


# Referencelist

## Road- and Railway Tunnels

date: 09/2009

Services for Geotechnical and Structural Monitoring	Engineering Geodesy and Tunnel Surveying	Software
<b>GI</b> Geotechnical Instrumentation <b>3D</b> Optical 3D-Deformation Monitoring <b>GR</b> Georobot - automatic 3D-Deformation Monitoring <b>DT</b> Dilatometer Tests <b>VM</b> Vibration Monitoring <b>AD</b> Automatic Data Acquisition	<b>CS</b> Construction Surveying and Heading Control <b>NC</b> Network and Control Surveys <b>PC</b> Profile check <b>ML</b> Motorised Laser System <b>MG</b> Machine Guidance <b>TS</b> Tunnel Scanner	<b>EU</b> EUPALINOS <b>KR</b> KRONOS

Austria 			
Owner	Project	Year	Scope
ASFINAG	Massenbergtunnel, S6 Semmering freeway refurbishment, l = 2 x 800 m	since 2009	CS, TS EU
BEG - Brenner Railway GmbH	Lot H2-2 Tunnel Radfeld Mitte, open cut tunnel railway axis Brenner, l = 2.400 m	since 2008	GI, 3D, AD CS, PC, NC EU
ASFINAG	Pfändertunnel, A14 Rheintal freeway 2nd tube, l = 6.5 km	since 2008	GI, 3D, GR CS, NC, PC, ML, MG
Government of Carinthia	Lilienbergtunnel, B82 by-pass Völkermarkt total l = 1.350 m	2007-2009	3D CS, PC EU
ASFINAG	Tanzenbergtunnel, S6 Semmering freeway refurbishment, l = 2 x 2.500 m	2007-2008	3D, VM CS, PC EU
BEG - Brenner Railway GmbH	Lot H4-3 Tunnel Stans/Tirol railway axis Brenner, l = 2.615 m	since 2006	GI, 3D CS, NC, PC EU
ÖBB (Austrian Federal Railway)	Lainzer Tunnel lot 31, Maxing l = 3.050 m	since 2006	3D, VM CS, TS
ASFINAG	Ganzsteintunnel, S6 Semmering freeway road tunnel, 2nd tube, l = 2.1 km	2006-2008	GI, 3D, VM TS, NC EU
ASFINAG	S35 Brucker freeway, section north „storage lake Zlatten-Mautstatt“ tunnel Kaltenbach l = 1.1 km & tunnel Kirchdorf l = 2.7 km	2006-2008	GI, 3D, VM TS, NC EU

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Owner	Project	Year	Scope
ASFINAG	Tauerntunnel, A10 Tauern freeway 2nd tube, l = 6.4 km	2006-2009	GI CS, NC, PC, ML EU
ASFINAG	Lainbergtunnel, A9 Pyhrn highway freeway tunnel, 2nd tube, l = 2.215 m	2006-2008	GI, 3D, VM TS, NC, PC, ML EU
ASFINAG	Katschbergtunnel, A10 Tauern highway freeway tunnel, 2nd tube, l = 5.400 m	2005-2006	3D TS, NC EU
Government of Upper Austria	Geisswandtunnel (by-pass Traunkirchen) B145 Salkammergut road, l = 2.119 m	2005-2007	GI, 3D, VM CS, PC, ML EU
Government of Upper Austria	Tunnel Grünburg, B140 Steyertal road l = 1.165 m	2005-2007	GI, 3D, VM CS, PC, ML EU
ÖBB (Austrian Federal Railway)	Tunnel line Perschling, railway Wien-St.Pölten Reiseberg- l = 1.370 m, Stierschweiffeld- l = 3.293 m, Raigrubentunnel l = 2.775 m	since 2005	GI PC, MG, ML EU
BEG - Brenner Railway GmbH	Lot H7 subsurface section Fritzens-Baumkirchen railway axis Brenner, open cut and special mining, l = 5.285 m	2005-2009	GI, 3D, AD, TR CS, PC, NC, ML EU
Government of Styria	Assingbergtunnel, A2 South freeway 2nd tube, l = 250 m	2004	3D, VM EU
Government of Vorarlberg	Achraintunnel, L200 Bregenzerwald road l = 2.5 km	2004-2006	MG EU
Government of Salzburg	Ofenauer-Hieflertunnel, A10 Tauern highway, refurbishment, l = 1.5 km & 2 km	2004-2005	CS, PC, TS EU
BEG - Brenner Railway GmbH	Lot H2-1 Tunnel Brixlegg railway axis Brenner, l = 4.200 m	2004-2007	GI, 3D NC EU
ARGE Tunnel Wienerwald	Tunnel Wienerwald, railway Wien-St.Pölten l = 13,35 km, therefrom approx. 11 km single rail tubes	since 2004	GI, VM CS, PC, NC, ML EU
Government of Carinthia	Loibltunnel, B91 Loiblpass road refurbishment, l = 1.570 m	2003	3D CS, PC, ML EU
ASFINAG	Tunnel Mixnitz, S35 Brucker freeway l = 570 m	2003-2004	3D CS, ML EU
Kienberg Panoramastrasse Errichtungs GMBH	Tunnel Kienbergwand (Salzburg) l = 1.160 m	2003-2004	3D CS, ML EU
ASFINAG	Tunnel Kremsursprung, A9 Pyhrn highway l = 860 m	2003-2004	3D CS, ML EU

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BEG - Brenner Railway GmbH	Lot H5 Vomp-Terfens railway axis Brenner, NATM tunnel, l = 7.855 m	2003-2008	GI, 3D, AD PC, NC EU
ÖSAG	Ambergtunnel 2nd tube, A14 Rheintal highway l = 2.969 m	2002	NC EU
Government of Upper Austria	Tunnel Hallstadt, L547 refurbishment, l = 1.254 m & 1.121 m	2002-2003	CS EU
Government of Tirol	Bachertaltunnel, Stubaital utility road, l = 580 m	2002-2003	3D CS, ML EU
Government of Tirol	Felbertauerntunnel, B108 safety refurbishment, l = 5.304 m	2002	CS EU
ÖBB (Austrian Federal Railway)	Birgl- and Kennlachtunnel, Salzburg 2 railway tunnels, l = 960 m & 260 m	2002-2004	GI, 3D CS, PC, ML, TS EU
ÖBB (Austrian Federal Railway)	Tunnel Unterwald, Schoberpass, Styria railway tunnel, l = 1.000 m	2001-2003	3D CS, PC, ML
ÖSAG	Tunnel Kienbergwand, A9 Pyhrn highway l = 1.454 m & 1.438 m	2001-2003	3D CS, PC, NC, ML EU
Government of Carinthia	Gräberntunnel, A2 South freeway 2nd tube, l = 2.148 m	2001-2003	CS, PC, ML EU
Government of Upper Austria	Tunnel Losenstein, B115 l = 583 m	2002	CS, PC, ML EU
Government of Styria	Herzogbergtunnel, A2 South freeway 2nd tube, l = 2.007 m	2001-2003	GI, 3D CS, PC, ML EU
ASFINAG Alpenstrassen AG	Tunnel Strengen, S16 Arlberg freeway l = 5.775 m & 5.659 m	2000-2006	3D, AD CS, PC, ML EU
ÖSAG	Semmeringtunnel, S6 Semmering freeway l = 3.488 & 3.414 m	2000-2004	CS, PC, ML EU
ÖSAG	Hungerbichtunnel, A9 Pyhrn highway l = 2 x 516 m	2000-2003	3D CS, PC, NC, ML EU
HL-AG	Lainzer Tunnel, LT22, Bierhäuslberg, Vienna railway tunnel, l = 795 m & 794 m	2000-2005	GI CS, PC, ML EU
Government of Vorarlberg	Tunnel Schnepfau, B200 l = 828 m	2000-2002	GI
ÖSAG	Speringtunnel, A9 Pyhrn highway l = 2.862 m	2000-2002	3D CS, PC, NC, ML EU
ÖSAG	Klausertunnel, A9 Pyhrn highway l = 2.278 m	1999-2003	GI, 3D, DT CS, PC, NC, ML EU

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Owner	Project	Year	Scope
Government of Styria	Plabutschunnel, 2nd tube, A9 Pyhrn highway l = 9.919 m	1999-2003	GI, 3D CS, PC, ML EU
Government of Styria	Tunnel Zigeunerbrücke, B146 road tunnel, l = 600 m	1999-2001	GI, 3D CS, PC, ML EU
ÖBB (Austrian Federal Railway)	Blisadona Tunnel, Langen, Vorarlberg railway tunnel, l = 2.415 m	1999-2002	GI
ÖSAG	Tunnel Spital, S6 Semmering freeway l = 2.597 m & 2.514 m	1999-2001	GI
ÖSAG	Traunfriedtunnel, A9 Pyhrn highway l = 441 m	1998-2000	GI, 3D CS, PC, NC, ML EU
ÖSAG	Falkensteintunnel, A9 Pyhrn highway l = 784 m	1998-2000	GI, 3D CS, PC, NC, ML EU
City Linz	By-pass Eblsberg, City Tunnel, Upper Austria l = 775 m	1997-2000	GI, 3D CS, PC, ML EU
Government of Tirol	Tunnel Hohe Wand, B171 l = 402 m	1997-1998	3D CS, PC EU
Government of Upper Austria	Sonnstein III, B145 l = 2 km	1997	VM
Government of Styria	Tunnel Prescenyklause, B24 l = 437 m	1997	GI CS, PC, ML EU
Government of Salzburg	Schönbergtunnel, B311 l = 3 km	1997-1998	CS, PC, ML EU
HL-AG	Sieberg Tunnel, St. Valentin, Upper Austria railway tunnel, l = 6.480 m	1996-2000	GI, 3D NC EU
Alpen Straßen AG	Landecker Tunnel l = 6.590 m	1996-1999	GI, 3D CS, PC, ML EU
Government of Vorarlberg	Ardetzenbergtunnel, L53 l = 525 m	1996-1997	3D CS, PC EU
Government of Tirol	Tunnel Rattenberg, B171 l = 604 m	1996	3D CS, PC EU
HL-AG	By-pass Melk, Lower Austria 2 railway tunnels, total l = 2.800 m	1996	GI
ÖSAG	Tunnel Lainberg, A9 Pyhrn highway l = 2.280 m	1995-1997	CS, PC, ML EU

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Owner	Project	Year	Scope
Government of Upper Austria	Sonnstein II, B145 l = 1.055 m	1995-1996	3D, VM EU
Government of Styria	Tunnel Dippelbauerbahn, B24 l = 200 m	1995	GI
Government of Vorarlberg	Fontanella Stutzobel, L193 l = 445 m	1995-1996	3D CS, PC, ML EU
ÖBB (Austrian Federal Railway)	Bosrucktunnel, Styria-Upper Austria railway tunnel, l = 4.770 m long-term monitoring	since 1994	3D EU
HL-AG	Römerbergtunnel, Upper Austria railway tunnel, l = 700 m	1994-1996	GI
Government of Tirol	Brettfalltunnel, B161 l = 1.336 m	1994-1995	3D EU
Government of Styria	Tunnel Totes Weib, B23 l = 572 m	1994-1995	GI CS, PC EU
ÖBB (Austrian Federal Railway)	Zammertunnel, Zams, Tirol railway tunnel, l = 2.300 m	1994-1996	GI, 3D CS, PC EU
ÖSAG	Tauerntunnel, A10 Tauern highway l = 6.401 m long-term monitoring	since 1994	GI
Government of Salzburg	Schmittentunnel, B311 l = 5.111 m	1994-1996	VM
ÖSAG	Bosrucktunnel, A9 Pyhrn highway l = 5.500 m long-term monitoring	since 1994	GI, 3D EU
Government of Vorarlberg	Passürtunnel, B197 l = 1.855 m	1994	3D CS EU
ÖBB (Austrian Federal Railway)	Galgenbergtunnel, Leoben, Styria railway tunnel, l = 5.142 m	1993-1996	GI
Government of Carinthia	Falkenbergstunnel, A2 Southern highway l = 1.170 m	1993-1994	GI
Government of Styria	Tunnel Niklasdorf, S6 Semmering freeway l = 2 x 1.300 m long-term monitoring	since 1993	3D EU
ÖBB (Austrian Federal Railway)	Kaponigtunnel, Salzburg railway tunnel, l = 5.094 m	1992-1998	GI, DT, VM ML EU
ÖBB (Austrian Federal Railway)	Tunnel Sonnberg, Treglwang, Styria railway tunnel, l = 500 m	1992	GI, 3D EU
Government of Upper Austria	Tunnel Sonnstein I, B145 l = 700 m	1992	GI, VM EU






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Government of Upper Austria	Tunnel St. Wolfgang, L546 l = 700 m	1991-1992	GI, 3D EU
HL-AG	Tunnel Lambach, Upper Austria railway tunnel, l = 1.410 m	1991-1995	GI
Government of Salzburg	Tunnel Hinterglemm, L111 l = 938 m	1990	GI
Pyhrn Highway AG	Pretallerkogeltunnel, Tunnel Wald, A9 Pyhrn highway L = 2 x 2.400 m & 2 x 540 m	1990-1992	GI
HL-AG	Inntaltunnel, Innsbruck, Tirol railway tunnel, l = 12.702 m	1989-1995	GI
ÖBB (Austrian Federal Railway)	Schattenburgtunnel, Feldkirch, Vorarlberg railway tunnel, l = 910 m	1989-1990	GI, VM
Government of Salzburg	Tunnel Trattenbach, B311 l = 1.510 m	1989	GI
Arlberg Strassentunnel AG	Langener Tunnel, S16 Arlberg freeway l = 2 x 2.000 m	1988-1989	GI
Brenner Autobahn AG	Roppener Tunnel, A12 Inntal highway l = 5.100 m	1988-1989	GI
ÖSAG	Grasbergtunnel, S6 Semmering freeway l = 2 x 300 m	1988-1989	GI
ÖSAG	Eselsteintunnel, S6 Semmering freeway l = 2 x 100 m	1988-1989	GI
Government of Styria	Hochstegtunnel, B146 l = 200 m	1988-1989	GI
Government of Carinthia	Karawankentunnel Mord, A11 Karawanken highway l = 7.864 m	1988-1989	GI
<b>Germany</b> 			
DB Netz AG (German Railway)	Finnetunnel NBS Erfurt-Leipzig/Halle railway tunnel, l = 6.886 m	since 2008	CS
Land Nordrhein-Westfalen	Tunnel Gevelsberg, L666n road tunnel, l = 600 m	2003-2006	GI, 3D CS, ML, PC EU
Land Nordrhein-Westfalen	Burgholztunnel, L418 road tunnel, 2 tubes, l = 1.865 m & 1.787 m	2002-2005	GI, 3D CS, ML, PC, TS EU
PB DE (German Railway)	Sandbergtunnel, NBS Ebersfeld-Erfurt, Thüringen railway tunnel, l = 1.230 m	2000-2002	GI
DEGES	Tunnel Berg Bock, A71, Thüringen freeway tunnel, l = 2.750 m & 2.729 m	2000-2002	GI, 3D CS, ML, PC EU
PB DE (German Railway)	Tunnel Geisberg, NBS Nürnberg-Ingolstadt railway tunnel, l = 3.289 m	1999-2003	GI, 3D CS, ML, NC, PC EU

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PB DE (German Railway)	Tunnel Stammham, NBS Nürnberg-Ingolstadt railway tunnel, l = 1.320 m	1999-2001	GI
PB DE (German Railway)	Tunnel Schellenberg, NBS Nürnberg-Ingolstadt railway tunnel, l = 650 m	1999-2003	GI, 3D CS, ML, NC, PC EU
PB DE (German Railway)	Tunnel Euerwang, NBS Nürnberg-Ingolstadt railway tunnel, l = 7.700 m	1999-2003	GI, 3D CS, ML, NC, PC EU
PB DE (German Railway)	Tunnel Irlahüll, NBS Nürnberg-Ingolstadt railway tunnel, l = 7.260 m	1999-2003	GI, 3D CS, ML, NC, PC EU
DEGES	Rennsteigtunnel, A71, Thüringen freeway tunnel, l = 7.916 m & 7.878 m	1998-2002	GI, 3D CS, ML, PC EU
DEGES	Tunnel Hochwald, A71, Thüringen freeway tunnel, l = 1.058 m & 1.056 m	1998-2001	GI, 3D CS, ML, PC EU
DB (German Railway)	Tunnel Himmelberg, Wahnscheid, Dickeck, Etzer Berg railway Köln/Rhein-Main l = 2.395 m & 735 m & 570 m & 1.110 m	1998-2000	GI
DB (German Railway)	Eggetunnel, Nordrhein-Westfalen railway tunnel, l = 2.880 m	1997-2000	3D EU
DB (German Railway)	Tunnel Idstein, NBS Köln/Rhein-Main, Lot C railway tunnel, l = 2.069 m	1997-2002	GI, 3D CS, ML, NC, PC EU
DB (German Railway)	Tunnel Schulwald, NBS Köln/Rhein-Main, Lot C railway tunnel, l = 4.510 m	1997-2002	GI, 3D CS, ML, NC, PC EU
DB (German Railway)	Tunnel Hellenberg, NBS Köln/Rhein-Main, Lot C high speed railway tunnel, l = 532 m	1997-2002	GI, 3D CS, ML, NC, PC EU
Highway Authority South Bavaria	Bordertunnel Füssen, A7 road tunnel, l = 1.272 m	1996-1998	GI ML EU
Highway Authority South Bavaria	Tunnel Farchant, A95, Bavaria freeway tunnel, l = 2.326 m	1996-2000	ML EU
Ministry for Traffic	Tunnel Hemberg, A46, Nordrhein-Westfalen freeway tunnel, l = 2 x 400 m	1996-1997	GI
City of Landshut	Hofbergtunnel, Landshut, Bavaria road tunnel, l = 1.200 m	1995-1997	GI, 3D CS, ML, PC EU
Road Administrati- on Passau	Tunnel Garham, B12, Bavaria road tunnel, l = 300 m	1995-1996	CS, ML, PC EU

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Owner	Project	Year	Scope
Provincial Authority Rhineland-Palatinate	Burgbergtunnel, B50, Bernkastel-Kues road tunnel, l = 513 m	1995	GI, 3D EU
City of Bad Wildbad	Meisterntunnel, L530, Black Forest road tunnel, l = 1.338 m	1994-1996	GI, 3D CS, ML, PC EU
DB (German Railway)	Crossing Nantenbach 3 railway tunnels, total l = 6.450 m	1990-1992	GI
DB (German Railway)	Tunnel Gefallener Fels, Idar Oberstein, Rhineland-Palatinate, railway tunnel, l = 210 m	1990	GI
Road Administration Bensheim	Saukopftunnel, B38a, Hessen road tunnel, l = 2.715 m	1989-1990	GI
DB (German Railway)	Tunnel Kehrenberg, Kassel-Fulda railway tunnel, l = 2.366 m	1987-1988	GI
<b>Greece</b> 			
Egnatia Odos S.A.	Panagia - Grevena highway 13 twin tube tunnels, total l = 2 x 11.5 km	2005-2008	3D TS EU
Egnatia Odos S.A.	Tunnel Sigma 3 twintube freeway tunnel, l = 2 x 640 m & 2 x 2.100 m	2003-2004	GI, 3D, DT EU
Egnatia Odos S.A.	Anthohori & Anilio Tunnel l = 2 x 640 m & 2 x 2.100 m	2003	3D EU
<b>Denmark</b> 			
DSB Danish State Railway	Storebaelt Tunnel railway tunnel underneath the sea, l = 2 x 7.935 m	1993-1996	3D MG EU
<b>Sweden</b> 			
Arlanda Link Consortium	Arlanda Express Link, Airport Stockholm railway tunnel, l = 8.800 m	1996-1999	EU
SJ Swedish State Railway	Hallandsassen Tunnel, Malmö-Göteborg railway tunnel, l = 8.600 m	1994-1995	EU
<b>England</b> 			
Bouygues Travaux Publics	New Tyne Tunnel north-south connection Newcastle upon Tyne road tunnel, l = 1.600 m	since 2009	GI, GR, AD EU
London & Continental railways	North Downs Tunnel, Channel Tunnel Rail Link l = 3.200 m	1999-2000	EU
<b>Italy</b> 			
FS Italian State Railway	High speed railway Bologna-Florenz 9 railway tunnels, total l = 59.279 m	1997	3D NC EU

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Owner	Project	Year	Scope
<b>Switzerland</b> 			
BLS Alp Transit	Gotthard Basetunnel, Multistation Sedrun total l = 57 km, lot l = 6,5 km	since 2004	TS
BLS Alp Transit	Lötschberg Basetunnel South, section Steg-Raron railway tunnel, l = 7.700 m	since 2004	TS
BLS Alp Transit	Lötschberg Basetunnel North, Kanton Bern railway tunnel, l = 3.500 m	since 2000	CS, ML, PC EU
Construction Authority Kanton Zürich	Eggraintunnel, A4 West by-pass Zürich freeway tunnel, l = 496 m & 443 m	2000-2002	3D EU
Construction Authority Kanton Zürich	Hafnerbergtunnel, A4 West by-pass Zürich freeway tunnel, l = 1.389 m & 1.347 m	2000	3D EU
Construction Authority Kanton Zürich	Aeschertunnel, A4 West by-pass Zürich freeway tunnel, l = 2.176 m & 2.142 m	1999-2001	3D EU
Authority for Underground Works Kanton Thurgau	Girsbergtunnel, N7 Thurgau freeway tunnel, l = 2 x 1.743 m	1998-2001	3D EU
<b>Hungary</b> 			
STRABAG AG	Tunnel chain M6 Szekszard - Boly 4 tunnels, total l = 6 km	since 2008	3D CS EU
MAV - Hugarian State Railway	Bella Hegy Tunnel, Komitat Vas railway tunnel, l = 375 m	1999	3D CS, PC EU
<b>Croatia</b> 			
STRABAG d.o.o.	Tunnel line Krapina-Macelj 6 freeway tunnels, l = 1.750 m, 590 m, 375 m, 265 m, 205 m, 355 m	since 2004	3D CS, ML, PC, NC EU
Hrvatske Autocesta d.o.o.	Tunnel Hrastovec, D3 Zagreb-Varazdin freeway tunnel, l = 523 m + 498 m	2002-2003	3D CS, NC, PC, ML EU
Autocesta Rijeka-Zagreb d.d.	Tunnel Javorova Kosa, M12 Zagreb-Rijeka freeway tunnel, l = 1.460 m	2002-2003	CS, NC, PC EU
Hrvatske Autocesta d.o.o.	Tunnel Brinje, D1 Zagreb-Split freeway tunnel, l = 2 x 1.560 m	2002-2004	3D CS, NC, PC, ML EU
Hrvatske Autocesta d.o.o.	Tunnel Gric, D1 Zagreb-Split freeway tunnel, l = 1.231 m & 1.214 m	2002-2004	3D CS, ML, PC, NC EU
Autocesta Rijeka-Zagreb d.d.	Tunnel Sveti Marko, M12 Zagreb-Rijeka freeway tunnel, l = 2 x 265 m	1996-1999	3D CS, PC, ML EU

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<b>Turkey</b> 			
KGM	Tunnel T1 & T2, Ciftehan-Pozanti Motorway 2 freeway tunnels, l = 2 x 500 m & 2 x 342 m	2002	3D EU
Ministry for Railway	Ayas Tunnel, Ankara - Istanbul fast train railway	1996	GI
KGM	Balcova Tunnels, Izmir Ringroad 3 road tunnels, total l = 6.013 m	1992	GI
KGM	Bolu Tunnel, Gümüşova-Gerede freeway tunnel, l = 2 x 2.900 m	since 1991	GI, 3D EU
KGM	TAG-Motorway, Adana-Gaziantep 4 freeway tunnels, total l = 3.240 m	1991	GI
<b>India</b> 			
Ircon Int. Lts	Pir Panjal Railway Tunnel, Kashmir Banihal rail tunnel, l = 11 km	since 2005	GI, 3D CS EU
<b>Pakistan</b> 			
National Highway Authority	Lowari Railway Tunnel Project railway tunnel, l = 8,7 km	since 2005	GI, 3D TS EU
<b>Taiwan</b> 			
THRC	C 240, 11 Tunnels railway tunnels, total l = 7.400 m	2001	GI, 3D EU
THRC	C 210 Hueilung & Linkon Tunnel railway tunnels, l = 2.160 m & 6.400 m	1996	3D EU
Second Freeway Bureau	Chung Liao Tunnel, 2nd freeway freeway tunnel, l = 3.100 m	1996	3D EU
<b>Vietnam</b> 			
Government of the Socialistic Republic of Vietnam	Hai Van Pass Tunnel road tunnel, l = 6.300 m	2001-2002	GI, 3D ML EU
<b>Chile</b> 			
Ministerio de obras publicas	Tunnel Ianco Arica, Santiago innercityroad tunnel, 2 3-line tubes underneath railway station, l = 388 m	2005-2006	GI, 3D EU
Ministerio de obras publicas	Tunnel T3, La Polvera, Valparaiso road tunnel, l = 414 m	2002	GI, 3D EU