

## Private Human Addressing System Based on Cameras and Sensors

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**Categories:**

- Computer Technology
- Electrical Engineering

**Keywords:**

- Cameras
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- Electrical Engineering
- Mobile Apps
- Sensors
- Smartphones
- Surveillance
- Wireless

Video surveillance cameras are widely used to identify people for security purposes. Currently, there is no existing end-to-end and real-time system that digitally associates people within the camera's view with their smartphones.

Researchers at Purdue University have developed a data transmission protocol that utilizes a person's unique motion pattern to identify addresses for communication. After a person's smartphone receives a wireless broadcast from the cameras, it can locally compare the motion address it received against its own motion sensor data. If it is a good match, it will accept the packet. The use of a low-dimensional code prevents leakage of the user's walking behaviors, which prevents potential hackers from inferring the motion patterns of users. The system requires no data from users and utilizes attributes, such as height, walking pattern, stride length, and posture, to identify subjects. As opposed to other transmission methods, such as Bluetooth beacons, this technology allows for continuous data transfer as subjects moves about.

**Advantages:**

- Associates a person's motion pattern to identify addresses for communication
- Achieved a 99.7 percent match effectiveness
- Does not require additional infrastructure
- Secure

**Potential Applications:**

- Mobile device marketing

-Mobile device information delivery

**People:**

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**Intellectual Property:**

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