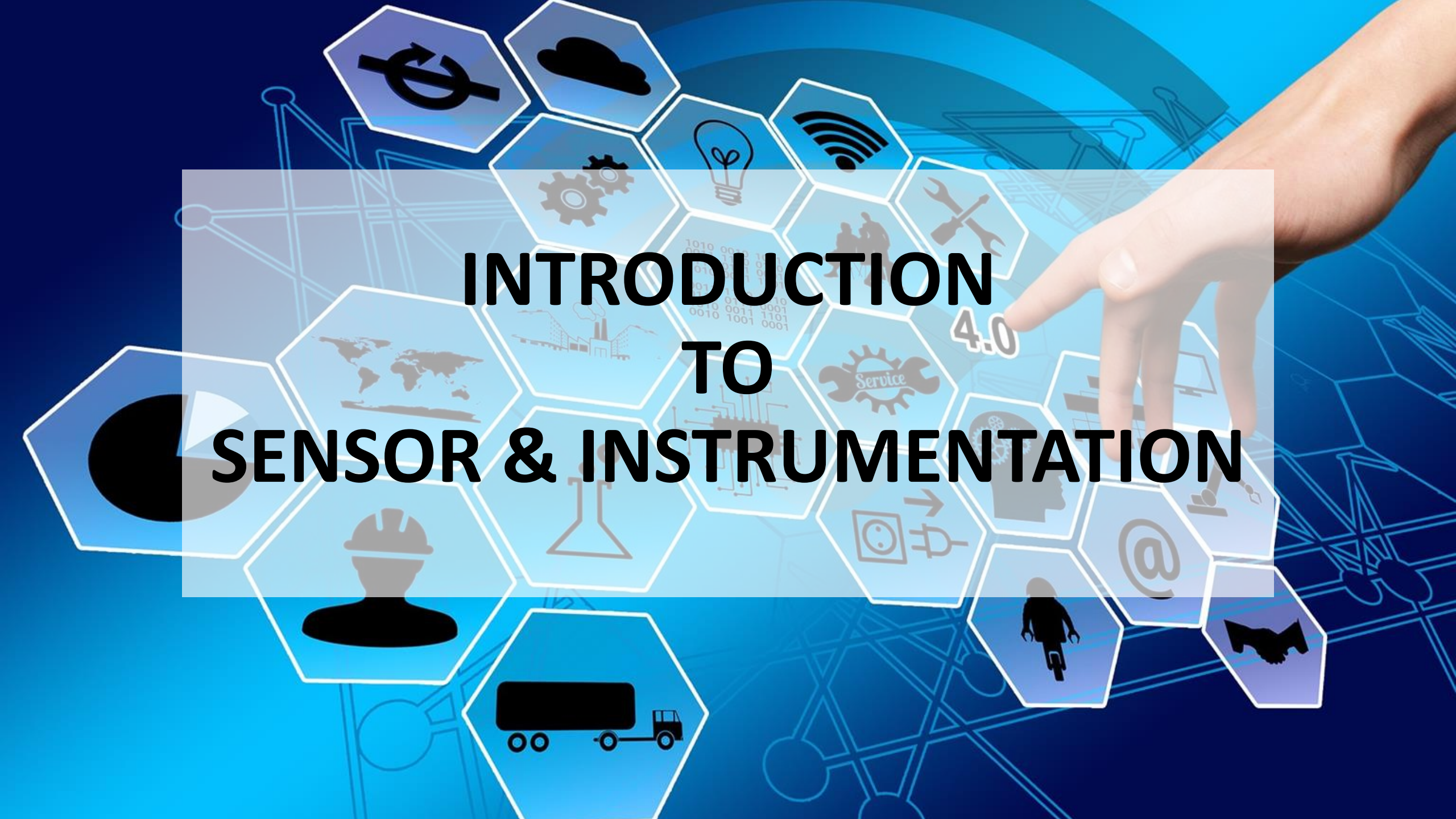


INTRODUCTION TO SENSOR & INSTRUMENTATION

Syllabus

Data acquisition tools:

- Introduction to sensors and data acquisition tools, Physical principles of sensing systems, Electromechanical and electronic meters and their uses, Analysis and application of various sensors: Proximity and Displacement sensors, LVDT, Strain gauge and load cell sensor, thermocouples, RTD, Thermistors, Radiation pyrometry, Ultrasonic sensors, speed sensor, Optical sensors, Motion and Orientation sensor, Flow sensors, Humidity sensor, Smart sensors and MEMS.

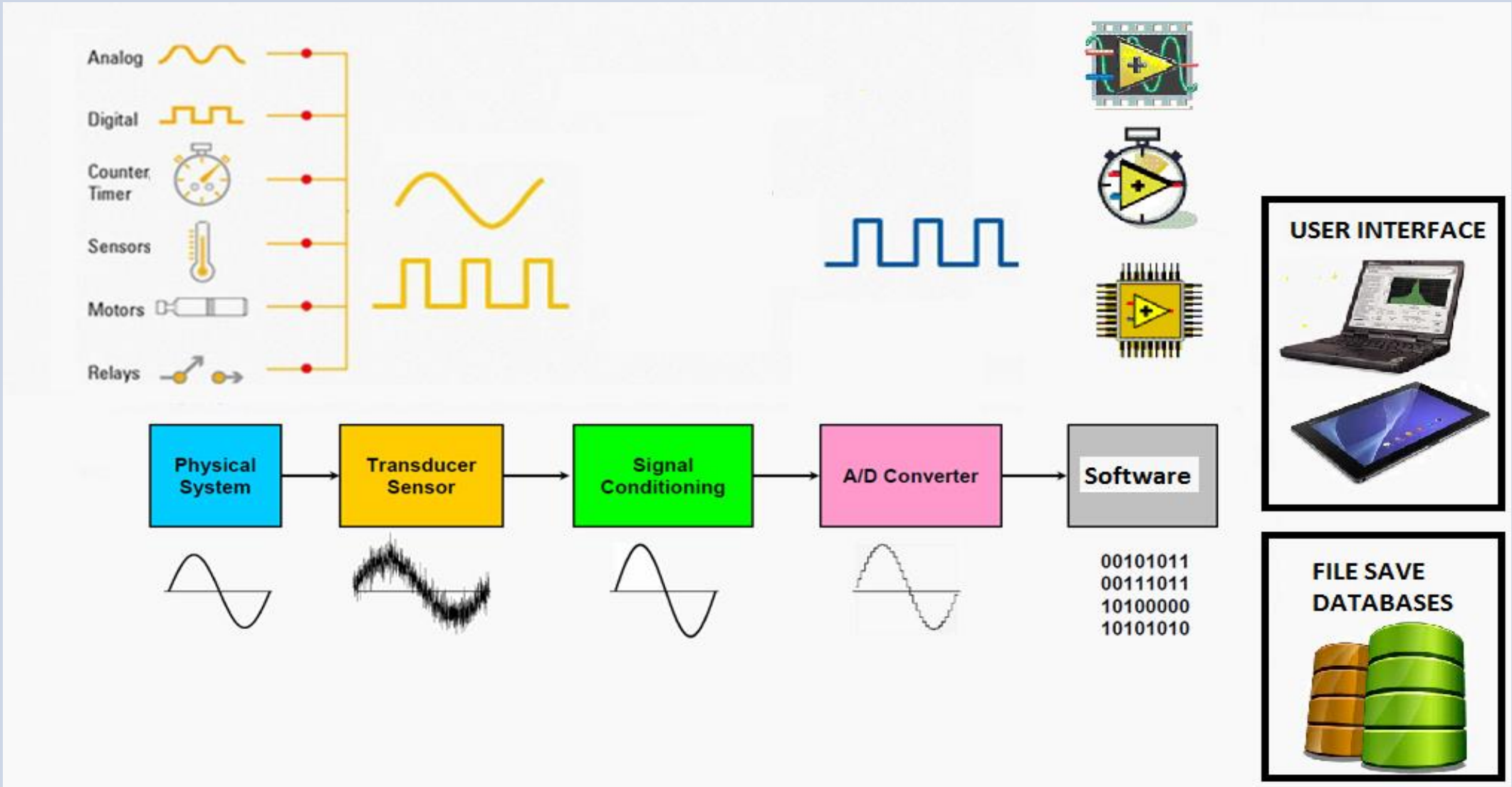
Instrumentation:

- Basic principles of dc and ac signal conditioning, Instrumentation amplifier, Analog signal filters, Analog to digital signal conversion, sampling, digital signal processing, A/D and D/A converters, sample and hold circuits.

Digital Data Transmission and Telemetry:

- Methods of data transmission, DC/AC telemetry system and digital data transmission, Recording and display devices, Data acquisition system and microprocessor applications in instrumentation.

Data acquisition



Sensors

Touch Sensor

Ultrasonic Sensor

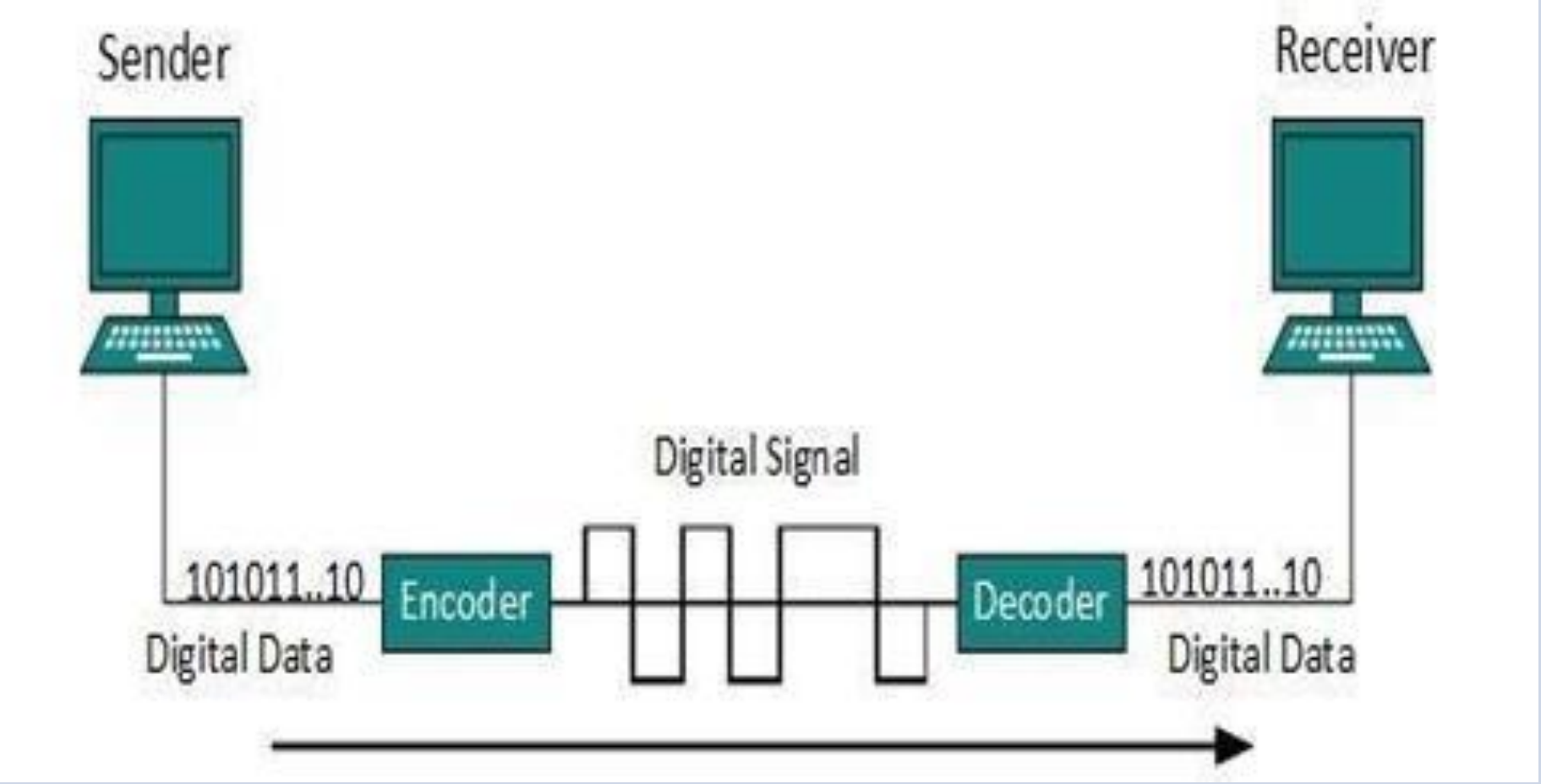
PIR Sensor

Speed Sensor

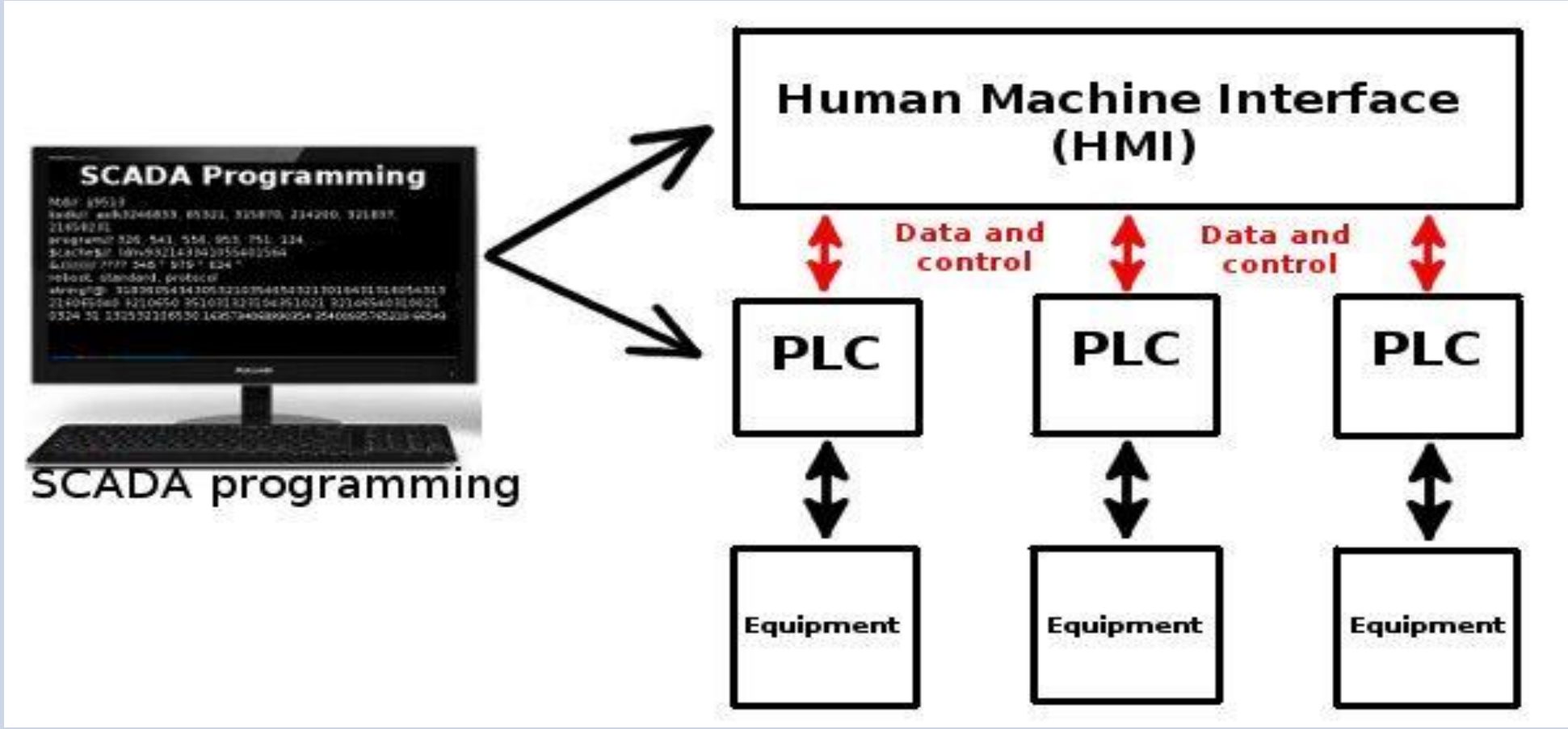
Temperature Sensor

Different Types of Sensors and Their Applications

Digital Data Transmission and Telemetry



SCADA


SCADA Programming
SCADA programming
Human Machine Interface (HMI)
Data and control
Data and control
PLC
PLC
PLC
Equipment
Equipment
Equipment


Thank
you!!!