

3.32 Static Luggage Detection and Intrusion Detection

Functional description

Keywords

Computer Vision, Security, Surveillance, Activity Monitoring, Luggage Detection

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Detecting changes in videos is an essential component of surveillance applications. Idiap has expertise in this domain, with efficient background subtraction schemes and further exploitation of this technology for automatic activity analysis from outdoor or indoor scenes.

Several modules have been developed in this direction. The first one detects and analyses changes in perimeters and space surveillance application, allowing for detecting intruders. The second detects static abandoned luggage left by passengers, including the detection of potential people remaining close to these objects.

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Innovative aspects

- Robust multi-cue background subtraction scheme
- Light robust multi-tracker scheme
- Combination of long-term cues (background) and dynamic cues (tracklets)

Corporate Sponsorship Program

See Section 4 of the present document

Commercial application examples

- Public space monitoring (luggage detection)
- Perimeter or indoor monitoring (intrusion detection)

File reference & version number:

Software disclosure 11636

More information

J. Yao and J.-M. Odobez. Multi-Layer Background Subtraction Based on Color and Texture. in Proc. CVPR Visual Surveillance workshop, June 2007.

A. Lopez-Mendez, F. Monay and J.-M. Odobez. Exploiting Scene Cues for Dropped Object Detection. Int. Conf. on Computer Vision Theory and Applications, Jan. 2014.

Software status

Demonstration software validated in real conditions.