

Quarterly Newsletter no 2(83) April - May - June 2019

DTCO 4.0 Intelligent Tachograph

www.drabpol.pl



"The fundamental principle of transportation is its safety"

In this issue you can find:

3 EVENTS

- DRABPOL as a new member of the Chamber
- 7th TECHNICAL AND REPAIR CONFERENCE "PKP 3 INTERCITY" S.A in Olsztyn
- Breaking News!!! ٦
- XVI Conference on "Railway Rolling Stock Modernization - Purchase and Maintenance,, in Wisła
- Premieres with participarion of our company
- What's new at BAUMA? 7
- 9 Smart cities coming soon?
- Latest news 2nd Quarter 2019
- 10 In telemetic world
- 10 Review of Trainings 2nd Quarter 2019
- 11 New technologies
- 13 About the development of the armored vehicles industry
- 14 We are celebrating the OSPTN round jubilee
- 15 The Art of Public Transport
- 16 Jubilee edition of Solarisposium

17 AUTOMOTIVE

- 17 Connectivity in all conditions
- 18 BANKE-DRABPOL joint project!
- 20 New DTCO[®] 4.0 tachograph already in force!
- 21 WORLD OF SERVICE CENTERS
- 22 SCANIA POLSKA ready for DTCO[®] 4.0
- 22 Our partner CPC service centers at AUTOSTRADA trade fair
- 25 TECHNICAL AND SERVICE NEWS
- 25 THEY WROTE ABOUT US



Mobile Cradlepoint IBR 1700 and IBR 900 17 routers





FROM THE EDITOR DITOR

Ladies and Gentlemen! **Dear Readers !**

This is second edition of our quarterly newsletter in the new version, which - as we hope - you like.

Like every year in Spring, we actively took part in numerous trade fairs, symposiums and conferences. Many of them have become a permanent part of our exhibition calendar, but there were also events on which we debuted this year, like a conference organized by the Polish Chamber of Rilway Equipment Producers and Railway Service Providers, which we had the pleasure to join.

We would like to encourage you to get familiar with our projects such as a joint project with BANKE company. In the course of this project our engineers realized the integration of KIBES system in the first electric garbage truck. More on this you can find on p. 18-19. At the end, we can not forget about the new DTCO[®] 4.0 intelligent tachograph, the introduction of which has already become a fact.

This topic still raises great interest and questions, both from service centers as well as from the end users side. Certainly, it will appear in the pages of our quarterly newsletter more than once.

We wish you pleasant reading !

Alicja Drabczyńska





Published by DRABPOL Editor: Drabpol sp. jawna P. Drabczyński i Wspólnik 42-233 Mykanów, ul. Akacjowa 24/26 tel.0-34 366 00 22, fax 0-34 366 01 02 centrala@drabpol.pl, www.drabpol.pl

In the interest of rail transport

DRABPOL as a new member of the Chamber



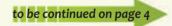
We are plesed to inform that since the end of April our company became a Member of the Polish Chamber of Railway Equipment Producers and Railway Service Providers.

The primary goal of this organization is to represent and protect the interests of its members, as well as to inspire and support the development of railway transport in Poland. At present, the Chamber gathers over 260 business entities related to railway market. Its activity is based on organizing thematic conferences, seminars, business missions, trainings, workshops and exhibition activities at numerous trade fairs.

Our company has been connected with the railway market for a long time, and many of our products have already settled in railway vehicles for good.

<u>7th Technical and Repair Conference</u> "PKP INTERCITY" S.A in Olsztyn

Our official membership in the Chamber was sealed during the Technical and Repair Conference "PKP INTERCITY" S.A. The entire event was held in Olsztyn under the patronage and in cooperation with PKP Intercity. During the mentioned conference, we also ceremonially received the certificates of accession to the Polish Chamber of Railway Equipment Producers and Railway Service Providers. The



BREAKING NEWS!!!

At the beginning of July, our company finalized a cooperation agreement with an international corporation – CURTISS-WRIGHT – and more precisely with the "Industrial Division" – a manufacturer of advanced industrial electronics.

As part of the cooperation, our offer will be extended by electronic systems for all types of vehicles. More information on that will be provided in the next issue.



24–26 April



DRABPO

P. Drabczyński i Wspólnik



cont. on page no 3

conference was also an opportunity for us to get acquainted with current events concerning the railway market. We listened carefully the propositions concerning the latest solutions, which guareantee passengers' safety and comfort. Our offer for railway market reflects standards, and the products have been successfully used in many railway vehicles for many years.

An important point of the conference was the ceremonial handing of the certificates of accession to the Chamber to all new members, including our company.

XVI Conference on "Railway Rolling Stock Modernization – Purchase and Maintenance" in Wisła

10-12 June 2019

Another places where we had a chance to be invited as a full member of the Chamber, was a conference devoted to the analysis of the current condition of rolling stock in Poland and its directions of development.

Issues discussed during the conference involved financing the purchase, modernization, maintenance and operation of the rolling stock units, as well as the presentation of innovative solutions for passengers' safety and comfort. In this last topic we had a lot to say.

At the conference, we had our information stand, where we presented USB chargers - for installation on a handrail, in the headrests of the seats or on the walls of the vehicle. Producers, such as Pesa and Newag, regularly installe them in their railway vehicles.

We also promoted Funtoro multimedia, which is increasingly used on trains throughout Europe. Train monitors must comply with the applicable safety standards. Therefore, they are equipped with protective, fireproof covers and cabling.



Currently, carriers are beginning to attach more and more attention to the passenger's comfort of travel. Thanks to such functions as watching TV, listening to music, playing movies, or using the Internet, the journey does not drag but it is also a pleasure.

It is worth noting that Molpir designed and patented a special monitor holder, hidden in the armrest of the chair. Thanks to this solution, every passenger, regardless of the place, may benefit from opportunities offered by the Funtoro system.

The offer also includes Konvekta HVAC systems for the passenger and motorman department. It is worth noting that Konvekta air conditioning units, intended for both electric rail vehicles (trams, electric trains), as well as diesel-driven rail vehicles (eg. rail buses) must comply with strict standards, such as:

Other products intended for this market, such as Enersys wagon engines for all types of Polish rail wagons as well as indicators, sensors and controllers, also fulfill the highest safety standards.

At our stand, we had the pleasure to host the representatives of Koleje Wielkopolskie (Wielkopolska railway), Szybkie Koleje Miejskie (fast urban railway) in Gdynia, Warsaw METRO (underground) and Intercity. We would like to thank all the guests for their visit and interest in our offer.

XIFair of Public Transport SilesiaKOMUNIKACJAin Sosnowiec16-17 April

PREMIERES WITH PARTICIPATION OF OUR COMPANY



In mid-April, as an exhibitor we participated in the Silesia KOMUNIKACJA trade fair in Sosnowiec dedicated to public transport.

The event was accompanied by conferences and debates devoted to electromobility, gas-mobility and issues related to low-emission passenger transport.

At our stand we also promoted e-mobility, including:

TM4 powertrain systems, being a part of our proprietary programe "Electromobility with Drabpol", that involves comprehensive solutions integrating electric powertrain systems of vehicles with the internal architecture of onboard electronics.

We presented SUMO HD drive electric powertrain system designed specifically for city buses from 8,5 m to 18 m and trucks over 18 tons and more.



The system is well known to bus manufacturers and public transit companies. At present, public transport uses over 153 Sumo HD systems, e.g. in Warsaw, Środa Śląska, Szczecinek, Zielona Góra, Lublin and Częstochowa, and further developments are planned in the future.

During Silesia KOMUNIKACJA we showed for the first time the two-tone demo version of ATG articulated system. ATG articulations and gangway systems are intended for electric buses. This is supported by the fact that ATG system is based on reliable hydraulic control, which consists of two hydraulic pistons. It reduces the basic weight, which with the current development of electric bus technology is a key aspect.

Weight reduction of components for vehicle construction transfers to the reduction of the weight of the whole vehicle, and the posiibility to take more passengers on board which is of great importance for bus operators and users. In electric buses this aspect is additionally important, because of the issue connected with a large mass of traction battery. In addition (to the light weight), although the ATG solution is intended for electric buses, it does not require electric control (i.e. power consumption), which is another advantage.

At this year's trade fair, we also promoted services provided by our Research & Development Department, in the field

At the stand we showed Sumo HD powertrain system, intended for city buses from 8.5 m to 18 m and trucks over 18 tons and more.



The two-tone demo version of ATG articulated system

of vehicle system integration and their visualizations on the MVP display, as well as on two additional displays that are components of the mFAP driver's workplace.

At our stand, we could not miss a product that enjoys unflagging popularity – we mean USB chargers. In public transport there are more than 16,500 pieces.

Rafako E-Bus premiere with our solutions

During the fair its premiere had the electric Rafaco EBUS, manufactured by RAFACO company from Racibórz. It is worth noting that this is the first bus manufactured by Rafaco and it is additionally an electrically powered vehicle.

Until now, the company was mainly active in the energy sector, hence the new manufacturer in the bus industry and its premiere bus aroused considerable interest.

TM4 Sumo MD powertrain system

It should be stressed that it is the first small bus in the country (8.5 m long, 2.4 wide and 3.2 high) equipped with a battery under the chassis.

We are even more pleased, that our solution has found application in this vehicle. The most important of them is TM4 electric powertrain from SUMO MD series, which consists of an electric motor, inverter and Neuro 200 controller.

MD system has been designed for medium-sized vehicles. In addition to using of TM4 products supplied by our company, Rafaco creates its own vehicle control system based on TM4 components and solutions. For this reason, the company bought the software, and Rafako engineers were trained at TM4 headquarters in Canada on creation of software for electric vehicles

FAP+ driver's workplace with MVP display

The premiere E-bus has been equipped with FAP+ driver's workplace with 12" Multi View Professional display, that is extremely flexible in programming.

Our engineers from Research & Development Department have developed a visulization of all information that is important to the driver, to be available on the above mentioned dispalay. The proprietary program, dedicated spe-

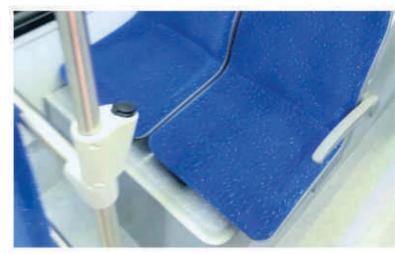


cifically to electric buses, was written from scratch in accordance with Rafaco's comments and wishes.

Electric multifunctional driver's panel stands out with its modern design. A centrally placed speedometer catches the eye. We want to stress that MVP display cooperates with all electric powertrains used by Rafako company.



Our engineers have developed a visulization of all information that is important to the driver, in accordance with Rafaco's comments and wishes, to be available on the MVP display.



USB chargers

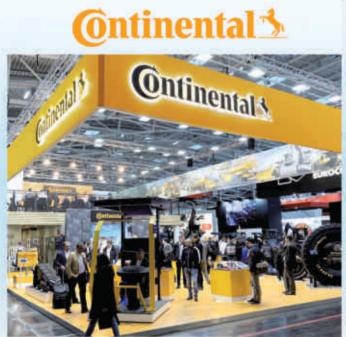
Rafaco's electric bus has been equipped with 6 USB chargers, thanks to which passengers will be able to charge their mobile devices during the journey.

boumo 8-14 April

WHAT'S NEW AT BAUMA?

Every three years there is a world-leading international trade fair for construction, mining and agricultural machinery and equipment. Our representatives went to Munich to check the latest trends in the industry.

Traditionally, we visited stands of our business partners, which were full of novelties.



New series of audio system, intended for machinery industry, deserves special attention.

Thanks to the use of CAN technology, they are very flexible and ready for the forthcoming DAB + technology.

The devices can be easily operated thanks to an external display already installed in the vehicle or by means of buttons on the steering wheel. The radio can be also installed in commonly inaccessible places, what is a big advantage, especially in the cabins of construction and agricultural machines, where space is very precious. Joint promotion of solutions: from the left Mr. Georg Kliewer - Head of Special Vehicles/ Continental, President of DRABPOL, Paweł Drabczyński and Virgilio Pico - Key Account Manager, Special Vehicles Electronics/Continental.

"Our CAN radios give manufacturers greater freedom and flexibility in the integration of radio functions. Drivers also benefit from this solution because all the information they need is clearly displayed", explains Alain Vaillant, Product Manager responsible for the new line of radios in the special vehicles team in the Continental business segment Independent Aftermarket.





There was also a world premiere of the second generation of ProViu₃60 system that increases the comfort and safety of the operator in construction machines.

The new ProViu 360 system has four cameras with a resolution of 1.3 Mpix, covering each direction, allowing the operator to have a bird's eye view of his machine.

Compared to the previous versin, the second generation of the system is completelly digital, so the system provides sharper and higher quality images in HD resolution on 10-inch HD touch screen.

"In the future, efficient and safe work on the construction site will not work without "digital mortar". Connected intelligent construction vehicles and machines are the basic elements that ensure faster, safer and, above all, more efficient operation on construction sites." – said Mr. Baumie Hans-Jürgen Duensing, Member of the Board of ContiTech Division.

The system can be used in many other special areas of application, for example it can be used as a precise edge control during the operations of rolling.

Of course, the new products will be in our portfolio, and thus our engineers from the R & D Department will extend the range of developed solutions by systems intended for the construction machine market.



Canadian manufacturer has introduced two new electric powertrain solutions – the Spicer Electrified e-Axle and e-Gearbox. Attention was paid to the two electrified construction machines presented at the outdoor stand - a 1.5-ton mini excavator and an 18-meter work platform. Thanks to extensive experience in construction and the wide range of proven powertrain and motion capabilities for electrified vehicles, Dana is on the best way to help manufacturers to introduce electric powered vehicles into the market.



Bauma became a permanent fixture in the calendar of Konvekta, a manufacturer of air conditioning units. At its stand, the company promoted air conditioning, ventilation and heating systems intended for construction machines that work in difficult conditions. The robust materials used to make the devices and single components, as well as advanced and modern technology guarantee high performance and reliability in everyday use.







Congress of Urban Technology in Warsaw

10 April



SMART CITIES comming soon ?

At the invitation of Zespół Doradców Gospodarczych TOR Sp. z o.o. we participated in the Congress of Urban Technology that took place at the Copernicus Science Center in Warsaw.

The congress was devoted to discussions on technology in the field of smart city, that uses information and communication technologies to increase the interactivity and efficiency of urban infrastructure, as well as to raise the awareness of its residents.

Among other subjects, the participants discussed smart mobility, project financing, and the risk associated with dynamic development of smart city.

We have been particularly active in the municipal electromobility forum.

Among other subjects, there were presented current regulations and legislative aspects regarding electromobility in Poland, as well as those related to the future. The participants also discussed the opportunities and challenges related to the obligation to have electric vehicles and they analyzed whether Polish cities are ready for the phenomenon of electromobility at all. The implementation of electric and low-emission powertrains to municipal transport is undoubtedly one of the biggest challenges of the transport industry. Presentations made during the congress gave answers to many important questions. For our company, as the representative of Dana company (a manufacturer of electric powertrain systems for vehicles), the issues raised during the Congress were very important.

Latest news - 2nd Quarter 2019

Thirty-three USB chargers have been installed in Mercedes buses, that joined MZK Bydgoszcz (Bydgoszcz transit company) fleet.

► Fourty-six Mercedes buses delivered to Gdańskie Autobusy i Trolejbusy by EVO BUS company were also equipped with FM telematic system with Ribas driver's virtual trainer, CPC system and 210 items of USB chargers.

Volvo buses in MZK Grudziądz (Grudziądz transit company) have been equipped with 21 USB ports.

Komunikacja Miejska w Puławach (Puławy transit company) has extended its fleet with three Solaris buses equipped with CPC systems and USB chargers.

Solaris buses that went to Komunikacja Miejska Płock (Płock transit company) have been equipped with 24 USB chargers.

Five SCANIA buses in MZK Biała Podlaska (Biała Podlaska transitcompany) have been equipped with CPC systems.

Twelve USB chargers have been installed in Solaris buses for the Żegluga Ostródzko-Elbląska Sp. z o.o. with its headquarters in Ostróda.

Białostocka Komunikacja Miejska (Białystok transit company) has supplied its fleet with Volvo Hybryd buses with USB ports (4 items).

Four Solaris buses with twenty USB ports (5 items per bus) went to MPK in Radomsko (Radomsko transit company).

Solaris buses in MZK Oświęcim (Oświęcim transit company) have been equipped with three CPC systems and 12 USB chargers.

MKS in Dębica bought 8 Autosanbuses with FAP + driver's workplaces, CPC systems, IBR 600 mobile routers and 48 USB chargers (6 items per vehicle).

Eleven Autosan buses with our FAP+ driver's workplaces have supported the fleet of Sanockie Przedsiębiorstwo Gospodarki Komunalnej (SPGK).

MMI Zbyszewo have supplied ZKM Zawiercie (Zawiercie transit company) with nine IVECO 72C URBY buses equi-pped with 36 USB chargers.

Latest news cont.

One hundred and eight USB ports were installed in eighteen Solaris buses for PKM Gliwice (Gliwice transit company).

Two USB chargers have been installed in Volvo bus in MZK Kędzierzyn Koźle (Kędzierzyn Koźle transit company).

Eight Volvo buses with CPC systems and twenty-four USB chargers went to MZLin Leszno.

- The fleet of MPK in Łódź (Łódź transit company) has been supplied with fourty-six Solaris buses equipped with CPC systems and USB chargers (item per bus).
- MZK in Pabianice (Pabianice transit company) has bought eight Solaris buses with 24 USB ports.

Twelve USB chargers have been installed in four Solaris buses in ZKM Białogard (Białogard transit company).

It has been a year since new range of telematics devices and software changes have been introduced on the market. Currently, the system is adapted, among others to the new legal requirements related to remote downloading of data from digital tachographs, drivers cards and DTCO 4.0 intelligent tachograph (from June 15).

During the conference, there were also novelties presentations. It was MiX Rovi Mini system (RIBAS +) that attracted the most interest. This device is a small display, which along with the functions of a mobile trainer of ecodriving (well-



<u>Annual conference</u> <u>MiX Telematics in Birmingham</u>

8-10 May

In telematic world

Spring each year is a time of summaries of the last 12 months, as well as the presentation of new solutions by our long-term partner - MiX Telematics. This takes place during the annual conferences, for which MiX Telematic's dealers come from all over Europe. This year they visited Birmingham.



known to Polish telematics customers), will act as a visual informer about the status of the vehicle or the environment (road signs, threat, walking on the road, etc.). MiX Telematics also shared with the conference participants good news. For the next year in a row, the company has been included in the top 5 telematics providers in the world, including a very strong position in Europe and Poland, where FM solutions can be found at our clients for over 20 years.

Review of trainings - 2nd Quarter 2019

17th April

Training on ContiPressureCheck system for DEMARKO Sp. z o.o., carried out at customer's headquarters in Bytom

18th April

Technical training on DTCO 4.0 digital tachograph for Kujawski Truck Center. The training was carried out at customer's headquarters in Rogówko

9th May

Training on ContiPressureCheck system for"Opony u Darka" company, carried out at customer's headquarters in Marysin.

14th May

Training on KONVEKTA KL20E air conditioning system for POL–MIEDŹ TRANS, carried out in Polkowice.

10th June

Technical training on DTCO 4.0 digital tachograph for representatives of PPUH TSL Jacek Wojciechowski, TA-CHOWAG and PHU "GRO-STYG". The training was carried out in our head-quarters in Warsaw.

Series of training courses for Mercedes-Benz Trucks Polska Sp.z o.o

In the second quarter of the year, we also conducted a series of five trainings in the field of a new DTCO 4.0 digital tachograph for Mercedes-Benz Trucks Polska Sp. z o.o. The trainings took place at the client's headquarters in Warsaw and participants were divided into groups:

Group I - 23rd May Group II - 24nd May Group III - 3rd June Group IV - 4th June Group V - 5th June



MOLPIR Europe 2019 Convention



Convention of European FUNTORO dealers in Smolenice 19-21 May

NEW TECHNOLOGIES



 $\label{eq:presentation} Presentation of the latest solutions in the field of multimedia and USB chargers.$

Every year, European Funtoro dealers meet at Smolenice castle (Slovakia) at the convention organized by the Molpir company – an official representative of Funtoro for the whole Europe. We traditionally took part in this event.

The convention is a great occasion to familiarize everyone with the new products that appeared in the offer. This time, there were USB chargers using the new Qualcomm Technologies Quick Charge 3.0 fast charging standard that came to the fore.

In the QC 3.0 standard, the fully discharged phone will charged in 30 minutes up to 80%. In previous solutions, such as QC 2.0, the phone was charged up to 63%, and in QC 1.0 to 18%. It's quite a big difference.

Quick Charge 3.0 is currently the fastest and most efficient charging technology.In Quick Charge 3.0 there was used Inteligent Negotiation for Optimum Voltage – an algorithm that allows the mobile device to select the required power level at any time, enabling optimal power flow while increasing performance. It also supports a wider voltage range, allowing dynamic adaptation of the mobile device to the correct voltage. For this purpose, Quick Charge 3.0 allows you to select the charging voltage in the range from 3.6 to 20 V.

The meeting program also included a presentation of induction chargers, mounted e.g. in tables and seats in vehicles.

The remaining novelties involved new housings for well-known USB chargers, mounted on handrails. The new housings are made of aluminum, thanks to which they will be more resistant to damage in public transport.

Convention participants could see more solutions while visiting the Molpir head-quarters.

A pleasant surprise was the new exhibition room with a large number of



The biggest interest in this year's convention was caused by USB chargers using the new Qualcomm Technologies Quick Charge 3.0 – a quick charging standard.

prototypes - including new adaptations in seats, new sockets, or the use of induction chargers.

The festive evening has traditionally been spent on a banquet, combined with wine tasting in Stary Młyn.



About the development of the armored vehicles industry

For the second time we took part in the national scientific conference EKSPLOBALIS 2019 organized by Wojskowy Instytut Techniki Pancernej i Samochodowej (WITPiS).

The main topic of this year's conference in Ossa (near Rawa Mazowiecka) was the operation of military equipment, related problems, and possible solutions.

The aim of the meeting was to search and promote optimal solutions in the area of development and exploitation of armored vehicles equipment, balistic protection, and optimization of legal regulations while assessing the product conformity. Official conference speeches, accompanied by information sessions and informal meetings, served this purpose.

The most important presentation concerning the plans of the Ministry of National Defense related to the acquisition and exploitation of military vehicles was given

by Lt. Col. Piotr Górniak from the Head of the Tank and Automotive Service of the Inspectorate for Armed Forces Support.

The presentation of the representative of the Military Center for Standardization of Quality and Codification, Mariusz Soczyński, on the quality assurance system in the armed forces of the Republic of Poland also did not escape the notice of the audience.

Conference participants with great interest listened to the presentation of Mr. Mariusz Kocieliński, who discussed a very important problem of aging of armored glass, the unacceptable for the army effects of this phe-



nomenon and the possibility of renovating such glass.

For us, as a company offering solutions for military vehicles, such as Armasafe starter batteries, sensors, indicators and displays, the conference was a perfect opportunity to exchange experiences, get familiar with new issues in the armored vehicles industry and make new contacts.

Presentation of Mr. Mariusz Kocieliński, the President of the Mario International Technology & Services (MIT & S) company, regarding armored glass met with considerable interest among conference participants.



Celebration of the 10th anniversary of the National Associa-tion of the Employers in the Oversized Transport Sector(Ogólnopolskie Stowarzyszenie Pracodawców TransportuNienormatywnego – OSPTN)31 May

We celebrate the round anniversary of OSPTN

Since we are a full member of National Association of the Employers in the Oversized Transport Sector, we were happy to take part in the festive jubilee Gala associated with the celebration of the 10th anniversary of its operation.

The festive celebrations took place in Jachranka on the last day of May. The evening Gala was preceded by the General Meeting, intended exclusively for the members of the Association.

Ten years ago the organization had 40 members. Nowadays, it involves 135 companies in various ways related to oversized transport. The main goal of the organization are joint actions aimed at improving legal state of oversized transport.

From the beginning OSPTN aims at unification and standardization of legal and actual requirements for the entire industry.

One of the problems the oversized transport has to face is the problem with tires – and in particular, with frequent wheels replacement resulting from tire blowouts. This means unnecesary stops, delays in deliveries or blocked roads. In addition, with such a large number of tires, like in low-loading semi-trailers, manual control of tires is very strenous and time-consuming.

Facing all these problems, four years ago, our engineers developed a proprietary solution called CPC-200 T. It is intended for oversized vehicles, such as multi-segment trailers, semi-trailers and tractors. A characteristic feature of the system is that it can be used in multisegment and multi-axled trailers with 8 wheels on each axle.

We have officially presented Mr. Łukasz Chwalczuk, the President of OSPTN with a congratulatory letter on the occasion of the 10th anniversary of this organization.

CPC-200T enables unlimited combinations of semi-trailers and truck tractors. In addition, the system properly groups and numbers the trolleys, so they can be clearly, and almost immediately, presented on the display.

CPC-200C entails not only control over tire pressure and temperature but also lower exploitation costs of such vehicles, and what is the most important, the increase in safety of transported oversized cargos. The festive jubilee was also the occasion to talk and exchange experience.

But as they say: all work and no play makes Jack a dull boy. The organizer provided many attractions for the participants, such as Nine Eleven band or Mr. Maciej Pęda –a magician with his impressing show.

We would like to congratulate the round jubilee and strong position on the market. We wish OSPTN realization of its further goals and dynamic development in the following years.





With a visit at the Global Public Transport
Summit

Stockholm 9-12 June

The Art of Public Transport



Global Public Transport Summit organized by the International Association of Public Transport (UITP), was an important event for the entire public transport. We also came to Stockholm to recognize the international market of passenger transport.

This is the result of actions taken by our company in the field of export of our products, but first of all services offered by our Research & Development Department, such as developing visualizations of all information necessary for drivers on digital dashboard displays.

Let's recall that nearly 2 years ago we created a pioneer solution in the field of dashboard software – a system of graphical and system personalization -FAPsafety +. The system allows to create client-dedicated solutions or meeting the requirements of the customer - municipal transport companies or vehicle manufacturers.

We also promoted our services in the field of subsystem integration, including powertrain systems.

We base on components of our partner – Dana company, which we had the pleasure to visit at its stand during the Public Transport Exhibition.

During the Public Transport Exhibition, the Canadian manufacturer TM4 / Dana presented the Sumo HD electric motor, the Neuro controller and the BCI 20 charger.

The Canadian manufacturer TM4 / Dana has presented the Sumo HD electric motor, the Neuro controller and the BCI 20 charger. We want to add that both the devices themselves and the management software has been designed to optimally use the potential of each device separately, as well as the entire system as a whole.

This year's motto of the summit in Stockholm was: "The Art of Public Transport"- as a striving for excellence in creating and delivering services of public transport. We hope that these aspirations will be fruitful, and we will see their effects in the near future.



Technical - workshop conference of Solaris company in Świnoujście

12-14 June



ContiPressureCheck

For the 15th time, Solaris organized a branch conference for its domestic customers, from technical and logistic divisions, and for its sub-suppliers.

We have been participating in these conferences for many years, so we could not miss this jubilee edition. Mainly from the fact that our offer for the bus market, which we presented during a short speech, is very wide.

It covers a wide range of solutions, such

as the FM system, CPC, radars connected to the 360 camera system, alcohol interlocks, TM 4 motors, ATG articulations, USB chargers, mobile routers and Konvekta air conditioners for SOLARIS buses of Alpino, Urbi-no, Trollino, Hybryd, Electric, Interurbino type, as well as for trams.

When it comes to the above mentioned systems we offer trainings covering their operation and maintenance, and we grant service permissions.

Conference participants could became familiar with the fields of activity of our new Research & Development Department. This department works on de-

signing of construction solutions for vehicles over 2.8 tons, in the field of low and high voltage electrical installations, including programming of their computers, parameterization of drive systems and those associated with the powertrain system and with the vehicle's total management system (including subsequent validation and designing visualization for vehicle displays and touch screens).

These services are addressed to manufacturers and municipal transport companies.

Our offer met with considerable interest, since the attendance at this year's Solarisposium was record-breaking-over 300 people.

The conference participants could also get acquinted with our solutions presented at our stand.

Undoubtedly, the choice of the meeting place influenced the positive, holiday atmosphere of the jubilee conference. Beautiful seaside beach in Świnoujście, and the summer weather enriched the celebration of this year's jubilee.



During the Solarisposium our stand experienced a real siege.

CONNECTIVITY IN EVERY CONDITIONS



For nearly three years, we have been offering mobile routers of the American company -Cradlepoint - on the Polish market. This year, the offer includes two new devices - IBR 1700 and IBR 900 routers that have already been used by our customer - Volvo Bus company.

Thanks to the admission to assembly by the Technical Department Volvo Bus, both models have already been approved for the retrofitting of buses of this manufacturer. Volvo Bus has purchased 8 IBR 900 routers in May.

Cradlepoint Routers is a compact networking solution designed for connectivity in the most challenging environments. Ideal for in-vehicle networks including police cars, ambulances and public transport. This cloud-managed solution allows you to manage vehicle networks easily in realtime. These solutions have all necessary certifications and characterize with resistance to extreme temperatures, humidity, shocks, vibrations, dust, water splash, reverse polarity, and transient voltage.

For over three years Cradlepoint routers, mainly from the COR IBR600 series, have been sucessfully used in Volvo buses and trucks, as well as in Autosan and Solaris buses. Currently, new Cradlepoint COR IBR1700 and COR IBR900 mobile routers are offered as part of an "all-inclusive" mobile networking solution in a NetCloud Solution Package.

NetCloud Solution sets for mobile applications include:

- routers with increased durability for mobile applications,
- remote cloud management and network monitoring with NetCloud Manager application,
- secure encryption of connections using with NetCloud Perimeter for perimetersecure overlay networks,
- 24/7 support and a 3-year warranty.

NetCloud Essentials contains all the features and capabilities required for a wide range of mobile or in-vehicle applications. Essential packages include 24/7 support (phone support: 24h weekdays with emergency response on weekends, web: 24/7, chat:24/5) and a 3-year warranty. For additional capabilities, a NetCloud Advanced upgrade can be added to the NetCloud Essential package at any time.

We want to emphasize that Cradlepoint routers are often chosen by users because of the unique function, which is remote management. Thanks to this function, the fleet manager can control the operation of the router at a distance, configure it and upload a new firmware depending on their needs.





Our integration of KIBES system in the first electrical garbage truck

BANKE-DRABPOL - joint project !



A few months ago, a Danish manufacturer of garbage trucks, Banke Electromotive company in cooperation with Drabpol started work on its first electric vehicle.

From the very beginning, our involvement in this project was connected with vehicle electronics, solutions in the field integration and design of FAPSafety+ (driver's workplace), and vehicle telematics (MiX Telematics) connected with ContiPressureCheck system (tire pressure and temperature monitoring system–CPC).

The equipment was complemented by radios, tacho-graphs and ProViu 360 camera system.

In BANKE electric garbage truck, our engineers from Research & Development Departament made an integration of the whole vehicle, in the lowcurrent area, namely integration of KIBES system that is based on CBCU computer (with connected MUX-4Pn multiplexers) and mFAP driver's workplace in configuration with MultiViu Professional and 2xMultiViu Flex.

We parameterized all components, calibrated the ProViu system and configured the ContiPressureCheck system. In addition, we made a sunroof and cabin heating control on a touch screen included in the mFAP.



Comprehensive implementation and launch of the above mentioned solutions took place at the headquarters of Bogdan Motors company, a manufacturer of vehicles for Banke that is located in Łuck, Ukraine.

Application of our systems, in addition to increasing passive safety, raises driver's and operator's comfort of work. We can be particularly proud of the project of integration and design of mFAP driver's workplace including modern graphical elements that were strictly tailored to the needs of our client.

The driver is fully supported by additional solutions available from the touch screen level.

In addition, we made the buttons for the panel according to the specification provided by the customer. Among functions supported from the panel level there are: ProViu₃60 camera control, CPC data analysis with alerts concerning tire failure and brake linings condition monitoring.

In addition, we personalized the service menu. Thus vehicle diagnostics and service menus (error codes) are shown on the real-time 3D model of the vehicle.

The vehicles, signed with Banke, logo have already appeared on the streets of Scandinavian cities.

Certainly they are one of the most technologically advanced and environmentally friendly municipal vehicles in Europe.



In the BANKE electric garbage truck, engineers from our Research & Development Department have carried out integration of the entire vehicle in the low-voltage area.



For our part, we made graphic design of the mFAP driver's workplace including advanced graphical elements, tailored to the specific needs of our client.



We took part in comprehensive implementation and launch of solutions at the headquarters of Bogdan Motors company, a manufacturer of vehicles for Banke that is located in Łuck, Ukraine.

NEW DTCO[®] 4.0 TACHOGRAPH ALREADY IN FORCE !

From June 15, 2019, vehicles over 3.5 metric tons must be fitted with a new-generation digital tachograph - DTCO[®] 4.0.



The above date results from the EU regulation 165/2014, which aims to improve road safety and prevent the manipulation of digital tachographs.

DTCO[®] 4.0 tachograph is a completely new solution, that enables:

- > Fast and simple commissioning with "plug & play" capability
- Automatic positioning with GNSS
- Save more time with inspections via DSRC remote communication
- Standardized ITS interface for fleet management systems
- Fewer auto repair shop visits thanks to DTCO[®] Configuration App
- The new KITAS 4.0 motion sensor for communication between the speed sensor and the digital tachograph.

We were training the first service centers in the field of DTCO[®] 4.0 maintenance in March. These services, in addition to the essential knowledge on a new device, also have the necessary service equipment to operate it – WorkshopTab 4.0 – as for now the only tool ready to work with Continental and Stone-ridge intelligent tachographs.

Technical training on DTCO[®] 4.0 and workshop tab 4.x at Continental headquarters.

We still actively take part in trainings devoted to $DTCO^{\circ}$ 4.0, organized by the device manufacturer, because we think that know-ledge in this topic is never too much.

Another training on DTCO 4.0 and peripherals even more established the knowledge that we had already possessed.

For this reason, at the end of June, our representatives from the Tachographs department went to the Continental headquarters in Villingen for another training on DTCO[®] 4.0 and peripherals to operate it.

The training presented comprehensive information in the field of DTCO $^{\circ}$ 4.0 GNSS, new KITAS 4.0 (2185) motion sen-sors, technical documentation and CAN bus connection.

There was also a focus on issues related to the programming of universal tachographs. Attention was also paid to legal issues (EU) No 799/2016 and 502/2018 and further plans related to this.

On the next day, the manufacturer presented the detailed information on Workshop Tab and maintenance of Stoneridge and Efas tachographs. In order to meet the changes regarding equipping vehicles from M1N1 category, a new adapter meeting legal requiremets has been presented.



DESERVICE CENTERS

(Damma)

Automation and

mmm

In Poland, we have already established a total of 244 authorized service stations, including 140 providing services in the field of tachographs, 68 - tire pressure and temperature monitoring systems, 30 – air conditioners and refrigeration units, and 6 – alcohol interlocks.

Ontinental 🏂



ALLELLER

The second second



summer.

and the second

in mi

<u>WorkshopTab VDO</u> for the service of <u>intelligent tachograph</u> <u>in Scania Polska service centers</u>

SCANIA POLSKA ready for DTCO[®] 4.0

Although the official premiere of the new intelligent tachograph was set in the mid-June, DTCO[®] 4.0 could be found in new vehicles offered by the dealers for several weeks now.

As we have already written, DTCO[®] 4.0 is a completely new standard of tachographs, that requires appropriate diagnostic tools to provide full service and compliance with the existing legal regulations.

The only such tool that currently meets all these criteria on the European market is WorkshopTab manufactured by Continental VDO. We are pleased to inform that another company that trusted our solutions is Scania Polska.

In the first half of the year, we supplied our client with a dozen of WorkshopTab devices. They allowed Scania to meet all legal requirements in terms of equipment in accordance with regulations concerning intelligent tachograph.

In addition to delivery of equipment, we also conducted trainings in the field of DTCO° 4.0 tachograph and WorkshopTab operation.

All Scania customers can be positive that their vehicles equipped with new



Mr. Grzegorz Bartosiak, Technical Support Engineer in Scania Polska S.A., was handed over WorkshopTab devices for DTCO[®] 4.0 tachographs.

 DTCO° 4.0 tachographs have been thoroughly checked by trained and competent technicians, with the right devices to operate intelligent tachographs.

With a visit at the 25th International Fair of Road Construction Industry – AUTOSTRADA in Kielce

14-16 May

ContiPressureCheck[™] partner service centers at the jubilee AUTOSTRADA trade fair



We go to Kielce every year, whether as an exhibitor or a visitor of AUTOSTRADA fair, called by many a "Kielce road construction festival". This year we did not have our own stand but we had the pleasure to visit stands of our ContiPressureCheck partner service centers that presented their comprehensive offers in Kielce. Each of them provides the road construction industry with its own solutions and our CPC systems (tire pressure and temperature monitoring systems).

PPUH Polmark Kielce

Polmark Kielce company, as one of a few, has been continually present at AUTO-STRADA fair for 25 years, so from the first edition.

The company, which is a production division of OAO BELAZ Holding manufactures well-known Biełaz rigid dump trucks not only for the Polish market but also for the western European markets.

Polmark Kielce manufactures and delivers the mining trucks, road-construction machines, mining and transport machines, underground engineering machines, machines for specialized factories and metallurgic machines.

The company develops in a fast pace by bringing to the market modern dumpers equipped with Scania engines that meet the highest environmental standards, which may soon be in force in Western European countries.

Polmark installs the tire pressure and temperature monitoring systems (Conti-PressureCheck) in Biełaz dumpers. What is worth noting, the CPC systems are fitted as standard in each machine sold by the company. And there are a lot of them on the market. These huge dump trucks can be found in opencast mines, cement plants or in quarries. Biełaz vehicles with CPC system have been successfully used in Cementownia Ożarów (cement plant) or Kopalnia Dolomitów (dolomite mine) in Sandomierz.



Taking into account the price of one machine tire of this type, up to tens of thousands zlotys, the benefits coming from using the CPC system result in huge savings - full control of the tires ensures their long life.

During the jubilee edition of the trade fair, Polamark has presented the Biełaz 7547S mining dump truck with Scania engine that meets the Stage V exhaust emission standard.

In the above mentioned Biełaz all tires have been equipped with ContiPressureCheck sensors.



The trade fair was a great occasion to meet with Mr. Marek Świercz – the President of the Management Board of Polmark Kielce.



Our second partner, due to its wide offer, decided on a multi-brand stand. The company is constantly strengthening its position on the national market of industrial, construction and agricultural tires. Thanks to agreements for the exclusive distribution of OTR industrial tires, BOTO truck tires, and Advance industrial, truck, agricultural and construction tires, Industra is at the forefront of companies engaged in sale of commercial tires in Poland. It is also a general distributor of OTR tires (Continental), used in container handling machines, such as reach stackers, empty container handlers and straddle carriers. In this segment of tires, it is the leader on the Polish market.

The company also develops distribution of Galaxy agricultural and industry tires, as well as AP Wheels twin and standard rims. With five presses for tire assembly and four mobile services intended for replacing large-size tires in construction machines, Industra is one of the largest service networks in Poland.

At its stand, the company presented: the Advance high-speed lift, L5 BOTO tire for dump trucks operating under the most difficult conditions, and OTR Continental tire intended for dump trucks and wheel loaders.

Industra has been cooperating with our company as a partner service for over four years – equipping tires of construction and port machines with tire pressure and temperature monitoring systems (ContiPressureCheck).



The company's stand was presented by Mr. Mariusz Kowalski, Sales Director of Industra company.

TORUS Jeleń i Nowakowski spółka jawna

Our last service partner presenting its offer during AUTOSTRADA trade fair, Torus company, joined our network of autho-rized ContiPressureCheck service centers relatively recently, a few months ago.

Torus company offers professional and comprehensive tire services.

The company provides tires for a wide range vehicles – from passenger cars and trucks to OTR large-size tires intended to various construction machines. At the same time, it offers tires of the most important global manufacturers. With three branches in the south of Poland, Torus is one of the biggest service networks of industrial tires in Poland. Although the cooperation with our company started relatively recently, it is dynamically developing.



The co-owner of the TORUS Jeleń i Nowakowski company, Mr. Piotr Jeleń, invited us to the trade fair stand.

Participation of our service centers in the jubilee AUTOSTRADA Polska trade fair has strengthen their position and poten-

tial on the road construction market. Hopefully with growing sale of tires and services for construction machinery, the demand for ContiPressureCheck system will increase.

TECHNICAL AND SERVICE NEWS

Projects of the Research & Development Department

Recently, our engineers from the R&D Department have completed work on the following projects:

► On MultiviuProfessional 12 our engineers added the Groeneveld's Greensight obstacle detection system that enables precise detection of obstacles in predefined zones.

This system has been implemented on Autosan buses on MVP12 display in combination with the image from the external camera.

► The MultiviuProfessional 12display shows states from the KnorrBremse LDWS radar system that is responsible for warning about an attempt to cross horizontal lines by the vehicle. Graphical and sound signals warning about the obstacle (the whole communication and fault diagnosis) have been implemented on the display - active braking assistance to prevent frontal collision.





TM4 Sumo HP electric motor for hybryd vehicles

With hybrid vehicles in mind, TM4/Dana (manufacturer of electric motors) developed the Sumo HP HV900. This motor also functions as a generator.

SUMO HP HV900 line has been specially developed for parallel and series hybrid configurations. In the first version the electric motor supports mainly the combustion engine in the wheel drive; whereas in the serial configuration it works primarily as a generator.

SUMO HP HV900 electric motor can be coupled with diesel engines, multi-speed gearboxes or integrated with axles - in the case of low-floor buses. The TM4 motor has software that adapts its operation to the characteristics of the hybrid powertrain system.

This motor is offered with the well-proven 3-phase CO150 inverter, already used in thousands of hybrid vehicles worldwide.

We would like to invite you to the nearest trade fair:



Kielce MSPO 3-6 September 2019 27th International Defence Industry Exhibition MSPO

WE INVITE YOU TO OUR STAND no D-68 HALL D



BUSWORLD Brussels EUROPE 18-23 OCT 2019

WE INVITE YOU TO OUR STAND no 3102 HALL 3

They wrote about us:

- 1. www.truck.pl, "Components from 3D printer A new offer of Drabpol", 2019-04-26,
- 2. Truck Van, "Electrically how?", no 3.29.
- 3. Truck&Van, "Climate change…", no 4.19,
- 4. Truck.pl, "New tachographs with obstacles", no 1261
- 5. Truck.pl, "About alcohol interlocks– Drunk at the wheel", no 1269
- 6. Transinfo, "New tachographs are getting closer. The expert reveals whether drivers have something to be afraid of", no 3.06.