



BTW

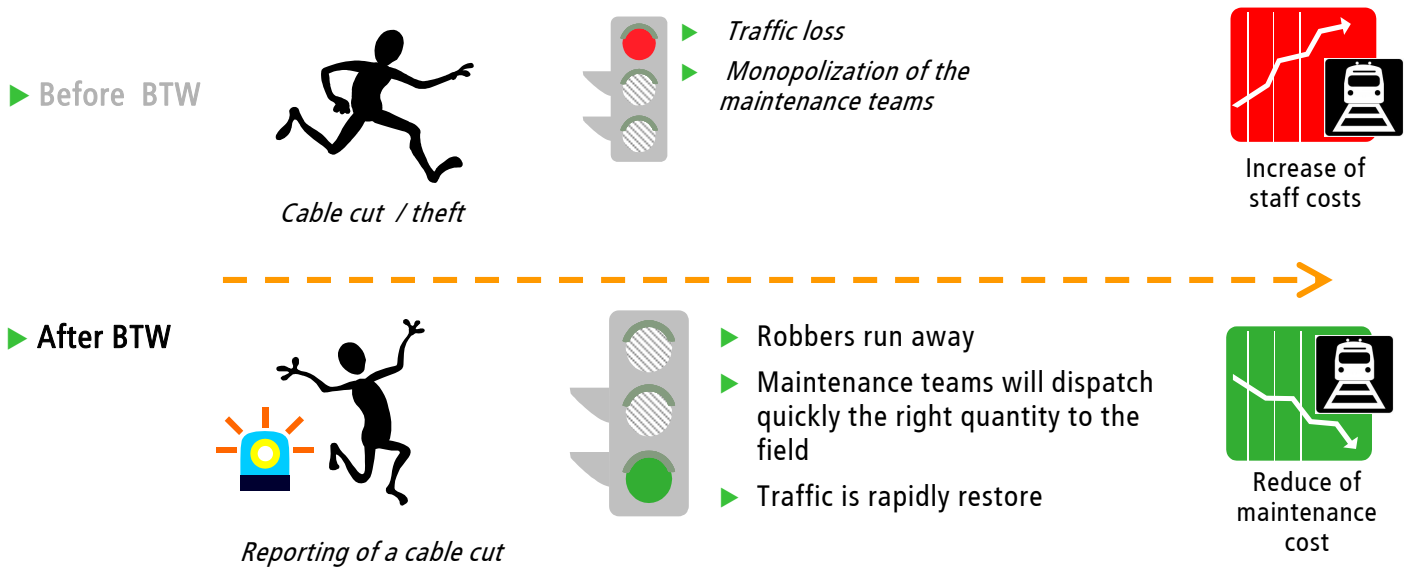
Automatic Break Transmission in electrical Wire system

 System to detect cable theft and cable cutting

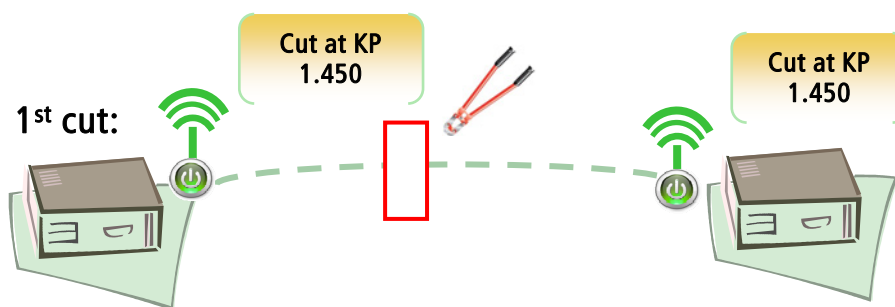
BTW

Automatic Break Transmission in electrical Wire system

BTW is a real time monitoring system able to detect and localize in real time a cable cut.

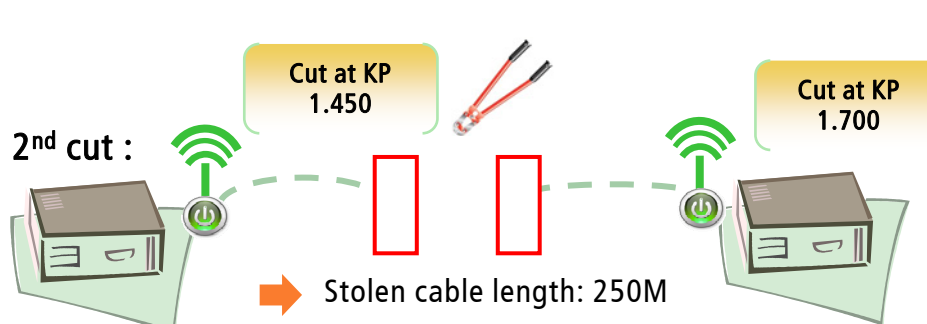


The BTW is a patented system



One sensor is placed at each end of the cable along the railway to allow having a redundancy immediately after the first cut.

The monitoring acquisition module will send an alarm to the central BTW server.



The second cut will confirm the localization of the incident and given the length of stolen cable. The maintenance team will know at the same time the localization of the incident and the right quantity of cable they have to dispatch to repair.

BTW is a global cable protection system

Avoid traffic loss by restoring quickly the railway traffic :

- ▶ Detect and transmit in real time the cable cut
- ▶ Capability to immediately localize the cable cut and the missing cable length
- ▶ Allows maintenance teams to dispatch immediately the right quantity to the field
- ▶ Significant costs reduction

Preventive effect :

- ▶ Security teams are alerted in real time
- ▶ Possibility to install alarms along the rail track
- ▶ Alert police immediately



SPECIFICATIONS

- ▶ **Reliable :** Sensors used in aircraft industry
- ▶ **Accurate :** +/- 50 m
- ▶ **High performance :** Alerts transmitted in real time via mobile network (GSM) or wired (IP)
- ▶ **Flexible :** Work on copper or aluminum cable



- ▶ **Not vulnerable :** Redundancy and monitoring of sensors whatever the network typology
- ▶ **Customizable :** Interfaces can be parameterized for integration with monitoring system
- ▶ **Upgradeable system :** We are working to improve the product continually
- ▶ **Easy to install :** Devices are installed in the technical area of existing infrastructures
Only a single pair of wires is needed

BTW

BTW is a global cable protection system to fight cable theft and its consequences.

The system localizes remotely the cable cut and the missing cable length. The traffic is rapidly restored and the police is immediately informed.

TYPE OF CABLE	BTW SOLUTION	THEFT CONSEQUENCES	
Signalling	Existing cables ✓✓	+++	Traffic interruption Cost of cable replacement
Power	Existing cables (<500V) ✓✓	+++	Traffic interruption Cost of cable replacement
Earthwire loop	Cable adaptation needed ✓	+	Safety of people and property Cost of cable replacement
Trackfeeder	Cable adaptation needed ✓	+	Performance, safety of people and property Cost of cable replacement
Catenary	✗	-	Few thefts



IN BRIEF ...

- ▶ Fast reaction in case of cable cutting
- ▶ Remote monitoring
- ▶ Precise location of cable cutting
- ▶ Length of stolen cable
- ▶ Wired or GSM/GSM-R communication network
- ▶ Can be integrated in global monitoring system