

Air Suspended and LIM Propulsion Transit System and Next Generation PRT

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This system is originally supposed to be designed based on full-automatic operation with no driver. Characteristics of this system include low vibration and less noise both inside and outside the vehicle due to the air suspension system composed of many rubber airpads at the bottom of the vehicle. Furthermore, linear induction motor propelling with no adhesion made possible to be accommodated to steep gradient. In order to carry forward the evaluation of this system, the first thing we had to do was to know the range of available application that this system can fit in. For this system two applications have been defined assuming actual installation of this system. The first is, On-Demand transportation system, which could be used for short trip. And the another is urban transportation system commonly used for medium sized transportation system such as commuter trains. Now, we are developing new generation system (PRT: Personal Rapid Transportation) based on this system. The next generation PRT is able to meet social needs such as cost-effective, less impact to the environment, and easy access with no barriers. In this system, in addition to the current performances, this has steering units to drive the vehicle independently on a flat track with no guidance rail and also batteries to run the vehicle on a flat track with no power rail. Furthermore, there is a characteristic of low floor for this vehicle. The most distinctive feature is its dual mode operation. This PRT can be used for both operations on an elevated guideway and on a flat track with no guidance rail and no power feeder.