



TELEGRA

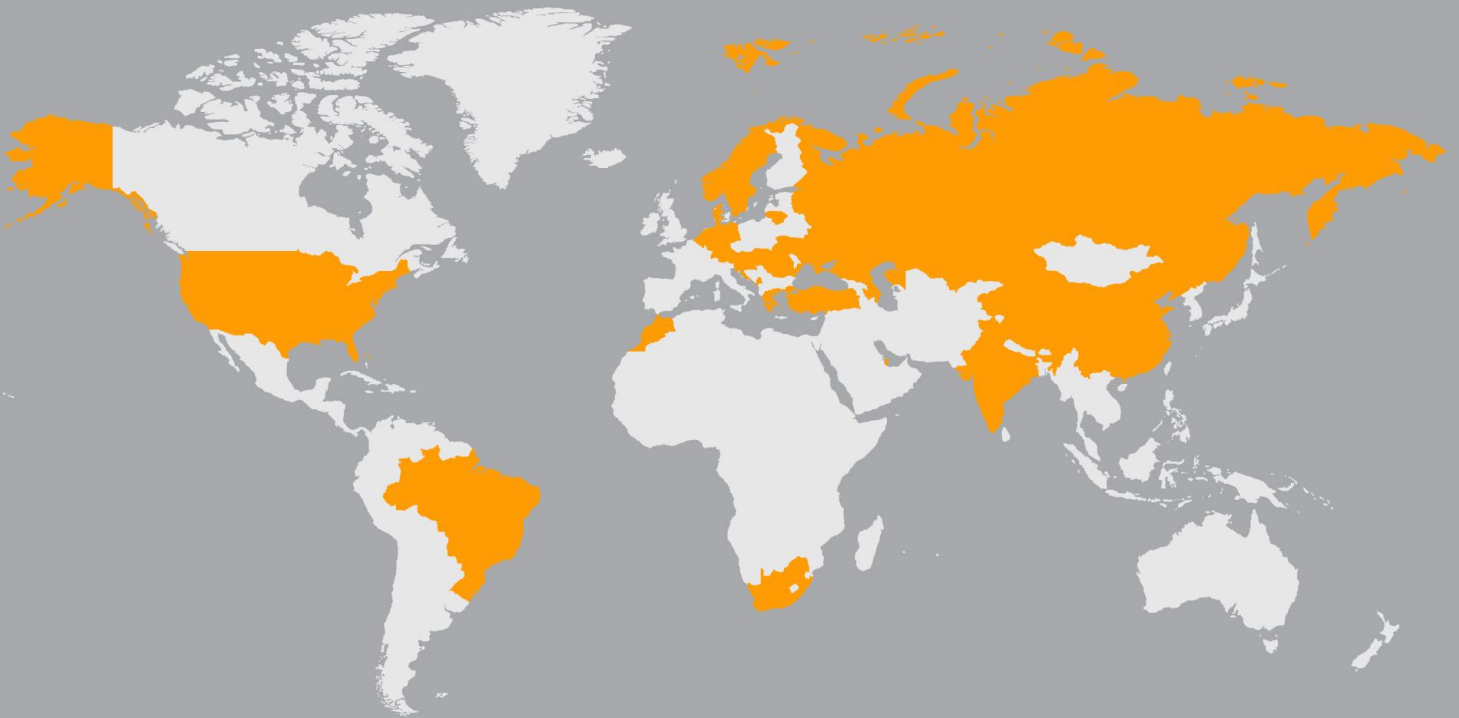
SMART TRAFFIC MANAGEMENT

R

REFERENCES

EQUIPMENT & SOFTWARE APPLICATIONS
FOR HIGHWAYS AND TUNNELS

R E F E R E N C E S



REFERENCES IN HIGHWAY AND TUNNEL PROJECTS

This is the summary of selected references of equipment and installations produced and delivered by Telegra d.o.o.

Issued: December 2009.

Country:	USA
Client:	Telegra INC
Project:	Washington DOT ATMS Design Build Project
Year:	2009.

Equipment	Quantity
Lane Control Sign, Front Access	222
Side-mounted Message sign, Front Access	55
Small Variable Message sign, Walk-in	21
Large Variable Message sign, Walk-in	4

Country:	Greece
Client:	New Alert ICT Systems
Project:	ERT & TMU for Aegean Motorways
Year:	2009.

Equipment	Quantity
GSM Emergency Road Telephone Sets (phone, solar panel, mechanical set)	220
Roadside Controlers	26
Traffic Detectors	208

Country:	Denmark
Client:	TTS
Project:	64 RW Displays
Year:	2009.

Equipment	Quantity
Red/White displays	64

Country:	Turkey
Client:	Ultra
Project:	40 RGB displays for IBB
Year:	2009.

Equipment	Quantity
RGB Displays	40

Country:	Ukraine
Client:	ALPO Holding
Project:	Kiev Ring Road
Year:	2008.

Equipment	Quantity
Display 2xRGB + full matrix text sign	152
Variable Message Signs	29
Programmable Text display	24
Roadside Controllers	93
Surveillance Camera	93
Overhead detectors	333
Road Weather Stations	4

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Turkey
Client:	Ultra Teknoloji A.S.
Project:	Istanbul - Kagithane-Piyalepasa and Bomonti-Dolmabahçe Tunnels Project
Year:	2008.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
Speed limit sign	32
Lane control sign	48
RGB Display	8
Yellow Display	16
Roadside Outstation - tunnel version	8
Roadside Outstation, outdoor version,	16
Roadside Outstation Upgrade for Traffic Counter	16
Overhead detectors	9
Emergency Road Telephones - Optical Version	8
Emergency Road Telephones in Tunnel - Optical Version	50
Road Weather Stations	(3)

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Hungary
Client:	SAGEM Magyarország Elektronikai Kft.
Project:	M0 Northern section
Year:	2008.

Equipment	Quantity
RGB Display	239
Full Matrix Yellow Text Display	51
Combined RGB and Yellow Text Display	6

Country:	Azerbaijan
Client:	Betamont
Project:	Signs for Baku – Airport motorway
Year:	2008.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
RGB Display	44
Roadside Outstation	9
Road Weather Stations	1
Surveillance Camera	18

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	India
Client:	L&T for Highway Authority of India
Project:	Highway sections TN3 and TN5
Year:	2008.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
Full Matrix Yellow Display	20
Roadside Outstation	14
Road Weather Stations	3
Surveillance Camera	18
ERT Set	48

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Slovenia
Client:	Tenzor, Slovenia
Project:	Golo Rebro and Pletovarje Tunnels
Year:	2008.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	32
Roadside Outstation	8
Inner Illumination Signs	56
Emergency Road Telephones in Tunnel - Optical Version	28

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Austria
Client:	PKE Verkerstechnik GmbH for ASFiNAG, Austria
Project:	Achrain Tunnel
Year:	2008.

Equipment	Quantity
Fully-programmable Full colour Display	2
LED Variable Message Signs	62
Road Outstations	5
Inner Illumination Signs	115

Country:	India
Client:	L&T for Highway Authority of India
Project:	5 Highway Sections
Year:	2007.- 2008.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
Fully-programmable Displays – gantry mounted	26
Fully programmable Displays – Trailer Mounted	4
Traffic Counting Stations	8
Emergency Road Telephones - Optical Version	138
Road Weather Stations	(8)
Surveillance Camera	(33)

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™

– traffic management SCADA.

Country:	Ukraine
Client:	SIAT o.o.o for Ukrainian Transport Authority
Project:	Highway Harkov: Section Kiev - Borispol
Year:	2006.-2007.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
Fully-programmable Full colour Display	81
Fully programmable Text Displays	37
Road Outstations (TLS Version 2002)	19
Road Weather Stations	(2)
Overhead detectors	(101)
Surveillance Camera	(20)

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™
– traffic management SCADA.

Country:	Denmark
Client:	TTS, Denmark
Project:	Portable LED Displays with GPS modules
Year:	2007.

Equipment	Quantity
LED Portable Display – with GPS module Type 1	4
LED Portable Display – with GPS module Type 2	23
LED Portable Display – with GPS module Type 3	4
LED Portable Display – with GPS module Type 4	5

Country:	Greece
Client:	NewAlert ICT Systems
Project:	Kamena Vourla Project
Year:	2007.

Equipment	Quantity
Lane Control Signs	48
Variable Speed Limit Signs	33
Variable Message Signs	3

Country:	Austria
Client:	PKE Verkherstechnik GmbH for ASFINAG, Austria
Project:	A10 Tauern Autobahn
Year:	2007.

Equipment	Quantity
Fully-programmable Full colour Display	4
Text + RGB Display	4
Road Outstations - various (EAK, SST (TLS Version 2002))	63

Country:	Greece
Client:	NewAlert ICT Systems
Project:	Ak Araxthou - Ak Metsobou Project
Year:	2007 - 2008.

Equipment	Quantity
Lane Control Signs	123
Variable Speed Limit Sign (VSLS)	35

Country:	Netherlands
Client:	Ko-Hartog
Project:	14 Displays Project
Year:	2007 - 2008.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
Fully-programmable Full matrix Displays	14

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Austria
Client:	PKE Verkerstechnik GmbH for ASFINAG, Austria
Project:	Highway A4 Ostautobahn: Section VBA Wien/NÖ
Year:	2006 - 2007.

Equipment	Quantity
Fully-programmable Full colour Display	1
LED Variable Message Signs	93
Road Outstations (TLS Version 2002)	25

Country:	Slovakia
Client:	Betamont
Project:	Hybe - Važec Project
Year:	2006/2007.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
Roadside Outstations	18

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Netherlands
Client:	Ko-Hartog
Project:	37 Speed displays
Year:	2006 - 2007.

Equipment	Quantity
Speed Displays	37

DOMESTIC PROJECTS

Country:	Croatia
Client:	Elmap d.o.o.
Project:	Highway Zagreb – Split - Dubrovnik: section Šestanovac – Zagvozd - Ravča
Year:	2008.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	36
Information displays	2
Road Outstations	9
Road Outstation equipped as Traffic Counter	9
Emergency Road Telephones - Optical Version	40
Road Weather Stations	(5)

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Croatia
Client:	HAC d.o.o.
Project:	Centralized Traffic Counting System
Year:	2008.

Equipment	Quantity
Traffic Counters	4
Overhead detection counters	(8)
Software with GUI for Centralized Traffic Counting System	1

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Rijeka- Zagreb; Section: Kikovica - Oštrovica – Vrata – Delnice – Kupjak – Stara Sušica
Year:	2008.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	233
Lane control Signs	136
LED Displays	7
Traffic Counters	59
Roadside Outstation	68
Road Weather Stations	(3)
Inner Illumination Signs	372

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Croatia
Client:	HAC d.o.o.
Project:	Highway A4; Section: Ivanja Reka -Goričan
Year:	2008.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	93
Road Outstations	33
Road Outstations equipped as Traffic Counters	10
Road Weather Stations	(4)

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Junction Rugvica
Year:	2008.

Equipment	Quantity
LED Variable Message Signs	12
Road Outstations	3
Road Outstations equipped as Traffic Counters	1
Road Weather Stations	1

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway A5: Section Đakovo - Sredanci
Year:	2007.

Equipment	Quantity
LED Variable Message Signs	30
Roadside Outstations	7
Roadside Outstations equipped as traffic counter	13
Emergency Road Telephones - Optical Version	24
Central ERT Control Station	1
Road Weather Stations	(3)

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Zagreb - Sisak; Section: Jakuševac – Velika Gorica
Year:	2007.

Equipment	Quantity
LED Variable Message Signs	3
Road Outstations	3
Roadside Outstations equipped as traffic counter	7

Country:	Croatia
Client:	HAC d.o.o.
Project:	Highway Zagreb – Split; Info-Displays project
Year:	2007.

Equipment	Quantity
Information Displays	5
Road Outstations (TLS Version 2002)	5

Country:	Croatia
Client:	BINA Istra d.d.
Project:	Tunnel Učka; ERT Tunnel project
Year:	2007.

Equipment	Quantity
ERT Central Unit	1
Emergency Road Telephones in Tunnel - Optical Version	74
Software + GUI for ERT monitoring	1

Country:	Croatia
Client:	Granit d.o.o.
Project:	Highway Bregana- Zagreb – Lipovac; Junction Križ
Year:	2007.

Equipment	Quantity
LED Variable Message Signs	26
Road Outstations (TLS Version 2002)	3
Roadside Outstations equipped as traffic counter	3
CCTV Camera	(3)
Road Weather Stations	(1)

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Tunnel Veliki Gložac
Year:	2007.

Equipment	Quantity
LED Variable Message Signs	33
Road Outstations (TLS Version 2002)	10
Inner Illumination Signs	97
CCTV kamera	(20)

Country:	Croatia
Client:	HAC d.o.o.
Project:	Junction Kosnica
Year:	2007.

Equipment	Quantity
LED Variable Message Signs	24
Road Outstations (TLS Version 2002)	13
CCTV Cameras	(6)
Road Weather Stations	(1)

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Tunnel Čardak
Year:	2007.

Equipment	Quantity
LED Variable Message Signs	19
Road Outstations (TLS Version 2002)	4

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Zagreb – Split - Dubrovnik: section Dugopolje – Bisko - Šestanovac
Year:	2007.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	130
Road Outstations (TLS Version 2002)	27
Emergency Road Telephones in Tunnel	4
Emergency Road Telephones	52
Road Weather Stations	5
Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.	

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Zagreb – Split; Maslenica Bridge
Year:	2007.

Equipment	Quantity
LED Variable Message Signs	2
Road Outstations (TLS Version 2002)	2
Electromechanical Prism Technology Variable Message Signs	2

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Motorway Solin – Klis - Sinj D1: Dračevac - Majdan
Year:	2006.

Equipment	Quantity
LED Variable Message Signs	27
Road Outstations (TLS Version 2002)	8
Electromechanical Prism Technology Variable Message Signs	61
Emergency Road Telephones - Optical Version	2
Emergency Road Telephones in Tunnel - Optical Version	4

Country:	Croatia
Client:	Dalekovod d.d. for HC d.o.o.
Project:	State road D8
Year:	2006.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	104
Road Outstations (TLS Version 2002)	15
Electromechanical Prism Technology Variable Message Signs	61
Emergency Road Telephones - Optical Version	4
Emergency Road Telephones in Tunnel - Optical Version	4
Road Weather Stations	(3)

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Zagreb – Lipovac; ERT for section Spačva - Lipovac
Year:	2006.

Equipment	Quantity
LED Variable Message Signs	6
Road Outstations (TLS Version 2002)	2
Emergency Road Telephones - Optical Version	16

Country:	Croatia
Client:	SANEF (Fr) for STRABAG
Project:	Zagreb – Macelj Highway
Year:	2006.

Equipment	Quantity
LED Variable Message Signs	110
Road Outstations (TLS Version 2002)	21
Electromechanical Prism Technology Variable Message Signs	4
Emergency Road Telephones in Tunnel - Optical Version	14
Emergency Road Telephones - Optical Version	24
Road Weather Stations	(4)

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Zagreb - Lipovac: Section Ivanja Reka-Velika Kapanica
Year:	2005.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	136
Road Outstations (TLS Version 2002)	54
Road Weather Stations	(12)
Traffic Management and Control Software in the Control Centre	5

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Ring Around Croatian Capital Zagreb (50 km)
Year:	2005.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	72
Road Outstations (TLS Version 2002)	40
Road Weather Stations	(4)
Traffic Management and Control Software in the Control Centre	1

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Zagreb (Bosiljevo) - Split - Dubrovnik: Section Crossing Vučevica (4 km)
Year:	2005.

Equipment	Quantity
LED Variable Message Signs	12
Road Outstations (TLS Version 2002)	7
Road Weather Stations	(1)

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Zagreb (Bosiljevo) - Split - Dubrovnik: Section Pirovac-Skradin-Šibenik-Vrpolje (33,5 km)
Year:	2005.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	68
Road Outstations (TLS Version 2002)	24
Emergency Road Telephones in Tunnel - Optical Version	32
Central ERT Station With Handling Desk	1
Road Weather Stations	(5)
Traffic Management and Control Software in the Control Centre	1

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Motorway Šibenik-Bosnia: Section Ražine - Dubrava (3,5 km)
Year:	2005.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	12
Road Outstations (TLS Version 2002)	9
Electromechanical Prism Technology Variable Message Signs	10
Inner Illumination Signs for Tunnels	1
Emergency Road Telephones in Tunnel - Optical Version	6
Central ERT Station With Handling Desk	1
Road Weather Stations	(1)
Traffic Management and Control Software in the Control Centre	1

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Zagreb (Bosiljevo) - Split - Dubrovnik: Section Tunnel Mala Kapela (6 km)
Year:	2005.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	174
Road Outstations (TLS Version 2002)	22
Inner Illumination Signs for Tunnels	64
Emergency Road Telephones in Tunnel - Optical Version	44
Central ERT Station With Handling Desk	1
Traffic Management and Control Software in the Control Centre	2

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Rijeka-Rupa: Section Jurdani-Permani-Slovenia
Year:	2005.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	27
Road Outstations (TLS Version 2002)	10
Emergency Road Telephones - Copper Version	10
Central ERT Station With Handling Desk	1
Road Weather Stations	(2)
Traffic Management and Control Software in the Control Centre	1

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Zagreb (Bosiljevo) - Split - Dubrovnik: Section Zadar 2 - Benkovac
Year:	2004.

Manufacturing, delivering and implementation of complete traffic management system including:

Equipment	Quantity
LED Variable Message Signs	12
Road Outstations (TLS Version 2002)	5
Emergency Road Telephones - Optical Version	16
Central ERT Station With Handling Desk	1
Road Weather Stations	(1)
Traffic Management and Control Software in the Control Centre	1

Complete transmission network all controlled from Operation and Maintenance Center (OMC) by topXview™ – traffic management SCADA.

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Zagreb (Bosiljevo) - Split - Dubrovnik: Section Benkovac - Pirovac
Year:	2004.

Equipment	Quantity
LED Variable Message Signs	15
Road Outstations (TLS Version 2002)	6
Emergency Road Telephones - Optical Version	20
Road Weather Stations	(1)

Country:	Croatia
Client:	Dalekovod d.d.
Project:	Highway Zagreb (Bosiljevo) - Split - Dubrovnik: Section Tunnel Mala Kapela - Lički Osik
Year:	2004.

Equipment	Quantity
LED Variable Message Signs	54
Road Outstations (TLS Version 2002)	25
Inner Illumination Signs for Tunnels	22
Emergency Road Telephones - Optical Version	16
Emergency Road Telephones in Tunnel - Optical Version	6
Road Weather Stations	(4)