



Vara lakshmi Penneru

Rail Signalling - PDA (Project Design Authority)

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A result-oriented professional over 22+ years of experience in Railway Signalling Industry.

- Participated many international projects
- Manages projects effectively from design concept to implementation.
- Creative in problem solving with a broad understanding of stakeholder needs.
- Strong collaborative relationships with colleagues, stake holders and clients.
- Effective team management.
- Project management combining comprehensive technical knowledge.
- Vendor and Sub-contractor selection and management.
- Resource development, competency management system.
- Co-ordination management with systemwide contractors.
- Technical proposals and Budget forecasting
- Management of Shutdown projects

PROFESSIONAL COMMITMENTS

- Expert in Re-Signaling brownfield and greenfield CBTC Projects and System Migration strategy Management
- Proven ability to analyze complex strategic and tactical problems into component parts.
- Outstanding delivery focus and attention to detail ensuring robust delivery of multidisciplinary solutions meeting the needs of all stakeholders.
- Committed to Quality, Accuracy, Timeliness and Efficiency in delivering allocated tasks.
- Guiding, Managing and developing teams on CBTC systems.

EDUCATION

Degree of Bachelor of Arts

INDUSTRY QUALIFICATIONS & AFFILIATIONS

- IRSE Signalling Principles designer - 1.1.550
- IRSE Signalling Verifier - 1.1.160
- Member of IRSE (MIRSE)
- Member of Singapore Standards committee

EXPERIENCES

Project Design Authority

Hitachi Rail, Singapore - Since June 2024



- Oversee the conduct and approve the outcome of trade studies to evaluate design alternatives in order to provide advice to both the customer and internal technical teams.
Consult with customers and their representatives in order to appropriately influence system architecture and design.
Ensure that the proposed architecture and design will meet the customer's requirements
Liaise with customers on technical, architectural and procedural issues as required.
- Manage, coach and mentor architectural and technical teams.
Lead collaborative discussion between internal teams, vendors and customers to clarify and define system requirements.
Approve the system architecture, and provide leadership and guidance to the architecture team
- Ensuring the implementation of multi-project synergies in order to optimize cost of technical solutions.
Developing and implementing policies, standards and procedures for the engineering and technical work performed in the Program, in conjunction with the Systems Engineering Manager.
Review of safety documentation and leading HAZOP sessions.

Project Design Authority & Engineering Manager

THALES

Thales Solutions Asia Pte Ltd, Singapore - May 2014 to 2024

- ▶ Head of Department for all the engineering designs for NSEW Singapore project with existing Westinghouse rail system interface with CBTC Thales PMI moving block system, Changeover Cubicle comprises 54 stations and a route length of 94 km.
Manage, coach and mentor architectural and technical teams.
Lead collaborative discussion between internal teams, vendors and customers to clarify and define system requirements.
Approve the system architecture and provide leadership and guidance to the architecture team.
Ensure the programme of design, installation, testing and commissioning is executed such that it can demonstrate a safe system is brought into use, compliant with the contract terms, conditions and principles together with operational and maintenance requirements.
Advise the Sub-Contractors when required on the technical content of documentation and the level of testing required to satisfy Safety requirements and ensure compliance of the core systems.
Head of Decommissioning for NSEW project
CCRB member with safety case preparation support for NSEW&TWE projects.
- ▶ Migration strategy Manager for all the NSEWP projects.
Ensure that technical and safety standards are maintained in all aspects of design within the allocated project.
Supporting bid team with cost estimation, schedule risks, technical description, migration plan and BOQ.
- ▶ Trained Singapore SMRT maintenance and operations team on CBTC wayside signalling design principles.
Presented NSEW Re-signalling wayside interlocking design and changeover principles to IRSE Singapore and IRSE Malaysia sections.
- ▶ Worked as an Engineering Manager with responsible to provide hardware solutions for North-South and East-West lines and Tuas Extension projects (NSEW/TWE) in Singapore. Wayside signalling interface design including hardware components selection.
Responsible to confirm that all design work is controlled, implemented and undertaken in accordance with relevant instructions/standards.
Manage the design team and work package with forecasting manpower requirement to management for all the design works.
Assist and monitor with the planning and progress of works in relation to timeline and budget.
Worked as an interface point between Thales Canada, Thales France and LTA/SMRT Singapore for wayside interface signalling solution.
Provided conceptual design solution for the system changeover from existing legacy system to new CBTC system
Supporting to supplier and procurement team in addressing component selection for hardware BOQ
Managing the sub-contractors
Complete signalling solutions for Canberra station, Tanah Merah extension and 4in1 depot including interface with other SWC's.
Managing Installation, Planning and Design teams including work package management.
Responsible to deliver Proof of Concept stations, North South Line, East west line and Tuas extension.
- ▶ Review and evaluate company and third-party documentation and products.
Review of design/signalling principles/scheme plans/control tables/testing methodology/fault reporting to ensure safe introduction back to revenue service.

Design Manager

BOMBARDIER
the evolution of mobility

BOMBARDIER TRANSPORTATION, MALAYSIA - April 2013 to April 2014

- ▶ Worked as a Project Engineer and design manager for Klang valley Mass Rapid Transit (KVMRT) with Bombardier Cityflo 650 automatic train control solutions for Sungai Buloh-Kajang line in Malaysia
- ▶ Responsible to manage the Signalling Design Group's and project
Manage, control and monitor design activities ensuring timescales, contractual requirements and quality are met
Managing the sub-contractors. interface with other SWC's and customer
- ▶ Confirm that all design work is controlled, implemented and undertaken in accordance with relevant instructions/standards.

Hardware Application Engineer

THALES

Thales Asia solutions Pte Ltd - April 2012 to April 2013

- Lead designer - Produced conceptual COC principle design for NSEW Singapore project with existing Westinghouse rail system interface with CBTC Thales PMI moving block system with Changeover Cubicle comprises 53 stations and a route length of 94 km.
- Responsible to deliver Proof of Concept stations design for Changi Airport, Changi Online, EXPO, Tanah Merah stations and Bishan Depot Test Track.
- Worked as an interface point between Thales Canada, France and LTA/SMRT Singapore
- Provided conceptual COC interface design for wayside signalling devices
- Supporting to supplier and procurement team in addressing the technical issues for Signalling racks.

Senior Signalling Design Engineer

INFOTECH ENTERPRISES LTD., BANGALORE - May 2010 to April 2012



- ▶ Responsible to produce Design, Checking and Verification of Signalling Systems.
Ensure that Technical and Safety Standards are maintained in all aspect of Design within the allocated project
Provide support and guidance to the Design Manager on all aspects of the allocated project.
Assist in the forecasting of Manpower requirements for all design work to enable allocation of resources to be made.
- ▶ Worked as a verifier (Independent checker) for Control table of the Siemens technologies used in New Delhi and Shivaji Stadium, IGI Airport Station & Dwaraka Sector 21 of Delhi Metro Rail Corporation (DMRC)
- ▶ Produced bookwiring Vol.2, SMCPLC design, Cut-in design, COC recovery design, Modification design and Record updated in Thales Seltrac moving block system for Northern line JNUP (Jubilee and Northern Line Upgrade Project)

Senior Design Engineer

MCML SYSTEMS PVT LTD, BANGALORE. - March 2004 to April 2010



- ▶ Commencing as a trainee engineer reaching the post of Senior Design Engineer
- ▶ (Team Leader) with responsibility for the management of a team of 15 staff, plus trainees.
- ▶ Worked as Design Engineer and Team leader for producing and verifying the Signalling interlocking design.
- ▶ Worked as Design Engineer on Scheme design project (Consisting of stages like data capture, DTG-R Simulation using Scheme Simulation tool) for Sub-section 15, Sub-Section 16 and Victoria line section of LUL for Westinghouse Rail Systems, UK.
- ▶ Produced Phase-2: Standardization of Route lists for England & Wales on South East, LNW and Western region of Netowrk Rail of Babcock Rail