

iCAT People Counting

Setup considerations

- Choose a stationary color-camera with a high Signal to Noise Ratio.
- Mount the camera in a downward looking fashion (or with a max. deviation of 30°), ideally at a height of 4~5m; maximize the relevant ground area in the camera's field of view.
- The video stream should have a 640x480 resolution and 15 fps.
- Configure the camera: flicker-free operation, turn off auto-focus, and enable multi-streaming.

Setting up the counter

- 1) Define the **Object tracking region** – the area where people are tracked:
 - a) Choose a camera, right-click in the **Video Analysis (iCAT)** tab, and select **Add new definition**.
 - b) Choose **Object tracking region** in the **Type** dropdown menu and enter an **Identifier** for the region.
 - c) Select the **Rectangle** or **Polygon** option and draw the Object tracking region on the camera view by placing its vertices (or use the default which is the entire image). When drawing a polygon double-click when done.
- 2) Select the **Indoor** and **Overhead downward looking** options when appropriate.
- 3) Define the tripwire(s) and associated “green field(s)” for the counting:
 - a) Right-click in the **Video Analysis (iCAT)** tab, and select **Add new definition**.
 - b) Choose **Event Trigger** in the **Type** dropdown menu and enter an **Identifier** for the region.
 - c) Select **Tripwire** from the options below the camera view.
 - d) Draw the tripwire on the camera view by placing its vertices and double-clicking when finished.
 - e) Define the green field by pressing the **Toggle** button or moving its vertices.
 - f) Ensure that the tripwire is not too close to the edges of the region or image.
- 4) Adjust tripwire parameters as needed.



Evaluating the performance

- Calculate the error rate by comparing the results of the people counter with the real number of people.
- Adjust the camera setup and software configuration to reduce the error rate.

Additional resources

- White Paper: People Counting with iCAT
- Netavis Observer User Manual