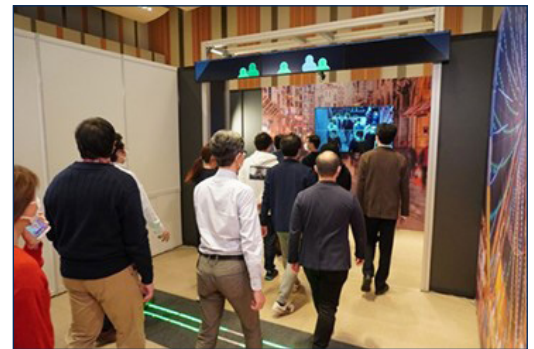\Orchestrating a brighter world

NEC

Reliable, real-time entry control

NEC's Gateless Access Control System

At a Glance

- Real-time authentication leveraging facial recognition.
- World-class accuracy with excellent tolerance for face orientation and blockages.
- Face recognition even when people are wearing masks or not directing their faces towards the camera.
- Eliminates the need for gates, authentication devices and guarded security at entrances.
- Integrates other engines, repeatedly detecting technology and person re-identification technology.

Overview

Welcome visitors without the need for gates and long wait times – while maintaining security and public safety.

Introducing NEC's Gateless Access Control System. Combining the #1 face recognition algorithm* with proprietary person re-identification technology, Gateless Access Control allows fast, reliable entry control at speed for groups of people. The technology can accurately identify and match multiple people in real time, even if people are facing away from the camera or their bodies are occluded.

This innovation allows for the removal of traditional gates, guarded security gates or barriers, which reduces bottlenecks and wait times without affecting the security of a site or event. The system enables a large number of people to be authenticated in real time by using camera images to repeatedly detect individuals and perform face recognition as they pass through a predetermined entry zone. If a person whose face image has not been registered in advance enters the area, an alert can be triggered and displayed on a nearby security monitor, on a handheld device or even above their head.

System Description

Gateless Access Control repeatedly detects individuals on camera and performs face recognition once their faces are visible. The system saves users from touching an ID card on an authentication device, getting in a specific line or facing a camera. Visitors simply walk through the area captured by a camera, without the need to install authentication devices or gates.

Gateless Access Control will prevent congestion during entry to and exit from theme parks, railway ticket gates, airports, hospitals, offices, manufacturing facilities, government buildings, military bases and more to achieve smooth and comfortable access control.

Key Innovations:

1. Repeatedly detects humans captured on camera in real time. Gateless Access Control ensures face recognition of multiple individuals in front of the system.

2. Quick and accurate face recognition. Even if the face is slightly hidden behind other people or if only a glimpse of the face is available, this technology can instantaneously recognize the face.

3. The cutting-edge person tracking leverages deep learning algorithms to address the challenges of person re-identification. Once identified, the person's trajectory is meticulously tracked across the scene for seamless continuity even if the person moves.

Key Benefits and Features

Gateless Access Control enables a large number of people to be authenticated in real time by using camera images to repeatedly detect individuals and perform face recognition as they pass through a predetermined entry zone.

This innovative technology removes touchpoints that create friction, queueing and bottlenecks. When a person cannot be authenticated, an alert can be sent to a predefined system / stakeholder.

The system has multiple use cases including military and law enforcement, hospitals and airports. According to SITA's 2023 Passenger IT Insights, airline passengers are embracing tech for smoother journeys from booking to boarding. Use of NEC's Gateless Access Control can further reduce friction related to airport checkpoints.

NEC continues to set the standard for secure, rapid, and accurate identity recognition solutions, delivering a highly secure, scalable, seamless experience.

To learn more about NEC iBoard, Digital ID, aviation and frictionless traveler experiences, please visit https://www.necam.com/Aviation/.

*Ranked #1 since 2009 through 2024 in face recognition benchmark tests conducted by the U.S. National Institute of Standards and Technology (NIST).
Source: NEC Face Recognition Technology Ranks First in NIST Accuracy Testing.

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