Recent Research and Development of Signalling and Telecommunications Technologies Shigeto HIRAGURI This paper outlines the recent research and development of train control systems, solutions for a problem of existing signaling equipment and the applications of radio communication technology to railways. It describes what we call "intelligent train" and a train control system for secondary lines which does not require an interlocking device at stations. It also describes solutions about a point machine in secondary lines, lightning-inducted voltage in cables and a visibility test of the obstruction warning signal. Finally, it describes the applications of millimeter wave technology which enables high speed and large capacity communications.