A Proposal of Safety Requirements for Train Control Systems Specifications

Koji IWATA

Recent train control systems tend to be larger and more complicated with the increase of the number of functions. In order to keep a very high level of safety in such a system, we are trying to prepare check items for system specifications of train control systems to be examined at the early stage in design phases to decrease the errors. In this paper, a common platform for train control systems is shown. Focused on this platform, some safety requirements defined by quantified values are shown by constraint equations. In addition, as a case study, we demonstrate an example of applying these equations to communication based train control systems with due consideration on line conditions.