

Reference Projects and Referees

Updated 12 March 2015

Project	Date	Organisation	Project Description	Responsibilities and Tasks	Referee
Vinschgauer Railway, ERTMS Level 3 Project	2014 - present	Südtiroler Transportstrukturen AG	Electrification of the Vinschgauer Railway with 25 kVAC and Implementation of ERTMS Level 3 Systems (GSM-R and ETCS Level 3)	Responsible for the development of the detailed concept for the migration to ERTMS Level 3, co-ordination with suppliers concerning system migration, development of the technical concepts for the implementation of ETCS Level 3 systems, detailed for the GSM-R Base Transceiver Stations (BTS), detailed cost calculations for the ETCS Level 3 and GSM-R systems, investigation and co-ordination of EU project financing	Michael Prader Stellvertretender Betriebsdirektor Vinschgauer Bahn Südtiroler Transportstrukturen AG Gerbergasse 60 Via Conciapelli I-39100 Bozen / Bolzano Tel. +39 0471 312-888 Fax. +39 0471 312-899 Michael.Prader@sta.bz.it
SBB ETCS Level 2, Version 2.3.0d Rolling Stock System Rollout (EZW)	2014 - present	Siemens Schweiz AG, Wallisellen, Siemens AG, Berlin, SBB AG	Fitting of 250 SBB locomotives and rolling stock of 9 different types with ETCS Level 2, Version 2.3.0d for operations on the SBB and normal gauge private railway network	Responsible for the test management and co-ordination with the SBB and further stakeholders, testing of the ETCS Level 2 on-board equipment on the SBB Mattstetten-Rothrist line, the Lötschberg Base Tunnel line and the Brunnen-Rynäch-Ersfeld line (part of Gotthard Base Tunnel project). Responsible for the development of the test planning, the development of test documentation and test cases, leading of operational and dynamic tests as well as network interoperability, integration and regression tests.	Stephan Güpfer Project Manager Switzerland Siemens Schweiz AG Hammerweg 1 CH-8304 Wallisellen Switzerland Tel. +41 585 580 705 Stephan.Guepfert@siemens.com
Gotthard AlpTransit Base Tunnel Project	2013 - present	IUB Engineering AG and BINARY Consultants Pty Ltd.	Construction of a 57 km double-tube tunnel for the high-speed line under the Swiss Alps in Switzerland, becoming the longest tunnel in the world. The planning and construction costs are estimated to be € 15 billion.	Responsibilities include support of the project management of the testing and commissioning phase of all railway systems in the project, including ERTMS Level 2, evaluation of tool support for the planning of the testing and commissioning in the project, configuration of and data management in the planning tool.	Dr Rolf M. Bergmaier Managing Director BINARY Consultants Pty Ltd. Ackersteinstrasse 84 8049 Zurich, Switzerland 37 Crows Nest Road Waverton NSW 2060, Australia Tel. CH +41 79 510 50 70 Tel. Au +61 289 20 29 40 binary.c@bigpond.net.au
SBB SWISS Interlocking Interface Standardisation Project	2010 - present	SBB AG, Know Gravity Inc., Siemens AG, Thales Rail Signalling Solutions, DB Netz AG	Specification and standardisation of the interfaces between interlocking systems in the Switzerland	Responsibilities include the overall project management of the new Swiss interface standards, introduction of a standardised methodology for the development of the specifications, development of the interface specifications for all variations of the interface for relay-based and electronic interlocking systems, including ERTMS Level 2 functionality, co-operation and coordination with Siemens, Thales and DB AG, development of the Concept for Validation & Testing for the interface standards. Development of the technical concept and the roadmap for the standardised interface to peripheral elements (such as points and signals) via ICT networks to the electronic interlocking systems SIMIS W and ELEKTRA 2.	Mauro Vasella Group Leader Interlocking Systems SBB Infrastruktur Swiss Federal Railways SBB Hilfikerstrasse 3 CH-3014 Bern Switzerland Tel. +41 51 220 11 11 mauro.vasella@sbb.ch
SwissRapide Express	2006 - present	SwissRapide AG	Promotion, planning, construction and operation of the first Magnetic Levitation Transport System (Maglev) for Switzerland. The planning and construction costs are estimated at € 6.7 billion.	Responsibilities include Programme & Project Management, development of the Feasibility & Concept Study, the Financing Model, the Business Plan, the detailed Business Case, the Communication Concept, the project cost calculations, the detailed technical planning as well as system development. Also responsible for investor relations, contract management, budgets and financial controlling, project planning, organisation of public relations and marketing events as well as project administration.	Aida von Schulman Managing Director Business Development SwissRapide AG Technoparkstrasse 1 CH-8005 Zurich Switzerland Tel. +41 44 540 77 77 vonschulman@swissrapide.ch
Indian Dedicated Freight Corridor (Western Corridor)	2013 - present	DCCIL (India) & Toyo Engineering Corporation, Japan	Design and construction of a new 1000 km double track, electrified dedicated freight corridor in north-western India The planning and construction costs are estimated to be € 5 billion.	Responsibilities include the design review of the signalling, ETCS and telecommunication systems in the project. Support in the preparation of the Toyo tender for the signalling and telecommunication systems in the project.	Takashi Hishiya Engineering Manager Toyo Engineering 8-1, Akanehama 2-chome, Narashino-shi, Chiba 275-0024, Japan Tel. +81-434-54-1709 Mobile +81-90-7282-3136 t-hishiya@ga.toyo-eng.co.jp

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Risk Analysis for the sigdata AG eFAP(EL)-LDI Adapter of the SBB	2014	SBB AG, Know Gravity Inc., Thales Rail Signalling Solutions	Development of the detailed risk analysis according to the CENELEC EN 50126 RAMS standards for the sigdata AG eFAP(EL)-LDI Adapter of the SBB, to be applied as a safe IT-based interface between interlocking systems	In co-operation with KnowGravity, development of the risk analysis approach and methodology, responsible for the detailed development of the risk analysis applying detailed UML-modelling elements as well as automated element relationships and calculations, co-ordination of the risk analysis approach and results with the SBB and Thales, development of safety requirements for the adapter based on the results of the risk analysis	Peter Ruch Expert Interlocking Systems SBB Infrastruktur Swiss Federal Railways SBB Hilfikerstrasse 3 CH-3014 Bern Switzerland Tel. +41 79 879 03 22 peter.ruch@sbb.ch
KyzyI-Kuragino Railway (Freight) Project, Russia	2013	China Overseas Engineering Group Co. Ltd. (COVEC)	Design and construction of a new 430 km double track, electrified freight corridor in eastern Russia. This is planned to be the first private railway in the country. The planning and construction costs are estimated to be € 6 billion.	Responsibilities include the preparation of a detailed proposal for the feasibility study for the project liaising with the EXIM Bank of China for the project financing, acting as delegated overall Project Management organisation within the project, liaising of the interests between Russia and China.	Ruslan Birlădeanu General Manager COVEC Eastern Europe Office for International Development MD-2021, Str. Pietrarilor 8, of. 13, Chisinau Republic of Moldova Tel. +373 78 003 777 Mobile +373 69 120 755 rbirladeanu@gmail.com
Oman Railway Construction Project, Phase 1	2013 - 2014	Oman Rail PMC Consortium	Construction of the first railway network in Oman, Phase 1 consisting of 1,100 km of the new double track railway network for freight and passenger traffic. The planning and construction costs for Phase 1 are estimated to be € 13 billion.	Designated as Project Management Organisation for the project in the consortium lead by Swiss Railway Engineering together with Deloitte & Touche, KPMG, Spectrum Engineering and Itten+Brechtbühl (Switzerland), lead in the development of the overall bid for the Project Management and Consulting in Phase 1 of the project.	Mark Dunn Partner Audit & Regional IT Specialist Group Muscat Office Deloitte & Touche (M.E.) Tel: +968 2481 7775 Mobile: +968 9429 8828 mddunn@deloitte.com
Ceneri AlpTransit Base Tunnel Project	2012 - 2013	Alpiq InTec AG	Construction of a 15.4 km double-tube tunnel for the high-speed line Gotthard-Lugano in Switzerland, as an extension to the AlpTransit Gotthard project. The planning and construction costs are estimated to be € 1.75 billion.	Responsibilities include leading the preparation for the overall project management of all railway systems, support for the development of the bid in the areas of telecommunication systems, data network, 50 Hz power systems as well as 16 2/3 Hz, 15 kVAC traction power systems, designated overall Project Manager for railway systems, detailed project planning, including planning of project resources, development of concepts for the project coordination with all stakeholders, the requirements management systems and the RAMS documentation.	André Hug Leader Acquisitions/ Risk Management Alpiq InTec AG Hohlstrasse 188 CH-8026 Zurich Switzerland Tel: +41 44 247 41 63 Mobile: +41 79 430 81 85 andre.hug@alpiq.com
Bangalore Metro / LRT Project	2011 - 2014	Capita Symonds Ltd., Bangalore Airport Rail Link Ltd	Development of the Options Report and the Detailed Project Report for the Bangalore Monorail / LRT.	Development of the operative principles, development of the concepts, feasibility study and cost analysis for the signalling, CBTC, traffic management and telecommunication systems for the Options Report and the Detailed Project Report, in co-operation with Capita Symonds Ltd.	Leighton Nicholas Project Manager CAPITA SYMONDS Ltd. Capita Symonds House, Wood Street, East Grinstead, West Sussex, RH19 1UU United Kingdom Mobile: +44 7880 044 799 Leighton.Nicholas@capita.co.uk
Finnish ERTMS Strategy Project	2009 - 2011	Finnish Transport Agency (FTA), previously RHK, Proxion Oy	Development of the strategy for the procurement and implementation of ERTMS Levels 1 and 2 on the Finnish railway network in the next 20 to 30 years. The project costs are estimated to be € 1,000 million.	Responsibilities include development of the ERTMS Cost Calculation System, calculation of overall costs for the implementation of ERTMS, cost comparisons between ERTMS Levels 1 & 2, benchmarking of costs and solutions with other European railways and projects, definition of the project scope, development of migration strategies, inputs concerning the experiences and best practices from other ERTMS projects from across Europe, support in the development of the final strategy report.	Veli-Matti Kantamaa Unit Manager Electrical and Signalling Liikennevirasto Finnish Transport Agency P.O. Box 33, 00521 HELSINKI Finland Tel. +358 20 637 3813 veli-matti.kantamaa@fta.fi
London Crossrail Project	2008 - 2009	Capita Symonds/ Northcroft/Bovis Consortium	Construction of an east-west underground rail link across London, connecting the Great Eastern and Great Western Railways with central London. The project costs are estimated at € 18 billion.	Responsibilities include supporting the consortium in the preparation of the bid as Project Delivery Partner, leading of the Rail Systems Directorate, development of concepts and requirements for a world class railway, including ERTMS Level 2 combined with automatic train operation, supplying experts and resources from partner companies of SRE GmbH, presentation of the bid to CLRL/Crossrail.	John Mayne Technical Director - Rail Capita Symonds Ltd Wood Street, East Grinstead, West Sussex RH19 1UU United Kingdom Tel. +44 1342 327161 Mob. +44 7747 757683 John.Mayne@capita.co.uk

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Saudi Landbridge Project	2008 - 2009	Toyo Engineering Corporation, Japan	Construction of approximately 1300 km of new railway lines across Saudi Arabia with a total budget of about USD 5 billion.	Management consulting for the preparation of the overall bid for the project, development of the project organisation, senior railway planners and advisors for the ERTMS Levels 1 & 2, signalling, interlocking and telecom systems, evaluation of the detailed bids from suppliers.	Takashi Hishiya Engineering Manager Toyo Engineering 8-1, Akanehama 2-chome, Narashino-shi, Chiba 275-0024, Japan Tel. +81-434-54-1709 Mobile +81-90-7282-3136 t-hishiya@ga.toyo-eng.co.jp
HSL Zuid Project, Netherlands	2008	Siemens AG, Berlin	New 125 km long high-speed line from Amsterdam to the Belgian border. Speeds of up to 300 km/h are planned. With final costs in the area of € 7.15 billion., the start of commercial operation is planned for 2009.	Testing work for ERTMS Level 2 on-board and infrastructure systems, support in system integration, functional and safety tests on the cross-border traffic to Belgium, the world's first for ERTMS/ETCS systems.	Dr Ireneus Suwalski Leader Testing ETCS Siemens AG Eisenstrasse 87-96 D-12435 Berlin Germany Tel. +49 (0) 30 386 51 474 ireneus.suwalski@siemens.com
AlpTransit Lötschberg Project	2007 - 2008	Siemens Schweiz AG, Berlin	Fitting of SBB and BLS locomotives and the rolling stock with ETCS Level 2 for operations on the BLS Lötschberg-Basislinie and the SBB NBS Mattstetten-Rothrist. Total project costs: € 4.8 billion.	Testing of the ETCS Level 2 On-board equipment for the following units: ICE, Re485, Am843, LRZ BLS, LRZ SBB und SIF BLS. Tests conducted on the Lötschberg-Basislinie, the SBB Mattstetten-Rothrist Line und the test line in Dottikon. Improvement of test process, development of test documentation, test cases, application of formal test tools. Leading of operational and dynamic tests as well as interoperability, integration and regression tests.	Michael Tobler Project Manager Switzerland Siemens Schweiz AG Hammerweg 1 CH-8304 Wallisellen Switzerland Tel. +41 585 580 752 Michael.Tobler@siemens.com
Change Management System for Railway Signalling Systems	2005 - 2006	SBB AG, Berne	Development and operation of a new Change Management System for all SBB signalling systems on their network. Objective: improvement of reliability and safety of service for train passengers when technical work and changes to signalling and traffic management systems are carried out while the systems are in operation.	Responsible for development of Change Management System processes, formulas and documents, including a detailed, formalised Risk Analysis. Responsible for Regional Change Management for eastern Switzerland, evaluation and approval of all changes and updates to the signalling systems.	Eckehard Schär Head of Technical Support Region East Swiss Federal Railways SBB Lagerstrasse 82 CH-8004 Zurich Switzerland Tel. +41 51 222 23 07 Eckehard.Schaer@sbb.ch
Euro-Interlocking Project	1998 - 2005	European Railways and Signalling Suppliers under the auspices of the UIC	Development of European Standards for Signalling Systems in the areas of safety, reliability, performance, hazard analysis as well as further standards for railway signalling and ERTMS/ETCS systems. The total project costs to date are € 30 million.	Responsible for Project Management, project financing and administration, development of conceptual approach, technical work, standards developments, co-ordination with the European railways and signalling suppliers involved, project promotion. Deliverables included an advanced business case, standardised & formalised Risk and Hazard Analysis, Data Preparation standards, safety, reliability & performance standards, etc.	Hans Volkers Managing Business Consultant Logica prof. W.H. Keesomlaan 14 1180 AD Amstelveen, Netherlands Tel. +31 65 346 46 93 hans.volkers@logicacmg.com
AlpTransit Gotthard Project	2004 - 2005	AlpTransit Gotthard AG, Lucerne, Switzerland	Development of the Call for Tenders all technical systems for the new twin tunnels through the Alps (57 km) being constructed by AlpTransit Gotthard AG, contract volume: CHF 1.8 billion. The final total project costs are estimated to be € 12 billion.	Responsible sub-project management, for the development of the project procurement strategy, the Risk and Hazard Analysis, the Change Management process, strategy for technical interfaces, provide requirements engineering and standards expertise for the signalling and ERTMS/ETCS systems in the Call for Tenders. Responsible for the collection and evaluation of the experience and Best Practice of other European railways in the procurement of signalling and ERTMS/ETCS systems.	Patrick Favre GESTE Engineering SA Science park PSE-C CH-1015 Lausanne Switzerland Tel. +41 21 693 83 85 patrick.favre@geste.ch (Patrick Favre is the previous Head of Signalling for AlpTransit Gotthard AG.)
GENERIS Project	2003 - 2005	European Railways and Signalling Suppliers under the auspices of the UIC	Development of European harmonised Functional Requirements for interlocking system applications, in accordance with CENELEC RAMS Standard processes.	Responsible for Project Management, Requirements Engineering, project financing and administration, development of a detailed business case, development of conceptual approach with the application of the DOORS Requirements Management System, the Unified Modelling Language (UML), requirements capture with railways involved, project promotion.	Veli-Matti Kantamaa Unit Manager Electrical and Signalling Liikennevirasto Finnish Transport Agency P.O. Box 33, 00521 HELSINKI Finland Tel. +358 20 637 3813 veli-matti.kantamaa@fta.fi
ESIS Project	2003 - 2005	European Railways and Signalling Suppliers under the auspices of the UIC	Development of safety-critical interface standards for signalling and ERTMS applications	Responsible for Project Management, project financing and administration, development of a detailed business case, development of conceptual approach and scope of interface standardisation, technical specification, co-ordination with signalling & telecom suppliers and among stakeholder organisations, project promotion.	Dr. Michael Meyer zu Hörste Thematic Area Manager Rail German Aerospace Centre Lilienthalplatz 7 38108 Braunschweig, Germany Tel. +49 (0) 531 295 34 40 Michael.MeyerzuHoerste@dlr.de

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PULS90 Project	2003	SBB AG	<p>Optimisation of ERTMS/ETCS Level 2 and operational processes to allow 90 second headways at major nodes in on the SBB network.</p> <p>The total project costs were estimated to be € 350 million.</p>	<p>Preparation and completion of the Feasibility Study for PULS90, including detail recommendations to SBB concerning future actions and the strategy for the project. Development of the concept for the pilot node as well as the concept for the involvement of industry partners in the project.</p>	<p>Dr Rolf M. Bergmaier Managing Director</p> <p>BINARY Consultants Pty Ltd. Ackersteinstrasse 84 8049 Zurich, Switzerland</p> <p>37 Crows Nest Road Waverton NSW 2060, Australia</p> <p>Tel. CH +41 79 510 50 70 Tel. Au +61 289 20 29 40 binary.c@bigpond.net.au</p>
Vietnam Railways Investment and Safety Assessment	2003	Vietnam Railways, Swiss Federal Department of Business Affairs (seco)	<p>Assessment of safety level of signalling, level crossing and traffic management systems in light of an international investment programme of the Swiss government in Vietnam.</p>	<p>Responsible the development of the Assessment report for Vietnam Railways and the Swiss government (seco). Development of recommendations to seco concerning investments into Vietnam Railways by the Swiss Government. Responsible for Project Management, for organisation and leading of interviews with over 20 stakeholder organisations in Switzerland and Vietnam, meetings with potential suppliers, on-site evaluation of the safety risks on the Vietnam railway system.</p>	<p>Nguyen Ngoc Hung Deputy Chief Planning and Investment Department</p> <p>Vietnam Railways 118 Le Buan Str., Hanoi, Vietnam</p> <p>Tel. +84 4 8 224 307 hung-khdt@vr.com.vn</p>