

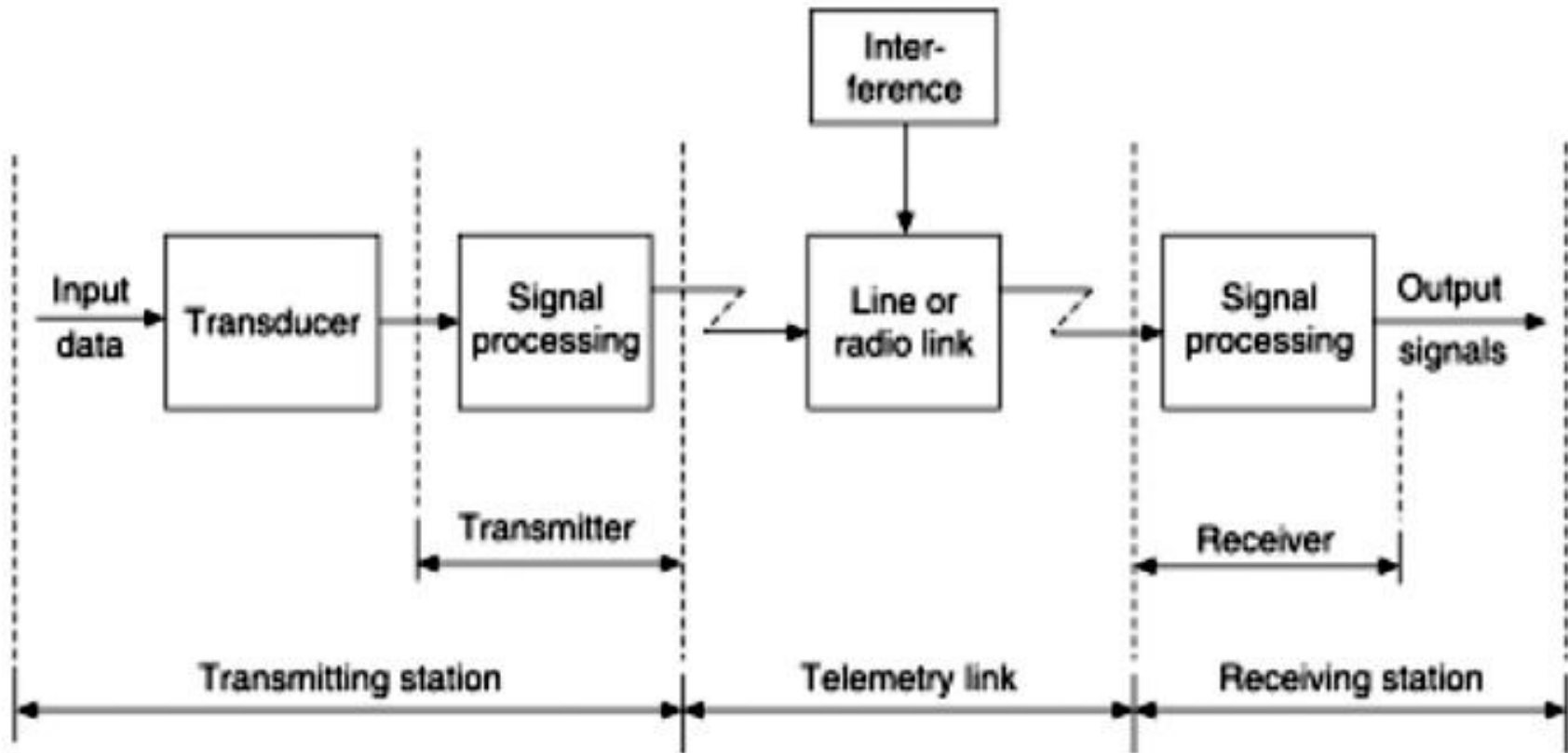
EIPC
NEE-403
Unit-3
Telemetry

Introduction

- Telemetry is presentation of measured values at location remote from site of measurement. Greek words 'Tele': remote, 'meter': measuring. e.g., doctor analyzing data of patient from remote location

- Telemetry involves three steps:
 - a. converting measured quantity to signal
 - b. Transmission of that signal over proper channel
 - c. Its reconversion to actual data for recording, displaying(CRT) for graphical analysis and further computation

Block diagram of telemetry system



Factors influencing Telemetry system design

- Primary criteria for choice and design is accuracy.
- System is decided whether transmitted data is in Analog or Digital domain.
- For digital data to be transmitted, error detection, recognition and correction capability make system accurate.

Factors influencing Telemetry system design

- System is decided whether transmitted data is in Selection of apt. bandwidth for data channel and data link to avoid crosstalk.
- Power levels must be low to reduce noise generation.
- S/N ratio of the system must be high.

Types of telemetry systems

- Landline Telemetry System: Power Lines, Telephone Lines and Electrical Wires. Distance ranges from 50m to 1 km e.g., labs, industries. Types: Current, Voltage & position.
- Radio-Frequency System: Radio links from 1 km to 50 km at 4MHz. For distance >50 Km Microwave links are used 890 MHz to 30GHz. Repeaters are installed after every 30 to 60 km for long distance transmission.

Thank You