AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

TOMORROW TODAY

OBSERV3D PERSON SEPARATION

ANTI-TAILGATING SOLUTION

OVERVIEW

Observ3D Person Separation is a software solution for accurate person counting in access control scenarios, enhanced by the use of a stereo camera. Key benefits are protection against tailgating and a high throughput of persons. Anti-tailgating prevents an unauthorized person from gaining access to the secured area by following an authorized user. The solution is designed for high security applications such as automated border control systems.
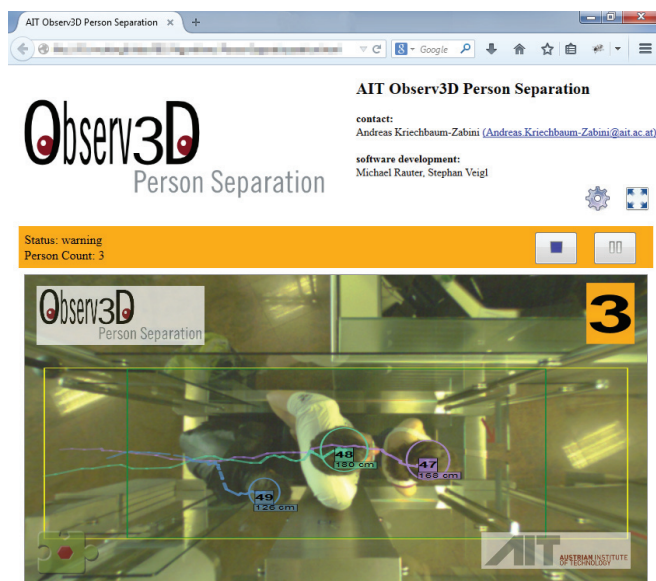

Figure: live camera view with trajectories per person

KEY FEATURES

▶ System output: number of persons detected, their trajectories of movements and live camera views
▶ Robust and reliable person counting due to highly sophisticated human detection and tracking algorithms
▶ Highly robust against varying environmental conditions (e.g. rapid changes in lighting situation) by analysis of high-quality 3D information
▶ Piggybacking and tailgating detection by robust separation of persons
▶ Specially designed not to miscount due to the presence of carried items (e.g. backpacks or suitcases)
▶ Multiple configuration settings such as region of interest and minimum person's height
▶ Functionality is offered as a web service, which allows a distributed concept having analytics and user interface on separate physical machines
▶ Easy integration into existing systems due to the RESTful interface using JSON

REQUIREMENTS

▶ Ethernet stereo camera (Gigabit, Power over Ethernet)
  -) mounted above the scene, camera lenses pointing straight down
  -) camera mounting height: 2.6 – 4.0 meters
  -) minimum required distance between persons' heads and camera: 0.50 meters
▶ Operating system: Microsoft Windows 7/8.1 64 bit
▶ Individual configuration of the algorithm for each setup (e.g. mounting height, region of interest)

CONTACT

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