


# REFERENCES

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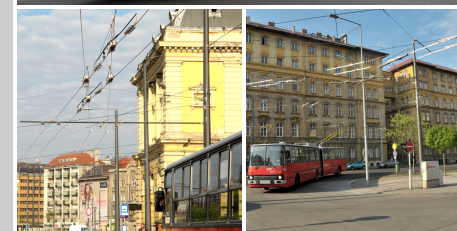


Selected Company References



**country**  Hungary  
**city** Budapest  
**period** 2014  
**scope** trolley-bus OCL  
**contractor** TEN-T (final client: BKV)

**description** Delivery of TBUS OCL material for trolleybus track e.g. cantilevers, section insulators, curve clamps, crossings, etc. We also supervised the assembly of tbus line.



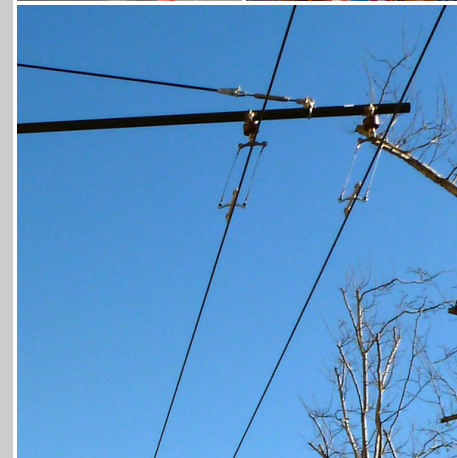
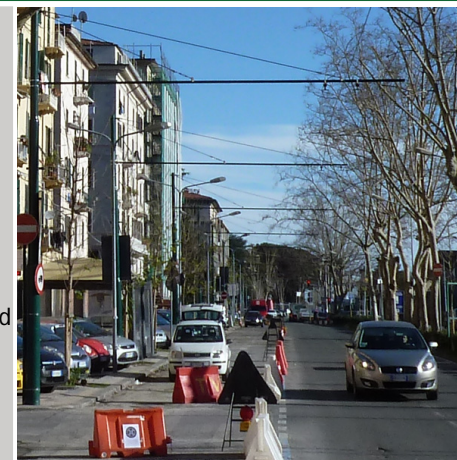
## Baross square project





**country**  Italy  
**city** La Spezia  
**period** 2014  
**scope** trolley-bus OCL  
**contractor** final client: ATC La Spezia

**description** Dismantle of current cantilevers and delivery and installation of new cantilevers incl. suspended OCL material for trolleybus track.



Viale Amendola



**country**  Czech Republic

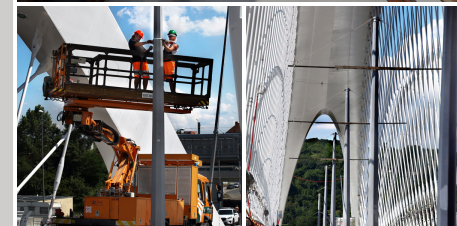
**city** Prague

**period** 2014

**scope** tramway OCL

**contractor** STRABAG a.s.

**description** We were responsible for delivery and installation of OCL poles as well as for delivery and assembly of overhead contact line on the bridge and at the surrounding area. We also made special preparation work for the priority of the tram vehicles.



Trojský most



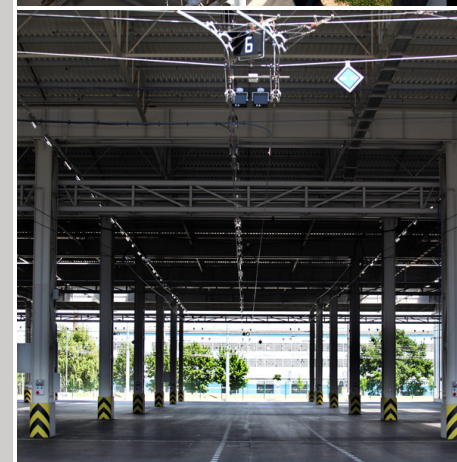


**country**  Czech Republic  
**city** Pilsen  
**period** 2013 - 2014  
**scope** trolley-bus OCL and signalling  
**contractor** Plzeňské městské dopravní podniky a.s.

**description** We carried out delivery and installation of overhead contact systems for new trolleybus depot, as well as delivery and installation of automatic system for switches operation (VETRA) including all related software and computer for dispatching room. The project include e.g.:

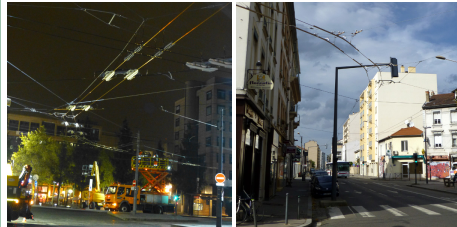
- 26 sets of electric switches
- 26 sets of mechanical switches
- 102 pcs of section insulators
- 44 pcs of disconnectors

"Our company was pleased and fully satisfied with quality level of executed works as well as with the professional team involved in this project. Taking into consideration the above mentioned we would like to recommend Elektroline a.s. as an excellent option for executing of the OCL systems work".



## New TBUS Depot





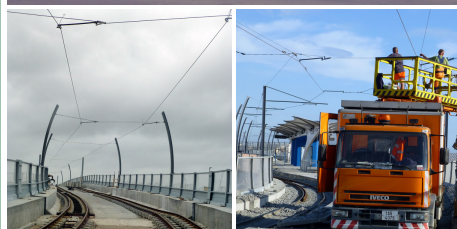
**country**  France  
**city** Lyon  
**period** 2012 - 2014  
**scope** trolley-bus OCL  
**contractor** Cegelec SAS Mobility Lyon (final client: SYTRAL)

**description** We partly delivered material for the track and completely assembly of tbus track C13 in Lyon.

Due to very high trafic and important lines and rotes in direction of Lyon airport in this part of Lyon whole track was totally assembled at night hours.



## Lyon TBus line C13



**country**



Italy

**city**

Cagliari

**period**

2011 - 2014

**scope**

tramway OCL

**contractor**

FABIANI SPA, Via Fra Galgario, 13, 24044  
Dalmine (BG)

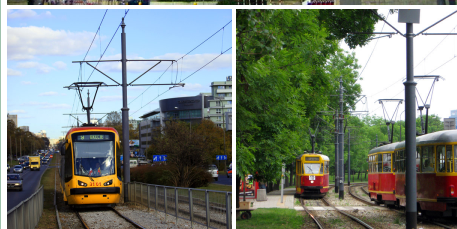
**description**

Delivery of material and assembly of new double track TRAM line which is placed on the 2km-long viaduct. We also made a connection with the substation and partly adjustment at nearby depot.



Metrocagliari, line 3 Gottardo -  
Policlinico





**country**  Poland  
**city** Warsaw  
**period** 1999 - 2014  
**scope** tramway OCL and signalling  
**contractor** KROMISS-BIS Sp. z o.o.

**description** Elektroline was responsible for delivery of TRAM OCL material and signaling components for the Warszawa city. We supplied especially following products:

- TMPK and TSC control systems (more than 200 pcs)
- signaling lamps
- sleeves and pole fastening
- supporting and tensioning equipment
- section insulators and OCL insulators
- GRP cantilevers and their components
- contact wire clamps
- tensioning mechanism and weights
- disconnectors
- suspensions and various OCL holders



## TRAM Warsaw Projects





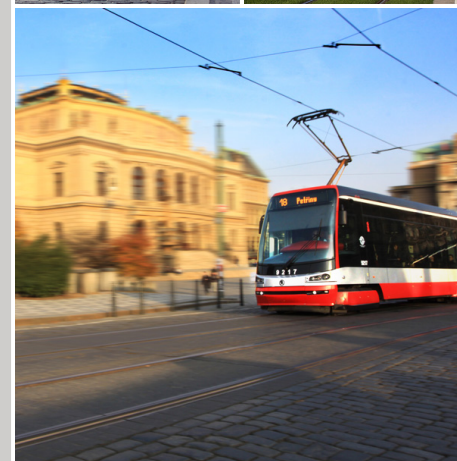
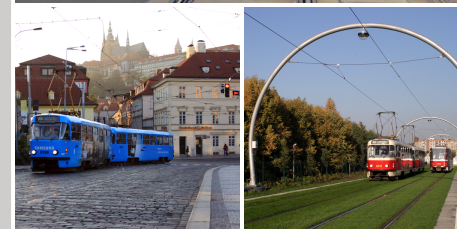
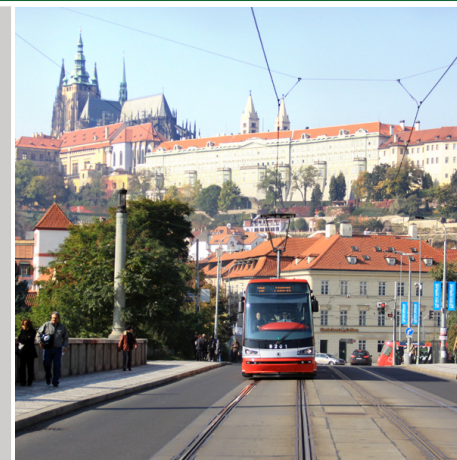
**country**  Czech Republic  
**city** Prague  
**period** 1992 - 2014  
**scope** tramway OCL and signalling  
**contractor** Dopravní podnik hl. m. Prahy

**description** More than 20 years cooperation (assembly & installations, material delivery and regular maintenance of our signaling devices, electro-revisions) with Prague Transport Authority. We have delivered and installed e.g.:  
**SIGNALING:**

- Automatic control system for switches (more than 220 pcs)
- Automatic heating system for switchpoints

**OCL SYSTEMS:**

- TRAM section insulators
- TRAM disconnectors
- GRP cantilevers
- Components for cantilevers
- contact wire clamps
- tensioning mechanism



General OCS & SIGNALING Delivery for  
Prague



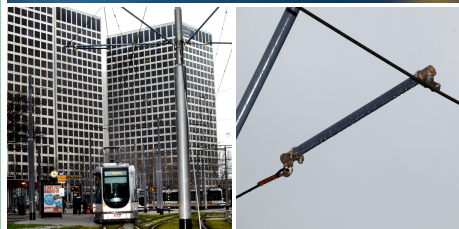
**country**  Czech Republic  
**city** Pilsen  
**period** 2013  
**scope** railway OCL  
**contractor** Edikt a.s. (final client: Škoda Transportation)

**description** Elektroline Inc. was responsible for designing, delivery and assembly of overhead contact line system (ARCAS-EL) incl. technology for detection and signalization of traction voltage level in contact line system in range of DC 0,6 - 4 kV, AC 15 kV 16 2/3 Hz, AC 25 kV 50 Hz.



Test Track





**country**  Netherlands  
**city** Rotterdam  
**period** 2013  
**scope** tramway OCL  
**contractor** StruktonRail commissioned by Gemeentewerken Rotterdam and Rotterdamse Elektrische Tram  
**description** Delivery of OCL material for tramway track.



## Renovation of Marconiplein





**country**  Australia

**city** Gold Coast

**period** 2012 - 2013

**scope** tramway OCL

**contractor** Balfour Beatty Rail Australia, Project manager: Mr. David McCulloch

**description** Delivery of the complete system of over head contact line material for 13km light rail track.



## Gold Coast Light Rail



**country**

 Poland

**city**

Poznań

**period**

2012 - 2013

**scope**

tramway signalling

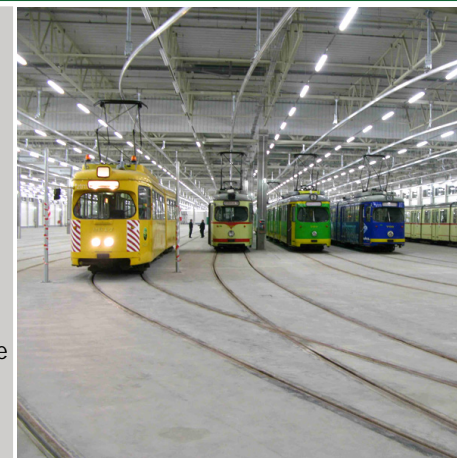
**contractor**

PSI Poznań (final contractor: MPK Poznań)

**description**

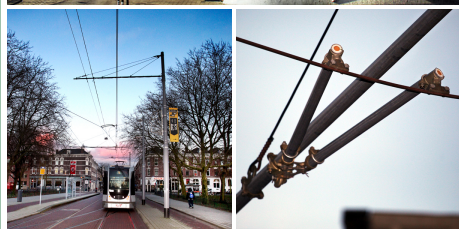
In this project we are/were responsible for these deliveries and installations:

- Automatic control system of depot
- software & visualization for movement of vehicles within the depot
- 42 pcs of electro-hydraulic point machines
- 39 pcs of mechanical point machines
- 95 pcs of resonant track circuits
- other material and equipment: tram detection elements, signaling lamps, etc.



Franowo Depot





**country**  Netherlands

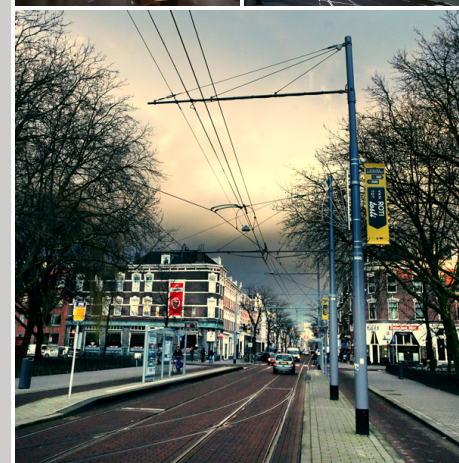
**city** Rotterdam

**period** 2012 - 2013

**scope** tramway OCL

**contractor** StruktonRail commissioned by Gemeentewerken Rotterdam and Rotterdamse Elektrische Tram

**description** Delivery of OCL material for tramway track and public lightning



## Revitalisatie Nieuwe Binnenweg





**country**

 Czech Republic

**city**

Pilsen

**period**

2011 - 2013

**scope**

railway OCL

**contractor**

Skanska Inc. (final client: Railway Infrastructure Administration, state organisation (RIA))

**description**

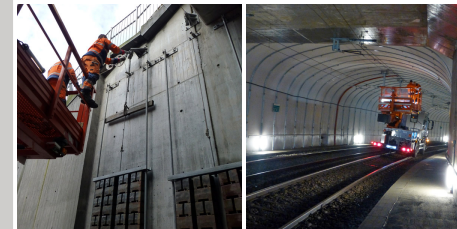
Elektroline Inc. was responsible for delivery and assembly of railway overhead contact line system (ARCAS-EL).



Passage through rail. junction Plzen in direction of the 3rd Transit Rail. corridor



**country**  Norway  
**city** Bergen  
**period** 2012  
**scope** tramway OCL  
**contractor** Bybanen AS  
  
**description** Delivery of OCL material and adjustment of 10 kms lightrailtrack. Especially reparation and contact wire stagger adjustment of lightrail track (10kms) in tunnel.



# OCL repair of lightrail track in Bergen

24/CEC/20





**country**  Belgium  
**city** Ghent  
**period** 2012  
**scope** tramway signalling  
**contractor** De Lijn Oost Vlaanderen

**description** Description of responsibilities:

- SIL3 signaling system for tramway level crossing
- SIL3/SIL2 resonant track circuits



## Ghent Langeveldend level crossing signaling system

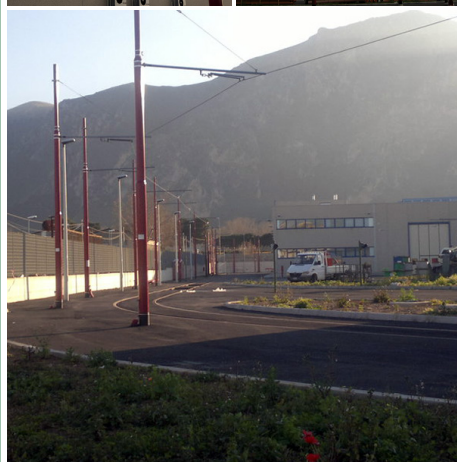


**country**  Sweden  
**city** Gothenburg  
**period** 2012  
**scope** tramway OCL  
**contractor** GS Sparvagn, Mr. Dennis Sköldborg  
**description** Delivery of OCL material for tram line.



## Gothenburg tram line





**country**



Italy

**city**

Palermo

**period**

2011 - 2012

**scope**

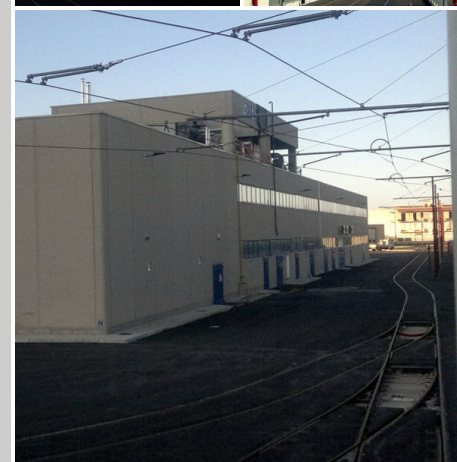
tramway OCL

**contractor**

Kiepe Electric (final client: EDS  
Infrastrutture SpA: Ing. Michele Ficano)

**description**

Delivery of the OCL material for new tram line  
and for two tram depots (Rocella depot,  
Leonardo depot).



New Palermo TRAM line



**country**  Bulgaria  
**city** Vidin  
**period** 2009 - 2012  
**scope** railway OCL  
**contractor** FCC Construcción S.A.

**description** Delivery and installation of electrical and OCL equipment including ARCAS system (15 km). Our main responsibility in the project is to build complete over-head contact line for rail traffic, illumination of railway stations & nearby road overpasses and traction substation 27,5 kV.

Danube Bridge and Adjoining Infrastructure Project is very significant rail-route construction in region of Eastern Europe. This bridge will become new transit connection between Bulgaria (Vidin) and Romania (Calafat). Until now it was not possible to cross the Danube River another way than by the ferry or hundreds kilometers far away bridges. It will be changed within several months. The importance of the bridge also consists in that matter it connects rail as well as road traffic. Our main responsibility in the project is to build complete over-head contact line for rail traffic, illumination of railway stations and traction substation 27,5 kV. We are very glad we can be part of such a project.



## Danube Bridge and Adjoining Infrastructure Project



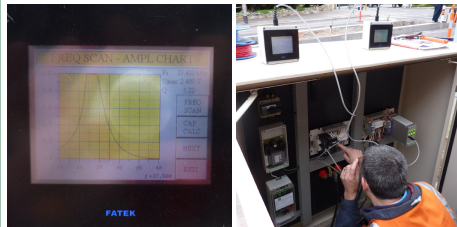


**country**  Italy  
**city** Cagliari  
**period** 2011  
**scope** tramway OCL  
**contractor** ARST spa

**description** Supply and assembly of OCL material for electrical traction, for extension of existing power supply line to other tracks where the trams pass, in the area of depot and maintenance workshop, situated inside the location of Operation Head Office of Metro Cagliari in Monserrato.



## Monserato Depot in Cagliari



**country**  Australia  
**city** Melbourne  
**period** 2011  
**scope** tramway signalling  
**contractor** Yarra Trams, contact person: Mr. Massoud Majidi

**description** Delivery and installation:

- Delivery of fail-safe track circuits BRC for detecting presence of a tram within tram stops
- Including GSM communication module for remote diagnostics of the system



## Melbourne, track circuits

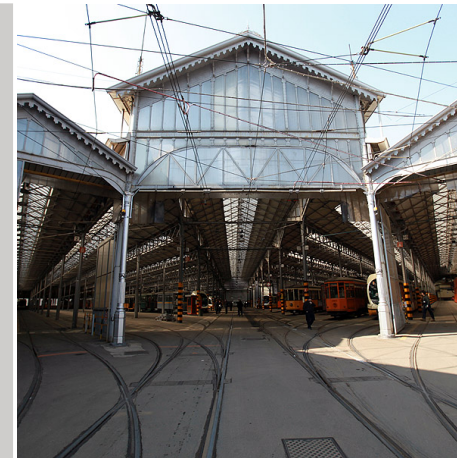




**country**  Italy  
**city** Milan  
**period** 2011  
**scope** tramway signalling  
**contractor** Azienda Transporti Milanesi S.p.A.

**description** Delivery and installation:

- Automatic control system of entrance to the depot
- Point machine (electro-hydraulic)
- Resonant track circuits BRC (SIL 2 safety assessed)



## Tram Depot Baggio



**country**  Germany  
**city** Weinheim  
**period** 2011  
**scope** tramway OCL  
**contractor** Rhein-Neckar-Verkehr GmbH

**description** Delivery of material for tram catenary track:

- GRP cantilevers
- components for cantilevers and other OCL material
- insulators



RNV- Linie 5 an der Bergstraße





**country**  Turkey

**city** Gaziantep

**period** 2010 - 2011

**scope** tramway signalling

**contractor** E+M Elektrik Sistem Hizmetleri Ltd. Sti;

**description** Delivery and installation of signaling systems and components:

- semi-automatic depot control system
- VETRA tram-to-way side communication system
- tram priority system
- point machines (electro-hydraulic and mechanical)



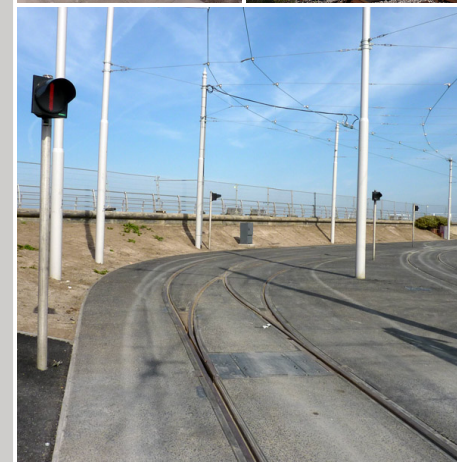
## Gaziantep Depot



**country**  Great Britain  
**city** Blackpool  
**period** 2009 - 2011  
**scope** tramway signalling  
**contractor** BAM Nuttall

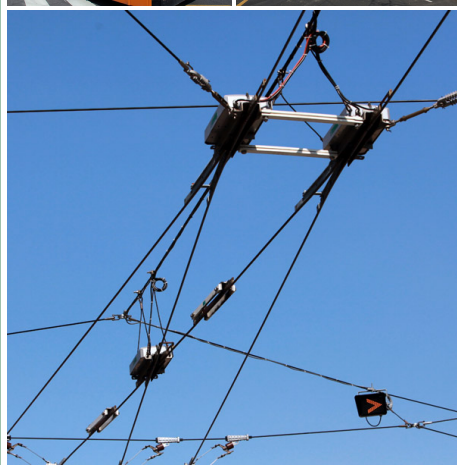
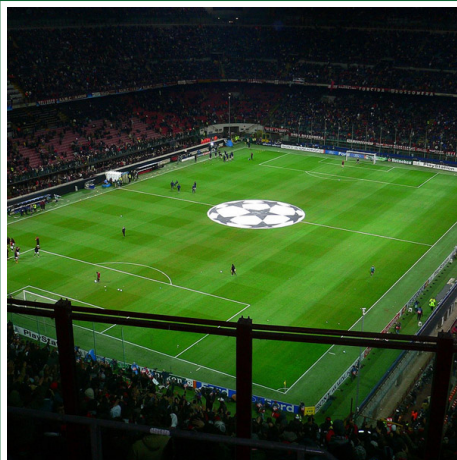
**description** Delivery and installation:

- Switch point control systems TSC (SIL 3)
- Point machines (electro-hydraulic and mechanical)
- Radio communication system (VETRA communication)
- Preference of trams at junctions (VETRA communication)



## Blackpool and Fleetwood tramway reconstruction





**country**



Italy

**city**

Milan

**period**

2010

**scope**

trolley-bus OCL

**contractor**

ATM Milano - Azienda Trasporti Milanesi

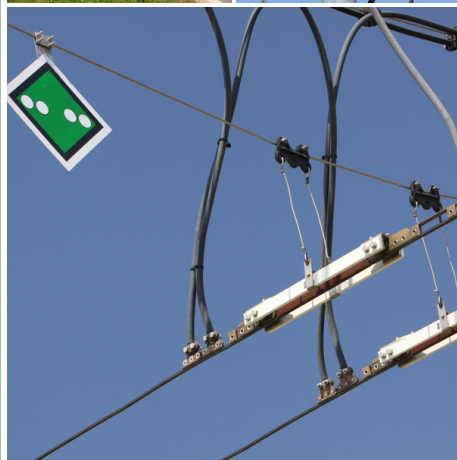
**description**

Delivery and assembly of TBUSxTRAM crossings and OCL and OCL material and of TBUS electrical (2 sets) and mechanical switches (2 sets) - Piazza Bottini



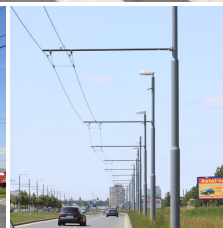
Piazza Bottini





**country**  Czech Republic  
**city** Plzeň  
**period** 2009 - 2010  
**scope** trolley-bus OCL  
**contractor** Plzeňské městské dopravní podniky, a.s.

- description**
- delivery and assembly of complete electrical TBUS switches (6 sets) including automatic control system - VETRA
  - delivery and assembly of complete mechanical TBUS switches (5 sets)
  - delivery and installation of 3 sets of TBUS x TBUS crossings
  - other OCL material



Borská pole





**country**  Austria  
**city** Salzburg  
**period** 2009  
**scope** trolley-bus OCL  
**contractor** SLB Salzburger Lokalbahn

**description** Delivery and installation:

- Delivery of electrical and mechanical switches for trolley-bus track
- Delivery of TBUS x TRAIN crossing where the vehicles can passage through with current in both ways (both trolley-bus as well as train)



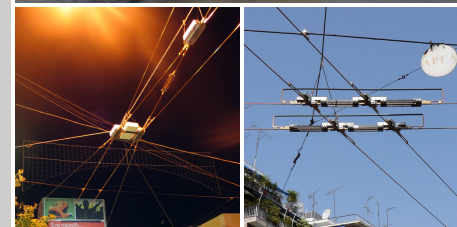
Salzburg



**country**  Greece  
**city** Athens  
**period** 2008 - 2009  
**scope** trolley-bus OCL and signalling  
**contractor** ELPAP

**description** Deliveries and supervising of components and technologies for trolley-bus track, namely:

- VETRA system - intelligent automatic setting of vehicle's itinerary while passing the city (vehicle's itinerary is automatically performed until terminus arrival)
- 50 complete sets of electrical switches
- 60 complete sets of mechanical switches
- 60 complete sets of tbus crossings
- on board equipment of 366 vehicles by VETRA system
- other OCL and fitting material



Athens - tbus VETRA system