Principal Tester in Charge for the Testing and Commissioning:

- 1. Brooklyn, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.
- 2. Frances St. L-xing, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.
- 3. Tottenham Loop, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.
- 4. Tottenham "B" (mechanical interlocking), Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.
- Sunshine, Munistone and West Footscray (boundaries), Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.

Project Leader and Designer:

- 1. Newport, PTC Signal Rehabilitation Project (Victoria, Australia). The project has included design of signalling arrangements, which were prepared for the application of computer-based interlockings, Connell Wagner Ltd., Melbourne, Australia, 1995.
- 2. Ringwood, PTC Signal Rehabilitation Project (Victoria, Australia). The project has included design of signalling arrangements, which were prepared for the application of computer-based interlockings, Connell Wagner Ltd., Melbourne, Australia, 1995.
- 3. Heidelberg to Rosanna, PTC Signal Rehabilitation Project (Victoria, Australia). The project has included design of signalling arrangements, which were prepared for the application of computer-based interlockings, Connell Wagner Ltd., Melbourne, Australia, 1995.
- 4. Broadmeadows, PTC Signal Rehabilitation Project (Victoria, Australia). The project has included design of signalling arrangements, which were prepared for the application of computer-based interlockings, Connell Wagner Ltd., Melbourne, Australia, 1995.
- 5. Frankston, PTC Signal Rehabilitation Project (Victoria, Australia). The project has included design of signalling arrangements, which were prepared for the application of computer-based interlockings, Connell Wagner Ltd., Melbourne, Australia, 1995.
- 6. Jolimont to Clifton Hill, PTC Signal Rehabilitation Project (Victoria, Australia). The project has included design of signalling arrangements, which were prepared for the application of computer-based interlockings, Connell Wagner Ltd., Melbourne, Australia, 1995.

Tester in Charge for Testing and Commissioning:

- 1. Sunshine Loop Decommissioning, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.
- 2. Newport Stage Works, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.
- 3. Newport Final Design (including the SSI portion, re-signalling designs of the existing relay interlocking and the appropriate interfaces), Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.

Project Leader, Designer and Principal Tester in Charge for the Testing and Commissioning:

1. Распутница 1 В, Београдски сајам (ЖТП Београд). Развој, пројектовање, израду, монтажа, испитивање и комисијско пуштање у рад сигнално-сигурносног уређаја упрошћеног типа за потребе Југословенских Железница, Институт "Кирило Савић" Београд, Југославија, 1990. године.

Designer:

- 1. Bristol, Stapelton Road Signal Conversions (British Rail). Circuit design for conversion of electro-mechanical Banner repeats to fibre optic Banner repeats. Circuit design in accordance with British Rail typical Free Wired Interlocking Standards to provide controls and lamp proving, Connell Wagner Ltd., Melbourne, Australia, 1992.
- 2. Havant Resignalling (British Rail). Circuit Design for new interlocking at Havant. Design included control table changes and detailed design of the interlocking, Connell Wagner Ltd., Melbourne, Australia, 1992.
- 3. Sunshine Loop Interim Decommissioning Design, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1994.
- 4. Sunshine Loop Decommissioning Design, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia). Design activities providing auto signalling through the single line and appropriate alterations to Anderson Street Level Crossing circuits, Connell Wagner Ltd., Melbourne, Australia, 1994.
- 5. Tottenham Loop Interim Stage Work Design, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1994.
- 6. Tottenham Loop Design, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia). Design activities including significant alterations to ex. Sunshine Loop circuits to be reused as Tottenham Loop circuits, Teknis Design Alterations, Tottenham 'B' Re-signalling Design, West Footscray Circuits Alteration Design, Munistone Circuits Alteration Design and Sunshine Circuits Alteration Design, Connell Wagner Ltd., Melbourne, Australia, 1994.
- 7. Brooklyn Interim Stage Work Design, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1994.
- 8. Kernot Street L-xing, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia). Circuit alteration design, Connell Wagner Ltd., Melbourne, Australia, 1994.
- 9. Frencis Street L-xing, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia). Circuit alteration design, Connell Wagner Ltd., Melbourne, Australia, 1994.
- Champion Road L-xing, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia). Design of HXP-3 (Harmon CBI L-xing system), Connell Wagner Ltd., Melbourne, Australia, 1994.
- 11. Newport Stage Work, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia). The designs include stage work signalling arrangements, bonding plans, releasing table alterations and circuit's design, Connell Wagner Ltd., Melbourne, Australia, 1994.
- 12. Shanghai Monorail Project (China), Preliminary design of Signalling Arrangement. The design has included headway calculations, signal spacing and ATP considerations to obtain the optimal performances, Connell Wagner Ltd., 1996.
- 13. Champion Road L-xing (PTC, Victoria, Australia). Design of Pedestrian Gates and Flashing Lights Circuits, Connell Wagner Ltd., Melbourne, Australia, 1996.
- 14. Cherry Street L-xing (PTC, Victoria, Australia). Design of Pedestrian Gates and Flashing

Lights Circuits, Connell Wagner Ltd., Melbourne, Australia, 1996.

- 15. Windermare Road L-xing (PTC, Victoria, Australia). Design of Pedestrian Gates and Flashing Lights Circuits, Connell Wagner Ltd., Melbourne, Australia, 1996.
- 16. Edgar Road L-xing (PTC, Victoria, Australia). Design of Pedestrian Gates and Flashing Lights Circuits, Connell Wagner Ltd., Melbourne, Australia, 1996.
- 17. Lara Lakes Road L-xing (PTC, Victoria, Australia). Design of Pedestrian Gates and Flashing Lights Circuits, Connell Wagner Ltd., Melbourne, Australia, 1996.
- 18. Jolimont Resignalisation Project (PTC, Victoria, Australia), Design of Final Concept Signalling Arrangement. The project has included design of signalling arrangements which were prepared for the application of computer based interlockings at Flinders Street and the optimisation of signalling and equipment against required headways, Connell Wagner Ltd., Melbourne, Australia, 1997.
- 19. Melbourne Freight Terminal, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia). The project includes various design activities required to provide the standard gauge connection, Connell Wagner Ltd., Melbourne, Australia, 1997.
- 20. Станица Обилић (ЖТП Приштина), Израда монтажног пројекта, Институт "Кирило Савић" Београд, 1986. године.
- 21. Станица Титова Митровица (ЖТП Приштина), Израда монтажног пројекта, Институт "Кирило Савић" Београд, 1986. године.
- 22. Станица Звечан са Валачем (ЖТП Приштина), Израда монтажног пројекта, Институт "Кирило Савић" Београд, 1986. године.
- 23. Станица Косово Поље путничка (ЖТП Приштина), Израда монтажног пројекта, Институт "Кирило Савић" Београд, 1986. године.
- 24. Станица Косово Поље теретна (ЖТП Приштина), Израда монтажног пројекта, Институт "Кирило Савић" Београд, 1986. године.

Checker of the Design:

- 1. Waterloo & City Line Re-signalling (British Rail): Full design check of track bonding plans, control tables, interlocking circuits and ATP code selection tables and circuits for British Rail's Waterloo and City Line. The task involved identification of foul track circuits and checking of control tables and circuits for a two-stage implementation of ATP / ATO on this line. Compliance with British Rail's Standard Signalling Principles and Typical Circuits for Free Wired Interlocking was checked and deviations from the specifications were noted. Solutions were proposed where necessary to overcome design deficiencies, Connell Wagner Ltd., Melbourne, Australia, 1992.
- 2. Farleigh Purono (Queensland Railways, Australia). Checking of design of WESTECT ATP (Westinghouse Automatic Train Protection System) Route Data design consisting of transponder allocation drawings, detailed site survey information and client provided information for speed board placement and track gradient profiles, Westinghouse, Melbourne, Australia, 1993.
- 3. Farleigh Purono (Queensland Railways, Australia). Checking of design of WESTECT ATP computer generated gradient calculations and signal route entrance speeds used in transponder CTSS (Configuration of Transponder Sub System) data and ATP encoder logic, Westinghouse, Melbourne, Australia, 1993.
- 4. Farleigh Purono (Queensland Railways, Australia). Checking of design of WESTECT ATP CTSS used to store specific track data and to program transponders. The specific track data

includes such information as radio channels, gradients, permanent and temporary speed restrictions and signal divergent route information, Westinghouse, Melbourne, Australia, 1993.

- 5. Ipswich Toowoomba (Queensland Railways, Australia). Checking of design of WESTECT ATP (Westinghouse Automatic Train Protection System) Route Data design consisting of transponder allocation drawings, detailed site survey information and client provided information for speed board placement and track gradient profiles, Westinghouse, Melbourne, Australia, 1994.
- 6. Ipswich Toowoomba (Queensland Railways, Australia). Checking of design of WESTECT ATP computer generated gradient calculations and signal route entrance speeds used in transponder CTSS (Configuration of Transponder Sub System) data and ATP encoder logic, Westinghouse, Melbourne, Australia, 1994.
- 7. Ipswich Toowoomba (Queensland Railways, Australia). Checking of design of WESTECT ATP CTSS used to store specific track data and to program transponders. The specific track data includes such information as radio channels, gradients, permanent and temporary speed restrictions and signal divergent route information, Westinghouse, Melbourne, Australia, 1994.
- 8. The Adwest SSI, Belair to Goodwood Train Describer Project (Transadelaide, Australia). Checking of the Control Tables, Connell Wagner Ltd., Melbourne, Australia, 1995.
- 9. Brooklyn, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.
- 10. Newport Stage Works (Signalling arrangements, bonding plans, control tables and circuit alterations), Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.
- 11. North Geelong "C" Stage Work (Signalling Arrangements and Locking (releasing) Tables), Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.
- 12. Maddox Road L-xing, Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia). Checking of HXP-3 (Harmon CBI L-xing System) design alteration, Connell Wagner Ltd., Melbourne, Australia, 1995.
- 13. Kutorajo, Cirebon-Kroya-Yogyakarta Project (Indonesia), Checking of WESTRACE Control Tables, Westinghouse, Melbourne, Australia, 1996.
- 14. Maos, Cirebon-Kroya-Yogyakarta Project (Indonesia), Checking of WESTRACE Control Tables, Westinghouse, Melbourne, Australia, 1996.
- 15. Cirebon-Kroya-Yogyakarta Project (Indonesia), Checking of WESTRACE Block Circuits for typical station arrangement, Westinghouse, Melbourne, Australia, 1996.
- 16. Brooklyn Resignalling Design (PTC, Victoria Australia). Checking of the Interlocking Design. The project involved the provision of power-operated points in an area equipped with twoaspect signalling, Connell Wagner Ltd., Melbourne, Australia, 1996.
- 17. Deer Park West (PTC, Victoria, Australia), Checked Aspect Change Design, Connell Wagner Ltd., Melbourne, Australia, 1997.
- 18. Upfield (PTC Signal Rehabilitation Project). The project has included checking of several stations and more then 30 L-xings and Ped-xings. The following drawings, which were prepared for the application of computer-based interlockings, have been checked: Signalling arrangements, Bonding plans and Time-distance graphs, Connell Wagner Ltd., Melbourne, Australia, 1997.

The developer:

- 1. Модел сигнално-сигурносног уређаја за станице на прузи Лешак Ђ. Јанковић (Енергоинвест, Сарајево). Учествовао у пројектовању и испитивању уређаја, Институт "Кирило Савић" Београд, 1984. године.
- 2. Командни уређај за сигнално-сигурносне уређаје у дигиталној технологији, Израда пројекта и прототипа, Институт "Кирило Савић" Београд, 1987. године.
- 3. The development of gauge detection circuits for the fail-safe gauge detection on the mixed gauge (BG and SG), Melbourne to Adelaide Gauge Standardisation Project (National Rail, Australia), Connell Wagner Ltd., Melbourne, Australia, 1994.

Factory Acceptance Tester and Witness:

- 1. The Adwest SSI, Belair to Goodwood Train Describer Project (Transadelaide, Australia), Connell Wagner Ltd., Melbourne, Australia, 1995.
- 2. Kretek, Cirebon-Kroya-Yogyakarta Project (Indonesia). Factory Acceptance Testing of WESTRACE, Westinghouse, Melbourne, Australia, 1996.
- 3. Karangsari, Cirebon-Kroya-Yogyakarta Project (Indonesia). Factory Acceptance Testing of WESTRACE, Westinghouse, Melbourne, Australia, 1996.
- 4. Patuguran, Cirebon-Kroya-Yogyakarta Project (Indonesia). Factory Acceptance Testing of WESTRACE, Westinghouse, Melbourne, Australia, 1996.
- 5. Legok, Cirebon-Kroya-Yogyakarta Project (Indonesia). Factory Acceptance Testing of WESTRACE, Westinghouse, Melbourne, Australia, 1996.
- 6. Bumiayu, Cirebon-Kroya-Yogyakarta Project (Indonesia). Factory Acceptance Testing of WESTRACE, Westinghouse, Melbourne, Australia, 1996.
- 7. Kroya (the most complex station in the contract consisting from two WESTRACE systems), Cirebon-Kroya-Yogyakarta Project (Indonesia). Factory Acceptance Testing of WESTRACE, Westinghouse, Melbourne, Australia, 1996.
- 8. Sikampuh, Tasikmalaya-Banjar-Kroya Project, (Indonesia), Factory Acceptance Testing of WESTRACE (Westinghouse Computer-Based Interlocking System). Westinghouse, Melbourne, Australia, 1997.

Designer, Tester and Commissioning Engineer:

- 1. Сигнално-сигурносни уређаји за станице на прузи Лешак Ђ. Јанковић (Енергоинвест, Сарајево). Учествовао у пројектовању, изради, испитивању и пуштању у саобраћај уређаја, Институт "Кирило Савић" Београд, 1985. године.
- 2. Сигнално-сигурносни уређаји за станице: Липљан, Бабљак, Грлица и Урошевац, на прузи Лешак Ђ. Јанковић (Енергоинвест, Сарајево). Унификација измена у пројектима и на уређајима, Институт "Кирило Савић" Београд, 1985. године.
- 3. Станица Радучић код Книна (ЖТП Хрватске). Учествовао у развоју аутоматских сигнално-сигурносних уређаја за непоседнуте станице и на основу тога у пројектовању, изради, испитивању и пуштању у саобраћај уређаја, Институт "Кирило Савић" Београд, 1988. године.