



# Personnel and Resumes

<b>Name of Nominated Personnel</b>	<b>Sub-Discipline Area</b>
Phil Lock	Senior Consultant
Philip McCluskey	Senior Consultant
Bruce Armstrong	Senior Consultant
Scott La Vertu	Senior Consultant
Russell Murray	Project Manager / Senior Consultant
Tony Bolgia	Senior Consultant (Communications)
Jeff Cross	Senior Consultant
Peter Stewart	Project Manager / Consultant / Technical Support
Dale Biddell	East Coast Senior Technical Support
Alison McCluskey	Procurement & Administrative Support and Technical Support (drafting)

## SHORT FORM RESUMES

<b>PHILIP LOCK</b>	
<b>Qualifications:</b>	<p>Bachelor of Engineering majoring in Electronic Engineering, Curtin University, 1980</p> <p>Graduate Diploma Business and Administration (Management) Curtin University, 1984</p>
<b>Demonstrated Skills:</b>	<p>Phil has been employed, worked and consulted in urban passenger and freight railways in WA, NSW and Queensland for the past 30 years. Phil was employed by Westrail for 13 years where he worked in the areas of signalling design, maintenance and train control and systems during that time. He continues to consult, manage and develop projects in these areas for railways around Australia.</p> <p>Phil has been involved in the development and management of a number of significant rail projects and has some 30 plus years experience in the rail industry. During his 13-year career with Westrail he was a key player in the development of the train control and operational systems for the Westrail, PUREP and NSR works.</p> <p>Key skills include:</p> <ul style="list-style-type: none"> <li>• Management and Development of rail projects, including signalling, train control, communication and information systems for urban and freight railways, specification and contract preparation, outsourcing, risk analysis and contract management</li> <li>• Development of business based asset and performance regimes for the provision of rail infrastructure services and the implementation of management strategies to support these in a range of industries.</li> </ul>
<b>Recent Career Summary:</b>	<p>Phil is currently working with TasRail on the replacement of their train control system with a new electronic Track Warrant System delivering Track Warrants into locomotives and track vehicles. This also includes the introduction of a new DMR radio system.</p> <p>Phil was the Superintendent's Representative for the Train Control System aspects of the signalling Processor Based Interlocking (PBI) Contract between WestNet Rail and US&amp;S. He was also responsible for the preparation of the specification, negotiation and management of the Train Control aspects of that contract.</p> <p>Phil was the Superintendent for the WestNet Rail Centralisation of Train Control Project. Phil was jointly responsible for the preparation of the specification, negotiation and management of this project and contract.</p> <p>Phil continues to provide consultancy advice to the Brookfield Rail on the design of various systems including Train Control and Computer Assisted Train Orders (CATOS) and is currently jointly negotiating the contracts for the</p>

delivery of the extensions to the MidWest train control systems for WestNet.

Phil has recently completed an assignment with the PTA to develop the AMP for the PTA's Communications Network and PTA Control Systems. This assignment not only developed the Communications Network AMP but also assisted the PTA in the development of its Asset Management Strategy, AMP structure and guidelines for developing AMP's. This work was based on the PASS 55 standards and is ongoing.

Phil has also completed an assignment for QR where he assisted in the development and prepared the Telecommunications Backbone Network Asset Management Plan. This plan was prepared in accordance with QR Networks Asset Management guidelines which are based on the PASS 55 standards.

Phil also provided technical and management advice and jointly developed the specifications for the BHPB new Rail Technology System which includes train control, scheduling and SCADA systems.

Phil continues to provide consultancy advice to the Public Transport Authority on the design of various operational systems including traction power SCADA, Train and Customer Information Systems, Train Control System, Passenger Information System and Voice Systems etc.

He was the Superintendent of the Train Control System Project as part of the extension of the Perth Urban Railway South (New Metro Rail). This system delivers a new train control and customer information system designed to integrate the functions of signalling control and passenger information as well as timetable generation, automatic route setting, performance reporting and management.

Phil has recently concluded a role in QR where he was the commercial manager for the sale of telecommunications services to external carriers. He has also been involved in development and management of a number of significant projects, contracts and negotiations on behalf of QR including the development of the contractual framework for the provision of railway technical and operational services by Queensland Rail to the first privately built railway operator and manager (Airtrain) in Qld.

He was the project manager for the negotiation and development of the contractual and performance regime framework for the Transport Services Contract for the provision of rail infrastructure services by Queensland Rail to Queensland Transport.

He is also developed the strategic plan for QR's operational and IT systems and processes. This has involved the development and implementation of the strategy for QR's train control systems, integrated operational systems, data warehouse and integrated management reporting system which provides monitoring and reporting of the key performance indicators to QR's key government, customer and regulatory stakeholders.

<b>PHILIP MCCLUSKEY</b>	
<b>Qualifications:</b>	<p>Bachelor of Applied Sciences Degree with a major in Analogue and Digital Systems, Curtin University, 1975.</p> <p>Post Graduate Diploma in Applied Corporate Finance and Investment Analysis. 1991 Securities Institute of Australia (SIA WA Branch)</p>
<b>Demonstrated Skills:</b>	<p>Phil McCluskey has been involved in the management of many rail and systems related projects.</p> <p>He has been involved in the strategic planning, project definitions and the development of procurement and management plans for a number of projects and has over 12 years of rail experience in rail systems and 25 years of engineering experience in power and process industries.</p> <p>He has demonstrated skills in the areas of project and contract management and is able to manage large teams of engineering and support personnel including operations, engineering, planning, and software and systems groups.</p> <p>He has a high level of technical skills in the areas of control, communications, electrical engineering and signalling which allows good inter-discipline management.</p> <p>He has been involved in many construction projects, which provides insight into issues and problems arising with the management of large projects.</p> <p>He has a sound knowledge of railway safety management systems.</p> <p>He has particularly strong skills in planning staging works which minimise operational disturbances.</p>
<b>Recent Career Summary:</b>	<p>In recent years, major clients have included BHPB, PTA, WAGR, WestNet Rail, Westrail, PTA, ERG in WA, Airtrain and Queensland Rail in Queensland and TIDC in NSW.</p> <p>Phil has recently worked with TasRail on the replacement of their train control system with a new electronic Track Warrant System delivering Track Warrants into locomotives and track vehicles. This also includes the introduction of a new DMR radio system.</p> <p>Phil was the Project Manager for the WestNet Rail Centralisation of Train Control Project. Phil was jointly responsible for the preparation of the specification, negotiation and management of this project and contract. Phil continues to provide consultancy advice to the WestNet Rail on the design of various systems including Train Control and Computer Assisted Train Orders (CATOS) and is currently jointly negotiating the contracts for the delivery of the extensions to the MidWest train control systems for WestNet.</p> <p>Phil recently completed an assignment for QR Network where developed and prepared the Telecommunications Backbone Network Asset Management Plan. This plan was prepared in accordance with QR Networks Asset Management guidelines which are based on the PASS 55 standards.</p>

Phil more recently has assisted the PTA with the development of the AMP for the PTA's Communications Network. This assignment not only developed the Communications Network AMP but also assisted the PTA in the development of its Asset Management Strategy, AMP structure and guidelines for developing AMP's. This work was based on the PASS 55 standards and is ongoing.

Mr McCluskey was involved in the original Westrail NSR works and has been involved with the upgrading and strategic planning of the Westrail Train Control Systems for a number of years.

Phil was the project manager for the Urban Security Initiatives Project for the Public Transport Authority (PTA) as the Project Manager.

These works include the introduction of new fibre technologies which are used as a communications medium for CCTV, Long line public address systems, new passenger information systems, emergency and help telephones and future SmartTicket facilities. The project also encompasses new lighting at stations and station barriers and car park fencing.

Phil has recently relocated the Central Monitoring Room for the PTA.

Phil has been a key resource in the planning of the migration of the existing Westrail train control systems to new technologies.

Phil has been involved in the Brisbane Airport Rail Link and the Singapore integrated smartcard ticketing system and was involved with the QR Network Access Group in the development of the 5 year strategic plan and the development of the NA infrastructure assets management programme. This involved the development and implementation of a strategy for QR's train control systems, integrated operational systems, data warehouse and integrated management reporting system which provides monitoring and reporting of the key performance indicators to QR's key government, customer and regulatory stakeholders.

Phil has also provided technical and management advice and jointly developed the specifications for the BHPB new Rail Technology System which includes train control, scheduling and SCADA systems.

Phil consulted to the Transport Infrastructure Development Corporation NSW providing advice on their CIMS Project involving the provision of customer information and train control for the urban rail network.

<b>BRUCE ARMSTRONG</b>	
<b>Qualifications</b>	Bachelor of Computer Science, Murdoch University
<b>Demonstrated Skills</b>	<p>Mr Armstrong has been involved in the computer and electronics industry for approximately 25 years. He has wide ranging experience and skills necessary to successfully take electronic and software systems from initial concept through implementation, documentation and deployment.</p> <p>He has good writing and communications skills and a demonstrated ability to deliver comprehensive system engineering and maintenance documentation for his projects. He possesses both project engineering and project management skills exemplified in his varied and highly technical work history. He undertakes projects in the diverse areas of marine equipment monitoring systems, robotics, Electronics engineering, Software systems engineering and implementation of turnkey systems.</p> <p>In 1992, he designed and manufactured the current PTA electronic passenger information displays. The displays are an original design that uses both LED and electromechanical (flip-disc) technologies. The displays have performed very reliably for the past 13 years.</p> <p>In the period 2002 to 2005, he developed a passenger information (PIN) system for PTA WA. The very small development team of two persons were jointly responsible for all aspects of the PIN, including requirements gathering, the on-station hardware, head office and field applications necessary to deliver the completed system. The system has been designed to deliver information reliably to patrons, it regularly achieves availability of better than 99.9% for the entire system.</p> <p>Software and communications experience include UML design, Microcontroller firmware (PIC), HDLC/SDLC, TCP/IP, User interface design, Linux, Visual C++, GCC, Protel, HTML, AutoCad. .</p>
<b>Recent Career Summary</b>	<p>In recent years, a major client has been The Public Transport Authority of WA, where he has been the principal architect of the PTA Passenger information system (PIN) currently deployed at approximately 60 suburban train stations.</p> <p>He has also recently completed the design and development of a Sub-sea Cable Laying monitoring application for Land and Marine Contractors, Hong Kong and has considerable expertise in design and development of robotics applications and hardware.</p>

**SCOTT LA VERTU**

Rail Safety Worker Card (No: RRN0010089543-100 Expires: 08/18)

**Demonstrated Skills:**

Scott has over 15 plus years of experiences in systems and network design.

His key responsibilities have included:

Provision of technical and design input into projects with the PTA program  
Provide the necessary IT and Communications Technology skills to major PTA infrastructure projects, particularly those using “converging” technologies (e.g. USIP/CCTV, Smart Rider, Train Control, TVM, SSR etc.)

Take a/the leading role in major IT Projects that have a major impact on PTA’s operations (e.g. EDRMS) or that create a “paradigm shift” in technologies or operating procedures (e.g. SAN, Business Continuity / Counter Terrorism, SSR)

Strategic selection of current and future technologies to ensure business and operational objectives are met while managing the associated risks.

Assist in the smooth transition of systems from Design/Construct to Operate/Maintain by ensuring O&M staff are prepared and trained and documentation is in place

Ensure and take overall responsibility for ensuring that network services are designed to agreed performance, availability and service levels and that consistent standards are maintained across the organisation.

Lead and participate in the planning, design and installation of systems, hardware and software on Public Transport Authority’s LAN, WAN, Network Operating Systems and Control / Operational Systems

Provide technology sections with expertise, advice and assistance where necessary.

Delivery of the Operational Systems and Business Support Program to agreed organisational objectives.

Explore and negotiate funding, including joint funding, from numerous funding sources.

Monitor and review work practices within the Program, promoting innovation and continuous improvement, and provide leadership in introducing improvements.

Provide strategic advice and information covering program coordination and project management related issues.

Manage the Operational Systems and Business Support Program resources to maximise performance and meets identified business objectives.

Represent the PTA on relevant committees, conferences, working parties and steering groups.

Work closely with relevant internal and external clients, stakeholders and asset owners in preparing annual and other longer term Operational Systems and Business Support Program covering PTA’s three business drivers (1) growth, (2) asset management and (3) business improvement.



	<p>Responsible for the effective management and leadership of project teams which may include external organisation membership.</p> <p>Ensure funding to support project planning and needs analysis activities is incorporated in operating and capital budget processes.</p> <p>Ensure the delivery of the projects within the Program in line with the Project Management Framework.</p> <p>Manage all risks associated with projects within the Program.</p> <p>Identify and implement opportunities to maximise efficient and effective program delivery.</p>
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<b>RUSSELL MURRAY</b>	
<b>Qualifications:</b>	<p>Bachelor of Engineering B.E.(Hons)(Civil), University of Queensland, 1979  Post-Graduate Diploma in Hydraulic Engineering Grad. Dip. Hyd. Eng. (Distinction), I.H.E., Delft, 1987  Master of Science in Engineering M.Sc. (Distinction), I.H.E., Delft, 1988  Graduate, Australian Institute of Company Directors  Chartered Professional Engineer</p>
<b>Demonstrated Skills:</b>	<ul style="list-style-type: none"> <li>• Project and program management</li> <li>• Development and implementation of technologies for asset protection and monitoring</li> <li>• Information systems to support transport system operation</li> <li>• Business case development, including engineering and financial analysis</li> <li>• Qualitative and quantitative issues analysis; risk assessment and risk allocation</li> <li>• Policy and strategy development</li> <li>• Transport planning across all surface modes (rail, bus, light rail, road, cycling and pedestrian)</li> <li>• Transport project delivery including busway infrastructure and tollroads</li> <li>• Environmental management of transport projects</li> <li>• Land use and transport integration</li> <li>• Development of infrastructure and service solutions, including innovative solutions</li> <li>• Bringing stakeholders together, and creating collaborative, outcomes-focussed approaches</li> <li>• Briefing of senior decision-makers</li> </ul>
<b>Recent Career Summary</b>	<p><b>Key Achievements:</b></p> <ul style="list-style-type: none"> <li>• Development of intelligent monitoring solutions for transport assets and operations</li> <li>• Development and implementation of technologies for safety and efficiency of transport operations, including visualisation interfaces for operations</li> <li>• Development and implementation of innovative level crossing protection system (LXPS), protecting overhead traction power from overheight road vehicle impact</li> <li>• Development and implementation of innovative bridge impact protection system (BIPS), protecting low clearance bridges from overheight road vehicle impact</li> <li>• Development of innovative collision avoidance system for road-rail level crossings</li> <li>• Strategic advice re transport infrastructure management</li> </ul>
<b>Queensland Government Department of Transport and Main Roads</b>	<p><b>Various Senior Roles including:</b>  Director (Roads Business Development)  Director (Urban Congestion)  Director (Strategic Infrastructure Investment)  Director Transport Planning (South East Queensland)  Director Waterways Management &amp; Infrastructure Development</p> <p><b>Key Achievements:</b></p>

	<ul style="list-style-type: none"><li>• Developed and implemented transport programs and projects to address urban congestion.</li><li>• Business case development and governance of major transport infrastructure projects including busways and tollroads</li><li>• Delivered several major transport planning studies</li><li>• Managed delivery of transport project</li><li>• Analysed environmental and community impacts of transport (including air, water, noise, vibration, economic) and developed policy, planning and project responses.</li><li>• Exercised the owner's responsibilities for over 500 statewide boating assets, including the development and implementation of asset management strategies, standards and programs</li></ul>
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<b>TONY BOLGIA</b>	
<b>Qualifications</b>	Bachelor of Engineering Degree, University of Western Australia
<b>Affiliations:</b>	<p>Member of the Institution of Engineers Australia according to the following:</p> <ul style="list-style-type: none"> <li>▪ Member Institution of Engineers Australia (MIEAust), Chartered Professional Engineer (CPE).</li> <li>▪ Member of the Institution of Engineer's Information Technology and Electronics College.</li> <li>▪ NPER accredited.</li> </ul>
<b>Demonstrated Skills</b>	<p>Tony has extensive professional experience in the information technology and telecommunications industry.</p> <p>He has been involved in the design, project management, strategic planning, project definitions and the development of procurement and management plans for many projects and has over 15 years of direct experience in rail systems and 30 years overall in engineering design &amp; operations</p> <p>Tony has demonstrated skills in the areas of project &amp; contract management and in particular of operational and control systems.</p> <p>Tony has a high level of technical skills in the many disciplines which allows good inter-discipline management. He has good verbal and written communications skills as well as sound interpersonal skills and interacts with PTA and other organisation senior managers and operational personnel.</p> <p>Tony has been involved in the tender process and has strong negotiations skills being responsible for negotiating contract claims and disputes.</p> <p>Tony supported and provided consultancy services to the Project Manager, Security Initiatives Project, Public Transport Authority of Western Australia (PTA USIP). This project was a major initiative to improve the level of security at railway stations. Work included providing superintendent services, providing scope of work documentation, request for tender documentation and technical specifications.</p> <p>The PTA USIP works included the introduction of new fibre technologies which are used as a communications medium for CCTV, Long line public address systems, new passenger information systems, and emergency and help telephones. The Project was awarded the Institute of Engineers Aust (WA) Engineering Excellence Award in 2007.</p> <p>Tony has also provided advice to the Manager Infrastructure Systems and associated Technology Discipline Managers, Public Transport Authority of Western Australia, to facilitate the provision of business deliverables in a reliable and cost effective manner.</p>

	<p>Recent technology projects for QR National &amp; QR demonstrate excellent design and problem solving skills together with the ability to work in a multi-disciplines team and to maintain relationships with both the client engineers and contractors.</p>
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	<p>Tony has experience working on an operating 25kV railway environment and is WPW05 accredited.</p>
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## JEFF CROSS

<b>Qualifications:</b>	Bachelor of Engineering (Electronic & Communications) Curtin University WA, 2003 Associate Diploma of Electronic Engineering Advanced Manufacturing and Technology Centre WA, 1993 Advanced Certificate of Electronic Engineering South West College of TAFE WA, 1992
<b>Demonstrated Skills:</b>	<p>Jeff Cross has over 17 years' quality experience in the Electronic and Communications industry complemented by extensive formal qualifications, including a Bachelor of Engineering (Electronic and Communications).</p> <p>His skills encompass a wide range of disciplines, including business and operational management, solution architecture, business analyst, product/application development, project management, SCADA and PLC, software and hardware development, team development and leadership, development &amp; nurture of strategic relationships, and extensive technical service and customer support.</p> <p>Highly results-oriented, flexible and ambitious, Jeff Cross seeks new challenges in a position with an employer of choice, whose vision, values and commitment to excellence he shares.</p> <ul style="list-style-type: none"><li>▪ Strong communication, negotiation and interpersonal skills – able to relate to people on all levels and establish effective relationships with clients, key stakeholders, peers and staff locally and internationally</li><li>▪ Inclusive and inspirational team leader – proven ability to train, empower, motivate and mentor</li><li>▪ Demonstrated expertise in electronic and communication system product development, solution architecture and project management to safety, quality, cost, time and compliance standards</li><li>▪ Strong analytical, organisational and time management skills – able to make sound strategic and operational decisions to meet demanding deadlines in high-pressure environments</li><li>▪ Exceptional technical skills with complex control systems and associated communications hardware and software, complemented by excellent IT hardware and software skills</li><li>▪ Commitment to and experience in developing and managing compliance and QA systems</li><li>▪ Overall, totally focused, adaptable and dependable with the highest possible levels of motivation, commitment, drive and integrity</li></ul>

<b>DALE BIDDELL</b>	
<b>Qualifications:</b>	B.App.Sc 1990
	<p>Rail Safety Worker Card (No: RRN0010089541-100 Expires: 08/18)</p> <p>30215QLD – Course in General Safety Induction (Construction Industry) (Card No: 0869668 Issue 30/08/08)</p> <p>Security Provider Licence No: 3365668 Expires: 05/03/16</p> <p>Senior First Aid Certificate</p>
<b>Demonstrated Skills:</b>	<p>Dale is ARCSG’s most experienced Installation and Maintenance Technician. Dale installs and maintains all ARCS’s asset monitoring and protection systems including Queensland Rail SEQ, Aurizon Nth Qld and Sydney Trains. He has also installed systems in Western Australia for the Public Transport Authority, Brookfield Rail and BHPB.</p>
<b>Recent Career Summary:</b>	<p>Dale currently maintains and supports all ARCS systems. These systems incorporate the use of cameras, digital video recorder, lasers detection, radio and wireless communications and software configuration. System includes the following:</p> <ul style="list-style-type: none"> <li>• Level Crossing Monitoring Systems</li> <li>• Bridge Impact Protection Systems</li> <li>• Level Crossing Protection Systems</li> <li>• Rail and Ambient Temperature Systems</li> <li>• DC Feeder Cable temperature Monitoring Systems</li> </ul>

**PETER STEWART**

<b>Demonstrated Skills</b>	<p>Since joining the WAGR in 1970, Peter has been employed in the rail, agricultural, entertainment and pharmaceutical sectors during the last 37 years. Peter possesses high-level research skills developed as a postgraduate scholarship student at UWA, management &amp; marketing skills from the pharmaceutical industry, technical skills from the agricultural, recording and rail industries. He has been directly involved with ARCS since 2000.</p> <p>Key skills include:</p> <ul style="list-style-type: none"><li>• A multi-disciplined approach to problem solving, resulting from long experience in real-time, industrial and off-shore data collection, monitoring and control systems.</li><li>• Strong experience in the preparation of technical manuals, strategic planning and related documentation</li><li>• Proven track record of delivering complex systems in the rail industry. In this context, the Passenger information system and the Midilites electronic displays, currently installed in the PTA network.</li><li>• Excellent communications skills.</li><li>• Excellent problem solving skills</li></ul>
<b>Recent Career Summary</b>	<p>Peter has provided a range of management, technical documentation and project supervisory services to WestNet Rail, BHP Billiton, QR and PTA over the last five years. His experience includes the specification of the BHP Billiton Train Control System, tender management and evaluation and recommendations for award. Recent work includes:</p> <ul style="list-style-type: none"><li>• Project Manager for QR SEQ's SMART projects incorporating the Rail &amp; Ambient Temperature Sensing (RATS), Level Crossing CCTV and Bridge Impact Detection System (BIDS) projects;</li><li>• PTA Perth Underground TCS SCADA project – essential systems testing &amp; commissioning, and as well as superintendence of defects rectification activities for PTA;</li><li>• BHPBIO Project ROS Rail Specialist for the development of the Rail Fleet Management suite of applications;</li><li>• BHPBIO Project ROS Communications Specialist in the development of communications strategies and related enabling technologies associated with the delivery of the whole of Project ROS including development of options for RTK DGPS for location of rail &amp; road vehicles;</li><li>• QR Mobility Case Study Report - research and authoring of report on options for implementation, service options and commercialisation of network-wide wireless broadband services;</li><li>• Project manager for WNR TOS2006 computer assisted dispatch project including the development of control tables for WNR's dark territory operations;</li></ul>



**ALISON MCCLUSKEY**

**Qualifications:**

Graduated Year 12 in 2006

**Demonstrated Skills:**

Alison McCluskey has assisted on the WNR Train Control Centralisation project in the capacity of supporting both the project manager and the contract superintendent.

Alison has been an administration assistant for the Urban Securities Initiatives project and New Metro Rail Drawing projects managing and maintaining the distribution and storage of AutoCAD and PDF files.

Most recently she has documented the preset views for PTZ station cameras for USIP2 and compiled Station and site files in preparation for handover.

**Recent Career Summary:**

Alison has previously worked in customer service and retail at such places as Blockbuster, Bakers Delight and Chicken Treat.

She has been employed by Milford Holdings Pty Ltd for the last four years providing procurement, administration and book-keeping assistance to ARCS across a variety of client projects and for Milford Holdings internal requirements.