

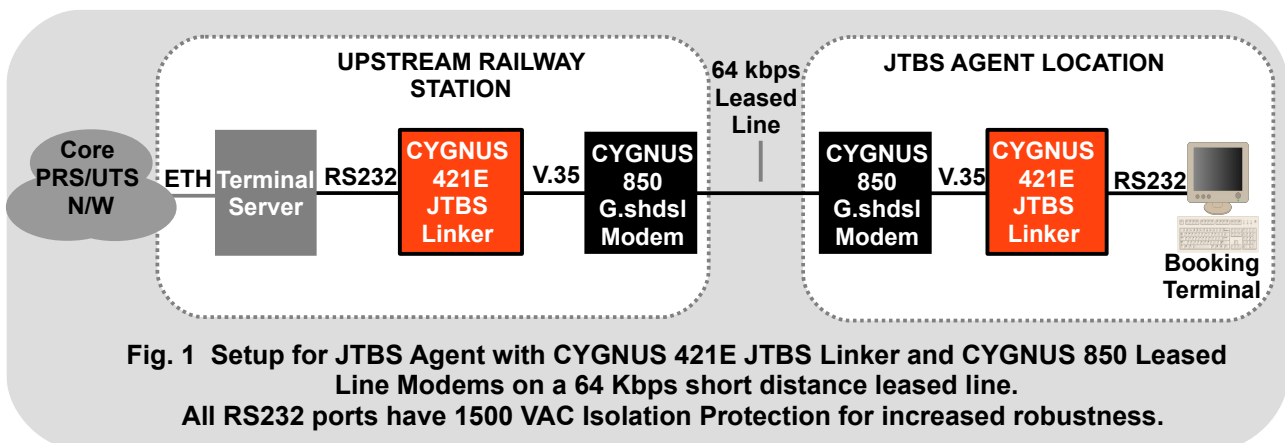
Connecting JTBS and YTSK Franchisees to the PRS/UTS network

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Connectivity Solutions for Janasadharan Ticket Booking Seva (JTBS) and Yatri Ticketing Seva Kendra (YTSK) Franchisees as Per Railway Guidelines and Circulars

Railways have been decentralising ticket booking by allowing franchisee operations managed by private parties. These operations are housed in franchisee premises, which could be located at places near or far away from existing railway stations and railway booking offices.

JTBS (Jansadharan Ticket Booking Sewa) franchisees are authorised to issue unreserved tickets and tickets for suburban travel. These franchisees are typically located near railway stations. They are allowed to use dumb terminals for booking tickets. Cygnus offers CYGNUS 421E JTBS Linkers to connect the dumb terminals at JTBS premises to ports of a Terminal Server at a nearby railway station. As per railway policy, a leased line is required from franchisee premises to the railway station. CYGNUS 421E is a mux-like device which operates in pairs across a 64 kbps leased line and extends up to four RS232 ports from the central Terminal Server to the franchisee premises using a leased line. It is in widespread use by JTBS franchisees all over the country. A pair of CYGNUS 421E units protects against any data errors on the leased line by automatically detecting and correcting them. 1500 VAC Isolation protection is provided on all RS232 ports for increased robustness. The product can also be used by railways themselves to provide error-corrected connections to up to four remote terminals at a remote site, over a 64 kbps leased line. Fig. 1 shows a typical setup.



Yatri Ticket Suvidha Kendras (YTSK) are allowed to sell both reserved and unreserved tickets to the public. The user device at franchisee premises is again a dumb terminal, and the franchisee site is connected to railway network using leased lines. However Railway Board guidelines (as expressed in Commercial Circulars issued by the Board) require that the connectivity scheme between YTSK franchisee and the railway station should be able to provide for leased lines up to 2 Mbps, and also that the franchisee should lease 2 lines to the nearby railway station since high uptime is a must for issuing reserved tickets. CYGNUS 711L YTSK Linker takes these special requirements into account. It has two network ports for connecting to two leased lines. If one link is inoperative due to any reason, the units automatically switch over to the other, ensuring high application uptime. The speed on both network ports can be up to 2 Mbps. Four RS232 ports can be extended to the YTSK location using the YTSK Linker. Higher end models with more terminal ports are also available. 1500 VAC isolation on each RS232 port ensures increased robustness. A typical setup is shown in Fig. 2.

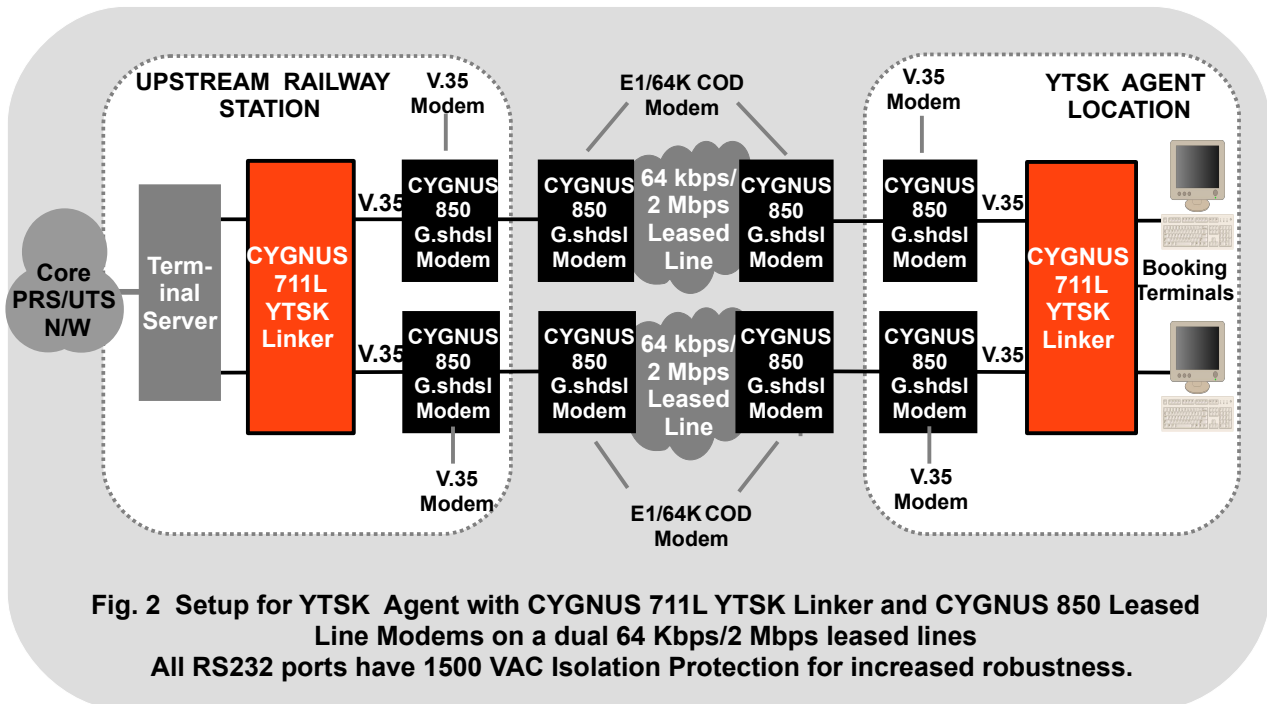


Fig. 2 Setup for YTSK Agent with CYGNUS 711L YTSK Linker and CYGNUS 850 Leased Line Modems on a dual 64 Kbps/2 Mbps leased lines
All RS232 ports have 1500 VAC Isolation Protection for increased robustness.

Fig.3 shows a solution for issuing both PRS and UTS tickets from a single counter. Cygnus 405 Automatic Printer Switch allows the terminal at the counter to switch between UTS and PRS systems, and simultaneously switch the terminal's printer port between the printer with UTS ticket roll and the printer with PRS ticket roll. It is widely used by railways for setting up "Universal Counters". YTSK agents can also gain the same benefit.

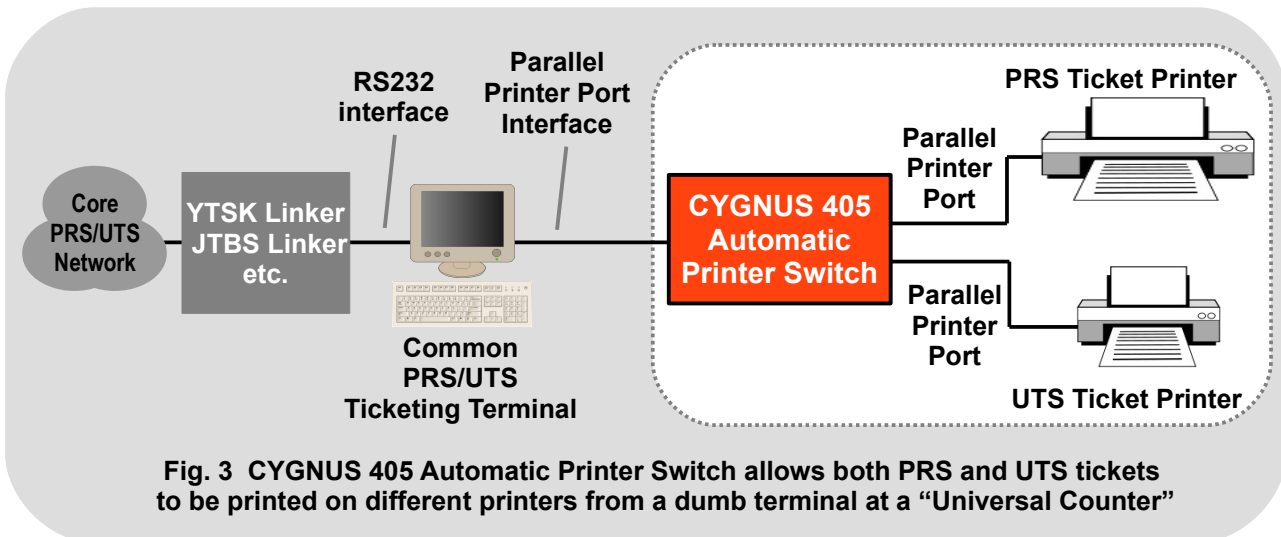


Fig. 3 CYGNUS 405 Automatic Printer Switch allows both PRS and UTS tickets to be printed on different printers from a dumb terminal at a "Universal Counter"

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