iBand

a wearable device for handshake-augmented interpersonal information exchange

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Initial meetings and introductions mark the first moments of building new relationships. Yet these important moments are often awkward or forgotten, sometimes because of the natural failings of human memory (not being able to recall someone's name) or because there is a lack of a catalyst for a richer interaction. The iBand is a new wearable technology that aims to address these problems. The device is a bracelet that stores and exchanges information about you and your relationships. Data exchange occurs only when you shake hands with another user. Information gathered and processed is reflected on the bracelet itself and can serve as a reminder or as an ice breaker for further conversation.

The iBand project aims to leverage the simple gesture of the handshake, coupled with the qualities of jewelry to act as tangible keepsakes and reminders of relationships, to explore potential applications at the intersection of social networking and ubiquitous computing.

The prototype is a wearable bracelet, adjustable in design for different kinds of users (male, female). When worn, the circuit board and battery lay flat under the wrist and an infrared (IR) transceiver is positioned near the back of the thumb pointing toward the hand such that it is visible to an IR transceiver on another device when shaking hands. A handshake is detected via infrared transceiver alignment combined with hand/wrist orientation and gesture recognition using a 2–axis accelerometer.

In a full experience with this prototype, the user first enters contact/biographical information into a kiosk, which stores it in a database and assigns a unique ID number to their iBand. The user can also create a personal logo that appears on the LED display woven into their device. When the user shakes hands with another iBand user, ID numbers and logos are exchanged and stored. The LED display cycles through the stored logos at a pace reflecting the number of hands that have been shaken. When the user returns to the kiosk, it displays a list of new contacts by looking up the collected ID numbers in the database.

We are currently working on further prototypes that include additional functionality and richer wearable displays to support a variety of social networking and interaction analysis applications.

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