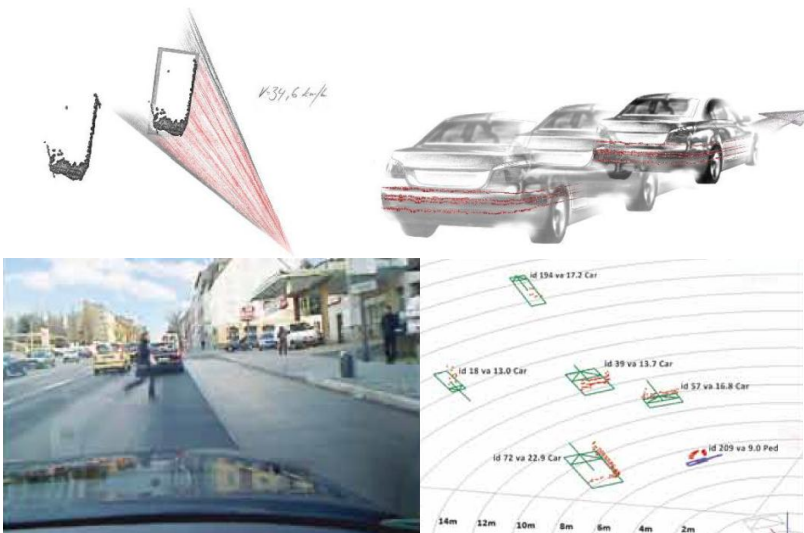


ibeo Object Tracking

All **ibeo** laser scanners are equipped with a **very robust and reliable** embedded **object tracking**.

The **ibeo** object tracking provides thanks to the **high resolution** of **ibeo** scan data a **high level** description of the surroundings.

Up to 65 objects will be **simultaneously** tracked and provide **high level information** like speed, moving vector and size.



ibeo Object Tracking key features:

- Simultaneously tracking of up to 65 objects
- Bounding box and speed information
- Single Track Model based ego
- motion compensation

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ibeo Object Tracking technical details...

Scan data pre-processing

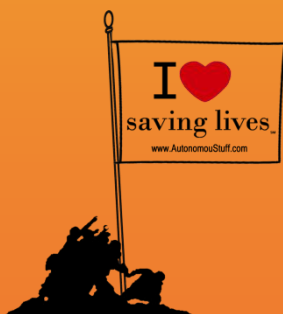
- All scan points are marked with one of the following flags:
 - Valid
 - Ground
 - Dirt
 - Transparent
 - Clutter

General Tracking Information

- Technology: Kalman filter
- Motion compensation: Single Track Model based ego motion compensation (requires ego motion data)
- Max number of simultaneously tracked objects: 65
- Prediction of covered/ hidden objects: Up to 1 s

Object Output

- ID: For a live time unique reference number
- Position: x/y tracking reference point
- Outline:
 - Up to 34 contour points
 - Bounding box (center, size, orientation)
- Velocity:
 - Relative velocity vector
 - Absolute velocity vector (requires ego motion data)
- Class (requires ego motion data):
 - Car
 - Truck
 - 2-Wheeler/ Bike
 - Pedestrian
 - Unknown small
 - Unknown big
 - Not classified
- Certainty/ Object status:
 - Object age
 - Object prediction age
 - Classification age
 - Position sigma



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