UBIQUITOUS COMPUTING ASSIGNMENT

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Topic   : 3 Problems/Ideas interested in solving

Assignment No.   : Week 3

➢ I really wish our banks had biometrics authentication to check the identity of a person.
➢ It really annoys when I go to the bank for withdrawing cash and I would not be able to withdraw the cash as I have left my ID proof home.

Problem 1: Drinking Under the Influence (DUI)

- Most of the accidents in the US is made because of DUI and the below statistics shows the same.

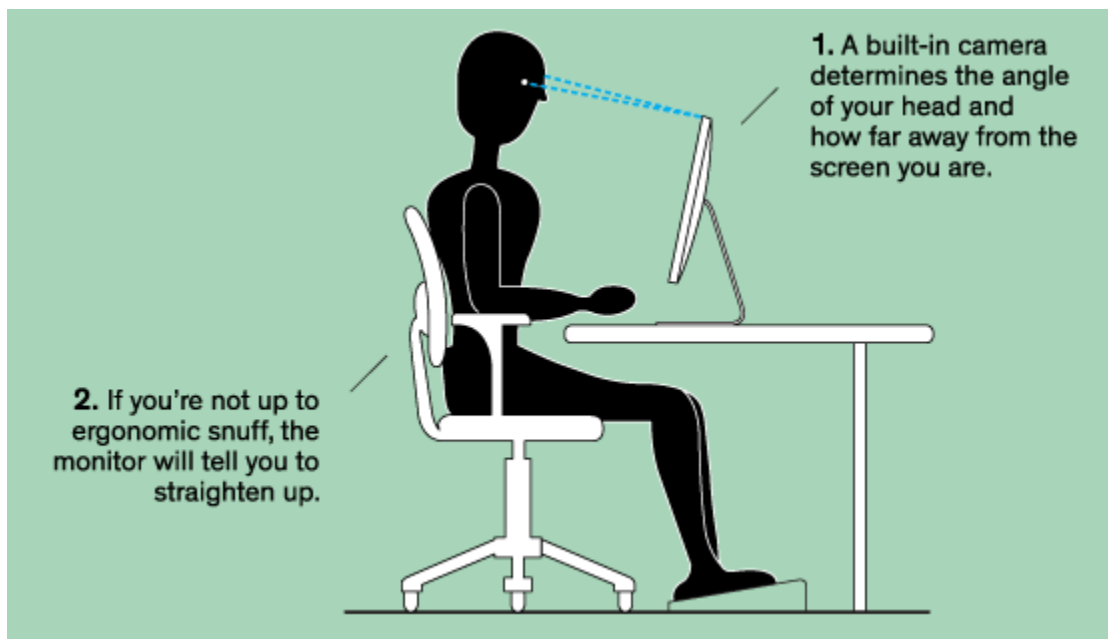Annual Self-reported Alcohol-impaired Driving Episodes among U.S. Adults, 1993–2014
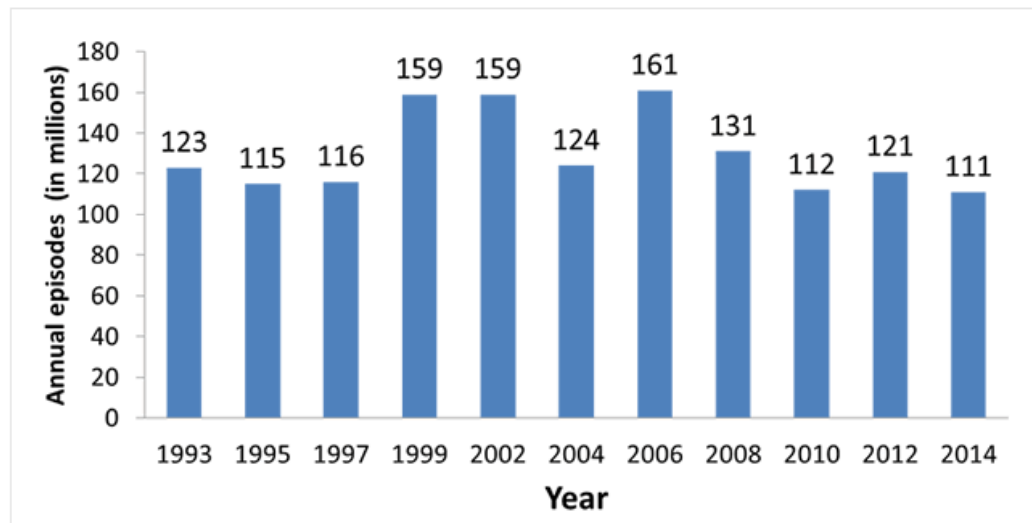
Source: CDC. Behavioral Risk Factor Surveillance System (BRFSS), 1993–2014. Available at http://www.cdc.gov/brfss

- Making an inbuilt breathalyzer inside the car that can monitor the alcohol level by sniffing the drivers breathe or scanning the blood in their fingertips via the steering wheel and make the car stop / immobilize if the level of alcohol is high.
- Currently police officers randomly stops a car and checks his breath for alcohol consumption.
- But this will not catch everyone who is driving under consumption because the police checking is done randomly.
- If this is made compulsory for every vehicle by DMV, then this could reduce most of the accidents.

Problem 2: Slouching while using Computer/Laptops

- Most of the current generation people are bending their spine because of watching computers.
- It helps the people avoid achy backs and tired eyes.
- A built-in camera should follow the position of your pupils to determines how you are sitting.

1. A built-in camera determines the angle of your head and how far away from the screen you are.

2. If you're not up to ergonomic snuff, the monitor will tell you to straighten up.

- The monitor should also inform us about that time to stand up and to take a break and it should automatically power off when it finds that we went away from the sensor.
- Philips is currently working on ErgoSensor monitor that would solve the similar kind of issue.
- People would pay around 130-200 for this product as this would really help people avoid slouching.

Problem 3: Tooth decaying

- Oral hygiene is one of the most important habit an individual should maintain.
- Failing to maintain the oral hygiene leads to plague and that leads to tooth decay.

    ✓ Idea: Create a tooth sensor that sends an alert when it detects bacteria associated with plague buildup or infection. It may also send a notification to the personal dentist that gives us a social pressure to make a dental appointment.
- People could pay more (40-70/tooth)for this as this device can maintain their oral hygiene perfectly.
- This device should notify us when the bacterial content is high in our mouth and alerts us for brushing or flossing.
- It should also identify the bacteria in saliva that is associated with stomach ulcers and stomach allergies and this could prevent a person from ulcer along with maintaining oral hygiene.