

Client:
Bombardier Transportation
for TransLink

Location:
Vancouver, BC, Canada



photo courtesy of TransLink

The Vancouver SkyTrain, North America's first driver-less advanced rapid transit system, was recently almost doubled in size to just over 30 dual-lane miles with the opening of the new Millennium Line. Included in the expansion were 60 new Bombardier Mark II vehicles for which Trak Com designed and provided the onboard voice communications system.

Each married pair of vehicles has a Communications Control Unit (CCU) which provides the following facilities:

- Full duplex radio communication between the trains and central control
- Passenger Intercom Panel (PIP) interface to enable communications between the control center and passengers requiring emergency assistance
- Automated Station Announcements via the Public Address (PA) system, generated by an onboard digital voice announcement unit (VVAU) which is triggered from central control through the radio network
- Monitoring and reporting of onboard passenger assistance alarms and smoke detectors
- LonWorks network interface to other onboard systems, used in part to enable downloading of vehicle Health Monitoring Unit (HMU) information via the radio
- Hostler Access Panel (HAP) interface providing radio, intercom, and PA facilities for crew that move trains in the yards or in the event of a breakdown

Wayside Radio Communications Control Units (RCC) provide the fixed interface between the vehicles and the Train Information and Management System (TRIMS). The RCCs operate using a modified MPT1327 trunked radio protocol, which allows any of the four duplex radio channels to be used for voice or data communications. All messages between the trains and TRIMS are communicated via redundant RCC units.