
狭路での「協調行動」自動運転

“Cooperative AD” on narrow road technology

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システム構成・技術

System & Technology

➤ 事故「ゼロ」を目指したリスクの管理

Risk management aim for zero accidents

- 顕在リスク/潜在リスク+「干渉リスク」
Existing/potential risk + "interference risk"

狭路すれ違いなどの苦手シーンで

安全かつスムーズに走行する協調行動自動運転

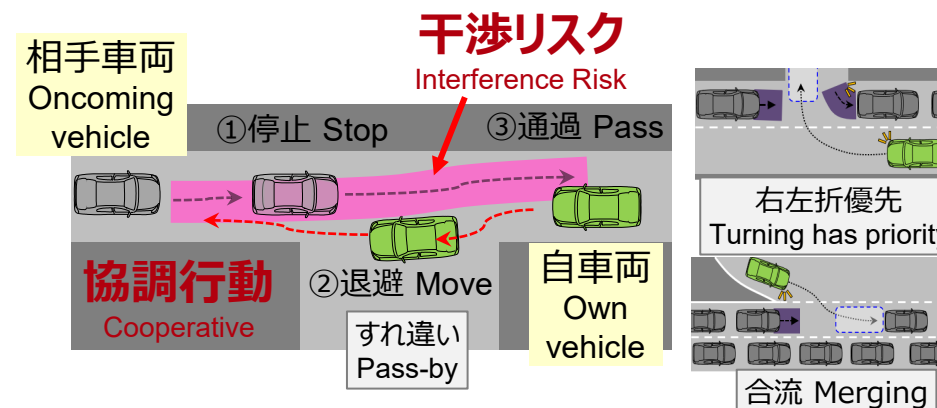
Cooperative behavior to drive safely and smoothly in difficult situations, such as a narrow road

➤ 協調行動計画

Cooperative behavior planning

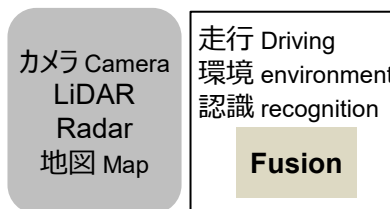
- 3Dセンシング結果から周辺状況を把握
Comprehend surrounding conditions from 3D sensing
- 周辺車両の意図理解と経路の予測
Understanding intentions of surrounding vehicles and path prediction
- 周辺車両と協調した自車の運転計画
Cooperating operation plan with surrounding vehicles

協調行動ユースケース Cooperative behavior use case

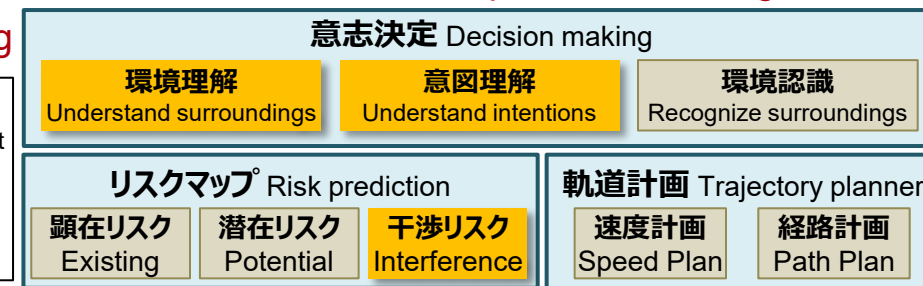


システム構成図 Architecture

3Dセンシング 3D-Sensing



協調行動計画 Cooperative Planning



車両制御 Vehicle Control

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研究段階
Research

先行開発
Advanced
Development

量産開発
Mass Production
Development

量産
Mass
Production

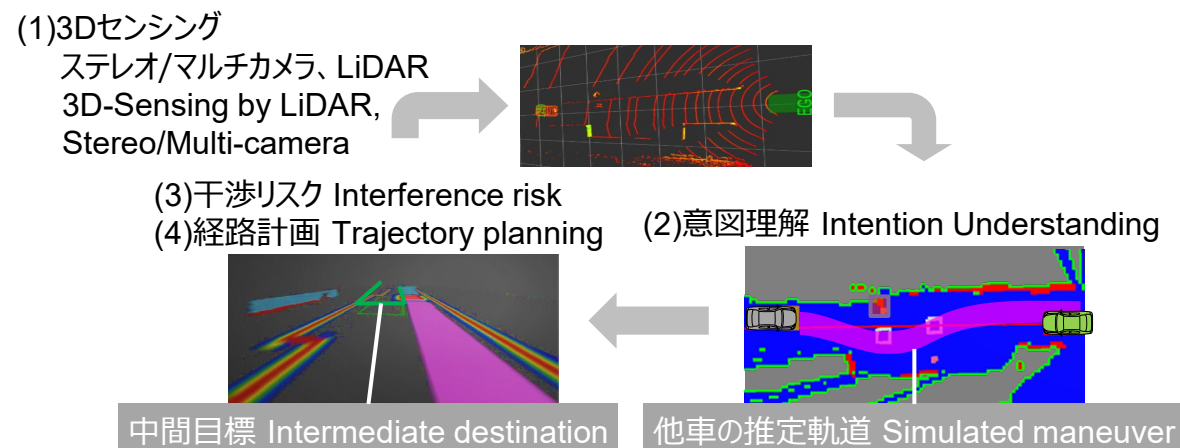
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特長

Feature

- **3Dセンシング 3D-Sensing**
 - **周辺環境の3D計測**
3D measuring of the surrounding environment
- **相手車両の意図理解**
Understanding intention of other vehicles
 - **計測した freespace と相手姿勢から軌道推定**
Plan trajectory based on the 3D-measured free space and position of oncoming vehicle
- **干渉リスク Interference risk prediction**
 - **相手車両の走行意図と推定軌道に干渉する領域を求め、自車の走行可能領域を把握**
Determine interference area of the oncoming vehicle's predicted behavior and trajectory, to determine drivable area of own vehicle
- **経路計画 Trajectory planning**
 - **走行可能領域に応じて中間目標を含む自車の走行経路を計画**
Plan own vehicle's trajectory and intermediate destinations in the drivable area

協調行動計画 Cooperative Planning



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The planned trajectory and the standby posture with consideration of the obstracle



Astemo

Astemo