Respiration tracking using the Wii Remote Game-controller

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- **Problem:** Pulmonary rehabilitation in COPD patients. Lack of motivation, transportation problems.

- **Possible solution:** breathing feedback, game-based rehabilitation at home.

- **Methodology:** develop a low cost, Wiimote-based system to monitor user's breathing and provide feedback.
- 7 healthy volunteers
- 3 tests. 3 min long:
  - Sitting on a chair.
  - On a stationary bicycle before doing exercise.
  - On the bicycle after doing exercise.
- User counts its own respirations.
- Wiimote is able to monitor breathing.
- Relatively precise for rehab purposes.
- Low cost, non-invasive solution.
- Early stage of development.
- Problems differentiating body movements from breathing.
Increase markers performance:
  - Better materials with higher reflectiveness.
  - Active markers.

Address tests with COPD patients.

Avoid body movement interferences by using several Wiimotes.