

Understanding and Analyzing 'Safety' in Body Sensor Networks



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Setting Up The Problem

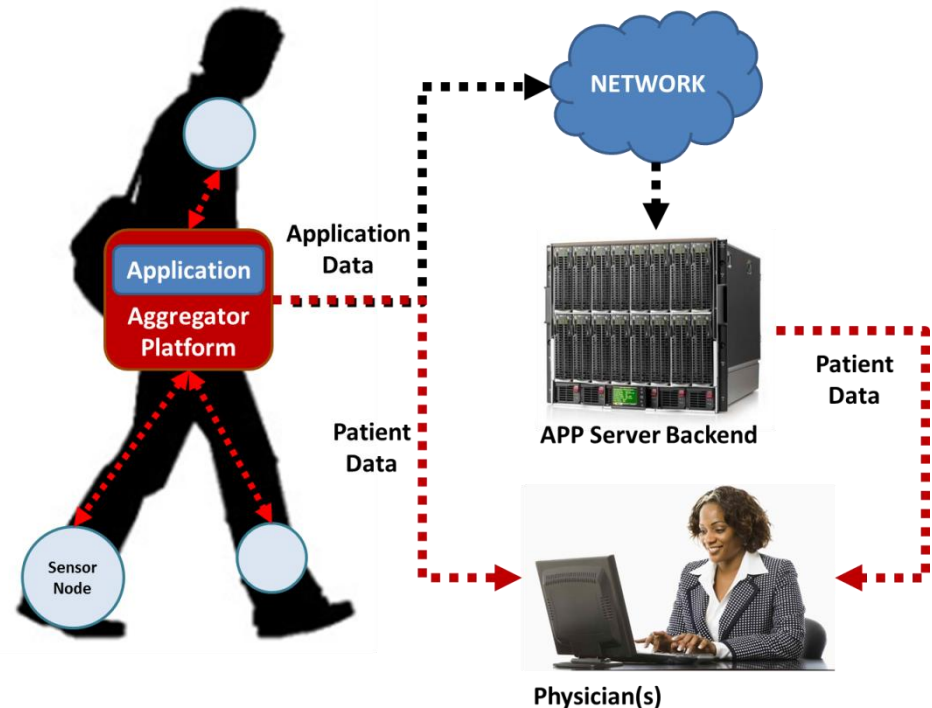
- Our end goal: **analysis**
 - Check **properties** of the **system**

- Which properties?
 - **Safety**

- Which system?

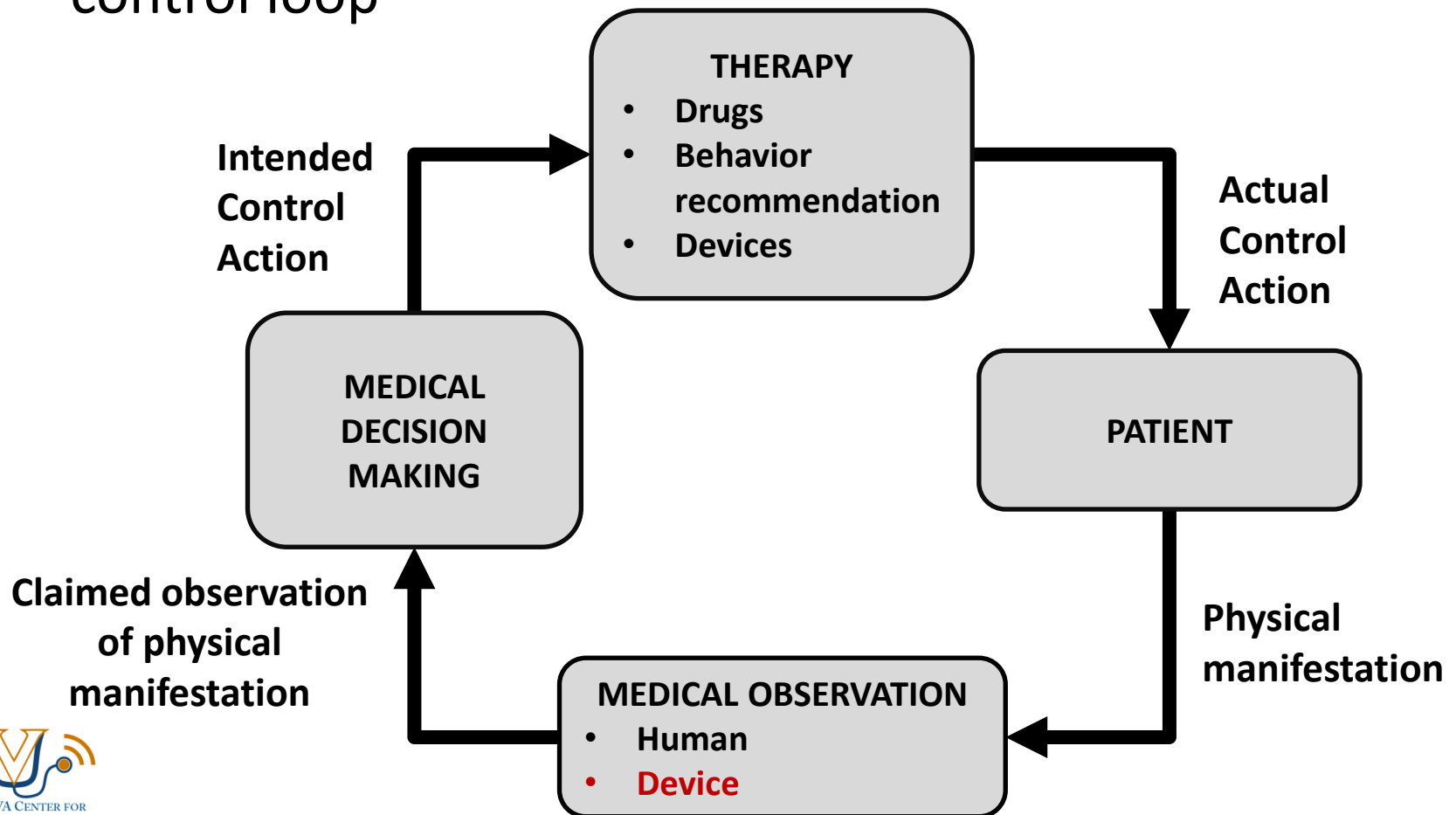
- **Sensing-only** body sensor networks (BSNs)

*There's lots of issues here even without closed-loop



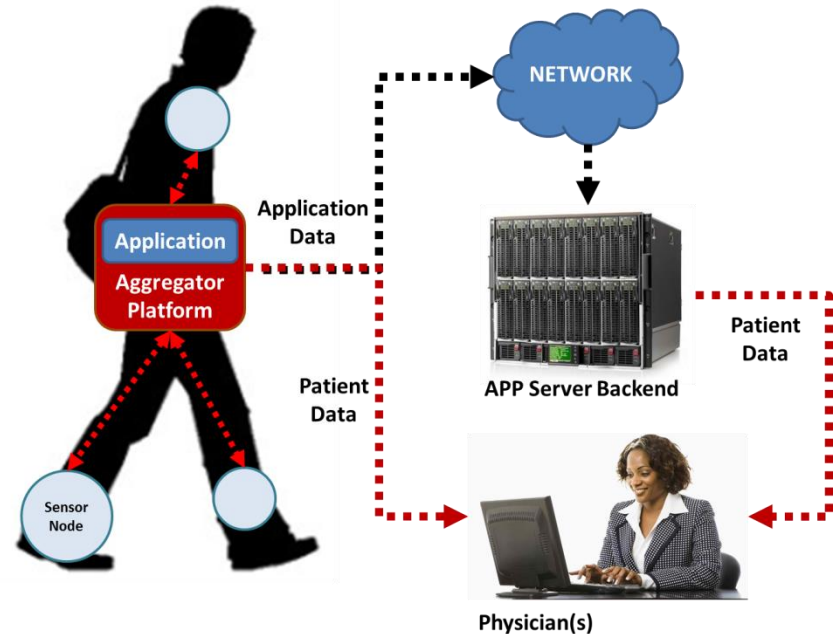
How does STAMP apply to BSNs?

- Must first examine personal health management control loop



Issues to consider

- Subsystem design problem
 - Limited knowledge about whole loop
- Inference vs. Control
 - Control \Rightarrow Inference
- ‘Interface’ design problem
- Plug-and-play (open systems)
 - Medical systems must be assembled from pre-designed components
- Systems dynamics



Intended Deliverables (Directions)

- Models
 - For understanding, communication, discussing ‘safety’
 - For design
- Analysis techniques
 - For design
 - For regulation

