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### Editorial Article

by **Gunter Mackinger**

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## Editorial

### Dear Trolleybus Community,

The TROLLEY project already entered the home stretch and is in its final project year. A lot of project activities, pilot actions and investments will be finalised during 2012 and lessons learnt shall be transferred to the trolleybus community, for example through the "Transnational Manual on Advanced Energy Storage Systems" for trolleybuses or the "Transnational Take-up Guide on Diesel Bus Replacements".

And we are still very encouraged, as we receive many positive signs from the trolleybus community like the introduction of a trolleybus system in Lecce, Italy, or the consideration of re-introducing a trolleybus system in Montreal, Canada (see trolleybus news in this issue).

Another important part of TROLLEY's work is the promotion of trolleybuses as smart, clean and green solution for urban public transportation of the future.

Therefore, the TROLLEY project has created the free of charge "ebus – the smart way!" campaign, which stands for the first joint European image campaign to promote trolleybuses. You are highly welcome to join this promotion initiative to raise awareness for trolleybuses worldwide. Please find more information about the campaign in this issue.

In addition, TROLLEY reached nearly 50.000 citizens in the partner cities so far and raised their awareness of trolleybuses as a clean, electricity-based public transport mode during the first two European Trolleybus Days. The 3rd

European Trolleybus day takes place as part of the European Mobility Week on 22th September 2012. Please join this initiative and promote the trolleybus at this occasion. If you need more information or further support, please contact us!

Finally, I would like to call your attention to the International TROLLEY Transferability Conference, which will take place together with TrolleyMotion's 3rd International Trolleybus Conference on 23th and 24th October 2012 in the TROLLEY partner city Leipzig in Germany. Please mark this date in your calendar!

**Enjoy reading the TROLLEY journal! Yours faithfully**

Gunter Mackinger,  
Lead Partner TROLLEY



*Gunter Mackinger, Director of Transportation, Salzburg AG, Lead Partner TROLLEY*

All over the world, a "pro trolleybus" development can be seen – which is not too surprising when considering the advantages of the system. Cities such as Montreal, Riad, Helsinki, Verona or Leeds are now introducing a trolleybus system or are discussing its installation. At the same time, the trolleybus receives an additional boost due to new strategies and future orientation for the European transport area, such as for example the emissions reduction target of 60 % until 2050, laid down in the Transport White Paper of the EU or the Clean Vehicle Directive, which determines that public transport operators have to consider energy-related and environmental consequences when procuring road vehicles, including energy consumption, CO<sub>2</sub> emissions and certain pollutant emissions for the whole lifetime of the vehicles. When such external factors or costs respectively are also considered when calculating the profitability of transport systems, as e.g. in the course of a comprehensive study on the future of the trolleybus system in Seattle in the State of Washington, the economic advantage of trolleybus systems concerning environmental friendliness and „life-cycle costs“ becomes very evident when comparing them

to other systems, despite relatively high start-up investment cost, especially if the electricity needed for operation is derived from renewable sources of energy. There are, however, barriers to the implementation of such future-oriented European strategies and targets on the local level: lacking political support and long-term perspective. The emissions reduction target and the limited oil reserves currently put electromobility on the political agenda and technical innovations in electric bus systems experience new dynamics. When considered from the point of view of the trolleybus, it is more a "back to the future!", as the trolleybus has already presented itself as fully developed, technically secure and economi-

field of electromobility, as experienced by our TROLLEY partner from Leipzig. Therefore we hope to be able to send a positive signal with our European TROLLEY project and to bring the trolleybus as an electromobile transport system more into the focus of funding bodies via this European detour. Regrettably, the trolleybus is also forgotten from time to time on the European level, the TROLLEY consortium for instance had to call the EU's attention to finally integrating the trolleybus as local "zero-emission" transport system into the EU's "Clean Vehicle Portal".

In the electromobility discussion, the trolleybus is an unjustly neglected means of transport, which can, when compared to railbound public means of transport, be int-



*The new "ebus" for Parma*

cal electromobility system over the past decades. Unfortunately, however, the competition for funding is not at all open to all types of technology. Trolleybus systems have not been considered or are only considered very rarely on the national funding level in the

duced at much lower cost while still profiting from the rail bonus, i.e. higher esteem attributed by the public to railbound means of transportation. Furthermore, its approximately 50% ▶

*continue page 3*

► longer life cycle when compared to diesel buses as well as its zero emission status and very low noise emissions make it a particularly clean and city compatible vehicle. So why do not more cities worldwide introduce the trolleybus as urban, clean public transport system? There is for once the reproach of the trolleybus being an outdated technology, which is not generating innovation anymore. In reality, however, innovations in the form of additional energy storage systems, which allow for partial trolleybus networks, or technical progress in the needed infrastructure, for instance through lighter catenary construction, reveal a different picture. Trolleybus systems represent a modern, promising public transport, which is, contrary to some of the new technologies, mature, technologically secure and economical. A further argument, which is frequently raised contra trolleybuses, is the catenary problematic. But if it is compared to the international efforts to introduce city railway and tram systems, the catenary discussion can only be comprehended as being irrational and it is often misused for lobbying purposes. The catenaries have, at least in Salzburg, not resulted in a reduction in the number of tourists coming here from all over the world. Last but not least the trolleybus is attributed an "old-fashioned" image, as has partly also been confirmed by a study in our TROLLEY partner cities; however, only in those cities, which still employ old fleets. The introduction of new vehicles with new designs, such as the new trolleybuses for Riad or the TROLLEY partner city Parma, will lead to a different picture here as well. All these developments will hopefully help the trolleybus to continue its renaissance and more and more to be perceived as stand-alone, promising electromobile transport system instead of an in-between system between bus and tram.

### European photo competition "My trolleybus – my city!"

The response to the TROLLEY photo contest 2011, entitled „My trolleybus - my city“, was tremendous: 129 participants from 6 countries submitted 250 pictures altogether. The submissions were so attractive, it was difficult to choose one standing out. But the jury, consisting of Dr. Margit Zuckriegl (Head of the Austrian Photo Gallery), Trude Kaindl-Höinig and Robert Ratzer (both from the daily newspaper „Salzburger Nachrichten“) and the TROLLEY project lead partner Salzburg AG, represented by Gunter Mackinger, Johann Kogler and Angelika Gasteiner, has voted (25% of the decision was generated through votes of the TROLLEY consortium and a Facebook vote) and the winner is Luigi Muzzi, a pensioner from Parma.

### 2nd European Trolleybus Day - again a complete success!

On 17 September 2011, the TROLLEY partner cities celebrated the European Trolleybus Day for the second time. With this initiative, the TROLLEY partnership would like to call attention to trolleybus transport as an important part of sustainable urban mobility in European cities. The activities ranged from information campaigns, open days at trolleybus depots and sweepstakes to a concerted European photo competition "My trolleybus – my city!" (see news above) on that day. Altogether, more than 50,000 citizens have been reached by the partner cities' activities and more than 500,000 people potentially have been reached by the media reporting about the first two European Trolleybus Days in 2010 and 2011. The TROLLEY partners



Winning photo of TROLLEY's photo competition „My trolleybus - my city“

Mr Muzzi was invited to take part in the award ceremony, which took place in the framework of TROLLEY's mid-term event on 7 December 2011 in Salzburg (on the premises of the Salzburger Nachrichten). The runners-up were Martin Grill from Brno in the Czech Republic (2nd place) and Bartosz Zalewski from Gdansk (3rd place) in Poland. Congratulations to all winners! Due to the great success, a new edition of the TROLLEY photo contest is planned for 2012! More information will follow soon on our TROLLEY project website and in the next edition of the TROLLEY journal. To see all winning shoots 2011 and more submitted photos, browse to our Facebook page via the project website [www.trolley-project.eu](http://www.trolley-project.eu)!

hope that other trolleybus cities will follow this initiative in the future to raise the general public's awareness of trolleybuses as a clean, electricity-based public transport mode. The 3rd European Trolleybus Day takes place as part of the European Mobility Week on 22 September 2012.

**Promote the trolleybus on this occasion and contact us for more information and further support!**



At the Trolleybusday, Brno opens the depot for its citizens

# TROLLEY image campaign – “ebus – the smart way!”

The TROLLEY project has created the “ebus – the smart way!” campaign to promote trolleybuses as smart, clean and green solution for urban public transportation of the future. Herewith, for the first time ever, a joint European image campaign to promote trolleybuses will be held in Salzburg (Austria), Parma (Italy), Brno (Czech Republic), Gdynia (Poland), Eberswalde (Germany) and Szeged (Hungary).

The main aim of the campaign is to present trolleybuses a well-established e-mobility solution that is capable of contributing to the EU’s 2020 emission targets. To spread and consolidate this message among citizens, decision makers and relevant public transport stakeholders throughout Europe, the TROLLEY project has created the image campaign “ebus – the smart way!”, which consists of promotional material such as billboards, posters or swing cards.

## A campaign for everyone – join us!

Other cities in Europe are invited to follow and to raise awareness for the trolleybus as a clean, sustainable, safe and efficient transport mode in Europe. They will be able to use the designed promotional material - shown in the figures below - free of charge and to adapt it to their local corporate identity in order to give it a relevant local touch. More information on its components and its visual look (brand, claim etc.) can be found on the TROLLEY website [www.trolley-project.eu](http://www.trolley-project.eu).

The TROLLEY project hopes to establish this initiative on a broad basis to promote trolleybuses and to show decision-makers of the transport sector and citizens their vast potential to transform transport systems from “fossil mobility” towards “electromobility”. If you are interested in joining our initiative and would

like to raise the awareness for trolleybuses as a clean, electricity-based public transport mode in your city.

**Please contact us (by email [trolley@salzburg-ag.at](mailto:trolley@salzburg-ag.at) or via phone +43-662-8884-6186), and we will provide you with the whole design package and more information.**

Examples for advertisements of the “ebus – the smart way!” campaign



Examples for a local adaption of the ebus campaign in Salzburg

## Lecce introduces trolleybus system

The Italian city Lecce introduced its trolleybus system on Thursday, 12 January 2012. The operation of trolleybus line 29, i.e. future line 3, which will eventually be about 5 km long, started at 6:30 in Via Calasso.

The schedule of the new line offers 15-minute intervals and a whole cycle lasts 45 minutes. The line will exclusively be operated by trolleybuses. With its high frequency, which has on bus routes so far only been offered on the line to the university grounds, it attempts to reach the target of 13,000 passengers per day. Furthermore, a three-month period of free rides is supposed to bring the operator closer to this ambitious goal.

Mr Pasquale Borelli, responsible for the trolleybus operation in the Italian city of Lecce, reckons that throughout the world, more means of transport with infrastructure are being built: trolleybus, tram, metro. For a metro, about 1 million inhabitants are requisite, Lecce is too small for that, but a trolleybus system is certainly a transport means of the future! The advantages of the trolleybus compared to a regular diesel bus are clear: less noise and less vibrations. He is convinced that the new means of transport will be widely accepted also for these reasons and that the expected ridership will be achieved after the three-month period of free rides in Lecce.



Maiden trip of trolleybus in Lecce's newly introduced trolleybus system  
(source: TrolleyMotion)



Reintroduction of trolleybuses in Montreal?  
(source: TrolleyMotion)

## Next stop Montreal?

In the Canadian metropolis of Montreal, the design of a trolleybus system is being explored. In a first step, 42 km of trolleybus line are being envisaged. In 2012, the results of a study are expected, which will present the consequences of such a system concerning cost structure and environmental friendliness in detail. As alternative, battery buses with charging stations are also being examined.

In first estimates, costs of up to 300 mio. Can\$ have been calculated for a first phase with around 40 vehicles, which could approximately be implemented until 2016. In the medium term, however, the procurement of 100-150 articulated buses is intended, if the results of the study are positive.

The idea of a trolleybus system came up as a cost-efficient alternative to the construction of a city railway, for which 750 mio. Can\$ were estimated for a 12.5 km city line, which could not be financed under the current circumstances. Next to the trolleybus option, the Société de transport de Montréal (STM) also considers other electric bus variants, as it has been requested by the city municipal government to convert the whole fleet to electric drives until 2025.

As a preliminary stage, only hybrid buses were procured as of 2010, battery buses are being envisaged for some less frequented branch lines; for the main lines, the tried and tested technology of the trolleybus has been accepted in order to reach the goal of completely electrified public transport. A first candidate for electrification is the existing bus line 105 Metro Vendôme - Concordia University Loyola Campus, which is used by 17,000 passengers per weekday.

## Modernisation of the rolling stock by conversion of diesel buses in Cluj-Napoca, Romania

After already having delivered ten solo trolleybuses and eleven articulated trolleybuses from Arad as part of the framework contract with SC Astra Bus SRL for the conversion of diesel buses into trolleybuses, the order for the conversion of 15 units of articulated diesel buses into articulated trolleybuses has now been extended to cover additional five units.



An articulated converted trolleybus in Cluj-Napoca  
(source: TrolleyMotion)

On account of these converted trolleybuses, more than half of the fleet of 93 trolleybuses now consists of low floor trolleybuses, 37 of these being solo buses and 11 being articulated buses. In addition to the modernisation of the rolling stock, an expansion of the trolleybus network in Cluj-Napoca is also foreseen. Line 8 connecting to the airport is supposed to be converted into a trolleybusline and neighbouring communities such as Floresti, Baciú and maybe Apahida will also be connected to the network.

In the framework of the TROLLEY project, a "Handbook on Detailed Diesel Bus to Trolleybus Conversion Principles" will be published in the near future in order to invalidate the argument of relatively high acquisition costs of trolleybuses on the one hand, but also to simply have a practical solution to the local need for more "modern" trolleybuses. The handbook will contain examples from the TROLLEY partner cities Gdynia and Szeged.



Participants of the 2nd TROLLEY Advisory Board meeting (from left to right): Johann Kogler (Salzburg AG), Frank Wruck (BBG), Ronald Juhrs (LVB), Gunter Mackinger (Salzburg AG), Ralf Haase (Friedrich-List-Forum Dresden e.V., TU Dresden), Mauro Piazza (TEP S.p.A), Tóth István Tibor (SZKT), Vít Blaha (City of Brno), Eberhard Nickel (LVB), Olgierd Wyszomirski (University of Gdansk), Siegfried Rupprecht (RC) and Marek Stepa (City of Gdynia). Not in the picture: Arnulf Schuchmann (TrolleyMotion).

## TROLLEY's Mid-term Workshop in Salzburg

The TROLLEY consortium held its Mid-term Workshop in Salzburg from 5 to 7 December 2011. During the workshop, the TROLLEY partners evaluated the project results and outputs reached so far and discussed the implementation of main project activities.

In addition, the Advisory Board of the TROLLEY project, consisting of high-level decision-makers from TROLLEY partners and external experts, met for the second time to supervise the project's progress and to determine the strategic focus of the final project year of TROLLEY.

### Contact and information: [www.trolley-project.eu](http://www.trolley-project.eu)

For further information subscribe to our mailing list and receive the TROLLEY newsletter or contact the Lead Partner:

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Parallel to euregia

**TrolleyMotion**

New Horizons for Urban Traffic, 3<sup>rd</sup> Trade Conference  
**23 to 24 October 2012**

- with trolley trade fair – electric public transport
- and summer university for future experts



This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF

## Calendar

- ▶ **7<sup>th</sup> UITP International Bus Conference "Think Bus – Cost-effective for society, attractive for customers"**, Istanbul, Turkey, **18-20.04.2012**, <http://istanbul.uitp-events-expo.org/>
- ▶ **Transport Research Arena 2012 "Sustainable mobility through innovation"**, Athens, Greece, **23-26.04.2012**, <http://www.traconference.eu/>
- ▶ **Joint TROLLEY & UITP Trolleybus Working Group meeting**, Parma, Italy, **03-04.05.2012**

## International TROLLEY Transferability Conference & 3rd International Trolleybus Conference in Leipzig, Germany

Leipzig will be the host city for the International TROLLEY Transferability Conference on 24 October 2012. The conference will highlight project results from the thematic clusters "Optimised energy use", "Increased public transport efficiency" and "Improved image and patronage" of the TROLLEY project. Prior to that, the TROLLEY partner TrolleyMotion will hold its 3rd International Trolleybus Conference "New horizons - Innovative electric bus systems" on 23rd and 24th October 2012 in Leipzig.

Both events will take place at the Leipzig fairgrounds and will be integrated into the „euregia 2012" fair and the first ever „new mobility" expert symposium. These high-caliber gatherings will examine future mobility, innovative electric transportation solutions and the development of interconnected infrastructure for cities and entire regions. Don't miss any of these excellent events and please already reserve the dates in your calendar. More information and draft programmes will be available soon!