

# AUTOMATIC ROUTE SETTING REQUIREMENTS SPECIFICATION

A computer-based system for automatic regulation and route setting is being developed. Subject to satisfactory trials, it is proposed that a prototype be installed as part of the Brighton Line resignalling scheme. This document gives the requirements of the laboratory ARS system. It distinguishes between those requirements relating solely to the laboratory system and those of the prototype system to be implemented on BR.

The major aims of the laboratory ARS system are:

- To provide a realistic evaluation of ARS in the laboratory
- To develop the basis of a production ARS system for general use on BR

The laboratory system is to generate the automatic setting of routes for trains moving through an area of railway. The railway will be simulated by a modified version of the General Area Time-based Train Simulator computer which will provide indications of track circuit occupations and train describer step messages. Trains will only proceed in the simulation when routes have been set for them by the 'signalman' by automatic signalling or by the ARS system.

The state of the railway and the movement of trains through it is to be displayed on a conventional illuminated track diagram. Manual route setting will be provided. Route setting is to be subject to relay interlocking train operated route release and safeguards against pre-selection of routes. The system is to be capable of operating in conjunction with solid state interlocking equipment when this has been proved.

The main functions of the ARS system are to be:

- To monitor the presence of trains in the area.
- To identify and resolve regulation problems using its train regulation strategies.
- To issue set route commands so that routes are set in the required order.