

Methods for Applying Public Communication Network to Communication-Based Train Control Systems

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A method for applying public communication networks to communication-based train control systems is proposed. The application of public communication networks to train control systems differs from conventional systems in that transmission lines which cannot be controlled by railway operators, intervene between safety equipment. Therefore, in order to construct a system in which safety techniques can be applied without depending on transmission lines, a configuration in which train control function and information transmission are independent of each other is presented. Furthermore, threats posed by information transmission function from the perspective of the train control function and countermeasure requirements are presented, as well as implementation methods which satisfy these requirements at the current techniques.