

Looking Ahead: Future Technologies for Elder Friendly Futures

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Building Elder Friendly Futures Locally and Globally
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Trends

- **Electronics**

- Smaller
- Cheaper
- More powerful



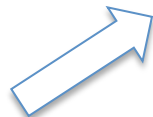
- **Software**

- Intelligent
- Manageable
- Mobile



- **Data**

- Ubiquitous
- Big
- Accessible



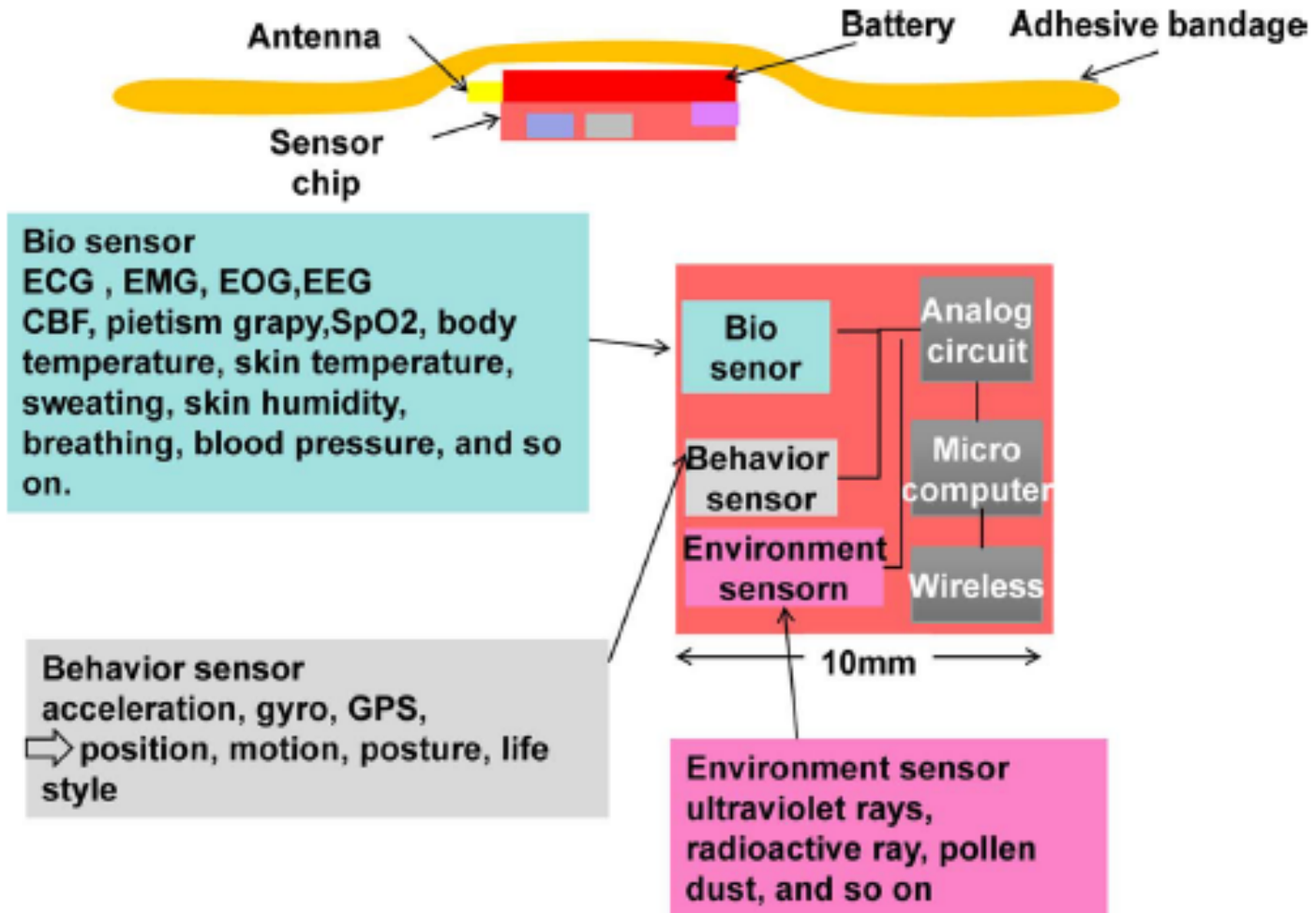
Themes

- Robotics
 - Caregivers
 - Surgeons (remote and on-site)
- Internet
 - Primary Care visit via Skype
 - Diagnosis online (crowd-source and PCP)
- Patient Privacy vs. Big data
 - Screening
 - Early warning
- **Smart Home**
 - **Embedded, continuous**
 - **Track daily activities**
- **Quantified Self**
 - **Real-time, mobile, passive**
 - **Unlock new measurables**

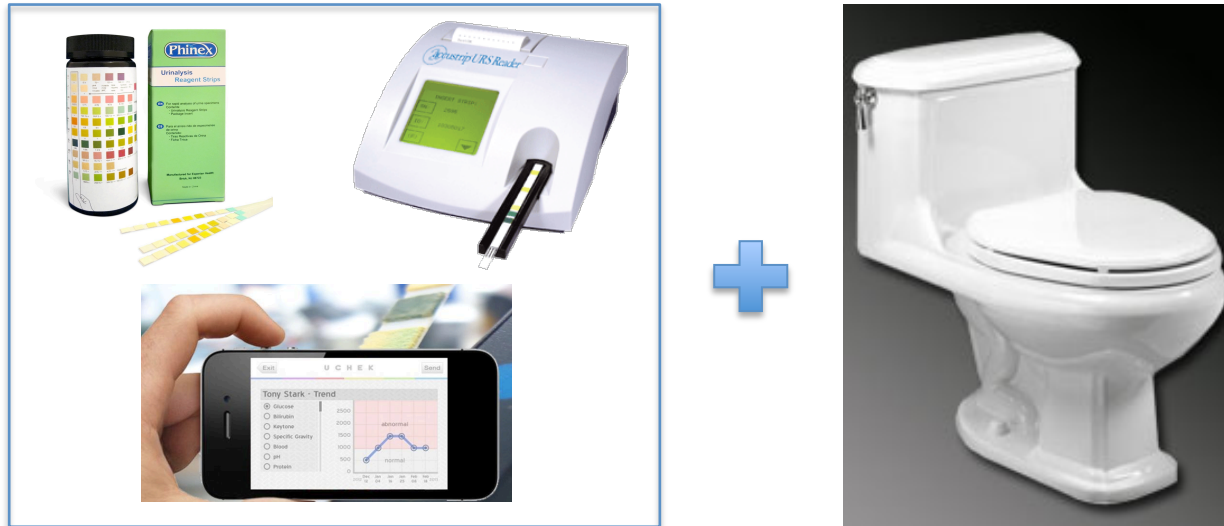
Expectations

- Automated “track and trigger” systems
- Total heart replacements
- Kidney treatment via artificial organs
- Natural drug delivery
- Digestible sensors
- Tissue engineering of nerve cells
- Stimulators to control obesity
- Embedded sensors to monitor daily activity
- **Personal sensors to monitor vitals**
- **Smart toilets for screening**

Example 1: Personal Sensor



Example 2: Smart Toilet



- Routine waste monitoring (**screening**) can be an important element of preventative care, but is currently used in targeted symptomatic patients (**case management**) at office visits
- **Home monitoring** could enable early detection of disease progression, disease onset, and potentially other biomarkers of interest