Armchair with Force Sensors

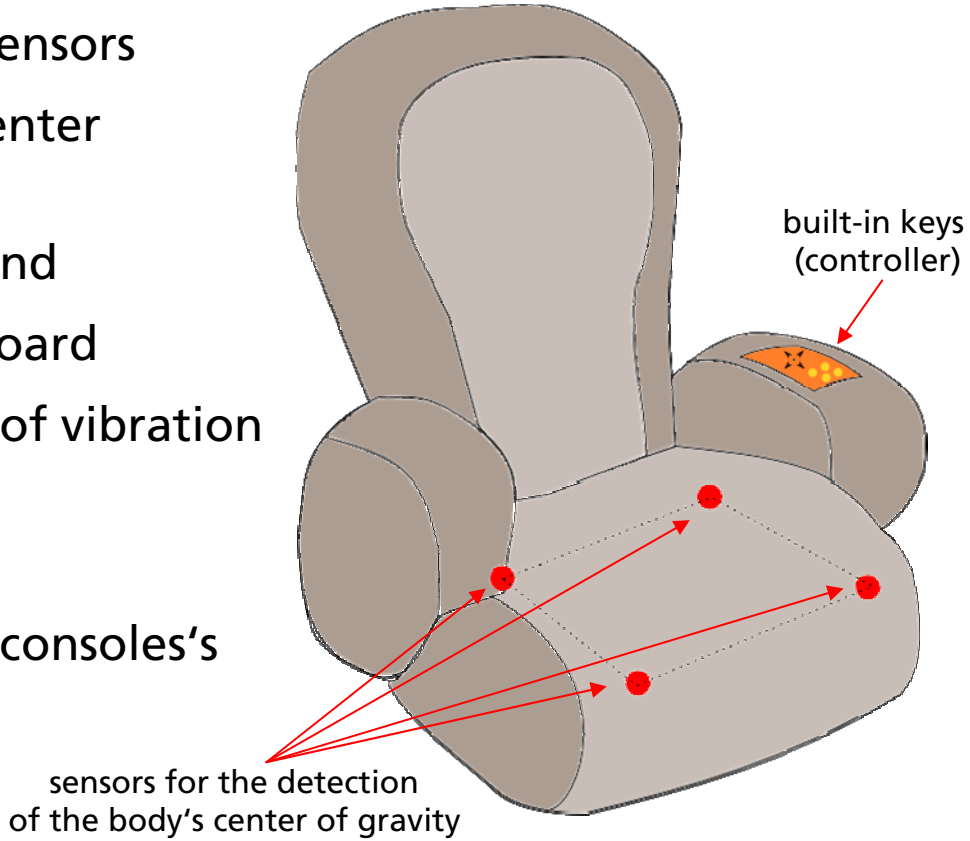
Brief Outline of the Idea

Overview

- Sketch
- Control Concept
- Application Scenarios

Sketch

- Armchair with Built-in Force Sensors
  - dectection of the body's center of gravity
  - time required to turn around
  - comparison: Wii Balance Board
  - haptic feedback by means of vibration
- Armchair's Built-in Keys
  - keys are illustrated on the consoles's game pad
  - surfaces as keys (proximity sensors)
- Integrated Speakers

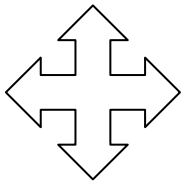


Control Concept

- Movement-Controlled, whilst seated durch Bewegung im Sitzen (thrombosis prevention)

- Force Sensors
  - detection of the body‘s center of gravity
    - detection of the incline based on the center of gravity
    - display of the tilt on cursor key of the game pad

  - detection of the speed of tilting
    - how long does tilting in one direction take



Control Concept

- Haptic Feedback
  - vibration for sensory support

    e.g. driving off the road

- Built-in Keys
  - surfaces as keys (proximity sensors)
  - display of all game pad keys
    - menu navigation on the screen
    - triggering selected events
    - confirming / cancelling certain dialog box

Application Scenarios

- Starting Applications
  - built-in keys for navigation and selection

- Selection of Participants
  - with the help of a list of participants
    - displayed on the screen
    - cursor-naviation
    - using the selection key

Application Scenarios

- Control via Force Sensors Built into the Armchair
  - tilting into one direction causes movement in the game
    - example: steering a racing car
  - (relatively) quick shift of the body's center of gravity
    - ➢ stronger response in the game
      e.g. quick steering in a racing game