DEVICE-FREE HUMAN IDENTIFICATION SYSTEM

Tech ID: 29291 / UC Case 2018-132-0

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	12,058,213	08/06/2024	2018-132

BRIEF DESCRIPTION

In our electronically connected society, human identification systems are critical to secure authentication, and also enabling for tailored services to individuals. Conventional human identification systems, such as biometric-based or vision-based approaches, require either the deployment of dedicated infrastructure, or the active cooperation of users to carry devices. Consequently, pervasive implementation of conventional human identification systems is expensive, inconvenient, or intrusive to privacy.

Recently, WiFi infrastructure, and associated WiFi-enabled mobile and IoT devices have become ubiquitous, and correspondingly, have enabled many context-aware and location-based services.

To address the challenges of human identification systems and take advantage of the popularity of WiFi, researchers at UC Berkeley developed a human identification system based on analyzing signals from existing WiFi-enabled devices. This novel device-free approach uses WiFi signal analysis to reveal the unique, fine-grained gait patterns of individuals as the "fingerprint" for human identification.

SUGGESTED USES

- Secure authentication
- Tailor-made services

ADVANTAGES

- Lower cost
- More convenient
- Less intrusive

RELATED MATERIALS

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INVENTORS

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OTHER INFORMATION

KEYWORDS

Software, Authentication, WiFi

CATEGORIZED AS

- **Communications**
  - Wireless
- **Computer**
  - Software
- **Environment**
  - Sensing
- **Security and Defense**
  - Other
- **Sensors & Instrumentation**
  - Other

RELATED CASES

2018-132-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Unsupervised WiFi-Enabled Device-User Association for Personalized Location-Based Services
- Automatic Fine-Grained Radio Map Construction and Adaptation

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