

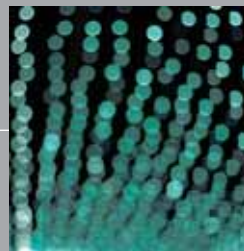
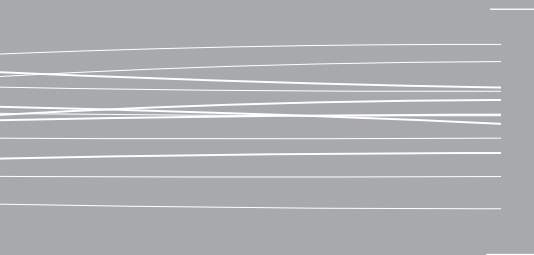


TELEGRA

SMART TRAFFIC MANAGEMENT

COMPLETE INTEGRATION OF ADVANCED TRAFFIC MANAGEMENT SYSTEM

TELEGRA'S CORE SUBSYSTEMS AND PRODUCTS



INTEGRATION – COMPARATIVE ADVANTAGES AND CONCEPTS

- One Stop Shop
- Full range of products and integration services
- Over 30 large systems in operation worldwide
- Expertise in hardware, software and system design
- Own core TMS products
- Integration and delivery of third party products and subsystems
- Services from design to installations and long term maintenance

TELEGRA'S OWN COMPONENTS INCLUDED IN ATMS DELIVERY



Designs

- Traffic technology designs, including OMC centre designs
- Telecommunication infrastructure designs
- Communication network designs
- Power supply designs
- Complete project documentation (preliminary, execution, as built)

Core hardware products

- LED displays and variable message signs
- Electromechanical (prism) variable message signs
- Roadside controllers
- Emergency roadside telephone systems

Core software products

- topXview™ Traffic Management SCADA Suite
- Various interfaces to third party equipment
- Design, testing and documenting of software interfaces and protocols

Cable Infrastructure & Network Design

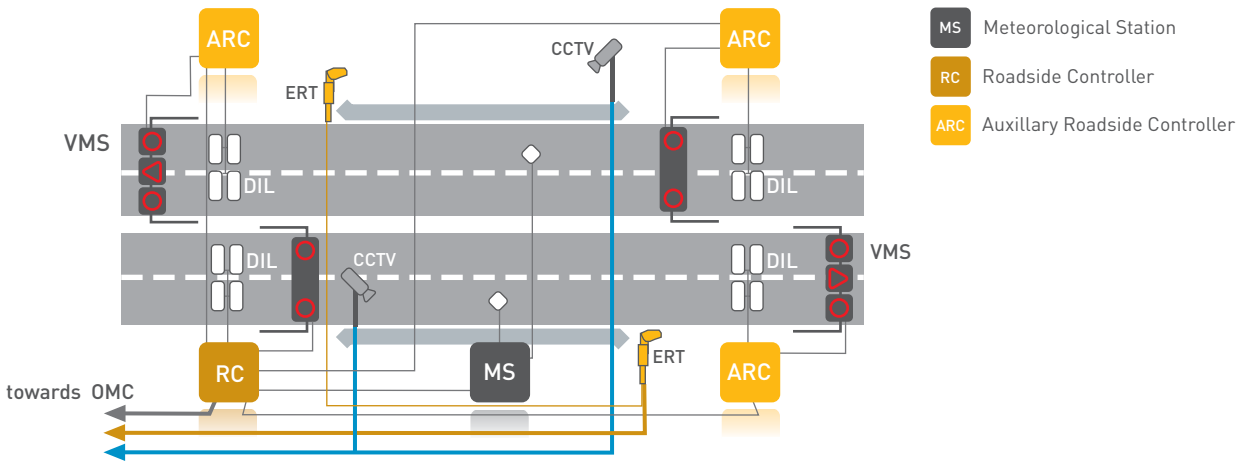
- Experienced in design, installation, testing and documentation of cable networks

Training & education of Operator's personnel

FIELD INTEGRATION OF HIGHWAY AND TUNNEL ELEMENTS

Field integration of highway elements

- Displays & Variable Message Signs
- Roadside Controllers (and their cabinets)
- CCTV & AID
- Traffic Counting & Classification (loop, piezzo and non intrusive)
- Meteorological stations and surface sensors
- Emergency roadside telephones
- Infrastructure & network (transmission equipment)



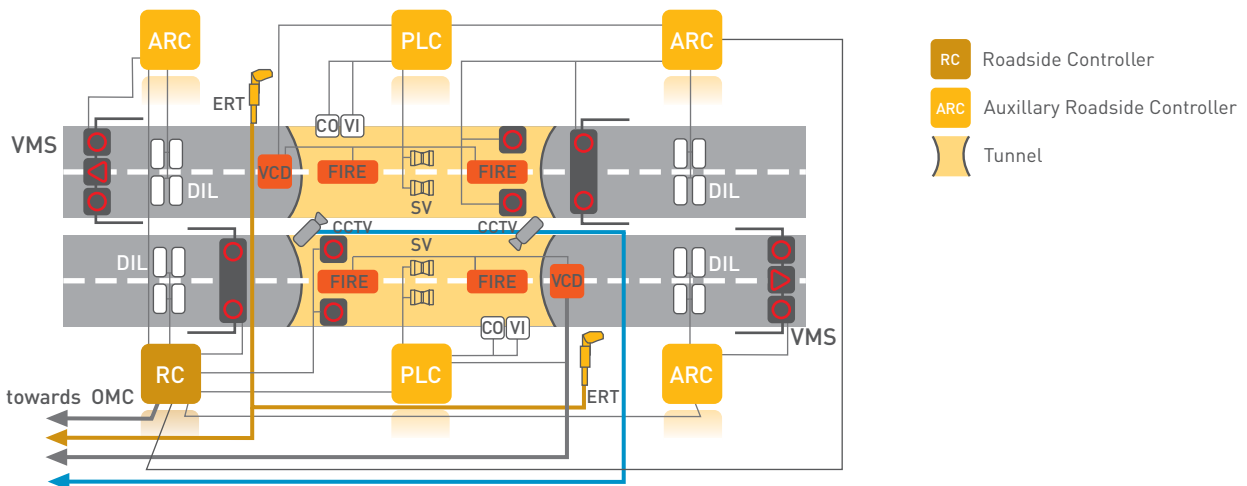
Field integration of Tunnel elements:

Roadside like systems

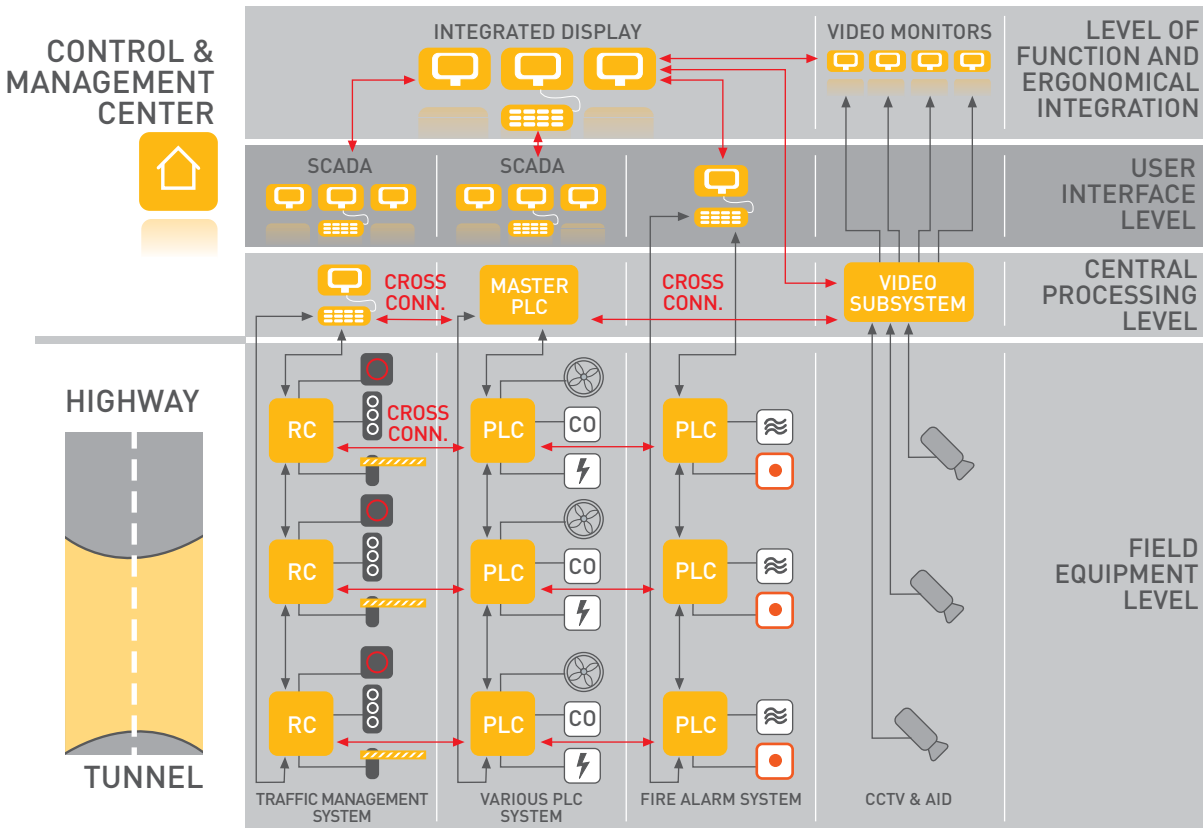
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Tunnel specific

- PLC subsystem – ventilation
- PLC subsystem – lighting
- Fire announcement
- CO and other air quality measurement
- Visibility measurements
- Public Announcement (PA) subsystem
- Radio rebroadcasting services
- Water pumps...

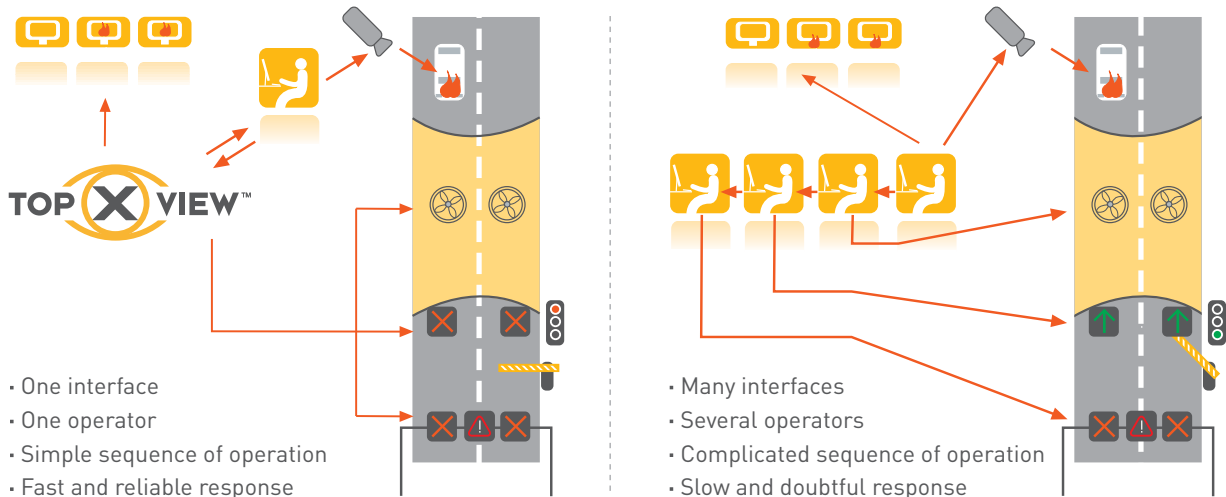


INTEGRATION OF HIGHWAY AND TUNNEL SUBSYSTEMS



VISUALISATION OF TRUE INTEGRATION CONCEPT

Telega's Single Workplace [Operator] Concept VS Traditional Multi Workplace [Operator] Concept

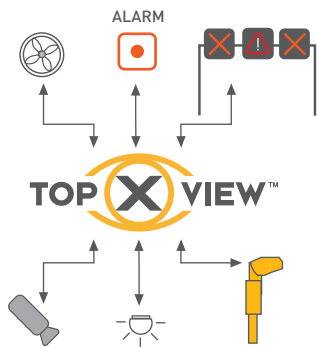


- One interface
- One operator
- Simple sequence of operation
- Fast and reliable response

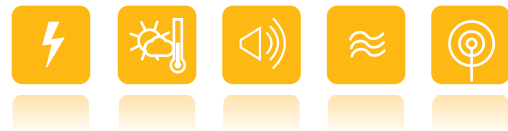
- Many interfaces
- Several operators
- Complicated sequence of operation
- Slow and doubtful response

TRUE INTEGRATION CONCEPT

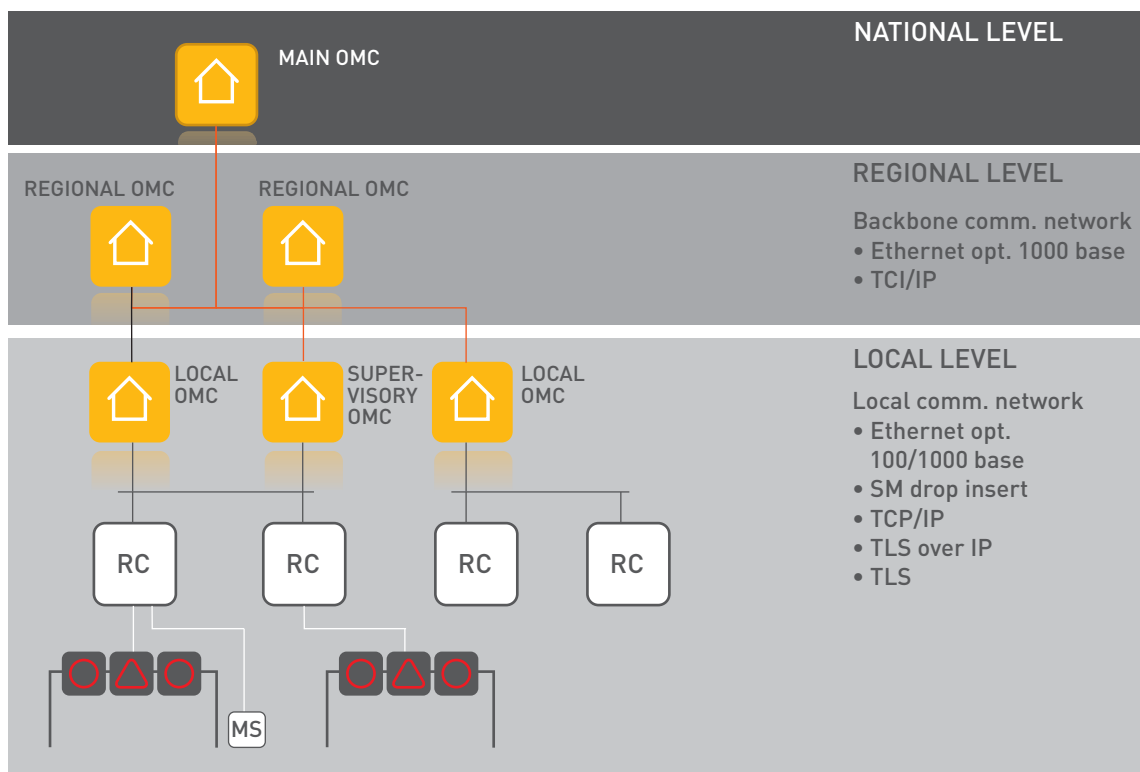
All systems monitored and controlled from a single workplace
 Any event (alarm) influences all systems
 – not only specific subsystem.



Flexibility to expand and add other systems in the future



Hierarchical concept – ability to plan national systems



European
Certificate of
Conformity



Quality System According to
EN ISO 9001:2000
Certificate Registration
No. 04 100 20021575



Member of:



GRAA award:



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