

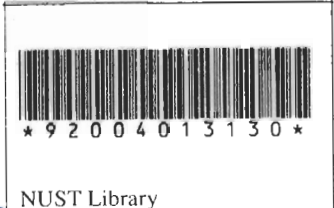
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COMPANY NAME: NATIONAL RAILWAYS OF ZIMBABWE

DEPARTMENT ATTACHED TO: SIGNALS



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PROGRAM: BSC (HONS) IN APPLIED PHYSICS

YEAR: PART III

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ABSTRACT

This industrial attachment report serves to present the things that were learnt and activities that were done during the period of industrial attachment while working under the Signals branch in the National Railways of Zimbabwe, NRZ.

Signals is a branch that is responsible for the designing and maintenance of communication systems such as Radio Communication (using radio signals), Telecommunication and Data Networking (using electrical signals and microwave signals respectively), and light signals on the railroads (electrical signals), and the maintenance of electrical and mechanical equipment used in the routing of track or roads.

There are five divisions of Signals namely; Electromechanical Signals, Telecommunication, Electronic Workshop, Radio Communication and Data Networking. Among these only four were covered even though the fourth was partly covered. The one that was not covered is Data Networking.

Electromechanical Signals is the division that deals with the maintenance of light signals and equipment used in routing of railroads. It is responsible for the communication between the train drivers and the signalman. It is responsible for the control and management of events in the track. It achieves this through the use of track circuits (control) and light signals.

The Electronic Workshop is responsible for the repairing of all NRZ electronic equipment such photocopying machines, facsimile machines, printers and monitors to mention just a few.

The NRZ exchange is responsible for telecommunication system. It installs and does maintenance of telecommunication equipment. It also attends to faults reported by the users.

The Radio Workshop is responsible for the installation and maintenance of radio equipment, television sets and the PA systems in trains. It also does the programming of the radios transmitters and receivers.

These are the departments that were covered during the period industrial attachment.