment – a cart for moving parts of the frame, an electrically powered winch with a brake,
  - washing water distribution system, including suction and discharge fittings,
  - low-voltage electric power supply system, including an entry box.

The container can be handled by a hook loader.

[www.vop.cz](http://www.vop.cz)



## VOP CZ, S.P.

Dukelská 102, 742 42 Šenov u Nového Jičína, Czech Republic  
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- Research, development and production of critical infrastructure and person protection products, ground robotic systems (UGV), 2D and 3D scanners for vehicle chassis inspection.
- Development and production of NBC protection means.



# 300 AAC Blackout

300 AAC Blackout ammunition has recently become very popular. This ammunition is also known as 300 BLK or under its European transcription as 7.62 x 35. Its name was formed from the Company's name - see below. The reason, why it received the Blackout nickname, remains unknown even to the designer. The word can mean either a power cut or the darkening of windows at night because of enemy air forces, eventually a loss of consciousness. This ammunition was designed by the Advanced Armament Corporation under the leadership of the Research and Development Director, Robert Silvers, supported by Company's Founder, Kevin Brittingham, and in cooperation with the Remington Defense. The goal was to use the M4 breech and its magazine without losing its capacity. This is a new kind of ammunition; the American SAAMI Association adopted its use in January 2011. It enjoyed an immediate widespread in the USA. This ammunition is used in the weapons that are produced by the manufacturers such as Remington, Robinson, SIG Sauer and many other. It is even possible to purchase a Russian Saiga of this calibre!

The 223 Remington case of this ammunition was shortened to a length of 34.75 mm and in contrary its calibre has been expanded to 7.62 mm which shall enable a wide range of bullets. Visually it reminds of a "hybrid" between the 223 Rem and a 7.62x39 (See Fig. 1).



Similar ammunition are also 6.8 Rem SPC and the 6.8 Grendel. There appeared some problems during using them in the automatic arms. These cartridges have a larger head and a smaller calibre than 300 AAC. A steeper cone of the case causes some difficulties during guiding the ammunition into the chamber where the ammunition got trapped. Dimensionally it is practically identical to the 300 Whisper. In regard to this bullet there were problems with ballistics and with unburned power residues. Armed Forces also expressed an interest in this ammunition. The Netherlands, for example, announced a tender for nearly two million pieces of ammunition with FMJ, the frangible and subsonic bullets. Other requirements are also heard from Belgium, France and Denmark.



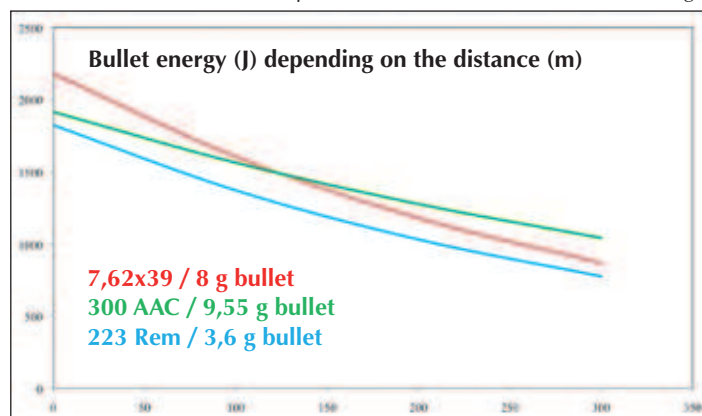
The 300 AAC also became a feature of the assortment portfolio of the Sellier & Bellot Company. For now there are three versions - using bullets weighing 8 g, 9.55 g and 13 g. The third version represents subsonic bullet for weapons provided with a silencer. Other variants are also in developing process...

The manufacturer pays a high degree of attention not only to the ballistics, but also to the proper functioning of the ammunition in the weapon. For this purpose, five different models of weapons were purchased:

- CMMG INC FAYETTE, MO, mod. MK-4 MULTI
- DANIEL DEFENSE, mod. DDM4V7300
- DANIEL DEFENSE, mod. DDM4300 SBR
- FAV-AR, mod. 300 AAC Blackout
- BUSHMASTER, mod. XM15-E2S

Currently, the only domestic manufacturer of the weapons of this calibre is the Vosátka Company. A weapon with a barrel length of twelve and a half inches, fitted with Meopta (1-4/22) optics is shown in Figure 2. The barrel manufactured by the renowned Lothar Walther Company was utilised for this weapon.

Regarding the performance of the ammunition, it is fully comparable with the "parents" calibres and in some assemblies and certain lengths it even exceeds them, depending on the shape and the weight of the projectile and also on the ballistic coefficient. The decrease of energy in relation to distance is described in Figure 3. It should be added that the 300 AAC achieves the stated performance from a barrel with of a length



of 40 cm; other calibres may need a 60 cm long barrel. It appears that due to its energy this calibre will also be successful for use in weapons that are equipped with a silencer. When the heaviest bullet for the 9mm Luger weighs 9.7 g and for the 300 AAC it weighs 13 g, the reason is obvious. With the same subsonic speed of 310 m/s the 300 AAC will put ca. 35 % more energy to the gun muzzle.

And the precision of the ammunition? For 100 meters 2R 100 five-shot sets is ca. 3 cm.

Dipl. Eng. Miloš Kremla

## Sources:

<http://www.v-ar.cz/>  
[https://en.wikipedia.org/wiki/300\\_AAC\\_Blackout](https://en.wikipedia.org/wiki/300_AAC_Blackout)  
[http://www.cip-bobp.org/homologation/en/tccc\\_public](http://www.cip-bobp.org/homologation/en/tccc_public)  
 technical documentation and ballistic measurements of Sellier & Bellot a.s.  
[www.sellier-bellot.cz](http://www.sellier-bellot.cz)





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# eLTE Rapid – Fast Operational Deployment System

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- fully transparent IP environment allows video, voice and data real time transmission,
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- predestined to secure communication during rescue operations,
- integrated sophisticated control system designed for eLTE networks,
- GPS tracking of the multifunction terminals,
- the handheld type terminals with Android system for vehicle or third parties equipment installations.

One eLTE Rapid deployment system can cover an area up to 50 square km.

For some special coverage conditions, one RRU equipment can be connected with an eLTE Rapid at a maximum distance of 10 kilometers, which gives significant coverage flexibility for different vertical industries.

Detailed information or technical specifications are available at the company ATS-TELCOM PRAHA a.s.



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# TESlink 27 – High Capacity LOS Radio Relay for Non-Civil Use

**High capacity stationary PTP radio-relay with transmission capacity up to 320 Mbs for non-civil use in dedicated NATO military frequency range 26,5 ÷ 27,5 GHz. Data transmission of gigabit Ethernet over distance up to 10 km.**

Suitable for transmission of high capacity data over larger military areas and airports or for last mile (side line) to backbone military nets. Band 27 GHz provides new military channels in the place with lack of operational channels.

## TESlink 27 – Main features:

- Dedicated NATO military frequency range 26,5 ÷ 27,5 GHz
- Stationary PTP radio relay with transmission capacity up to 320 Mbps
- Last mile to distance up to 10 km
- Channel bandwidth 28 MHz ÷ 56 MHz
- Modulation QPSK ÷ 256 QAM, ACM
- Gigabit Ethernet and E1
- Data transmission over larger military areas or airports
- Side line to backbone net
- Extension of military channel plan

[www.tesla.cz](http://www.tesla.cz)





# PBS Velká Bíteš – Certified Producer of Aircraft Turbines

**První brněnská strojírna Velká Bíteš, a. s. (PBS) is an established and renowned brand in the field of precision engineering. On the world market the company is known especially as a manufacturer of high-speed turbine machines for the aerospace industry. PBS further provides products, services and technologies for aviation such as precision castings of impeller and guide wheels for turbine engines and auxiliary power units, engine components - air starters and aircraft gearboxes, hi-tech machining, galvanic surface treatment, gear grinding, vacuum brazing and coating of turbine blades.**

The unique ability of PBS to carry out in-house development, manufacture and testing of aircraft products in accordance with global aerospace standards have greatly contributed to its enduring success on the global market. A Quality and Environmental Management System that complies with ISO 9001, AS 9100 and ISO 14 001 manages its modern manufacturing processes. Moreover, it holds Design Organisation Approval (DOA) and Production Organization Approval (POA) for aerospace products according to Part 21, Section A, Subpart J, G. The company is also a NADCAP approved supplier for radiation inspection and penetrant inspection including chemical process of pre-penetrant etching.

PBS' aviation manufacturing program is focused on development and production of small gas turbines, which forms the basis of many products, especially a complete range of Auxiliary Power Units (APU). The APUs by PBS, based on a small gas turbine with max. output up to 100 kW, serve as sources of pressure air for starting main engines (the simplest variants) up to the combined delivery of pressure air, electricity and hydraulics (the most complex variants). Development and production of APUs and environmental control systems (ECS) that are found among manufacturers of aircraft and helicopters worldwide, started in PBS nearly 50 years ago.

Based on the experience gained, steps were taken to expand the

portfolio of products towards the main propulsion units - jet engines for small manned and unmanned aerial vehicles and helicopters, both for civilian and military use. With their power-to-weight ratio, the turbine engines of PBS Velká Bíteš

enjoy a privileged position in the world. The most successful of the series is the TJ100 engine. With thrust up to 1300 N it ranks among the best in the world in the category of small turbojet engines. The product range also includes smaller TJ40 engines with 395 N thrust and TJ20 engines with 210 N thrust.

The experience gained in the development of turbines was used also in the development and manufacture of turboprop (TP) and turboshaft (TS) engines with an output up to 180 kW designed for small manned and unmanned airplanes and helicopters.

Thanks to the experience with the installation of the products in various types of aircraft, the PBS development and production teams are able to modify existing products or develop new ones according to the customers' requirements. The customers include especially the manufacturers of unmanned aircraft – drones, airplanes, helicopters, target drones, and also small manned experimental aircraft (so-called kit planes, gliders, etc.) mainly from Russia, China, the United Arab Emirates, Spain, India, Switzerland, and countries in North and South America.

[www.pbsvb.com](http://www.pbsvb.com)



## Traditional Reliable TENEO Connectors in Army Applications

**High technical demands, mechanical durability, resistance to shock and vibration, arctic temperatures, all these extremes are reliably faced by the goods produced by TENEO, a company based in northern Bohemia. This is why the armies of many countries have been using them in their equipment, combat vehicles, tanks, self-propelled howitzers, helicopter and combat aircraft engines, and other military equipment.**

"We can find our applications in the arsenals of virtually all the countries of the former Eastern Bloc, and we have not lost our ties with the states of the former Soviet Union, China, India, South America and nations in Africa," says company executive Mr. Jaroslav Jakoubě. Every year the company supplies the arms industry with tens of thousands of installations. "Our priority is to rapidly satisfy our customers' requirements, and it usually takes us just two weeks to process. We have our own development centre and laboratory, so we can offer customers special products for unusual applications," he adds.

Traditional ranges of army connectors, such as the RM type, are used as they are resistant to thermal shock, impact and vibrations in harsh operating conditions. They are particularly ideal for aircraft engines and armoured vehicles. Another type that has been proven over the years is the VŠ range of connectors, which are used in on-board and control applications for ground and aviation technology. These groups are accompanied by the time-tested ŠR range, which have proven suitable for tanks and combat vehicles.

TNR POWER connectors are a new product from TENEO. They are used anywhere where a powerful generator needs to be connected up and where reliability is key when transferring the requisite electrical variables up to 1000 V and 1135 A, in high-performance engines, pumps and other appliances. They are used in powering autonomous islands of mobile systems.

There is a long tradition of manufacturing connectors in the Jablonec region. "It started more than a hundred and fifty years ago, with Elektro Praga," explains Jakoubě. Recently the firm completed the reconstruction of its complex in Smržovka and modernized its technology park. TENEO supplies connectors and cable harnesses not only for military technology, but also for drilling equipment in the Czech Republic and the Russian Federation; almost half of what the firm produces ends up in the USA. It was the Americans who invited TENEO to develop specific connectors for special applications in mining and extraction technology, particularly subsea wells.

[www.teneo.cz](http://www.teneo.cz)





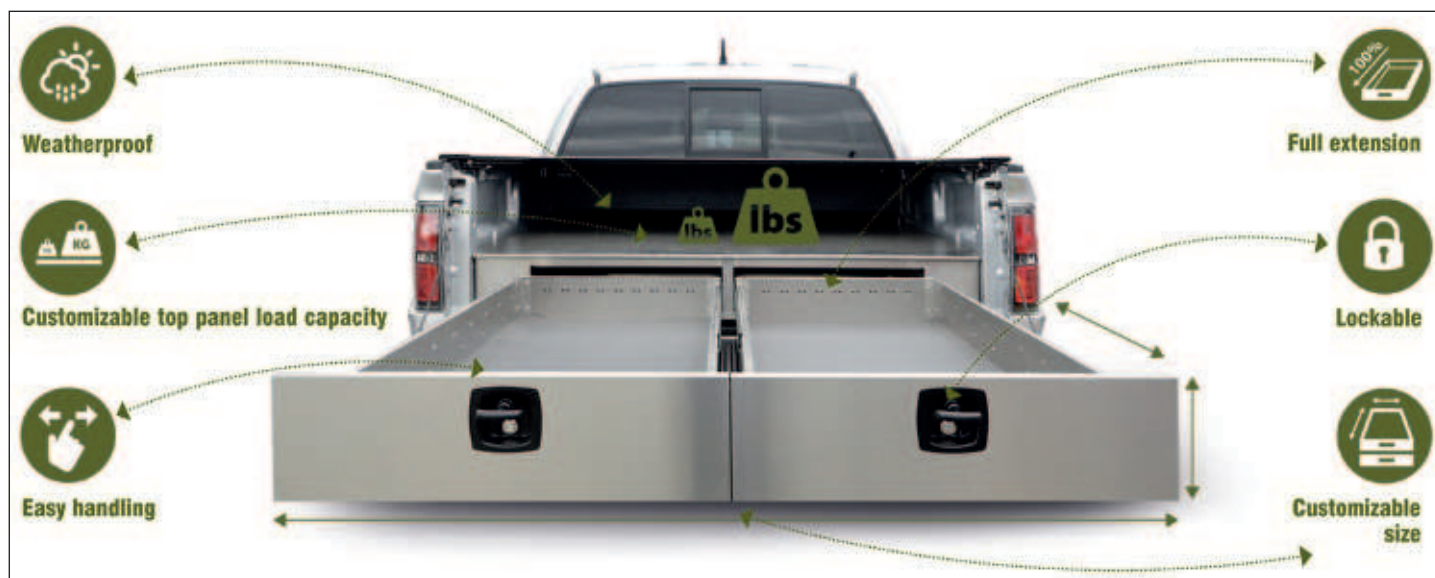
# Navaho Vehicle Storage System

*The nation's defenders have turned to Navaho drawers for their quality builds, ease of use, and rigorous standards that we have in place.*

Our impeccable history of versatile, rugged, secure, in-vehicle storage makes us the ideal choice. Our Navaho drawers withstand the harsh environmental conditions, while remaining easy to use. No matter the equipment, sensitive or not, our storage systems are the smart choice for your needs. All tactical field operations are covered, so if you are storing computers or firearms, your equipment and gear is safe and secure.

Seconds matter. No one knows that better than first responders. EMS, Firefighters, Police, and the other valuable persons who pledged to serve their community know that having unorganized equipment can mean life and death. Navaho drawers for Emergency Responders are designed for immediate access and flawless use. Based on feedback from Emergency Responders, we have designed drawers with customizable inserts, various sizes, and most importantly, they are industrial grade and can take a beating.

[www.navahosystem.com](http://www.navahosystem.com)  
[www.alfavaria.com](http://www.alfavaria.com)



## ARGUN Ltd.

*Argun Company Ltd. has been operating on the market for many years and provides a full range of high quality products in the field of ballistic and protective equipments. Portfolio of products is varied and is home to everything from ballistic vests and helmets, fragment jackets, additional ballistic panels, armour, anti-riot sets and protectors, helmets to tactical equipment, including shields and gloves.*

The company offers a complete range of high quality products of own production and puts emphasis on quality, delivery dates and multistage production control system. Checking of ballistic characteristics of products is performed in accredited laboratories in the Czech Republic, Germany and the USA. Due to elaborated and strictly followed quality control system the company is able to realize the orders as well in the home countries of the final customer at 100 % compliance with all quantitative and qualitative parameters of the delivered products.

The firm has a wide range of related services and provides for its clients supplies of spare ballistic inserts and covers, special size manufacture and professional advice in the field of ballistics. Contracts are executed for security forces and for individuals with an individual approach to every customer. The main customers for the company assortment include military and police forces both in the



country and abroad. The main customers for the company assortment belong to military and police forces both in the country and abroad.

With the development of new materials, technologies and types of products the company responds to market demands. On making products are used materials from renowned manufacturers and producers of ballistic assortment of technical fabrics. The materials used meet the required NATO standards.



Thanks to the positive customer response to ongoing supplies, service activities and expertise, the company ranks among the most competent and qualified capacities and manufacturers in the field of ballistics in Europe.

Advantages and benefits of company Argun is high flexibility, own manufacturing and development department, and a team of workers with years of experience in the field. A number of dedicated professionals, mainly in the area of development, technology and ballistics, operate in vocational, manufacturing and sales team of the company.

The company's philosophy is to precede the expectations of needs and requirements of customers, with an emphasis on using modern technologies and innovative materials and early deliveries within the required deadlines.

More information: [argun@argun.cz](mailto:argun@argun.cz), <http://www.argun.cz/>



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3. Official Partnership with DSIA - meaning you will be able to meet and partner with local industry
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#### HOST NATION KEYNOTE SPEAKERS:



**Mr. Daniel Kostoval**, Deputy Minister - Head of the Armaments and Acquisition Division, Ministry of Defence, Czech Republic



**Brigadier General Jaromir Zuna**, Director of Support Division, Czech Armed Forces



**Colonel Josef Kopecky**, Commander, Training Command - Military Academy, Czech Armed Forces



**Colonel Pavel Lipka**, Commander 7th Mechanized Brigade, Czech Army



**Major Jan Kerdik**, Deputy Commander 73rd Tank Battalion, Czech Army

#### INTERNATIONAL EXPERT SPEAKERS:



**Brigadier General Norbert Huber**, Director Armament and Procurement, Austrian MoD



**Colonel Janusz Godlewski**, Chief of Armour Programme Division, Land Forces Department, Armament Inspectorate, Polish Armed Forces



**Colonel Manuel De Hoyos**, Head of 8x8 VCR Programme, Spanish Army



**Lieutenant Colonel Alain Castermans**, Head of Office System Engineering/Ground-based Weapon Systems Division/Defence Materiel Organisation, Netherlands MoD



**Heather Elsley**, Programme Manager Land Integrated Survivability, DSTL



**Miha Matek**, Head of Armament Project Management Division, Slovenian MoD



**Mr. Ingvar Pärnamäe**, Undersecretary for Defence Investments and National Armaments Director, Estonian Ministry of Defence

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# Economic System of the Capital City of Prague: Robust Solution for Financial management

*Due to the use of advanced methods of data storage and administration, the project fundamentally increased data security against its theft, misuse, or intentional alteration. Specific control mechanisms within the system require correct procedures with regard to the method used when processing all data, and at the same time, they limit the possibility of data distortion.*

The economic system under the brand GORDIC has been continuously operated and developed since 1994 while covering all requirements for accounting and budgeting of the Metropolitan Authority of the Capital City of Prague, metropolitan districts, institutions fully funded from the state budget, and the institutions receiving contributions from the state budget. It concerns approximately 900 organizations.

The JES Project can be characterized as an integration of the existing accounting and budgeting system of the Capital City of Prague, its consolidation, while considering maximum protection of the already expended investments in the economic systems.

Since 2011, the Prague's uniform economic system has been ensuring a comprehensive management of economic agendas (accounting, budgeting, cash payments and direct debits, receivables, payables, property register, contracts, purchase orders, supporting analytical overview, etc.) of the Metropolitan Authority of Prague, 57 metropolitan districts, Technical Administration of Communications of the Capital City of Prague and Metropolitan Police of the Capital City of Prague.

The project was dealing with the upgrade of the existing solution with the methodological relation to the already operated systems when ensuring full compatibility of data and methodology while this included:

- building of an automated summarizing portal of accounting and budgeting data,
- increased transparency of all budgeting processes of the entities of the Capital City of Prague,
- unified performance of analytical agendas of accounting and budgeting area,

- centralized administration of data and applications for so called "small metropolitan districts" resulting in reduced costs of system management and its development,
- integration of the economic system within the agenda systems of the Metropolitan Authority of the Capital City of Prague,
- improved quality, accuracy, and completeness of information, etc.

## Summary of JES benefits

**The Capital City of Prague will obtain the information system that:**

- allows application of **advanced elements of management**,
- will provide an **improved data base** with regard to quality (scope of data, updated data) above which the tools for an efficient financial management and high quality controlling will be implemented,
- will allow **obtaining from it the information** about the state of budget use, mid-term budget outlook, volume of assets, receivables or payables, all **updated to a maximum possible level**,
- **will fundamentally increase data security** with regard to theft, misuse, or intentional alteration due to the use of advanced methods of data storage and administration,
- specific control mechanisms within the system will then require correct procedures with regard to methodology when processing all data, and at the same time, it will significantly **limit data distortion**,
- **will allow responding also to future requirements** for the addition of other functionalities.

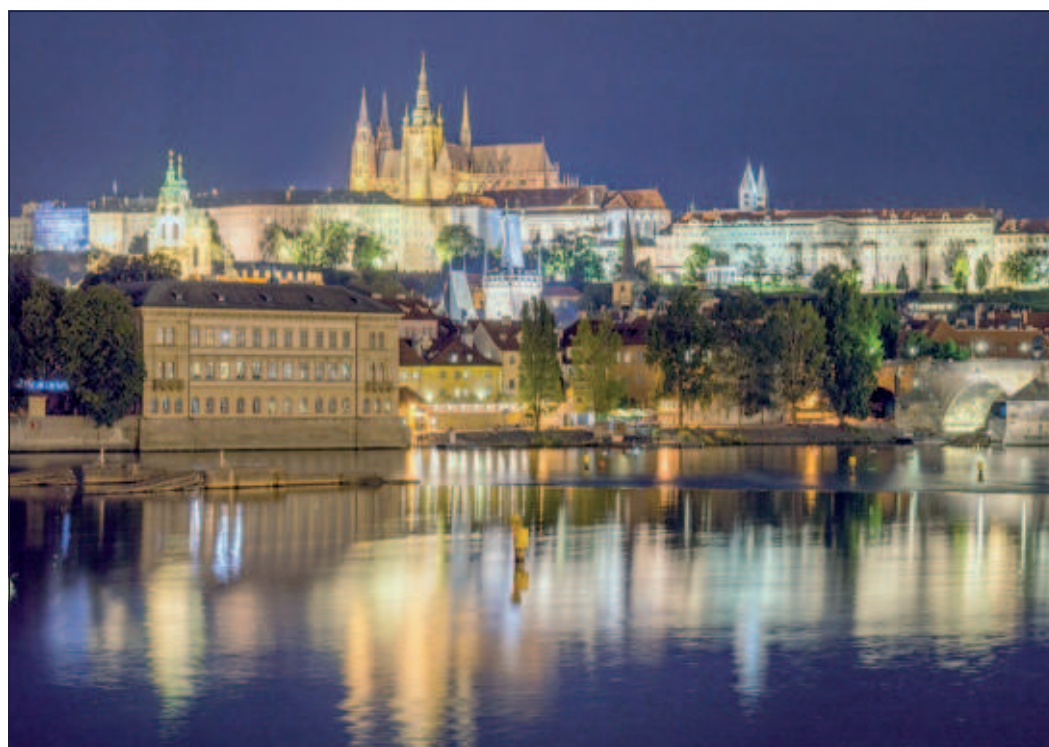
## Project implementation

Following the necessary procedural steps, a contract to implement a project was entered into on September 1, 2010, while the project included delivery of software and interface for the system PROXIO/ AGENDIO for the Metropolitan Authority of the Capital City of Prague, Technical Administration of Communications of the Capital City of Prague, Metropolitan Policy of the Capital City of Prague, and 57 Prague's metropolitan districts.

In addition, the system implementation at the above organizations and a comprehensive support of software including SW maintenance, system and database support, and other services as requested for the period of implementation by December 31, 2013.

The implementation was divided into three basic phases and included more than 100 partial milestones. On January 2, 2011, the operation of the GINIS Enterprise system was launched in its basic scope at total 25 organizations. As of August 1, 2011, the operation in the form of hosting was launched at the remaining metropolitan districts, and at the same time, operation of the summarizing centre was started.

By the end of 2012, the system implementation was carried out in so called extended phase, inclu-





ding the integration towards agenda systems. The whole project was officially closed as of December 31, 2012 while the overall integrations within the agenda information system are the only not completely finished area for the reason of a change of the information policy of the Metropolitan Authority of the Capital City of Prague.

Several dozens of specialists were continuously participating in the system implementation and the scope of the project required involvement of employees practically from all GORDIC distribution network. For example, in the course of October and November 2010, total 130 training sessions were organized while more than 1,600 persons took the training lessons! By the consistent imple-

mentation of the project principles, the project was implemented with no major problems and practically all project objectives were fulfilled.

#### What does JES represent?

Every year, the system processes more than 500 thousand invoices, more than million vouchers, 400 thousand payment documents, more than 550 thousand property cards, etc. Within the whole Capital City, it is used by approximately 2,500 users. It provides the standardized web interfaces on the advanced SOA basis to connect frequent applications of other suppliers. For the whole period of its operation, there has not been any major availability outage.

## Successful African Mission of GORDIC



**The company GORDIC has successfully implemented a part of the extension of the Service Desk tool (CA Unified Self-Service) for its South-African partner CA Southern Africa and its client, the company Sanlam. This company deals with insurance, investments, and financial planning. The solution that was developed and launched by the Czech specialists will provide its users with a faster finding of incident causes.**

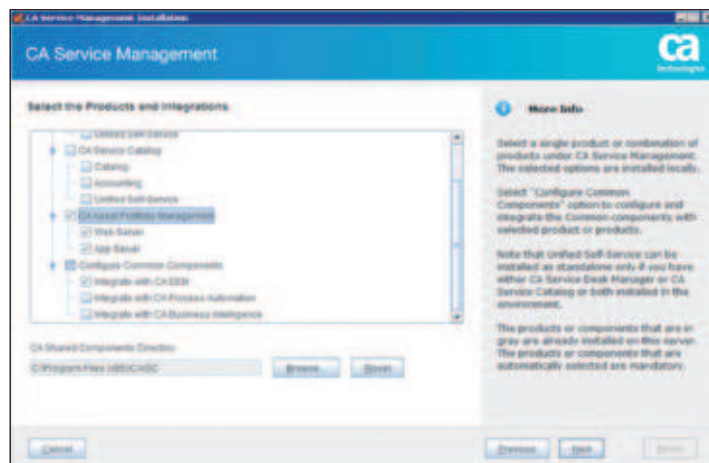
The implementation commenced on the turn of 2015 and 2016. Prior the implementation completing, the Head Solution Architect for the area of Service Management, Jakub Fiala, and the Main Programmer of USS portal, Stepan Sukovych, were invited to Cape Town to assist during the final customer acceptance and handing over the whole work for a testing operation.

For its more than 13,000 employees, Sanlam uses the last version of the package CA Service Management Suite 14.1 that includes, apart from other things, also Service Desk, Service Catalogue, and newly also CA Unified Self-Service Portal. It is just this dashboard portal

that provides the customers (users) with one place for the work with all types of services.

In addition to record incidents in the event that something is not working properly, the users can also choose from the catalogue of services (for example, ordering a new mobile phone, applying for the access to an application, or starting a process, for example, when a newly hired employee commences his job) or, within so called self-service, to change, for example, password or seek solution of frequently repeating events.

In addition to the implementation of this tool, the company GORDIC is able to create an additional content. And it was exactly this element that was the objective of the successful African mission. Due to this element, the client's users can thus enter Incidents together with the definition of another metadata and information necessary for a faster finding of the Incident cause (including the integration with the service-desk tool); or within another part of the content, they can obtain information from the solution of similar tickets.



**In the Czech Republic, the solution CA Technologies is operated, in addition to others, for example, by the National Registers Authority.**

*"It is another experience abroad for our company, and with regard to the response of our customer, it is definitely not the last one. For us, it was really a great experience and we are glad that we succeeded in reaching its successful end also with regard to the fact that that we were practically all week non-stop implementing a part of the application in a complex infrastructure, foreign environment, and at a demanding customer," Jakub Fiala said.*

The presence and abilities of the GORDIC workers were appreciated also by the Account Director of CA Southern Africa, Craig De Lucchi: *"We very much respect and appreciate the attitude of your company, especially the work of Jakub and Stepan who, despite the hectic conditions (the fast decision on their flight to Africa, all-day transfer to the town itself, etc., were able to resolve, in the incredibly short period of time, all issues and prepare the whole solution in order the customer could test and accept it with no reservations."*

[www.gordic.cz](http://www.gordic.cz)

# NATO Days in Ostrava with a New Defence Industry Conference on Friday before the Show

*NATO Days in Ostrava & Czech Air Force Days confirm that it is not only a massive show for the general public, but also a significant social event and a meeting place for top security experts. It is going to expand with a new significant side-event at this year's 15<sup>th</sup> anniversary of the show. A new "Czech Industry as Means of National Defence" conference is going to take place in Ostrava on Friday September 16<sup>th</sup> before the Weekend Show at Mošnov Airport and event's social programme. It bears a subtitle of the 1<sup>st</sup> Czech National Conference of Defence and Security Industry.*

"The main aim of the new conference, which is organized by the Ministry of Defence of the Czech Republic and us, is to facilitate



meeting and expert debate of defence and security industry with representatives of the ministry of defence and armed forces. It is going to be the first expert side-event of our show that allows for participation of industry," noted Zbyněk Pavlačík, the chairman of the Jagello 2000 Association, which is the organizer of the September-held show.

"The topic of the conference in its first year is going to be mostly about strategic enterprises for national defence. There is also going to be panel on modernization of ground forces before a widely-oriented afternoon session. That is a novelty for us since the defence expert programme of the event has focused mostly air force related topics before," said Zbyněk Pavlačík.

The Weekend Show itself promises a highly attractive programme again. "Even though we are still a couple of months before the show, we have numerous interesting displays confirmed already. They are dominated by the German participation, because Germany has taken up the role of the Special Partner Nation of this year of the show and it is going to handle it in a really high style. We look forward to all components of the German Armed Forces, German police, customs service, Red Cross and the Federal Agency for Technical Relief, which are coming to the show with a total of tens of vehicles and displays," noted Zbyněk Pavlačík.

"Besides that we already have three aerobatic teams with aircraft – an exclusive display of the Swiss Patrouille Suisse, Italian Frecce Tricolori and the Belgian Red Devils. There are two more unconventional aerobatic teams – the British parachute display teams the Falcons and the Tigers. And the list of participants still grows," added Zbyněk Pavlačík.

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**www.natoday.cz**



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# FUTURE FORCES FORUM to Host a Record Number of Experts and Industry Leaders in Defence and Security



*This October, Prague will traditionally become the venue of a meeting of domestic and foreign defence and security leaders on the occasion of Future Forces Forum (FFF). The project consists of a compilation of events and activities at high political, military, security and expert level, supported by many national and international institutions.*

For the first time in its history, it will present not only elements of national capabilities, but also the ability to meet interoperability goals in different areas of defence and security. FFF will cover not only traditional topics, such as **soldier equipment and protection, CBRN, Medical, Unmanned Systems & Robotics, Logistics, Cyber Defence**, but also **Hydrometeorological, Geospatial and GNSS**. FFF also focuses on **protection of critical infrastructure, counterterrorism**, management of **non-military crises** and emergencies, **CIMIC**, or importance and need to involve **R&D and education**.

FFF presents interests and needs of armies, law enforcement and security forces, or elements of the Integrated Emergency Management System on the one hand, and capabilities of industry and R&D on the other hand. This long-term project supports efficient international cooperation of government authorities and local government bodies, industry, science and education in defence and security.

FFF will this year culminate on **19 - 21 October** at **PVA EXPO PRAGUE** by **Future Forces Exhibition** and outstanding expert programme, including **World CBRN and Medical Congress, Future Soldier Systems Conference, Military Advanced Robotic Systems Conference, Future of Cyber Conference, CBRN Workshop, Medical Workshop, Geospatial, Hydrometeorological and GNSS Workshop and Logistics Capability Workshop**.



The FFF participants will have the unique opportunity to meet experts from the whole world, industry leaders in the field of defence and security technologies, leading scientists, but also high-ranking government and military officials from NATO, EU and other partner countries. During the event, official **NATO expert working groups' sessions** will take place on 17 - 21 October in Prague and at PVA EXPO PRAGUE. Among the participating groups are **NATO CBRN Medical Working Group, NATO Military Committee Medical Standardization Board Medical Material Military Pharmacy, NATO Army Armaments Group (NAAG) Land Capability Group Dismounted Soldier Systems (LCG DSS), Combat Clothing, Individual Equipment & Protection (CCIEP), C4I & System Architecture, Ammunition Interchangeability, Soldier Capabilities Analysis Group, Power and Connectors, Head Borne Systems TOE, Weapons & Sensors, Non-Lethal Capabilities and SAS Panel**.

Many leading representatives of different international organizations have already confirmed their participation at FFF, including General Petr Pavel, **Chairman of the NATO Military Committee**, who will deliver a keynote speech on 19 October.

The FFF project includes **static and dynamic demonstrations** that will give the event attendance an opportunity to make a **first-hand acquaintance with the latest technologies**.

Organizers expect more than 8000 participants, approx. 200 exhibiting companies, more than 1000 experts and VIP guests from over 60 countries.

**Register till 31 May and get an Early Bird discount!** More information and on-line registration are available on [www.future-forces-forum.org](http://www.future-forces-forum.org)








# FUTURE FORCES FORUM

## International Platform for Trends & Technologies in Defence & Security

**19 - 21 OCTOBER 2016**  
**PVA EXPO PRAGUE**  
**CZECH REPUBLIC**

### KEYNOTE SPEAKERS:

-  **General Petr Pavel** – Chairman of the NATO Military Committee
-  **Mr. Martin Stropnický** – Minister of Defence
-  **Mr. Jiří Hynek** – President of Defence and Security Industry Association



- 12th International Exhibition
- 200+ Exhibitors
- International Organisations, Government, Military, Law Enforcement, EMS, Industry and Business Leaders
- Live demonstration areas (indoor and outdoor)
- and much more



#### Speakers:

-  **BG Thomas H. Todd III** – Commanding General, NATICK, Soldier Systems, (ARDEC), USA
-  **Mr. Mark Richter** – NATO LCG DSS Chairman, USA
-  **Mr. Marek Kalbarczyk** – Project Officer Land Systems Technologies, EDA – European Defence Agency, POL

and others



#### Speakers:

-  **MG Jean-Robert Bernier** – NATO COMEDS Chairman, CAN
-  **MG Jeffrey Clark** – Defense Health Agency Director, USA
-  **Dr. Roger Van Hoof** – Secretary General, International Committee of Military Medicine (ICMM), BEL

and others



#### Speakers:

-  **MG John W. Charlton** – Vice Director for Joint Force Development, US Joint Staff J7, USA
-  **Mr. Paul D. Rogers, Ph.D** – Director of U.S. Army Tank Automotive Research, Development and Engineering Center, USA
-  **Mr. Berndt Körner** – FRONTEX Deputy Executive Director

and others



#### Speakers:

-  **MG Trond R. Karlsen** – NATO Logistics and Resources Division Director, NOR
-  **Mr. Timo Koster** – NATO Defence Policy and Capabilities Director, NLD
-  **LTG Jiri Baloun** – First Deputy Chief of the General Staff, CZE

and others



#### Speakers:

-  **Mr. Ray Swider** – Chairman NATO Capability Panel 2 (Identification and Navigation), USA
-  **Mr. David Grimes**, President, World Meteorological Organization (WMO); CAN
-  **Mr. Pascal Legai**, Director of European Union Satellite Centre, FRA

and others



#### Speakers:

-  **Oldřich Martinů**, EUROPOL
-  **GEN (Ret.) Mieczysław Bieniek**, Security and Defense Advisor, POL
-  **Dušan Navrátil**, director National Security Authority, CZE

and others



- NATO Dismounted Soldier Systems
- NATO CBRN Medical Working Group
- NATO Medical Materiel and Military Pharmacy Panel
- Camouflage, Concealment and Deception

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# C4ISTAR – New Technical Section of DSIA

*In the DSIA of the CZECH REPUBLIC two technical sections – Tactical systems and C4/digitization of the battlefield were established in the previous period (2012 and 2013). The members of the tactical systems section were more or less active in the area of tactical communications and members section C4/digitization of the battlefield had in his program primarily the problems of command and control.*

Members of the technical section of the tactical communication have prepared a technical manual „tactical communications“ and company RHODE & SCHWARZ organized for military professionals' roundtable to tactical communications. The hybrid communication system-HYKOS was introduced as a perspective and possible solutions of tactical communications in ACR. Round table on GŠ participated in almost 40 experts – military signaling officers, members of the acquisition directorate of MOD and deputy minister Mr. Tomáš Kuchta.

Technical section C4/digitization of the battlefield was founded by the organizations which support realization of a command and control systems of the ACR. An important event was a demonstration of core solution of tactical command and control system, which is operated in the ACR, for General Manager of NCI NATO agencies Mr. gen. Koen Gijsbers with accompaniment.

Another major joint action was the expert seminar with live demonstration of modern opto-electronic devices for the construction of tactical LAN and for the integration of various types of communication devices from different manufacturers at one tactical operation center (TOC).

The event was attended by about 60 experts from MO (Director of the Department of industrial cooperation), GŠ (Department of development of training troops, GŠ KIS support section, section KIS), University of defence, the Commander of the Engineer Regiment, representatives of the artillery brigade, signal battalion, 53. the Brigade, the staff of the VOP Lázně Bohdaneč, representatives of the Ministry of Interior of the Czech Republic, representatives of DG

Fire Rescue Service, representatives of the Czech industry and a delegation of the Armed forces of the Slovak Army (ŠbPO GŠ SR OS).

Implemented training events have shown that the selected topics of professional activities as well as its ability to members of the expert groups is at a high level. In the field of C4ISR, however, professional profiles of both groups partly overlap and partly are complementary. The leaders of the two specialized sections came to the opinion that one section created by combining the two sections would be a solution that integrated technical efforts of both sections to the comprehensive realization of command and control and established a **common section C4ISTAR**.

Establishing meeting of experts group C4ISTAR took place 4. 2. 2016 with the participation of 13 companies associated in the DSIA which expressed intend to continue to support work in this merged section. These include: ATS-Telcom Prague, AUDIOPRO, INTV, ICZ (DELIN-FO), MESIT holding, OPTOKON, PRAMACOM-HT, ROHDE & SCHWARZ-Prague, TESLA Hloubětín, TTC Telekomunikace, VARIEL, VOP GROUP and VTÚ, s.p.

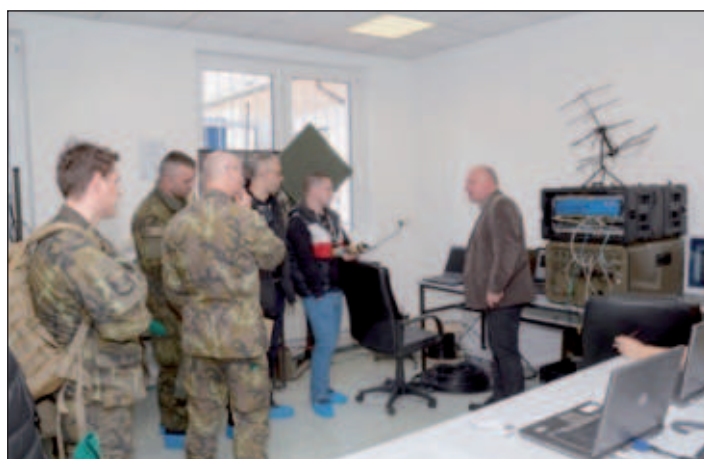
The main objective of the C4ISTAR section is to be group professional partner of MO and ACR in processing concepts, perspectives, professional assessment of military technology, in organizing professional workshops, seminars, demonstrations, and also in the implementation of the various modernization projects. Another aim of the section is wide awareness activities during demonstrations of new technologies applicable to the implementation of projects, or C4ISTAR when testing new systems.



*The initial meeting of joint section C4ISTAR*



*Gen. Koen Gijsbers – General director of NCI in technical tour in OPTOKON company*



*Technology workshop and a live demonstration*





**Meeting of C4ISTAR technical section in MESIT holding, a.s.**

The members of the C4ISTAR section have separately, but especially in close groups, or across of the whole section the ambitions and completely real professional, technical and technological assumptions and long-term experience to implement research, development and production projects in the Czech Republic, but also abroad, possibly in the framework of NATO or the EDA. As an example of the initiatives in the international field is a common offer of the OPTOKON, a.s., DELINFO, spol. s r.o. and PRAMACOM-HT, spol. s r.o. to the Baltic States (Latvia, Lithuania, Estonia) on the implementation of the system of C4ISR, which they plan to realize in the framework of the modernization of its armies to achieve interoperability with forces allied with NATO.

At the founding meeting of the specialized section has been proposed the founding Charter and prepared a framework plan of professional activity, which was further specified on the following meeting of the members in April 2016. This year we have two major joint action, which we want to start working and fit into the subconscious mind of military experts as a strong technical partner with the complex skills covering the area of the C4ISTAR.

The first event – the expert conference is scheduled for June this year and its aim is to introduce to the Ministry officials the portfolio of products and services which we are able to offer to MOD, but also to the Ministry of Interior of the Czech Republic and will be presented the most important and unique projects or services that were made as members of the C4ISTAR section in ACR. Part of the Conference will be the exhibition of existing devices, or projects which are realized in companies of the Czech defence industry.



**Seminar on the issue of trade with the Baltic republics**

(ROHDE & SCHWARZ, PRAMACOM-HT, OPTOKON) attended technical seminar on the issues of encryption and encryption devices for tactical communication. The seminar was prepared by ROHDE & SWARZ company and took place in the GŠ with the participation of 12 military specialists. Other important events took place on the military Committee in the Czech Parliament and dealt with the application of modern technologies in guarding the State border, and the other major interest areas. Of our members presented their technologies VTÚ, s. p. and OPTOKON, a.s.

Finally, it was also the seminar, which took place on 12. 4. 2016 in the Ministry of Foreign Affairs of the Czech Republic on the issue of trade with the Baltic republics. There we presented our interest to participate in the competition on project implementation C4ISR.

We think that together we are able to implement projects in our country and abroad, in which each company would hardly realize both because of the limited professional portfolio, primarily for reasons of smaller economic opportunities and inadequate business risk.

**Milan Šnajder**

The second joint action will be forthcoming lecture cycle in the framework of the exhibition the Future Forces, which we want to prepare in DSIA and MS Line booths. This lecture cycle we want to focus on the performances of modern technologies that we provide in our businesses, and which can be used with advantage in modernization activities of ACR.

In addition to the joint actions of the entire C4ISTAR section will be conducted a number of smaller specialized actions, involving only small groups.

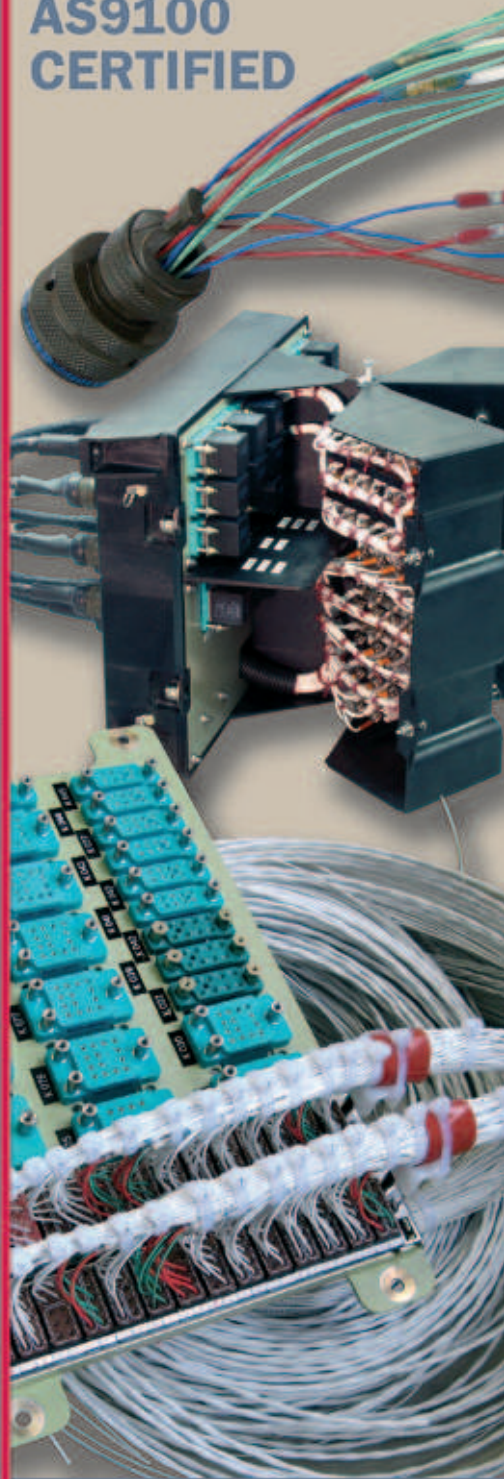
This year, we are already in smaller groups



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# Accreditation – a Tool to Support Regulators

## What is accreditation?

### ACCREDITATION - A service for the Community

Accreditation provides the attestation that accredited bodies offering testing, examination, calibration, certification, inspection and verification services have the technical competence and impartiality to check the conformity of products and services with the relevant national and international standards.

In the European Union, accreditation is performed by national accreditation bodies (NABs) appointed by governments as required by Regulation (EC) 765/2008.

- In the regulated area, the law requires accreditation for those bodies that qualify certain categories of products and services (e.g. products with the CE marking such as toys, lifts, food products with protected or guaranteed origin, etc.) which can be put onto the market only after undergoing conformity assessment against the applicable standards. This is notification.
- In the voluntary area, where there is no specific legislation, companies seek accreditation to provide the market with an impartial attestation of their competence in guaranteeing products' and services' quality, safety, security, etc.

### The European system of accreditation

Since 2008, Regulation (EC) 765/2008 establishes the first legal framework for accreditation in Europe, setting out requirements for accreditation relating to the marketing of products.

It gives a harmonized, rigorous approach to accreditation across EU Member States – so that ultimately one accreditation certificate or report will be enough to demonstrate the technical capacity of an accredited body.

The main principles of accreditation in the Regulation – which complements ISO/IEC 17011 and the other international standards for conformity assessment bodies – are:

- one accreditation body per Member State
- accreditation is operated as a public authority activity
- no competition between national accreditation bodies, and between them and conformity assessment bodies
- not-for-profit activity
- stakeholder representation

In accordance with article 11 of the Regulation, accreditation provides a presumption of conformity: accredited certificates and reports can be recognised in all EU Member States.

## What is conformity assessment?

### CONFORMITY ASSESSMENT - Enhancing confidence in the market

Testing, calibration, examination, inspection, certification and verification services, delivered by accredited bodies (CABs), are collectively known as conformity assessment activities.

Acting as authoritative and impartial entities, national accreditation bodies (NABs) evaluate competence of laboratories, inspection and certification bodies.

NABs guarantee credibility of conformity assessment and reliability of certificates and reports.

Conformity assessment services delivered under accreditation confirm that products and services comply with established requirements – standards and other relevant specifications.

The conformity assessment system is structured in order to give assurance to the public and boost business competitiveness.

In Europe, the conformity assessment system has been improved by the European Commission so as to increase confidence of regulators, businesses and consumers, and to guarantee free movement within the market of goods and services, offering a high level of health protection and safety for consumers and the environment.

All groups of society are involved in ensuring confidence in the products and services put on the market: governments, businesses, clients and end-users.

Accreditation is an ongoing process that guarantees the competence of accredited bodies performing conformity assessment services such as:

CERTIFICATIONS OF MANAGEMENT SYSTEMS for quality, environment, occupational health and safety, energy, food, information security, information technology, sustainable development	LABORATORY TESTS chemical, biological, physical, fire, mechanical, water, air, food, electrical and electronic, software, DNA, fingerprints, anti-doping, animal health
CERTIFICATIONS OF PRODUCTS, PROCESSES AND SERVICES toys, lifts, electrical devices, personal protection equipment, building products, bio-fuels, organic food and quality marks, recycled products, e-signature	MEDICAL EXAMINATIONS microbiology, histology, oncology, haematology, genetics, immunobiology, bacteriology, virology, endocrinology, reproductive biology
CERTIFICATIONS OF PERSONS auditors, welders, verifiers, inspectors experts, consultants, professionals in IT, healthcare, training and education	CALIBRATIONS speed control meters, weighing machines, spectrometers, chronometers, radiation monitor devices, gas flow meters, electric counters
INSPECTIONS products, services, processes, designs, installations, buildings, roads, railways, trucks and cars	VERIFICATIONS of EMAS registrations and declarations of greenhouse gas emissions, such as water vapour, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons

## What are international agreements?

### INTERNATIONAL AGREEMENTS - The EU and global recognition of reports and certificates

The activities performed by European accreditation bodies are recognised both within the EU and worldwide through their signatory status to the EA Multilateral Agreement (EA MLA).

The EA MLA covers testing and medical examinations, calibration, certification of management systems, products and persons, inspection and verification.

The EA MLA is an agreement signed between EA-member accreditation bodies to recognise and accept the equivalence of their accreditation systems. Thus it provides equal reliability of the certificates and reports issued by the organisations which EA NABs accredit.

This eliminates the need for suppliers of products or services to look for accredited certification / inspection / testing providers in each European country where they sell their products or services.

The EA MLA is recognised at the international level by the International Accreditation Forum (IAF) and the International Laboratory Accreditation Cooperation (ILAC). It means that EA MLA signatories benefit from global recognition through the IAF and ILAC mutual agreements and their consequent ILAC/IAF MRA/MLA marks.

## THE ADDED VALUE OF ACCREDITATION 25

### Accredited conformity assessment activities

By relying on accredited tests, examinations, verifications, inspections, calibrations and certifications, regulators and governments



obtain a third party, independent and competent evaluation, providing objective results to support sound decisions in regulation, public procurement or delivery of products and services onto the market.

Accredited bodies performing such services assure that they meet all required standards, as well as regulatory requirements and sector criteria, in terms of:

- technical competence, professionalism and integrity
- risk management
- adequate human and equipment resources
- mechanism for measuring improvement of product and service quality
- complaint and appeal system
- capacity to compete on an international scale under the EA MLA

When selecting an accredited body, it is essential to identify the scope of activities for which the accredited body is granted accreditation; this is detailed on the accreditation certificate.

#### RELIABLE PARTNERS

##### Accreditation Bodies' Network

##### Finding out the competent supplier for conformity assessment activities

EA, IAF and ILAC publish the list of accreditation bodies signatories of the EA and IAF MLA (Multilateral Agreements) or ILAC MRA (Mutual Recognition Arrangement), to identify the competent National Accreditation Bodies worldwide.

[www.european-accreditation.org](http://www.european-accreditation.org)  
[www.iaf.nu](http://www.iaf.nu)  
[www.ilac.org](http://www.ilac.org)

Moreover, accreditation bodies in most countries publish lists or directories of the bodies and laboratories they have accredited, together with contact details and scopes of accreditation.

Czech Accreditation Institute, public service company (CAI) ensures the accreditation system in the Czech Republic. CAI as the national accreditation body offers accreditation of the following entities:

- testing laboratories (EN ISO/IEC 17025)
- calibration laboratories (EN ISO/IEC 17025)
- medical laboratories (EN ISO 15189)
- certification bodies operating certification of
  - products and processes (EN 45011, EN ISO/IEC 17065)
  - management systems (EN ISO/IEC 17021) – including QMS, EMS, ISMS, FSMS, OHSMS, IT SM, EMAS (Regulation (EC) No. 1221/2009)
  - personnel (ISO/IEC 17024)
- GHG verifiers (EN ISO 14065 + Regulation (EU) No 600/2012)
- inspection bodies (EN ISO/IEC 17020)
- providers of proficiency testing schemes (EN ISO/IEC 17043)

CAI was founded by Memorandum of Association of the public service company dated 13 February 1998 pursuant to Act No. 248/1995 Coll. as a national accreditation body; based on decision of the Ministry of Industry and Trade CAI holds a status of a national accreditation body also in respect to foreign countries.

#### Contact details

Czech Accreditation Institute, o.p.s. (CAI)

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 Czech Republic

Telephone: +420 272 096 222

E-mail: [mail@cai.cz](mailto:mail@cai.cz)

Web site: <http://www.cai.cz>



Jiří Růžička,

Director of Czech Accreditation Institute



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# Air Traffic Controllers Have Received a Brand-New "Pair of Eyes" on North Sea Oil Platforms

*ERA's system for monitoring air traffic for oil platforms in the North Sea has gone operational. The unique joint project of ERA Company and HITT for Air Traffic Control the Netherlands (LVNL) has been successfully completed and the fruits of one of the greatest challenges in the history of implementing multilateration surveillance systems are exceptionally rewarding. LVNL's Flight Information Centre (FIC) controllers are currently able to "see" flying helicopters over the oil rig region from a height of 500 feet above sea level.*

ERA Company has announced that its multi-sensor surveillance system (MSS) along the north-west coast of The Netherlands has already passed a one year long successful trial and was officially accepted as operational. The system provides coverage for information services of helicopter traffic in the area of oil platforms in the North Sea. Air Traffic Control the Netherlands (LVNL) awarded the contract to former HITT (now defence and security company Saab) and ERA as its subcontractor.

Former HITT and ERA delivered a solution for FIC controllers with accurate surveillance of flights operating over the sea. They used sensors deployed at oil platforms in the North Sea to create a single multi-sensor surveillance system. The MSS system covers the complete area to provide seamless surveillance. The system supports safety of helicopter operations between the shore and oil fields.

In the North Sea area LVNL provides Flight Information Services and Alerting Services for example for helicopters to support their oil and gas operations. They were in need of a surveillance and tracking system to give flight information to helicopters flying to oil platforms. A large portion of the off-shore airspace surrounding the oil platforms is beyond radar coverage, and installing traditional radar would not have been effective or economical. LVNL required an innovative solution to maintain surveillance in the harsh North Sea environment.

"With this system helicopters flying over an oil rig in the North Sea are tracked as low as a level of 500 ft. This greatly enhances the



situational awareness of the Flight Information Center Controllers and increases the safety of operations in the North Sea area," stated Jurgen van Avermaete, general manager Procedures, Air Traffic Control The Netherlands.

The system is capable of detection of ADS-B and Mode S equipped aircraft to provide identification and positional data within an area of more than 30 thousand square miles. As part of the project, 17 sites were installed on oil platforms and 3 on onshore locations or islands in close vicinity. All sensors are connected to a Central Processing Station, which is located at the LVNL headquarters in Schiphol, Amsterdam.

ERA's composed multilateration and ADS-B system uses multiple low-maintenance, non-rotating stations to obtain aircraft location based on reception of transponder signals. This provides air traffic controllers with precise aircraft position and identification information.

# BAE Systems Awarded Contract to Refurbish CV90 Vehicles for Sweden

*The Swedish government has awarded BAE Systems a contract to refurbish 262 Combat Vehicles 90 (CV90) for the Swedish Army. The company's work will include refurbishing the chassis and upgrading the vehicle's survivability and turrets, as well as enhancing combat system performance. Together, these efforts will help increase the vehicles' lifespan in support of Army capabilities.*

"This is a very important program for BAE Systems and the Swedish Army," said Lena Gillström, managing director of BAE Systems Weapons Systems in Karlskoga, which builds the turrets. "With this



refurbishment and the introduction of the new Battlefield Management System, these vehicles will take a step into the era of digitized defense to strengthen the Army's capability to meet future threats."

BAE Systems will work closely with the customer throughout the program. Work starts immediately with deliveries beginning in 2018 and running through 2020.

"For the Swedish Army, CV90 has proven its value and capability over the years," said Tommy Gustafsson-Rask, president of BAE Systems Hägglunds AB in Örnsköldsvik. "CV90 is already in service in seven countries and now, with this refurbishment program, we'll further extend the CV90's contribution to Sweden's defence."

CV90 is a family of Swedish tracked combat vehicles designed by FMV, BAE Systems Hägglunds, and BAE Systems Weapons Systems, with more than 4 million engineering hours contributing to the development of this advanced Infantry Fighting Vehicle (IFV). The Swedish version of the IFV is outfitted with a turret equipped with a 40 mm autocannon.

The Swedish Army has a fleet of 509 CV90s. Other countries currently using the vehicle are Norway, Denmark, Finland, Estonia, The Netherlands, and Switzerland.

The contract was awarded to HB Utveckling AB, a joint venture between BAE Systems Bofors AB, part of BAE Systems Weapons Systems, and BAE Systems Hägglunds AB.





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# Publication Plan of CDIS Magazines in 2016

## Review for Defence and Security Industry 3/2016

**Deadline: 26. 8. 2016**

**Put into print: 9. 9. 2016**

**Expedition: 16. 9. 2016**

### EXHIBITIONS:

NATO Days (Czech Republic) September 17 – 18, FUTURE FORCES (Czech Republic) October 19 – 21

## Review for Defence and Security Industry 4/2016

**Deadline: 8. 12. 2016**

**Put into print: 22. 12. 2016**

**Expedition: 11. 1. 2017**

## CDIS Review 2/2016

**Deadline: 6. 5. 2016**

**Put into print: 20. 5. 2016**

**Expedition: 27. 5. 2016**

### EXHIBITIONS:

ILA (Germany) June 1 – 4, EUROSATORY (France) June 13 – 17, Farnborough (United Kingdom) July 11 – 17

## CDIS Review) 3/2016

**Deadline: 12. 8. 2016**

**Put into print: 26. 8. 2016**

**Expedition: 2. 9. 2016**

### EXHIBITIONS:

MSPO (Poland) September 6 – 9, NATO Days (Czech Republic) September 17 – 18

## CDIS Review 4/2016

**Deadline: 23. 9. 2016**

**Put into print: 7. 10. 2016**

**Expedition: 14. 10. 2016**

### EXHIBITIONS:

INDO DEFENCE (Indonesia) November 9 – 12

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