

## SPEED CONTROL AT JUNCTIONS TO SAVE ENERGY.

This report considers the train regulation requirements that are necessary to minimise conflicts at junctions and allow energy saving.

When a train is held at a junction because of some perturbation in train running, it will generally have dissipated its kinetic energy by breaking to a stand.

The work described here examines how much energy can be saved by employing coasting in such a way that no braking is required, provided the junction is cleared when predicted. The problem was studied with the aid of a computer programme.

To exploit such savings fully would require the frequent monitoring of trains by a real-time system which would need to control trains with a resolution ideally greater than that offered by the current signalling system.

The report concludes that the next step is to estimate how often the junction confliction problem occurs in practice and quantify the benefits for realistic situations. If the benefits appear high enough, possible methods of implementation should then be investigated.