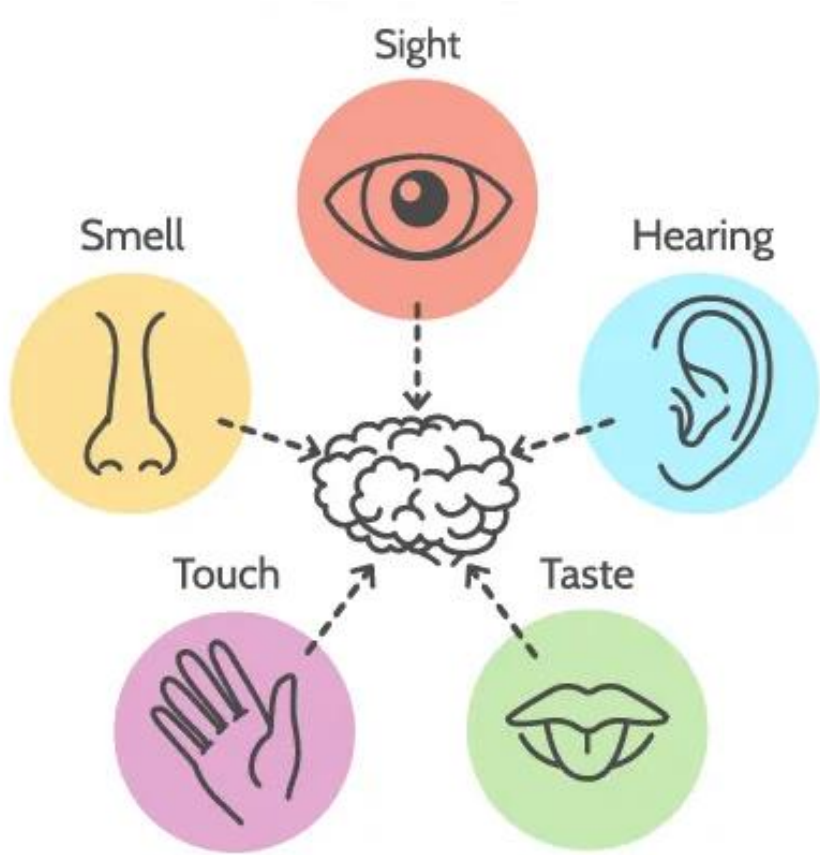
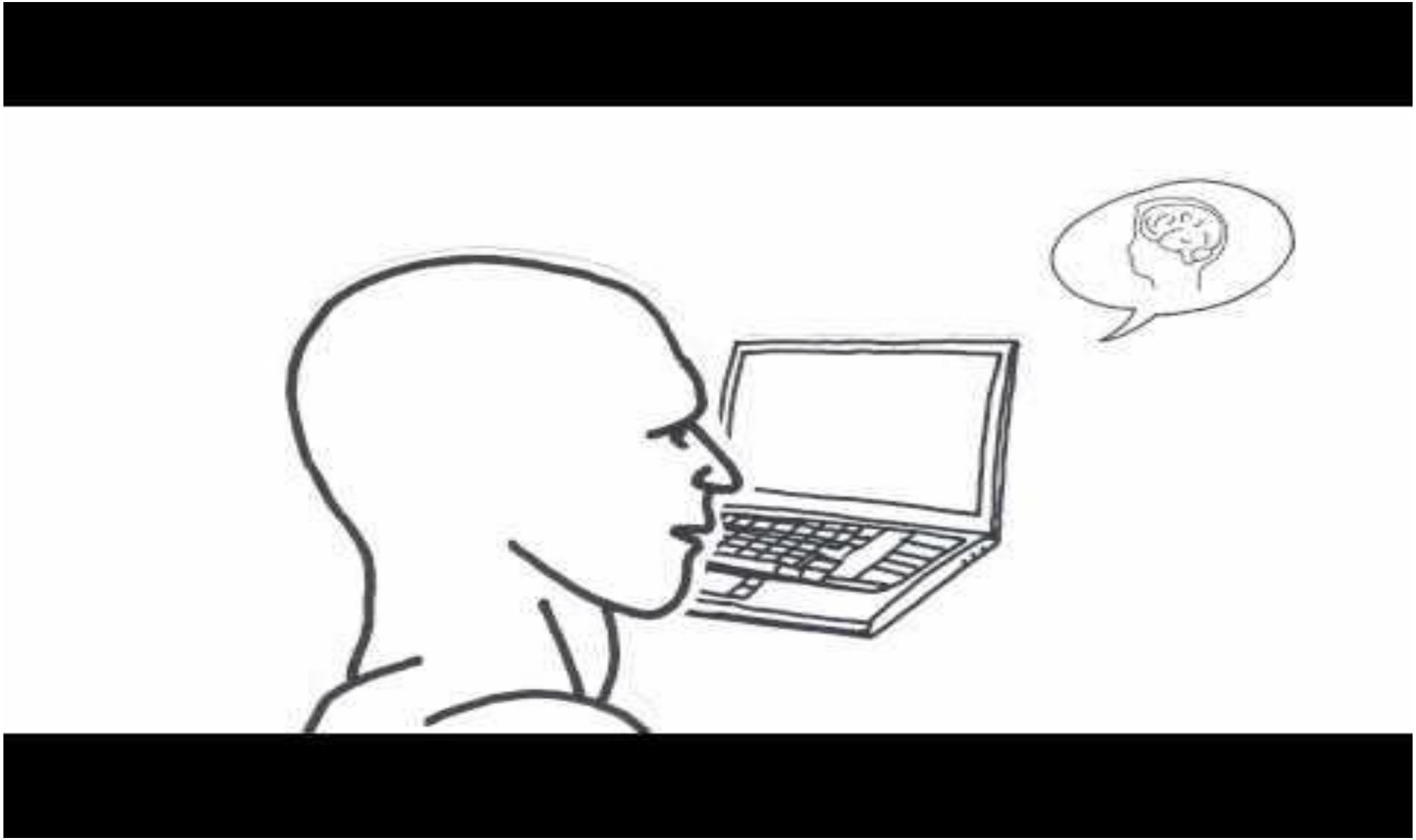
Интернет вещей

Датчики

Получение сигнала

Датчики





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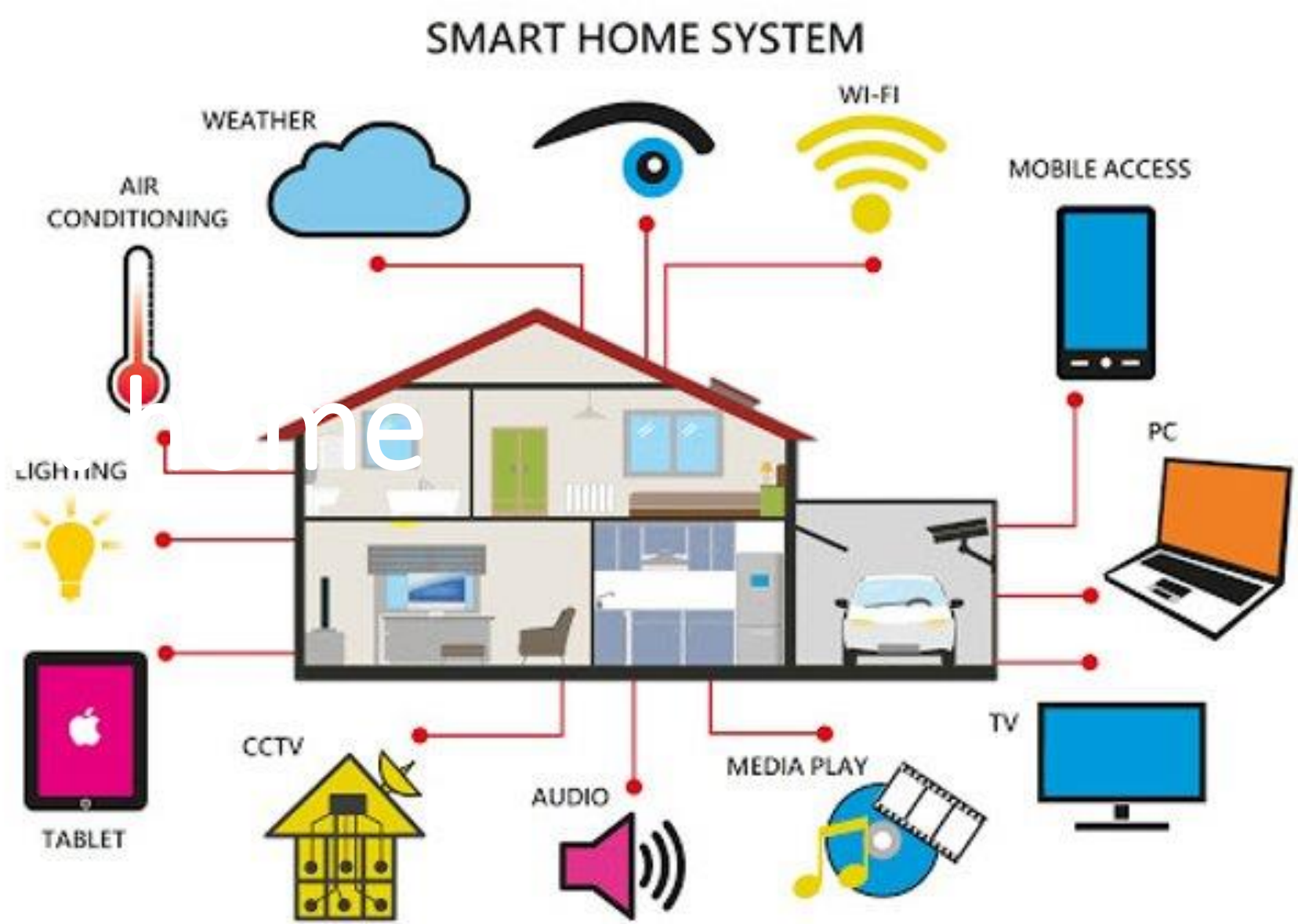
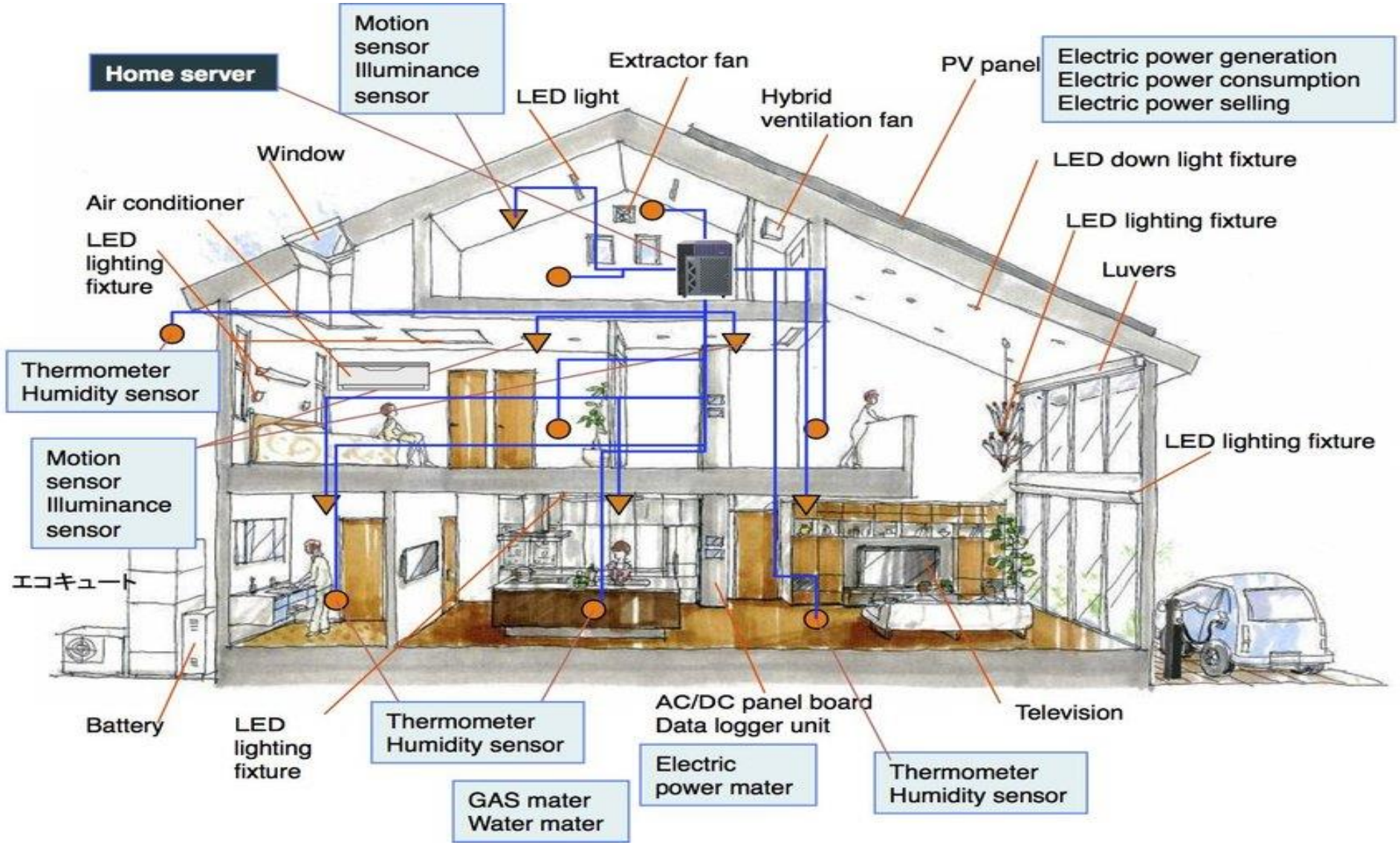
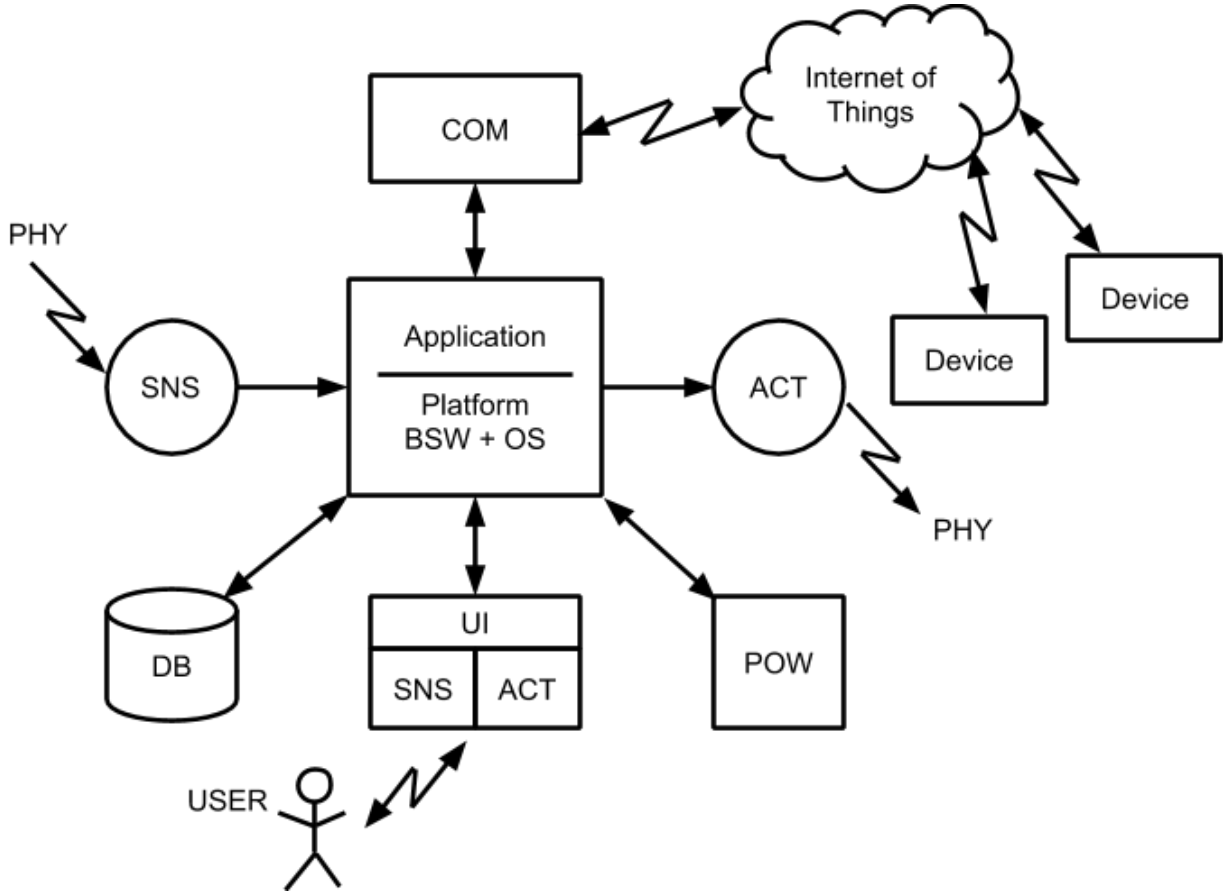

SMART HOME SYSTEM
WEATHER
WI-FI
AIR CONDITIONING
MOBILE ACCESS
PC
TV
CCTV
AUDIO
MEDIA PLAY
TABLET


Home server
Motion sensor Illuminance sensor
Extractor fan
LED light
Hybrid ventilation fan
PV panel
Electric power generation
Electric power consumption
Electric power selling
Window
LED down light fixture
Air conditioner
LED lighting fixture
LED lighting fixture
Luvers
Thermometer Humidity sensor
Motion sensor Illuminance sensor
LED lighting fixture
エコキュート
Battery
LED lighting fixture
Thermometer Humidity sensor
AC/DC panel board Data logger unit
Television
Electric power mater
Thermometer Humidity sensor
GAS mater Water mater

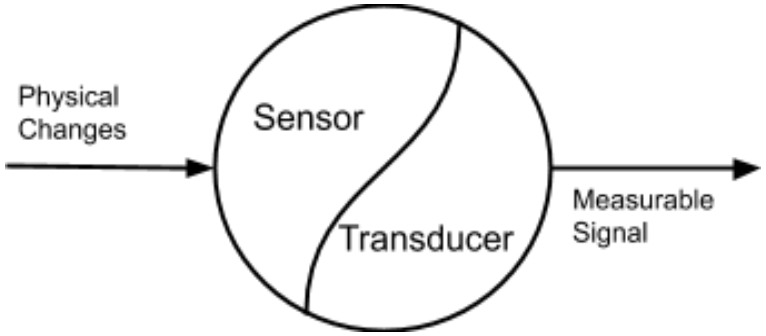
Типы взаимодействия

- Взаимодействие с пользователем
- **Взаимодействие с окружающей средой**
- Взаимодействие с устройствами(IoT)

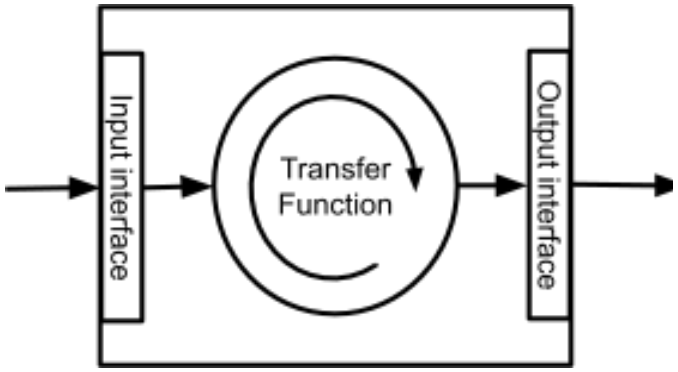


Датчики

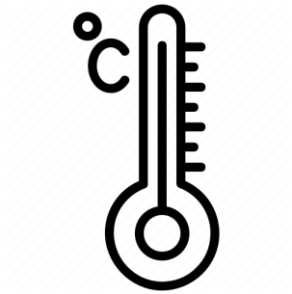
Совокупность компонентов, изготовленных ME, EE и SWE, которые преобразуют физическую величину из окружающей среды во внутренний сигнал системы.

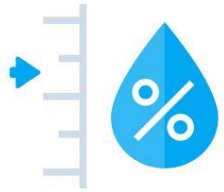


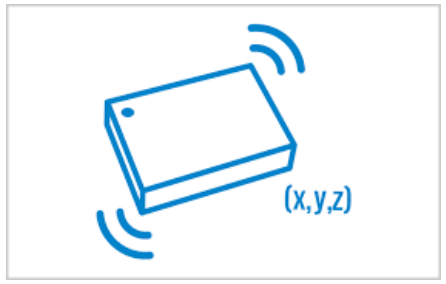
- Датчик - воспринимает изменения в окружающей среде и преобразует их в измеримую величину.
- Преобразователь - преобразует измеряемую величину в электрический сигнал.

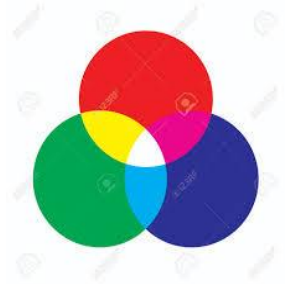


Классификация 1. Характер параметра

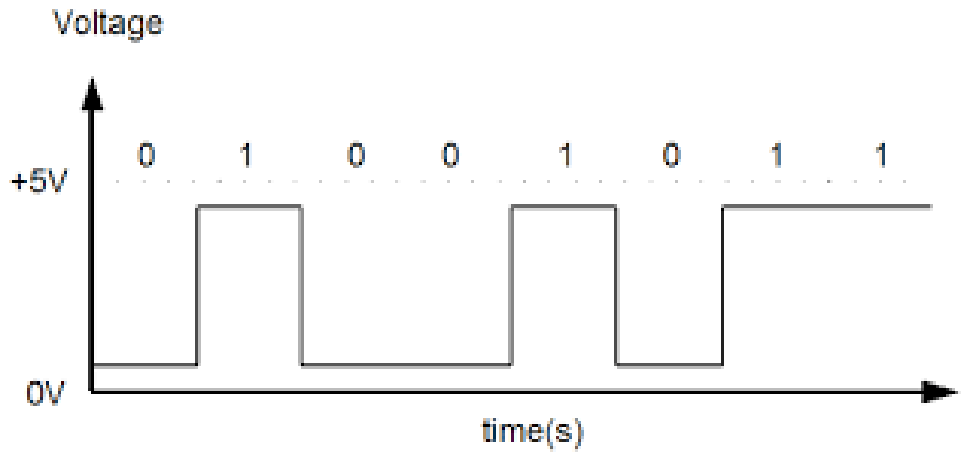


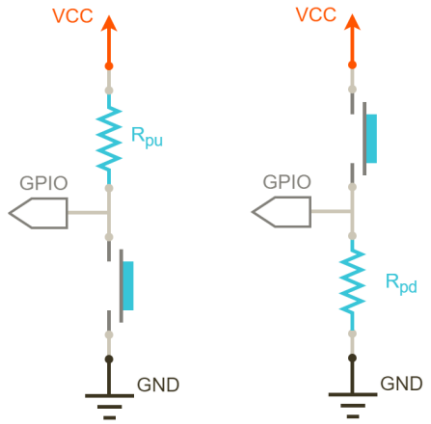




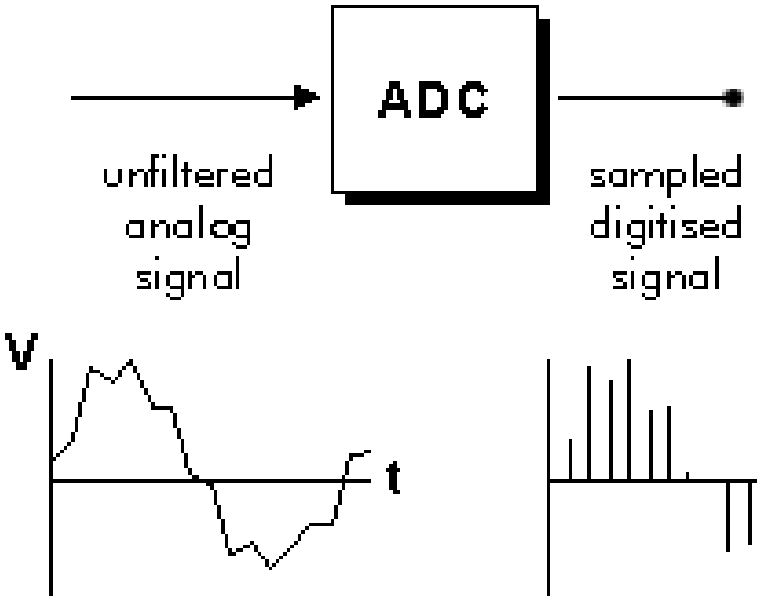


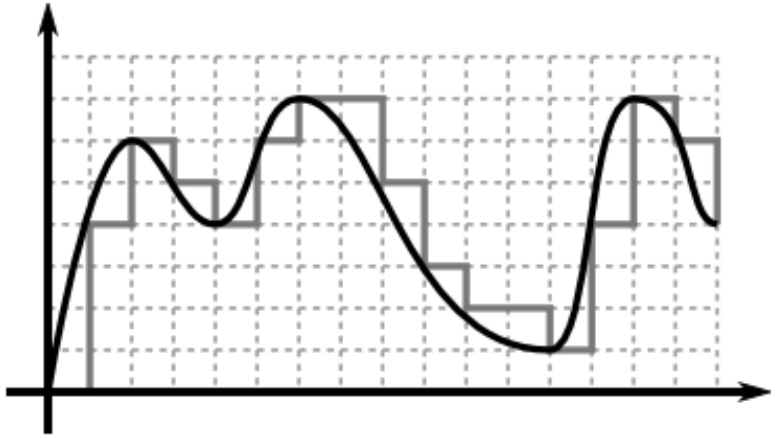
Классификация 2. Интерфейс - Бинарный

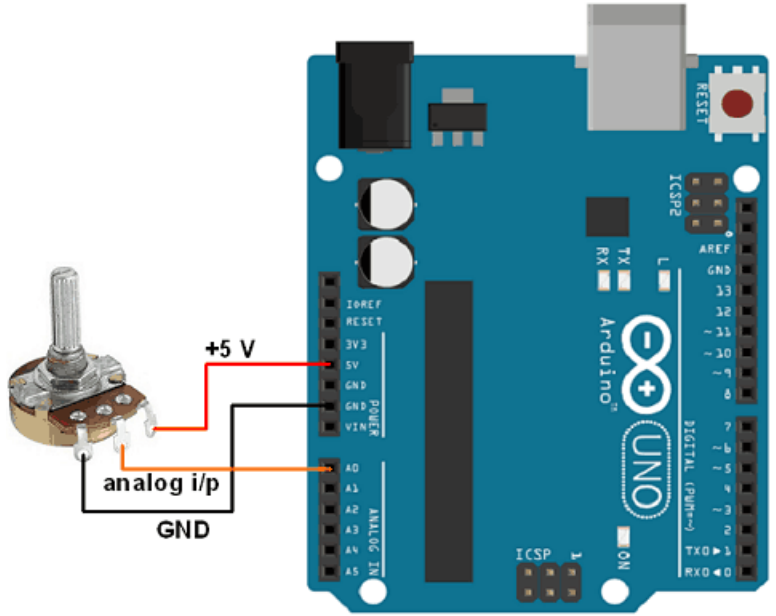




Классификация 2. Интерфейс - Аналоговый

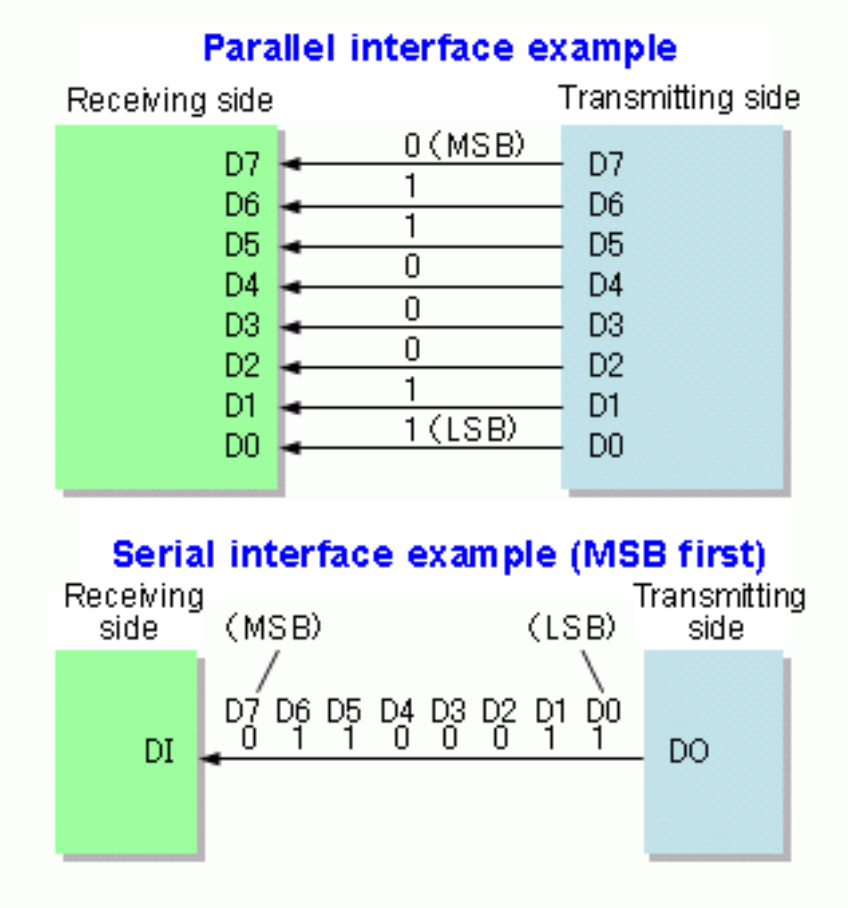


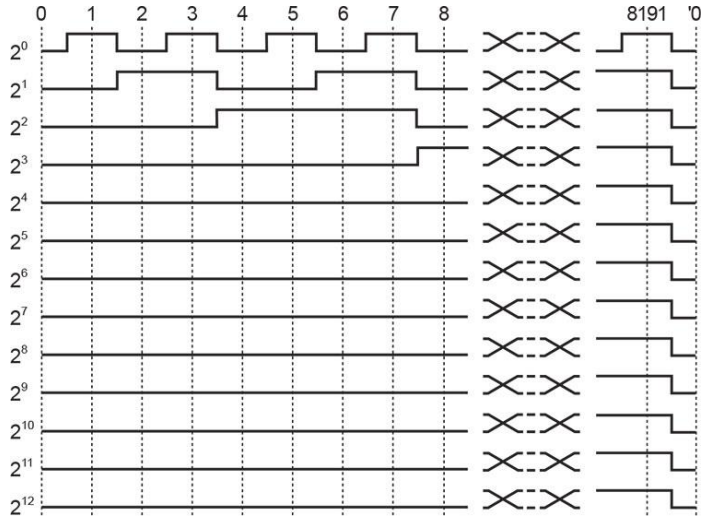




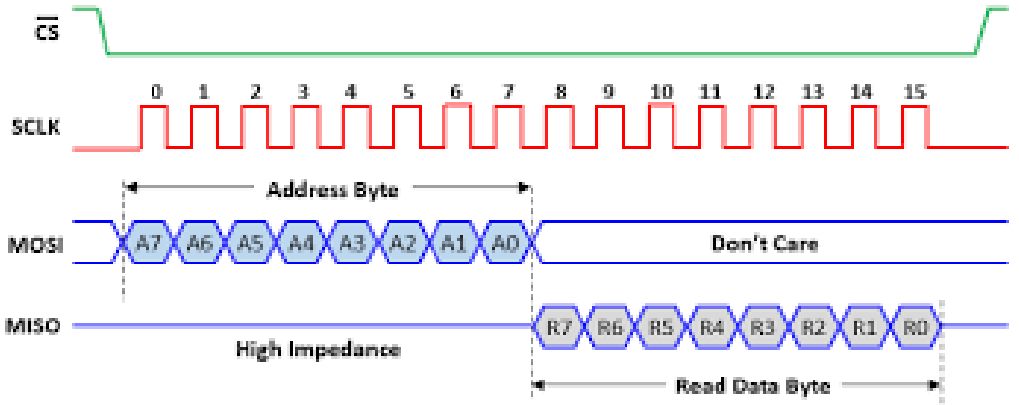
Классификация 2. Интерфейс - цифровой

PATA, LPT, PORTA, BORTB, LCD

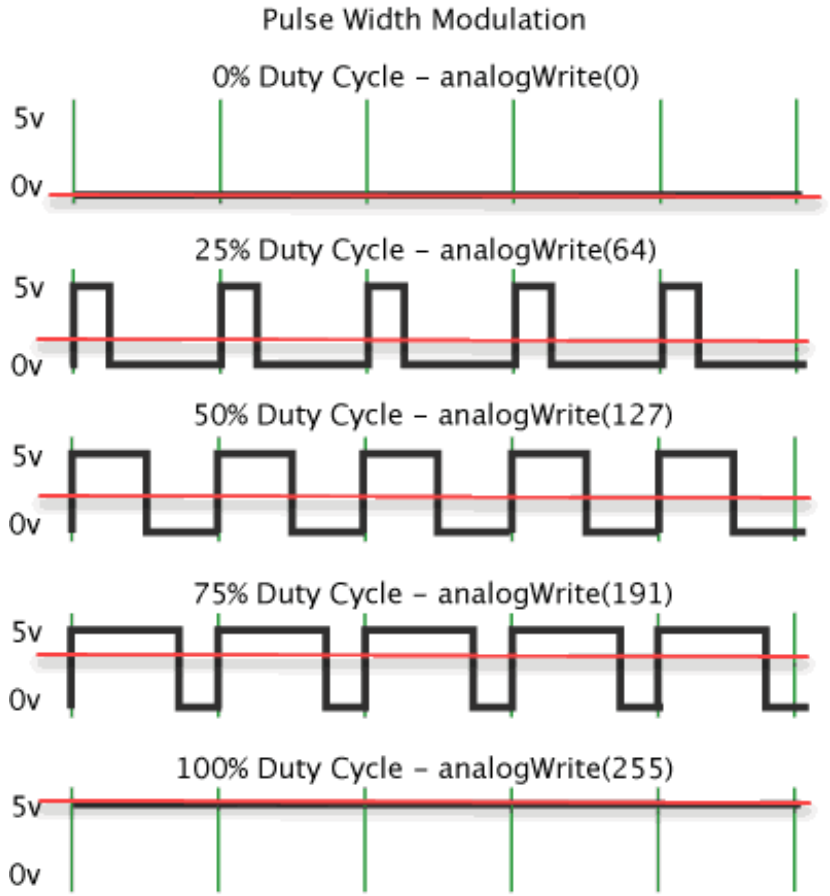


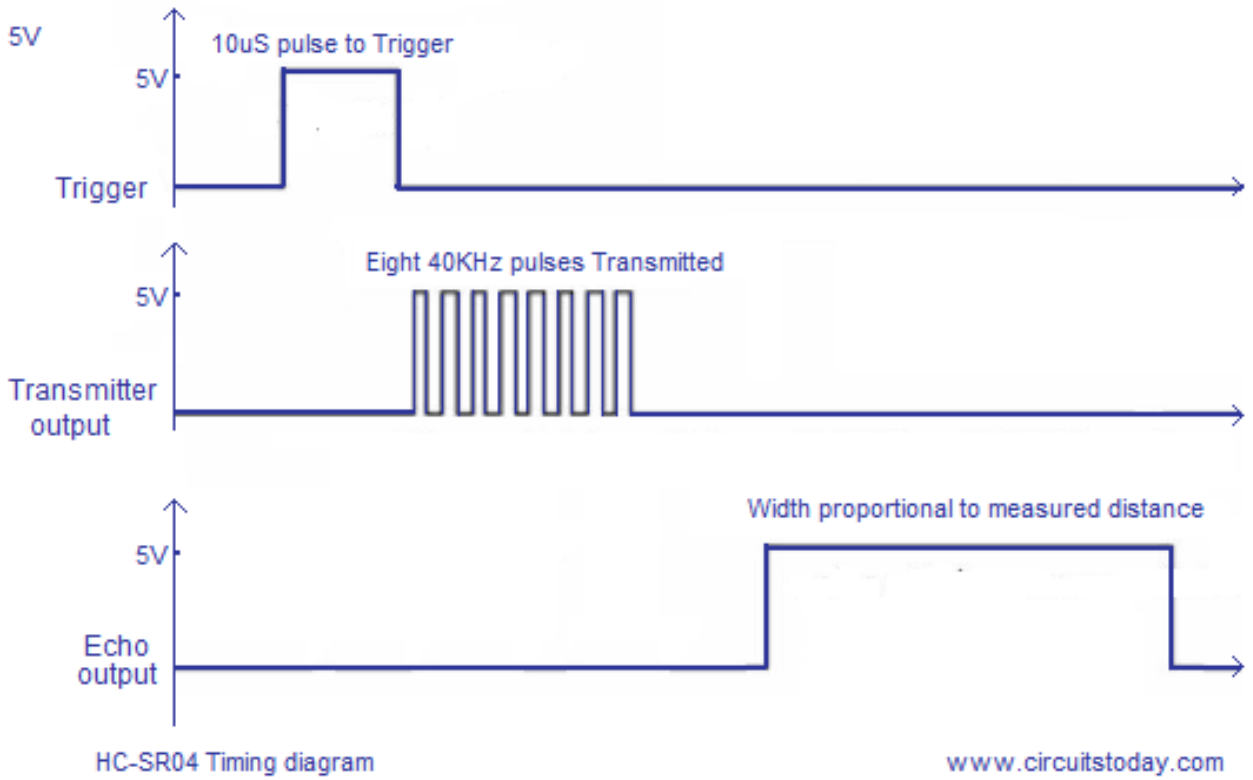


USB, SATA, I2C, SPI

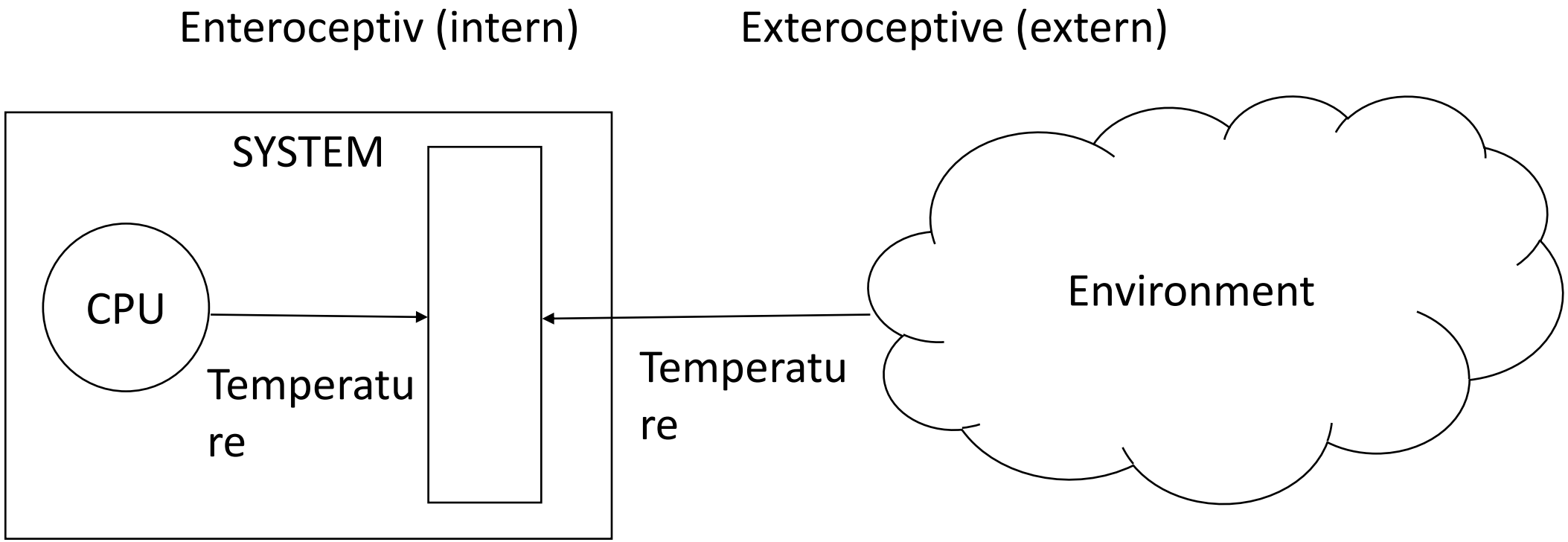


Классификация 2. Интерфейс — тайминг

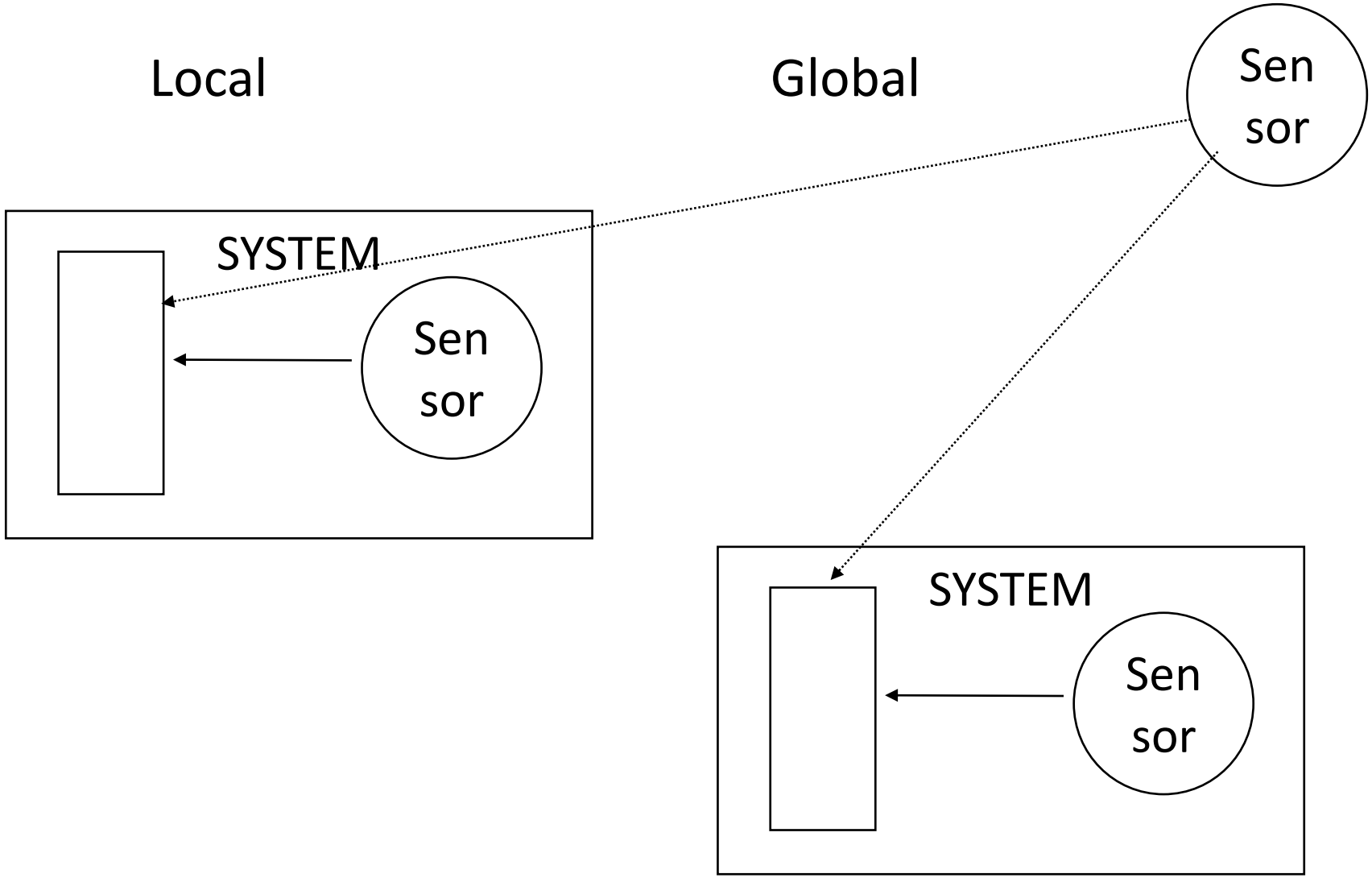




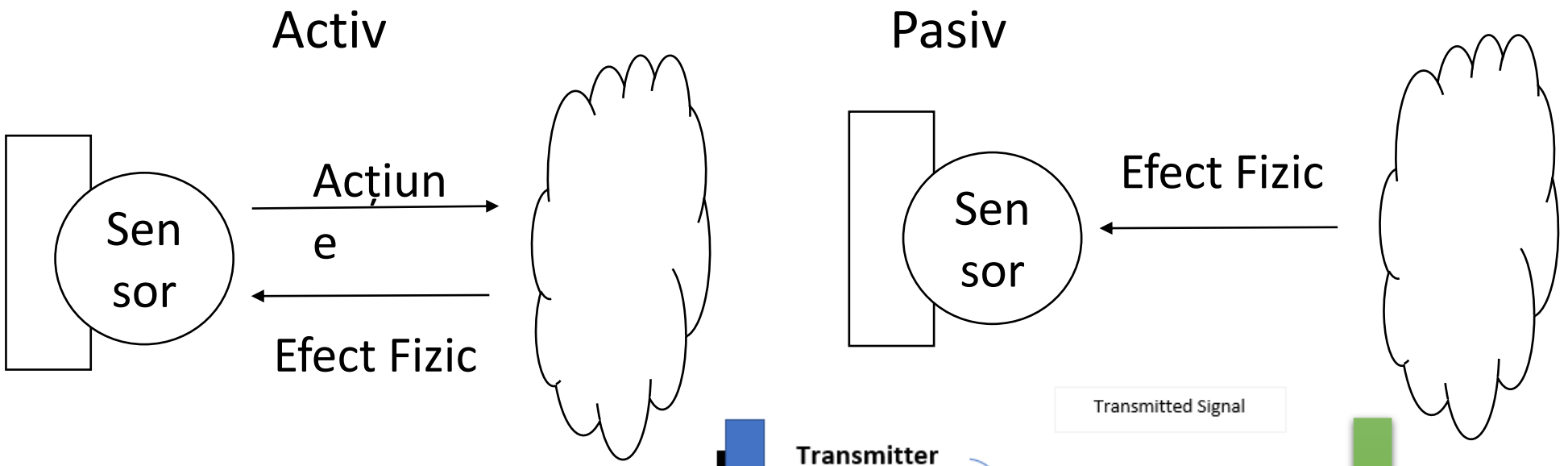
Классификация 3. Источник сигнала

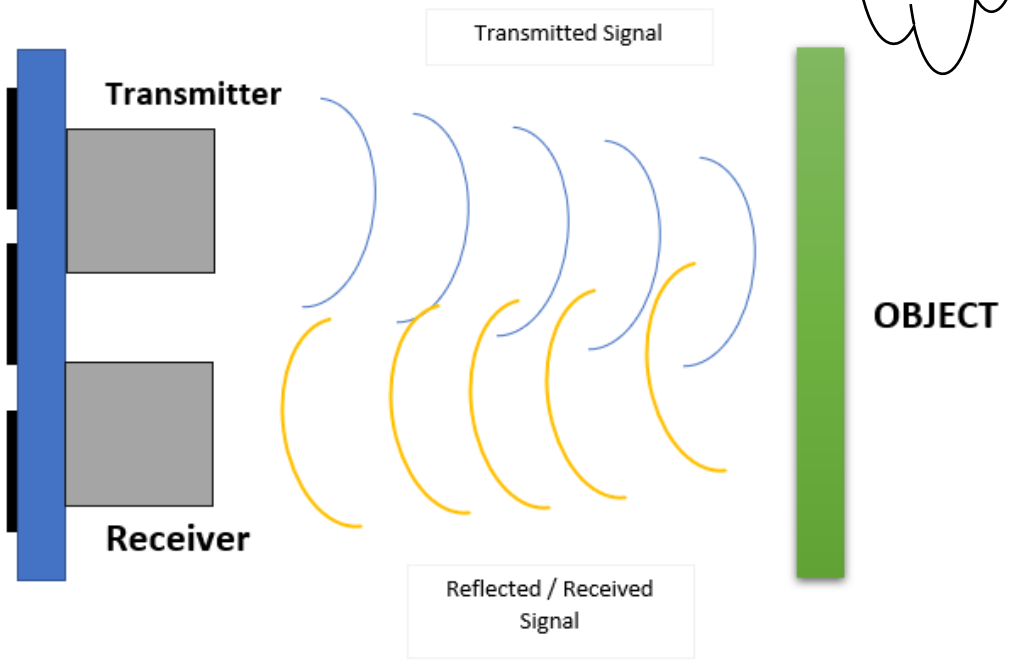


Классификация 4. Позиционирование



Классификация 5. Действие

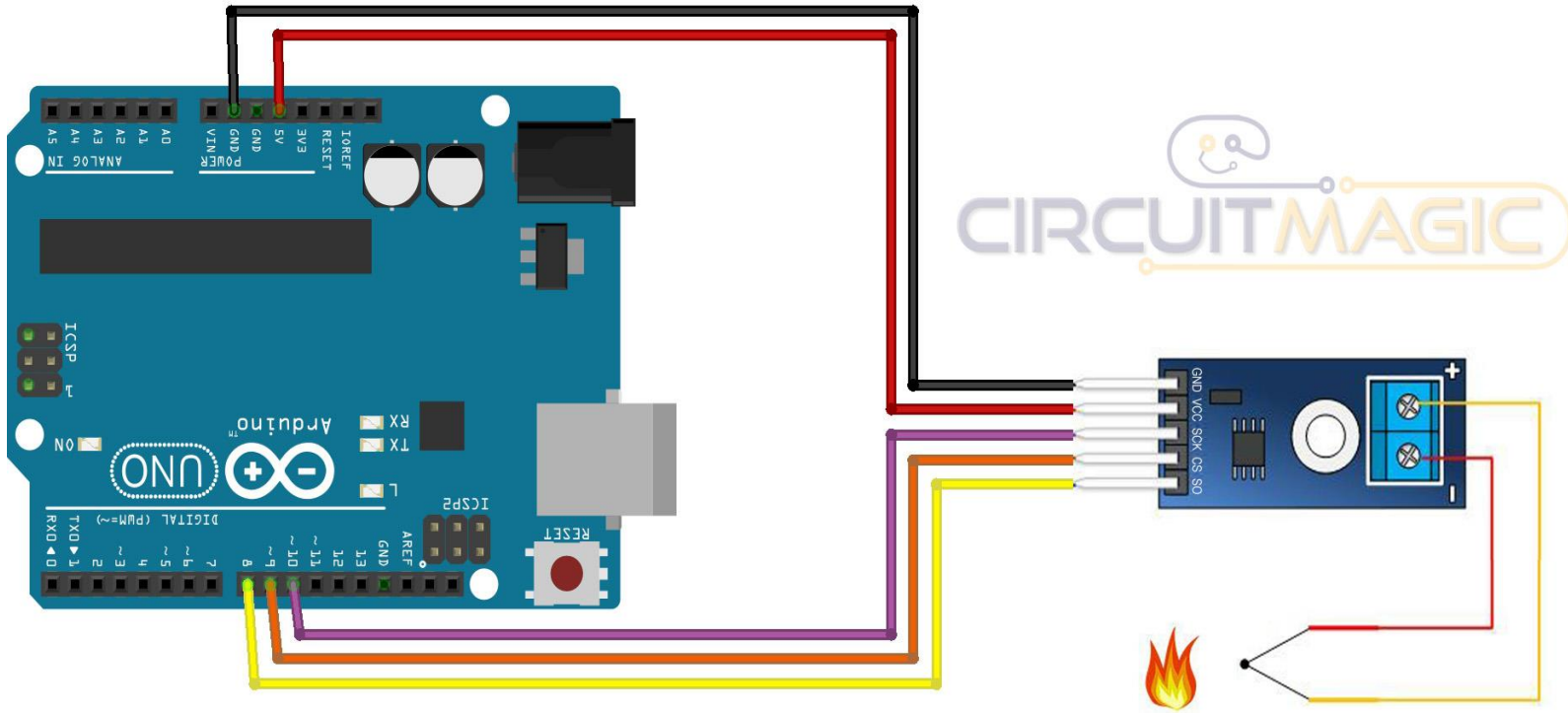




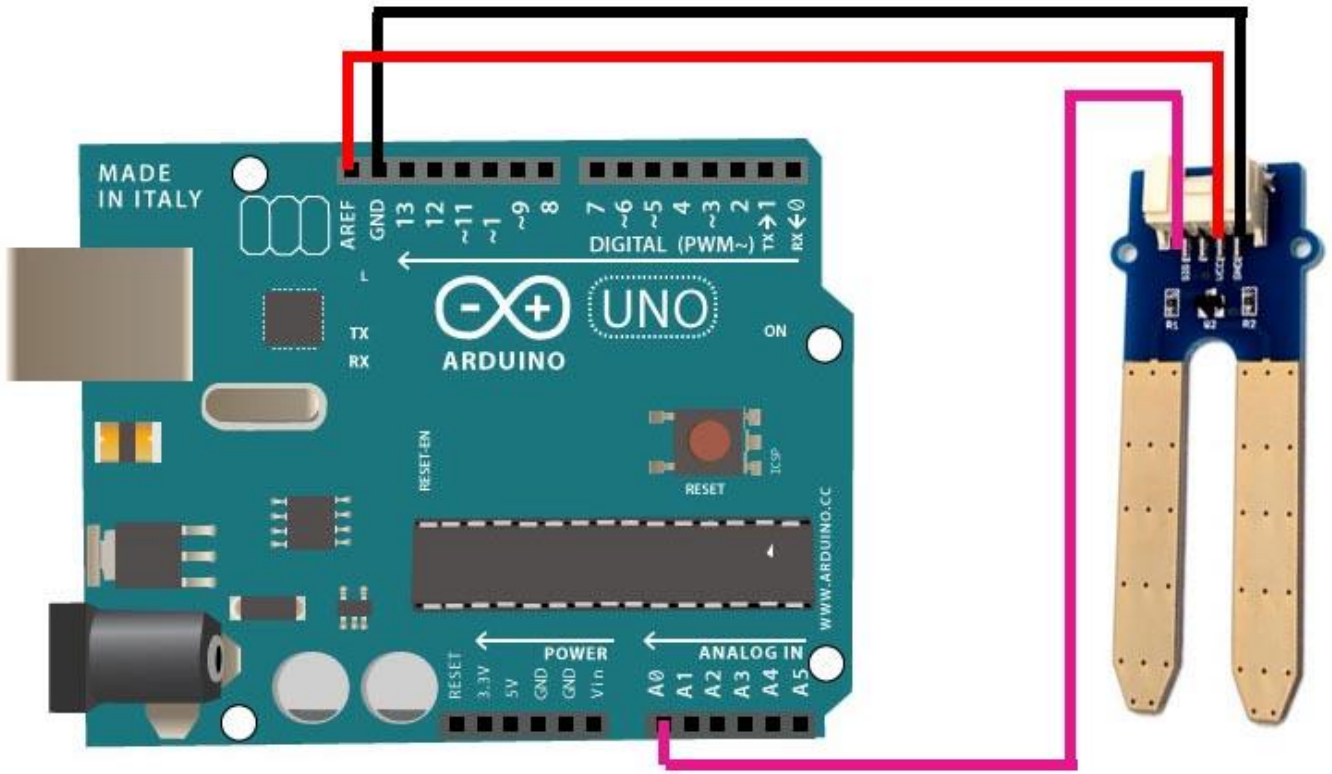
Классификация - Действие

	Local	Global
Internal	**Passive** battery sensor, chip-temperature sensor, shaft encoders, accelerometer, gyroscope, inclinometer, compass **Active** –	**Passive** – **Active** –
External	**Passive** on-board camera **Active** sonar sensor, infrared distance sensor, laser scanner	**Passive** overhead camera, satellite GPS **Active** sonar (or other) global positioning system

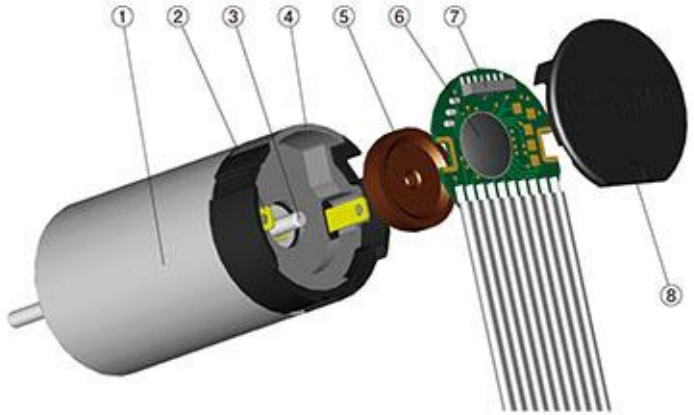
Achiziție - Temperatura

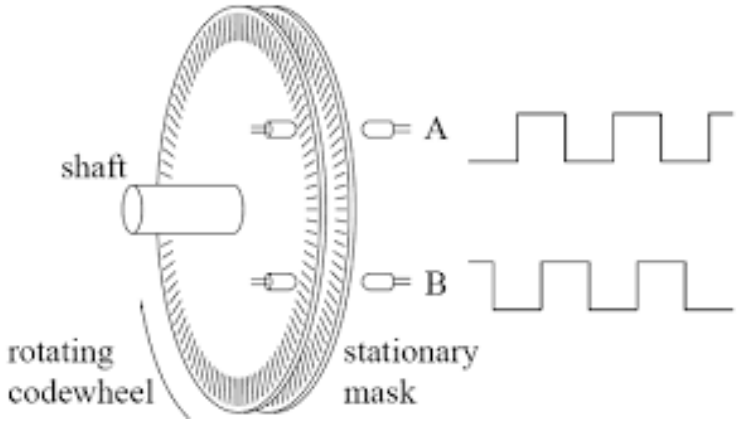


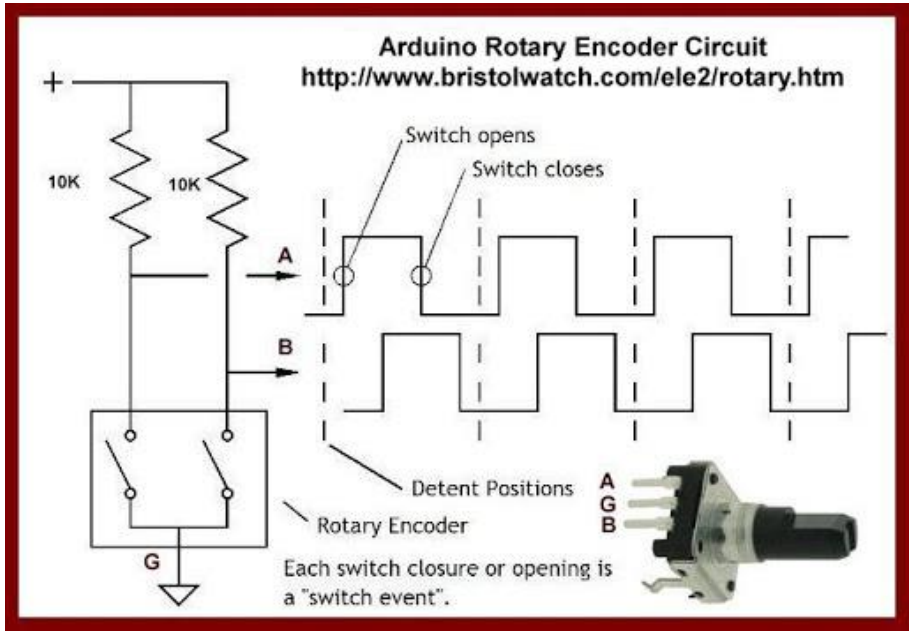
Achiziție - Umiditate



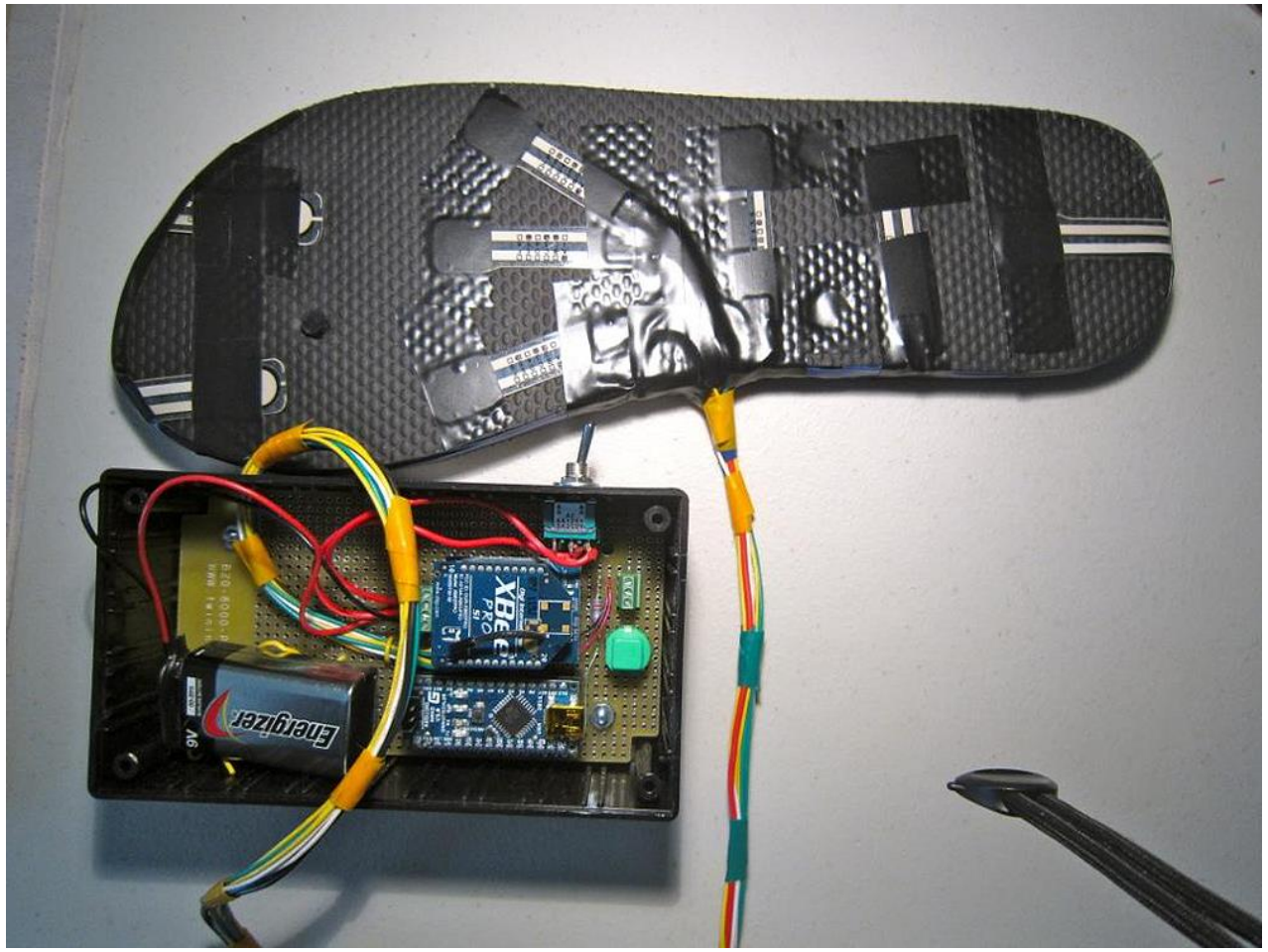
Achiziție - Rotații



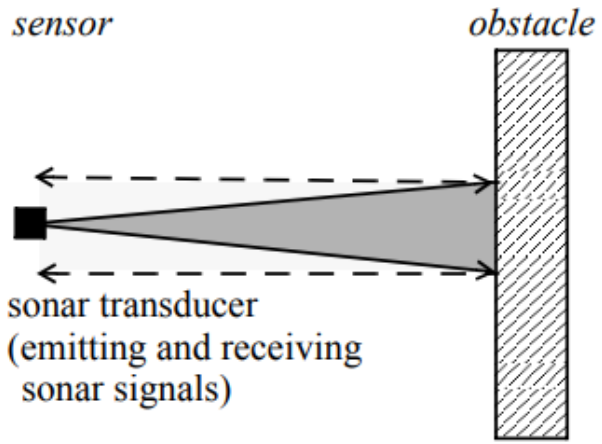


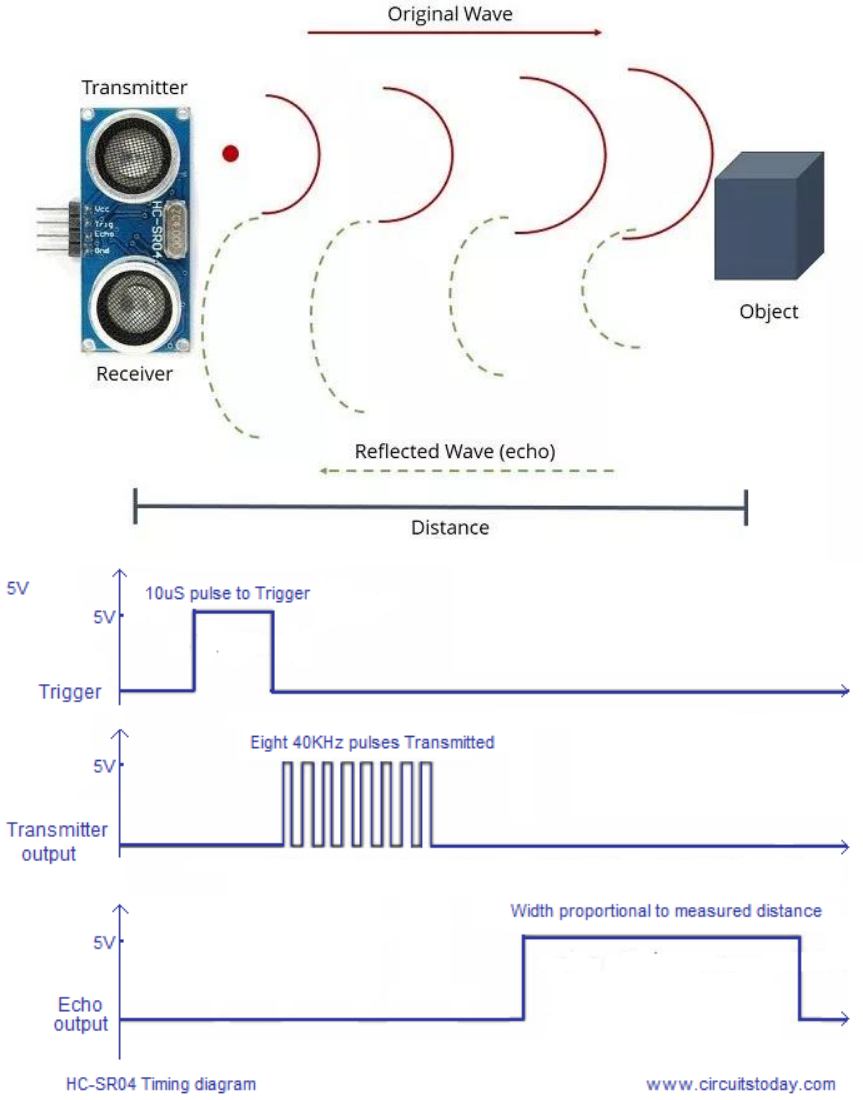


Achiziție - Presiune

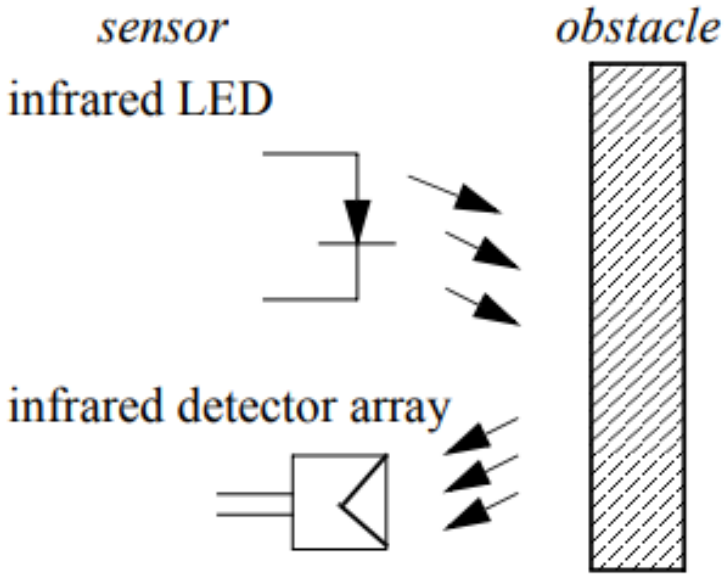


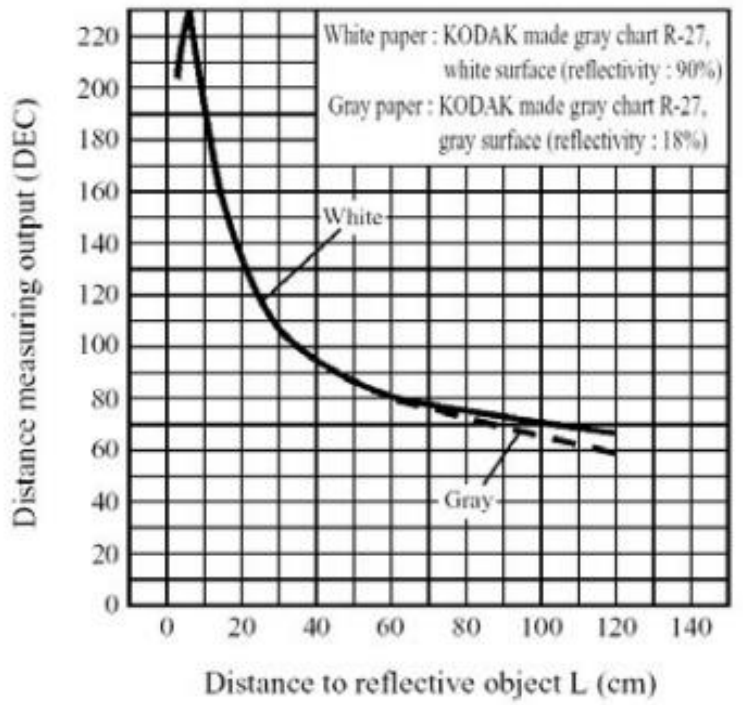
Achiziție - Ultrasonic Distance



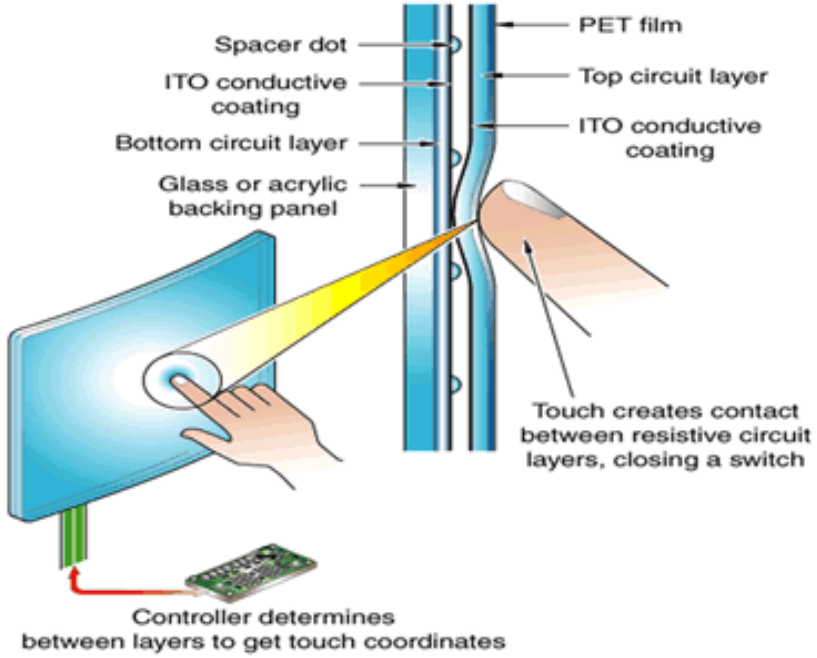


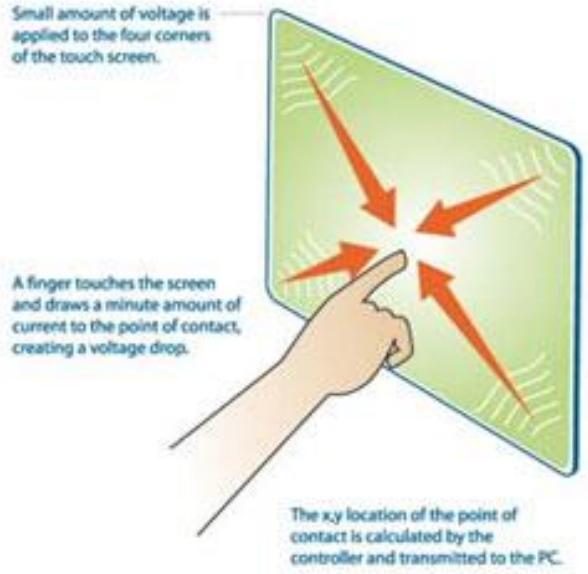
Achiziție - Laser distance

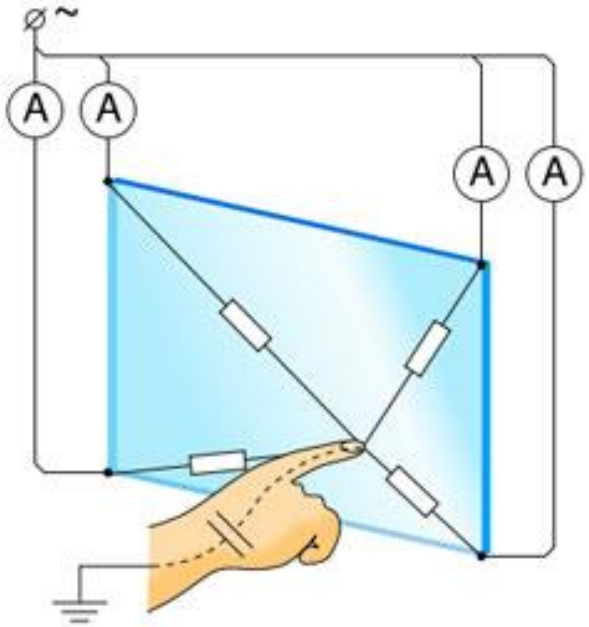




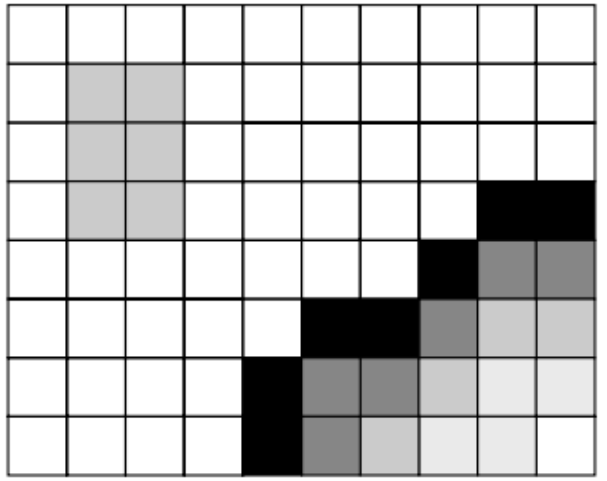
Резистивный сенсорный датчик

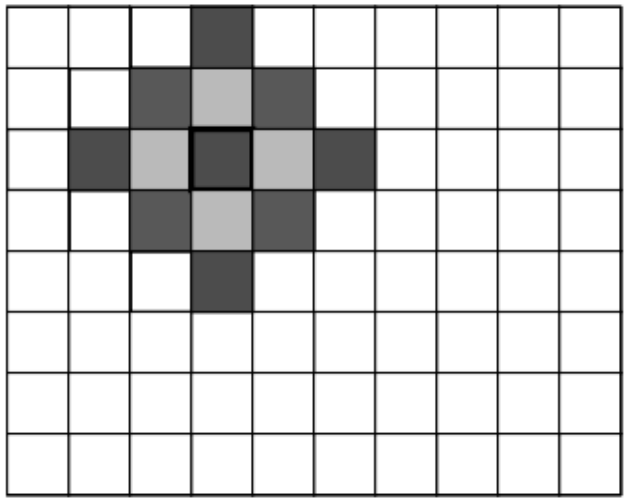




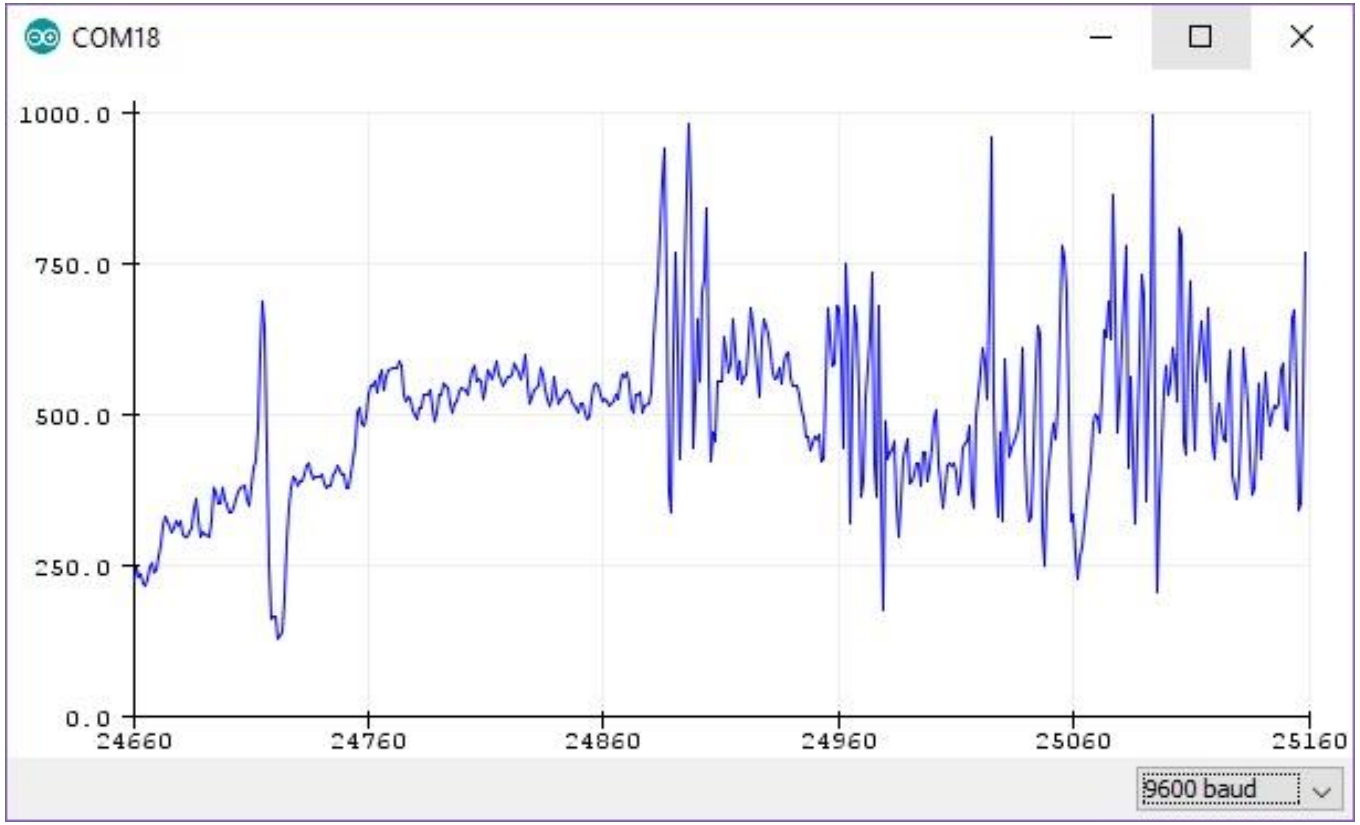


Обнаружение движения





Получение сигнала



AnalogInOutSerial | Arduino 1.8.12 (Windows Store 1.8.33.0)

File Edit Sketch Tools Help

AnalogInOutSerial

```
void setup() {
  // initialize serial communications at 9600 bps:
  Serial.begin(9600);
}

void loop() {
  // read the analog in value:
  sensorValue = analogRead(analogInPin);
  // map it to the range of the analog out:
  outputValue = map(sensorValue, 0, 1023, 0, 255);
  // change the analog out value:
  analogWrite(analogOutPin, outputValue);

  // print the results to the Serial Monitor:
  Serial.print("sensor = ");
  Serial.print(sensorValue);
  Serial.print("\t output = ");
  Serial.println(outputValue);

  // wait 2 milliseconds before the next loop for the anal
  // converter to settle after the last reading:
  delay(2);
}
```

1 Arduino Uno on COM5