

## **Fiber Optics in Trains**

**Project References** 



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#### Australia



H) HUBER+SUHNER



# Railcorp fleet for Sydney suburb built by Downer EDI Rail

78 trains - 624 vehicles - New built

1st train in service: July 2011

Intercar jumper type: rectangular Harting



**Scope of Supply**: Fiber optics backbone for on board video surveillance system.

- Coach Harnesses
- Intervehicle (Jumper) cables

## Czech Republik



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#### RegioJet

40 vehicles - Retrofit

1<sup>st</sup> retro train in service: expected 2013

Intercar Jumper type: circular Souriau MIL-DTL-38999 *Elio* 

Scope of Supply: Fiber optics backbone for on board video surveillance system.

- Coach Harnesses
- Intervehicle (Jumper) cables

#### Norway



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Flytoget Airport Express Oslo 16 trains – 64 vehicles – Retrofit 1<sup>st</sup> retro train in service: planned summer 2013 Intercar jumper type: feed-through with ODC fan-outs

Scope of Supply: Fiber optics backbone for on board video surveillance system.

- Coach Harnesses
- Intervehicle (Jumper) cables

#### Poland



#### SIEMENS

Metro of Warsaw Line 2 35 trains – 210 vehicles – New built 1st train in service: expected Q3/13 Intercar jumper type: rectangular Harting

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**Scope of Supply**: Fiber optics backbone for passenger information and entertainment system

- Intervehicle jumpers
- Vehicle harnesses

#### Sweden



#### BOMBARDIER



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Bombardier X55 high speed trains for Swedish state railway, SJ AB

20 trains - 80 vehicles - New built

1st train service: Feb 2012

Intercar jumper type: feed-through with Q-ODC fan-outs

**Scope of Supply**: Fiber optics backbone for in- train internet, infotainment system (video on demand) and video surveillance.

- Coach Harnesses
- Intervehicle (Jumper) cables

### Spain



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## CAF 900 Series. New fleet for Spanish operator EUSKOTREN

30 trains - 120 vehicles - New built

1<sup>st</sup> train in service: Feb 2011

Intercar jumper type: feed-through with Q-ODC fan-outs

**Scope of Supply**: Fiber optics backbone for in- train Passenger Information and video surveillance systems

- Coach Harnesses
- Intervehicle (Jumper) cables

### Spain





Metro of Recife (Brazil) 15 trains – 60 vehicles – New built 1<sup>st</sup> train in service: 2012 Intercar jumper type: feed-through with Q-ODC fan-outs

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**Scope of Supply**: Fiber optics backbone for passenger information and entertainment system

- Intervehicle jumpers
- Vehicle harnesses

### Switzerland



#### BOMBARDIER ALSTOM

## ICN trains for Swiss operator SBB

44 trains – 308 vehicles – New built

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1<sup>st</sup> train in service: 1999

Intercar jumper type: circular Souriau 8038-series

Scope of Supply: Fiber optics cables for MVB network

- Intervehicle cables
- Vehicle cables

## UK





#### **Heathrow Express**

14 trains - 61 vehicles - Retrofit

1st retro train in service: June '12

Intercar jumper type: feed-through with Q-ODC fan-outs

**Scope of Supply**: Fiber optics backbone for passenger information and entertainment system

- Intervehicle jumpers
- Vehicle harnesses



## UK



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#### London Underground

191 trains – 1395 vehicles – New built & retrofit

1<sup>st</sup> train in service with new ATC: expected 2017

Intercar jumper type: circular Souriau MIL-DTL-38999 *Elio* 

Scope of Supply: Fiber optics backbone for CBTC (train control system) train bus

BOMBARDIER

- Intervehicle jumpers
- Vehicle harnesses

#### South Africa



TRANSNE

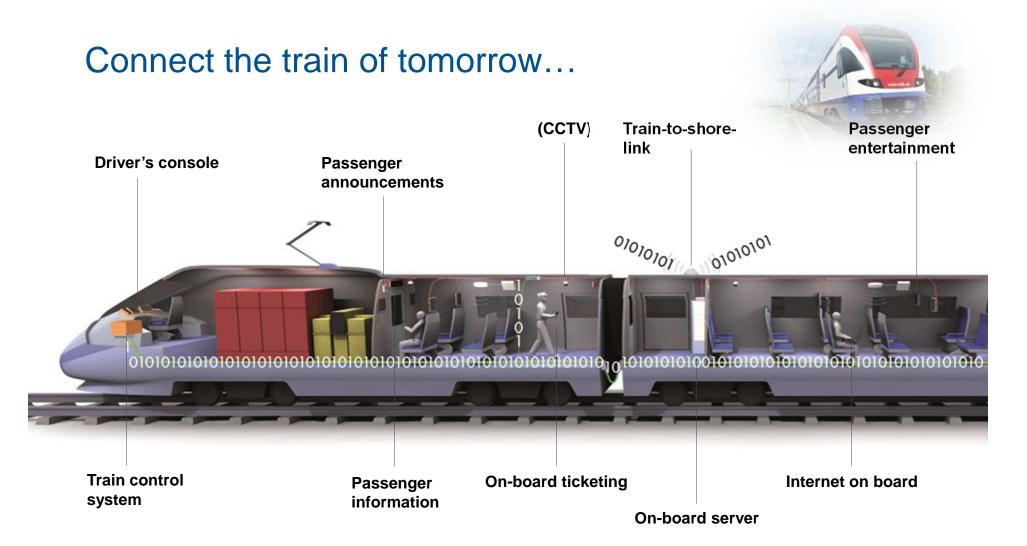
Phelophepa «Health Care Train» 1 train – 18 vehicles – Retrofit Retro train in service since 2012 Intercar jumper type: rectangular Harting

Scope of Supply: Fiber optics backbone for medical equipment and devices

- Vehicle harnesses
- Intervehicle jumpers







## Thank you for your attention



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