For more than forty years, ICE has equipped railway substations with selective and reliable relays and all over the world.

Nowadays, most of the High Speed Trains substations are monitored by ours systems.

The required functions to the control of the electrical supply network railway are mainly:

- Detection of short-circuits by a distance relay in AC network or di/dt relay for DC supply
- Protection of the traction transformer, with an additional differential protection if required
- Fault location
- Various operation functions such as monitoring of the supply voltage

PDZI800 and PDZIN1 gather all the useful functions to protect and exploit safely and securely a catenary.

PGTN1 is a traction transformer protection including a catenary back-up relay.

NPDT620 and NPDT630 are designed to provide fast and selective protection of 2 and 3-winding transformers, of all types, including Scott and auto-transformers.

LDN2 calculates the location of a fault detected by any separate protection relay, on feeders either on any conventional network or equipped with auto-transformers.

DPR800, detector of power swing, is dedicated to AC network. It analyzes the evolution of the substation current and voltage and detects any pulsation characteristic of a power swing.

DDL800 ensures monitoring of the railway catenaries and feeders on DC networks. It is dedicated either to the Tram or Railway applications.

In 2007, the French TGV hit the world record at 574.8 km/h under monitoring of the above products.
Some references

FRANCE

SNCF – French National Railways

ITALY

TAV SpA - Treno Alta Velocità

KOREA

KHSR (former KHRC) - Korea High Speed Rail
KNR - Korean National Railroad
KRNA – Korea Rail Network Authority

ENGLAND

CTRL – Channel Tunnel Rail Link
LTE – London Transport Executive

LUXEMBOURG

CFL – National Railway Company of Luxembourg

BELGIUM

SNCB - National Railway Company of Belgium
Infrabel - Infrastructure Company for Belgian railway
STIB - Brussels Intercommunal Transport Company

PORTUGAL

REFER – Rede Ferroviaria Nacional
Metropolitano de Lisboa - Metro of Lisbon

SPAIN

RENFIE – Red Nacional de los Ferrocarriles Españoles

MOROCCO

ONCF - National Office for Railways of Morocco