



DMS (Driver Monitoring System)

Outline



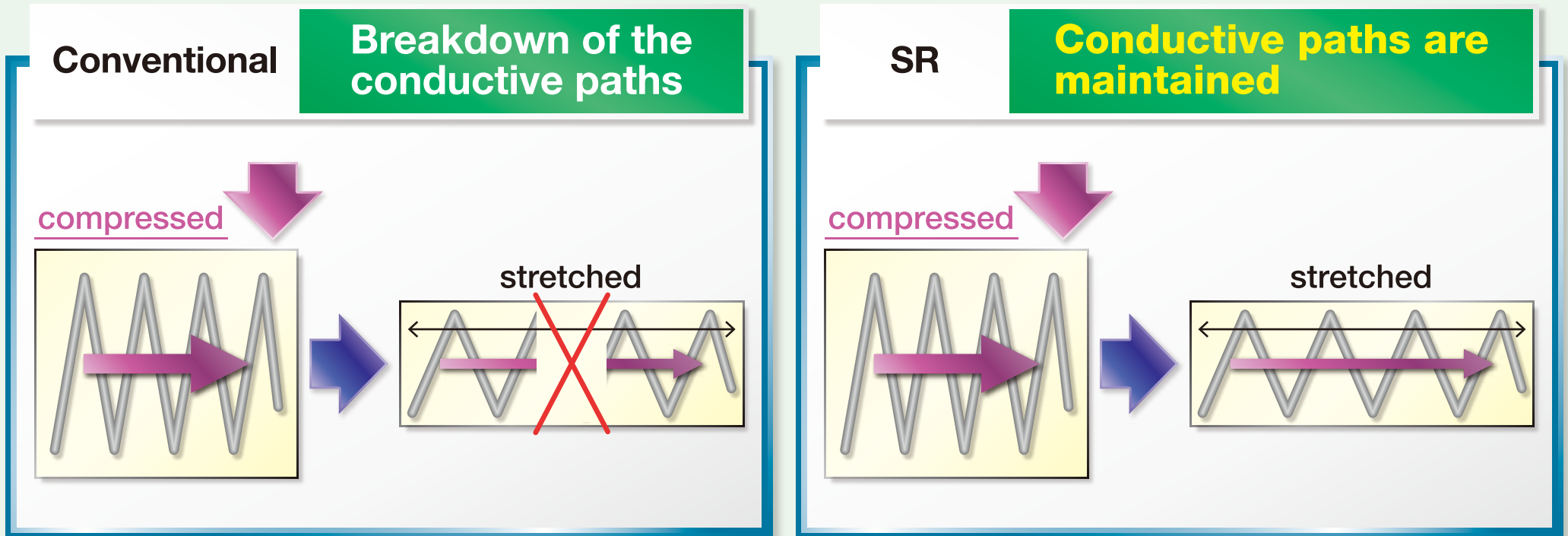
built-in SR Sensor

- **SR(Smart Rubber)Sensor** can be built into a seat. It is made of the **special elastic material** which is **soft** and **conductive**.
- It can detect **heartbeat**, **breathing** and **body motion** which are from the pressure changes sensed by SR sensor
- By the measuring results, it can estimate an occupant's condition (**fatigue**, **drowsiness**, **sudden illness etc...**). Then you can **connect to advanced services** such as alerting a driver, actuating an driver-assistance systems and calling in the outside.



What's SR ?

SR(Smart Rubber)is our new developed **elastomer** which is **soft and conductive**. It maintains the electrical conductivity even if it is stretched.

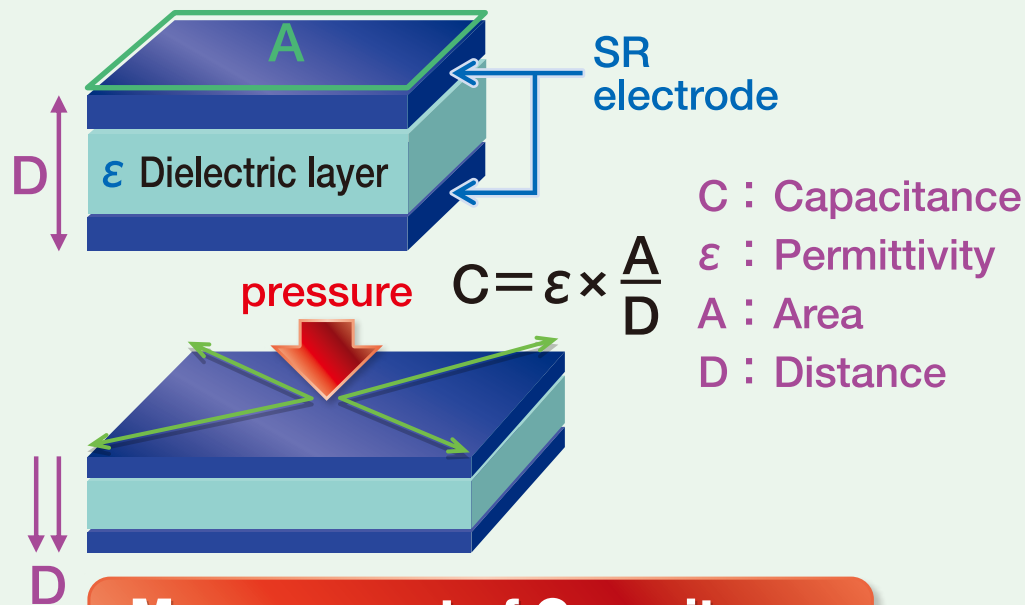




Principle of Sensing

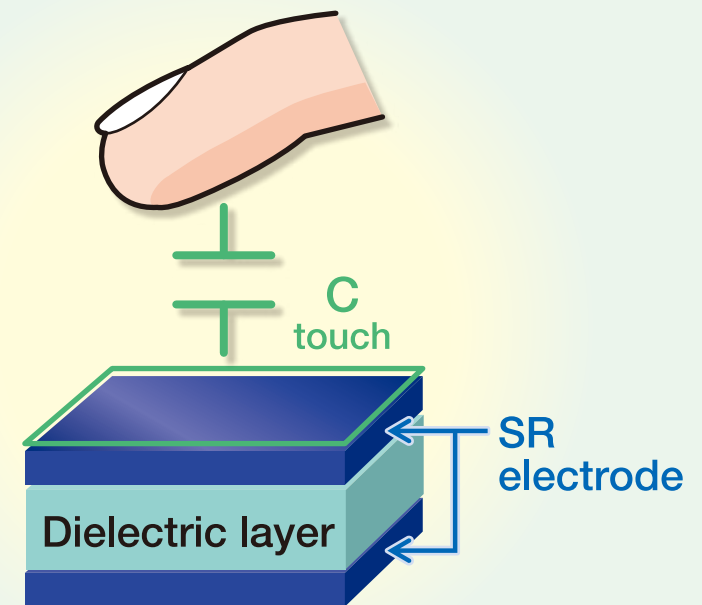
Electrostatic capacitor all made of elastomer

◎ Principle of **Pressure sensing**
(applied to this built-in sensor)



Measurement of Capacitance between the electrodes

◎ Principle of **Touch sensing**



Measurement of Capacitance between a finger and the upper electrode



Vehicle application

