Human-Oriented Information Restructuring (HIR) Systems for ITS

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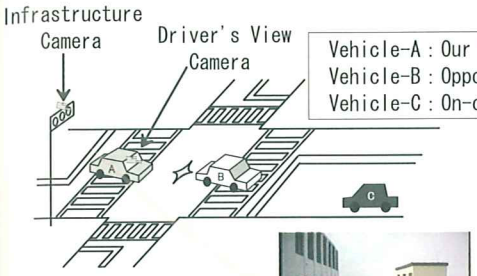
Support System for Right-Turn at an Intersection



Process	Execution time(ms)
Get parameters	0.10
Capture	0.88
Transmission	7.98
YUV to RGB	1.80
Image generation	46.40
Image synthesis	1.03
Display	3.13
Total	61.32
Frame rate	16.3fps


Supporting Image

Generating a Supporting Image


Detection a On-coming Vehicle


Transformation of View Point

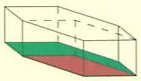
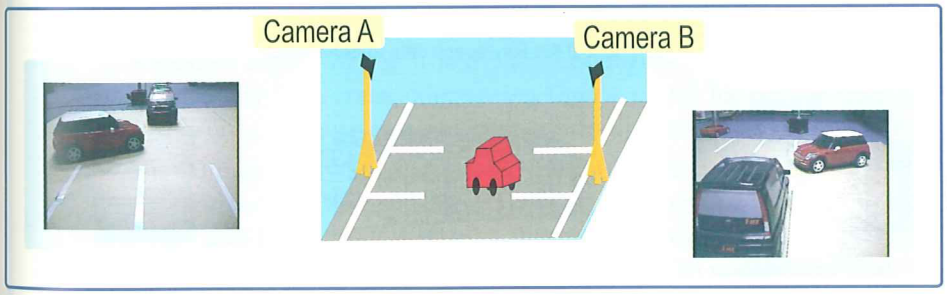
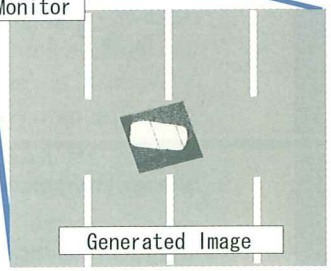

Estimation of 3D Position


Image Synthesis

Parking Assistance System Using Cameras Installed as Infrastructures

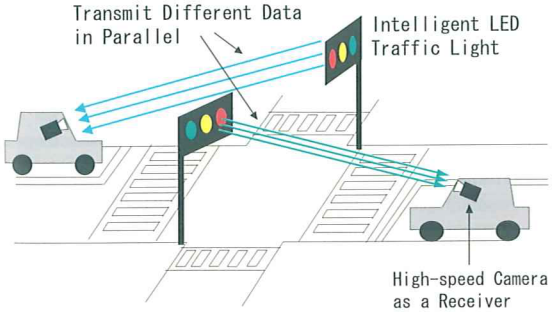



In-Vehicle Monitor


Generated Image

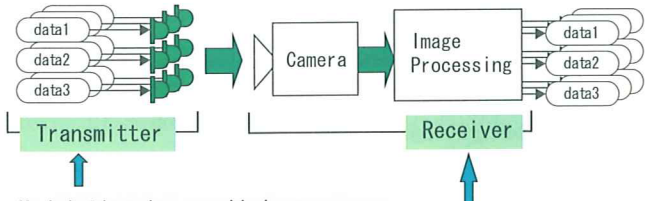
Use camera A image and camera B image to calculate a car's position
Transmit nesessary information obtained by calculation
Display images on which this system indicates the position of a car on the in-vehicle monitor

Road-to-Vehicle Communication System Using LED Traffic Light



Light goes straight on ⇨ Transmitting different information for every lane of road is possible

Parallel Wireless Optical Communication System



Modulating in parallel
by LED two dimention arrangement

Demodulating the signal
by using image processing techniques