

Lab – Imagine a new intelligent sensor

Objectives

Imagine devices that are currently inanimate objects that could be useful if sensors were added to them.

Background / Scenario

Many devices have sensors in them that affect the operation of processes or generate data to assist governments and businesses. Use your imagination to think of devices that could be made more useful if they contained intelligent sensors.

Required Resources

- none

- Step 1: Think about your day in your home, school, or office. Are there any objects that you think could provide useful information to you or to others if they were equipped with sensors? As an example, if the toilet roll holder in your home had sensors to detect weight, it could turn red and beep when it needed a new roll.
- Describe the object that you selected.
Window model in which its crystals take different polarizations depending on the intensity of light that is desired in the room, determined by measurements from different brightness sensors implemented in it, which will provide data for the different actuators to allow or control the polarization of the window glass.
 - What kind of data would sensors in this object gather?
The types of data to collect for this object are luminosity data, which, with their respective conditioning, will be represented by voltage values. These corresponding measurements supplied by said sensors, will be constantly monitoring the luminosity that is presented in the closed space.
 - How could the gathered data be useful and to whom would it be useful?
 - The management and utility of the data collected by the sensors would be very useful for large companies that clearly require workplaces, such as: Smart greenhouses and factories or places that require controlled light for their different processes or obtaining products.
 - The handling of the same, will be treated with a respective conditioning as mentioned previously, which will determine according to the voltage value, the action of the controller that allows it to handle polarization intensity in each of the crystals to obtain the desired light.