Proposed Work #2.

Understanding Bystanders' Privacy Mitigation Strategy in Smart space vs Wearable sensors

(Mitigation Strategy Tool Focused Version)

Research Objective

- Designing a **privacy mitigation tool** to
  1. improve users' awareness related to devices, their capabilities, and privacy controls for space and wearable sensors.
  2. suggest appropriate privacy mitigation strategies given a particular situation.

- Identifying methods to mediate **conflicts** in multi-user environments amidst varying sensing and data collection preferences

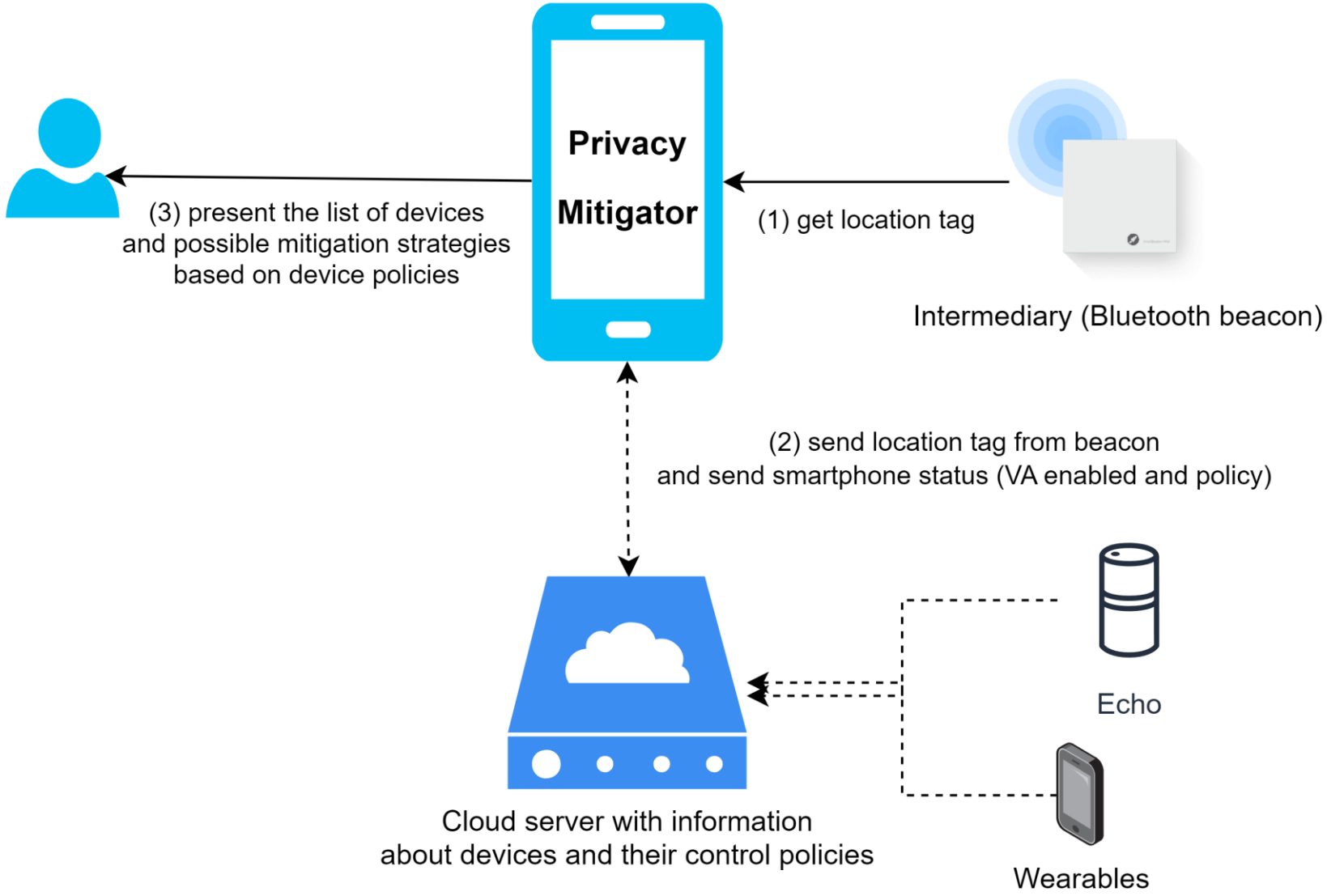
Why does this matter?

- As mentioned earlier, bystanders usually have no control over devices that can collect their data
- Rather, they are often even unaware of devices in their proximity
- Based on the results of Proposed Work 1, we may identify **reasons** for their lack of concern for space and wearable sensors.
- Designing a privacy mitigation tool that can interface with an **intermediary device** to identify devices in the users' proximity and suggest mitigation strategies based on owner-set policies can help improve bystander awareness of data collection and improve their agency over their data.

Intermediary device

- Given a collaborative academic space – we assume that each individual location within this space has an intermediary device
- This device can interface with all (1) smart VA devices in that space and (2) wearable devices in proximity.
- The intermediary can relay information to the privacy mitigation tool about which devices are present and the control policies for those devices.
- The privacy mitigation tool can suggest appropriate mitigation strategies based on this information.

Mitigator design



Research questions

- **What utility** do bystanders see in a **privacy mitigation tool** that informs users about **nearby devices** and **mitigation strategies** to protect their privacy?
  - Do users see value in the use of this tool?
  - What circumstances affect their choice of mitigation strategy for a given space?

- What are the important considerations in **resolving conflicts** for varying user preferences related to sensing in multi-user environments?
  - Users may have different preferences, such as pausing sensing to discuss a confidential topic. Whereas another use might be using the sensor for another task. How do user prefer to resolve these conflicts?