

# "Mehr Light!"

## Vision for Robots and Devices



# Rtrilo<sup>TM</sup>

### On-Board Computer Vision software for Robots and Autonomous Cart

Enables high-level control of robots and equipments by identifying specific objects and areas from videos/images using deep learning and various image processing technologies

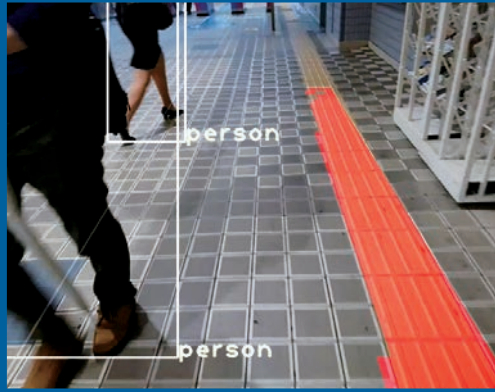


Systems Engineering Consultants Co.,LTD.

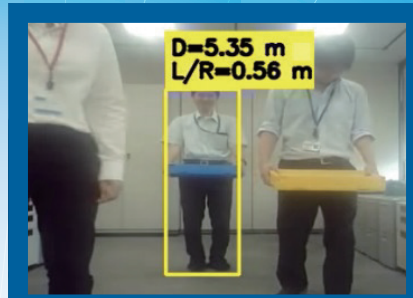
<https://www.sec.co.jp/english>

# Rtrilo Use Cases

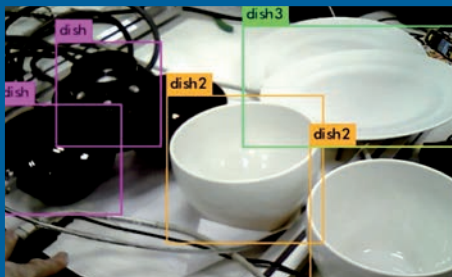
Construction, agriculture, manufacturing facilities, etc.



Distinction between the traveling area and obstacles



Specific object recognition



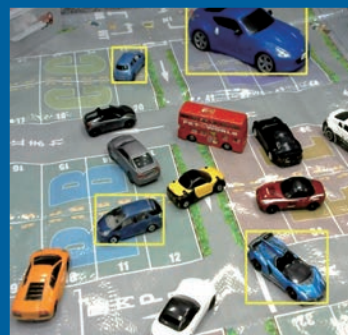
Subject recognition



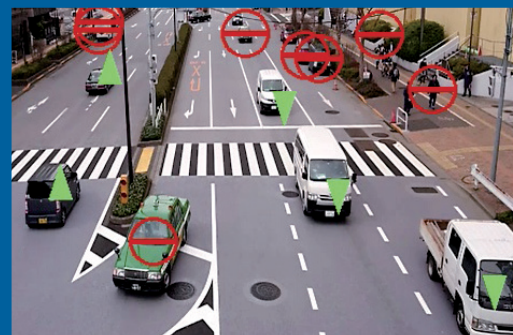
# Rtrilo™



7-Segment display recognition



Object recognition by color, shape



Detecting objects and its movement

## Functional Description

High-Level Object/Area Detection with Image Processing and Deep Learning Technologies

- Object detection and classification by Deep Learning technology: YOLO, SSD, VGG, GoogLeNet, ResNet, etc.
- Area recognition by color, shape
- Filtering by ROI(Region of Interest)
- Recognizing the motion/stop of the subjects
- Distance calculation to the subject
- Combination of algorithms: object detection and color/shape and distance, object detection and classification, etc.
- Input media: USB cameras, network cameras, streaming, file

Operating Environment ● OS:Ubuntu16.04 ● ROS:Kinetic

Package Contents ● Binary image as a ROS node (source code available for some scripts)  
● Operation manual, parameter manual ● Message specification