

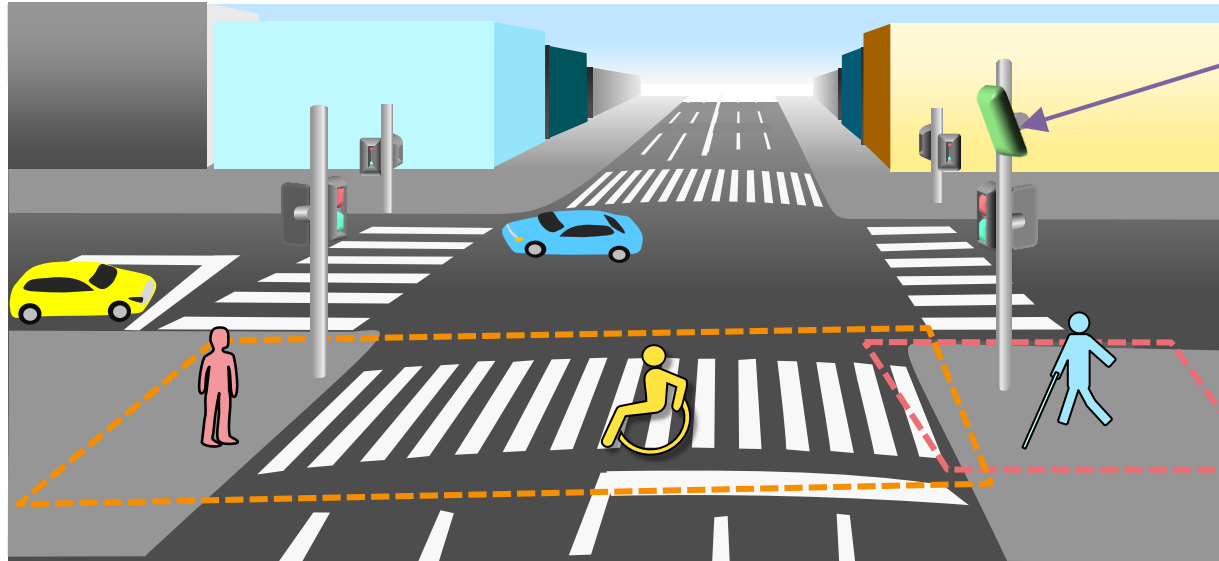
Fusion Sensor for Road-Crossers Detection

Information Network R&D Center
Sumitomo Electric Industries, Ltd.

Date: September, 2024

SEI's Fusion Sensor

“Enhancement of safety for Traffic-vulnerable”



Fusion Sensor
(Radar + Camera)

Prototype of
Fusion Sensor



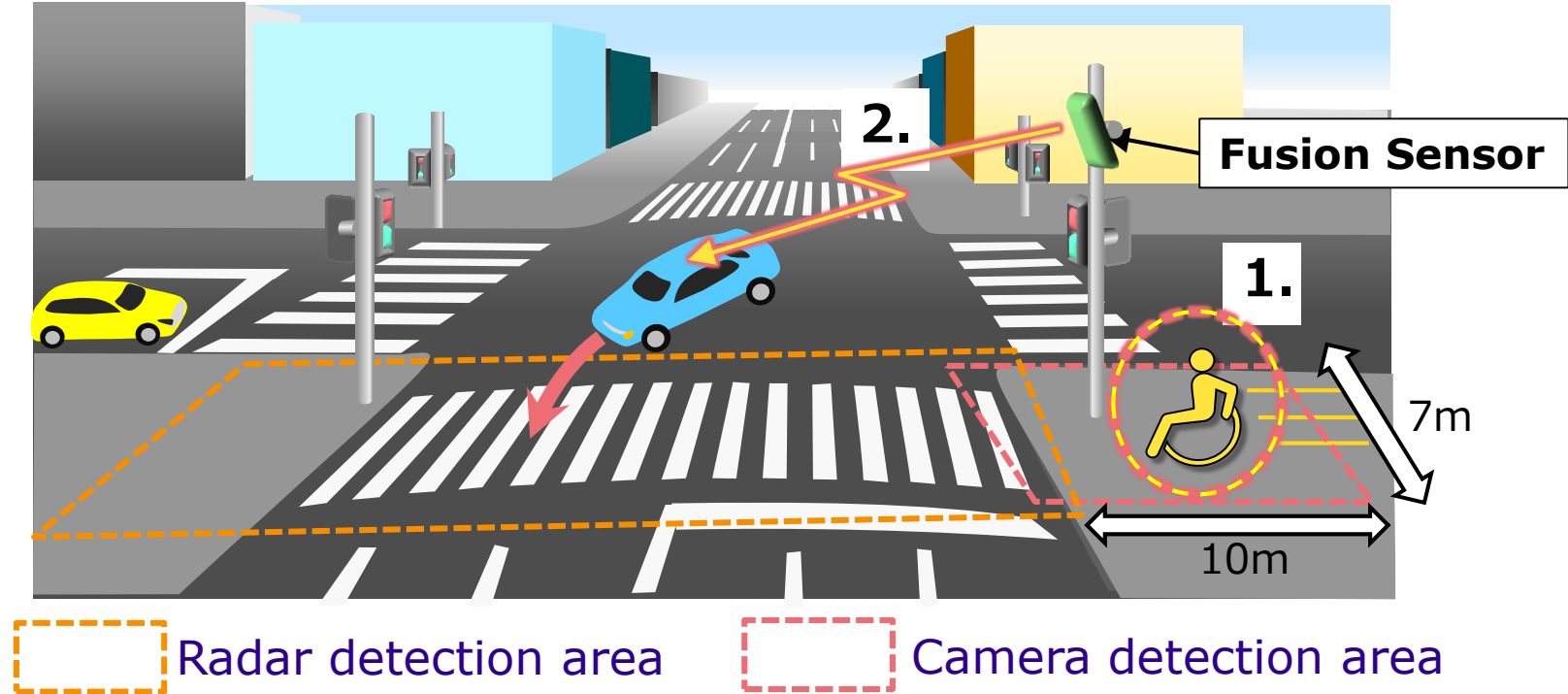
Overhead
camera

Radar detection area

Camera detection area

Use Case -Faster and Specific notification-

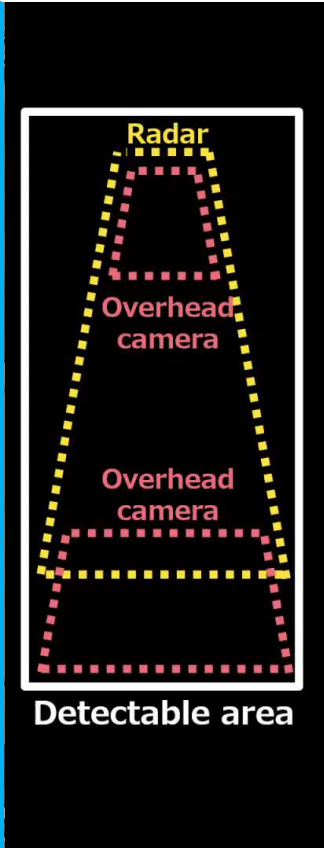
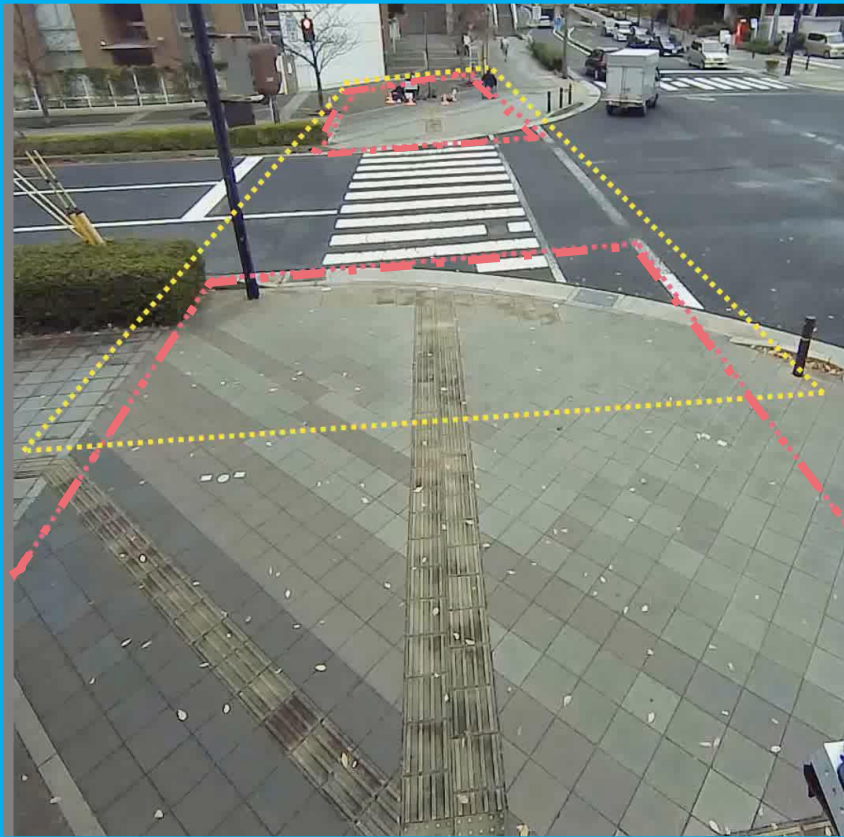
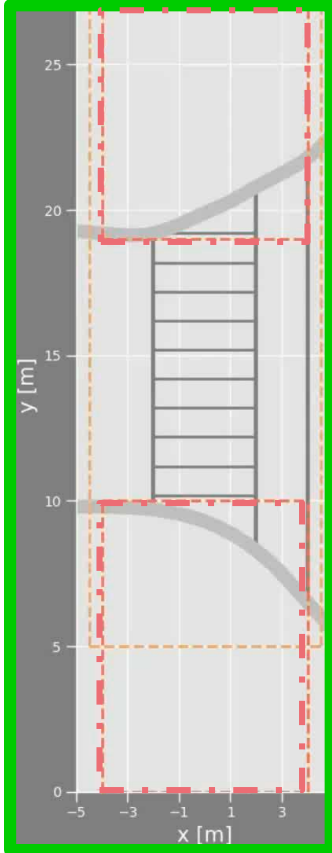
1. Fusion sensor detects road-crossers approaching from sidewalk
2. The system notifies the turning vehicles with V2X, signage, or flashing lights.



Attributes Detection Scene

Detected result

Reference camera data

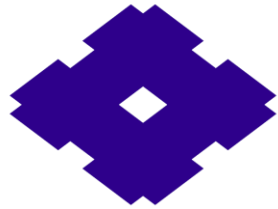


Features of SEI's Fusion Sensor

| Item | SEI's Fusion Sensor | SEI's Radar | Lidar | Camera |
|-----------------|---------------------|-------------|--------|--------|
| Detection Area | Excellent | Great! | Good | Good |
| All lighting | Great! | Great! | Good | Modest |
| All weather | Great! | Great! | Good | Modest |
| Maintenance | Great! | Great! | Modest | Modest |
| Shape and Color | Great! | None | Good | Great! |

Specifications

| Item | General | Remarks |
|---|--|-----------------------|
| External Dimensions | 175 x 175 x 75 mm | |
| Weights | 1.1 kg | |
| Radar Detection Area (Length / Width) | 60m x 30 m | depends on the height |
| Camera Detection Area (Length / Width) | 10m x 7 m | depends on the height |
| Output Data | Position, Velocity, Direction Road-crosser's Type (pedestrian, bicyclist, wheelchair user, white cane user) | |



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