Real time   Secure

Video Analysis Solution for Crowd Monitoring and Management

Crowd Detection System

- NEC's New Digital Security Solution to grasp Real-Time Crowd Density Levels and People Number using video surveillance systems.

- It powerfully assists you to clarify the crowd density levels and crowd behavior which are the keys to the crowd management. NEC's crowd behavior analysis technology provides you more precise information on crowd density levels with quantified data including the number of people and the percentage of crowd density.

How it works
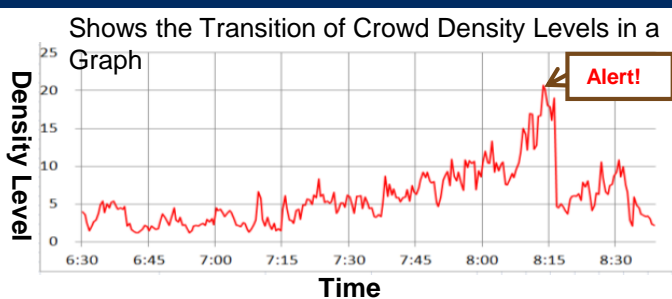
Videos from Surveillance Cameras

Using existing cameras and digital surveillance systems

Crowd Analysis is available for a Heavy Crowd of hundreds of people.

Installable in the system with cameras/ servers of lower performances and narrow bandwidth, as the frame rate and video resolution required for analysis are quite lower.

SHOP

Quantified Crowd Density Levels - Graph

Shows the Transition of Crowd Density Levels in a Graph

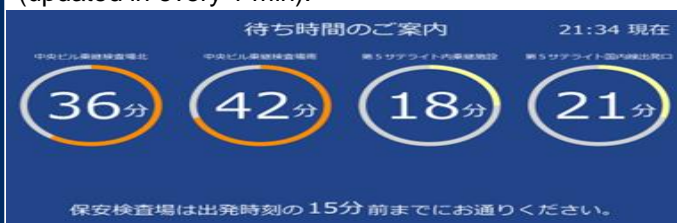Alert!

Density Level vs Time (6:30 – 8:30)

Crowd Analysis

A fast video analysis and processing
（A few seconds after video taking）

It analyzes the videos from the surveillance cameras, quantifies the crowd density levels and displays the results on the Staffs' PCs and the Information Boards for the Customers.

Estimated Line Wait Times (optional)

Estimates wait times from the crowd density levels analyzed/ the number of people counted. Displays real-time information of crowd density including estimated line wait times on the staffs' PCs (updated in every 1-2 seconds) and the Information Boards for customers (updated in every 1 min).

待ち時間のご案内   21:34 現在
36分 42分 18分 21分
保安検査場は出発時刻の 15分 前までにお通りください。

Quantified Crowd Density Levels - in Gauge, Heat Map, Crowd Flow Line（Traffic Line）

Shows the Crowd Density Level s in a Gauge / a Heat map / a Crowd Flow Line (Traffic Line) Arrow on top of the still picture from a camera.

32%

Key Features and Benefits

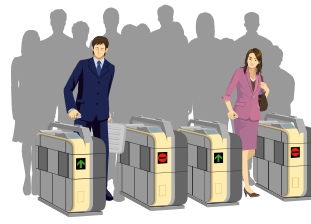### NEC's unique and robust Crowd Behavior Analysis Engine

- NEC's Crowd Behavior Analysis Technology handles a mass of people as a single object, not as a group of individuals. As it won't detect, track and identify each individual person, it requires no personal data for video analysis.
- It enables counting the number of people in a larger group and where people's figures are overlapped in an image.
- Provides data of the specified and the entire areas in an image.

Case Study

■Case Study 1 – Railway Station, Airport, Bus Terminal, Stadium, Theme Park, Large Commercial and Amusement Complex and etc.

- Estimates *Wait Times* at Railway Station Ticket Office and *Density Levels* at Railway Station Ticket Gate.
- *Crowd Management* in Large Facilities – early detection of abnormal crowd behavior / overcrowding.

- *History Data and Statistics* including Customers' Traffic Line to improve business and security management, and for marketing.

Density Levels Data and Estimated *Wait Times* Provided for the Passengers

■Case Study 2 – Street and Town

- Estimates Abnormal Overcrowding
- especially in *an emergency* to prevent *a secondary disaster* caused by an abnormal overcrowding.

- Tools For *Marketing* and *Urban Architecture* – Statistic Data such as the density levels of times and days provides a tool for urban architecture to secure safety / amenity and to promote commercial vitalization.

Crowd Management in an Emergency – Information on overcrowding in the areas around railroad/bus stations serves to prevent serious accidents and help people find the safer and easier way home.

It can detect objects *in outdoors* with the *unstable lighting* (i.e. sunlight).

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Global Business Promotion Department
Transportation and City Infrastructure Division
NEC corporation