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
### 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