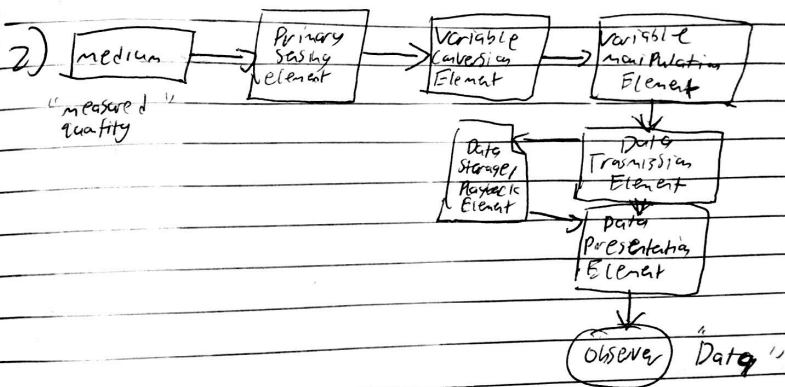


G. WIGGEME STANLEY 18/ENG04/039

1) A sensor tends to convert a physical attribute to an electrical signal. An actuator does the opposite, it changes an electrical signal to physical action.

Examples / Types

- i) Electrocardiogram: An electrical signal produced by the heart, these sensors play a special role as a result of their diagnostic and therapeutic applications.
- ii) Optical sensor: may use light to collect information and in the case of fiber optic sensor light is signal transmission medium.



- Primary Sensing Element

This receives energy from the measured medium and produces an output. The output is some physical variable.

- Variable Conversion Element

It converts the output signal from Primary Sensing Element.

to another more suitable variable while preserving the information content of the signal

- Variable manipulation Element

This element manipulates the numerical value according to some definite rule but a preservation of the physical nature of the variable

- Data Transmission Element

When functional elements of an instrument are actually physically separated, it becomes necessary to transmit this data from one another. This is the function

- Data Presentation Element

This element performs the translation function, i.e. the output feed to human beings

- Data Storage / Playback Element

Some may require ^{a distinct} data to be stored / playback which can easily recreate the stored data when needed

3) Sphygmomanometer

to measure the patient's blood pressure

Thermometer

To measure and record body temperature.