

# SmartCatch™ | Human Tailgating Technical Specification

Vident SmartCatch is an accurate and effective solution for detecting suspicious human tailgating at access control areas. Using existing CCTV infrastructure, SmartCatch software monitors, identifies and tracks objects for security policy violations and enables quick response through real-time alerts and instant video replays. At the core of SmartCatch is a set of advanced video algorithms capable of performing complex behavioral analysis, tracking numerous objects and simultaneously identifying security threats in even the most complex environments. Human Tailgating is one of many available SmartCatch behaviors.

## DEFINITION

The human tailgating algorithm detects humans from a CCTV camera and tracks their movement through a door. Tailgating is detected by SmartCatch when two or more humans move through a door within the camera view without the door fully closing between their entries. Human tracking includes any type of human movement such as running or walking within a camera view range. SmartCatch tracks each human individually in order to detect tailgating, even if multiple humans pass through the access door at the same time.



## SPECIFICATIONS

### □ General

- Type of use: indoor
- Maximum number of concurrent human tracks: 5
- Input video processing format: CIF, MPEG4
- Video processing size: 320x240(NTSC) or 352x288(PAL) minimum; higher resolutions fully supported if processing capacity is available. High resolutions can also be downsized or cropped to minimum processing size
- Minimum video size to detect human: 40 pixels in height at 320x240
- Number of access door per camera: 1 to 4
- Recommended minimum camera distance from access door: 6 meters or 20 feet with standard lens\*

- Recommended maximum camera distance from human: 10 meters or 33 feet with standard lens\*

### □ Hardware Usage

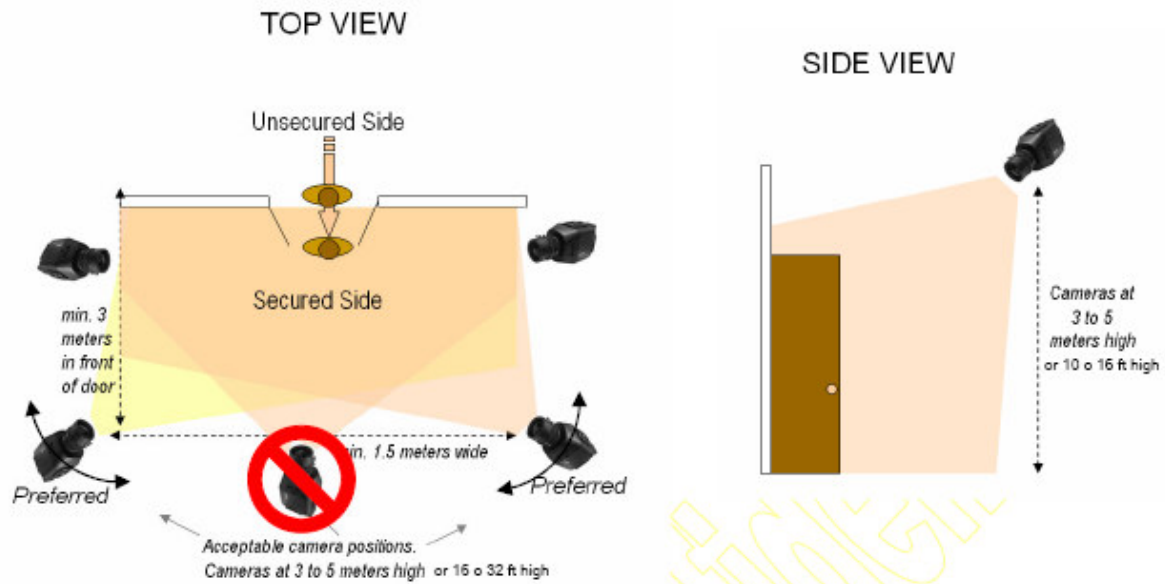
- SmartCatch Video Processing Unit (VPU) Software with Windows 2003 Server
- Minimum hardware specifications: Intel Xeon 2.8GHz, 1Gb RAM, 80 GB HDD

### □ User Configurations

- Minimum human tracking distance: 3 meters or 10 feet for upper body or foot position
- Access door entry may be defined by a region denoted by rectangles, ovals, or any polygon

\* Normal human eye.

**RECOMMENDED CAMERA POSITIONS\***



**HUMAN TAILGATING CALIBRATION PARAMETERS**

- Parameter Door Type
- Parameter Frame rate
- Parameter Loitering Time
- Parameter Open Close Time
- Parameter Swipe Threshold
- Door map
- Door open/close time (without integration with access system)
- Swiping time (without integration with access system)
- Human detector selection
- Auto calibration

**Tailgating Tip:**

Some users of the human tailgating behavior may allow multiple people to enter an access door at the same time provided that each person scans their access card or other device to validate their entry. SmartCatch can access this information to eliminate false-positive alarms when integrated with the access control system.

\*Camera positions may subject to change based on site survey results.