UMRR-11 Type 44 Case Study in Jeju island, South Korea

project: corresponding traffic signal pilot project 2020

- ***tender type: proposal tender***
- ***location: Jeju island***
- ***11x UMRR-11 Type 44***
- ***smart intersection, smart left-turn***

B1-IMAGE
비원이미지|주|

smartmicro
SMART MICROWAVE SENSORS

contents

※ Case Study introduction

1. project overall

2. radar sites ex 1)

3. radar sites ex 2)

Case Study – Jeju island

project: corresponding traffic signal pilot project 2020

implemented by Jeju 제주특별자치도 Jeju Special Self-Governing Province 자치경찰단

supervised by KoROAD 도로교통공단

objectives: reducing unnecessary waiting time to prevent J-walks,
reducing chances of danger of pedestrians & drivers,
increasing convenience enabling effective traffic signal

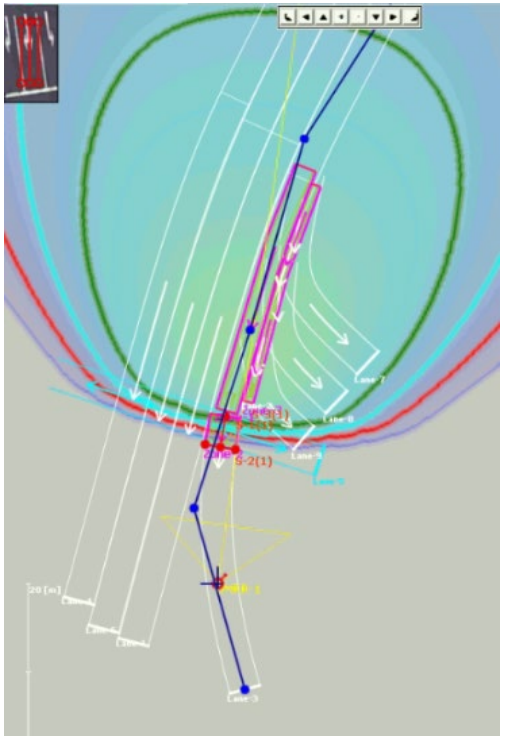
project period: 2020. 06. 26 ~ 2020. 11. 23 (150 days)

4 months of installation, 1 month of test

project overall

radar sites ex 1)

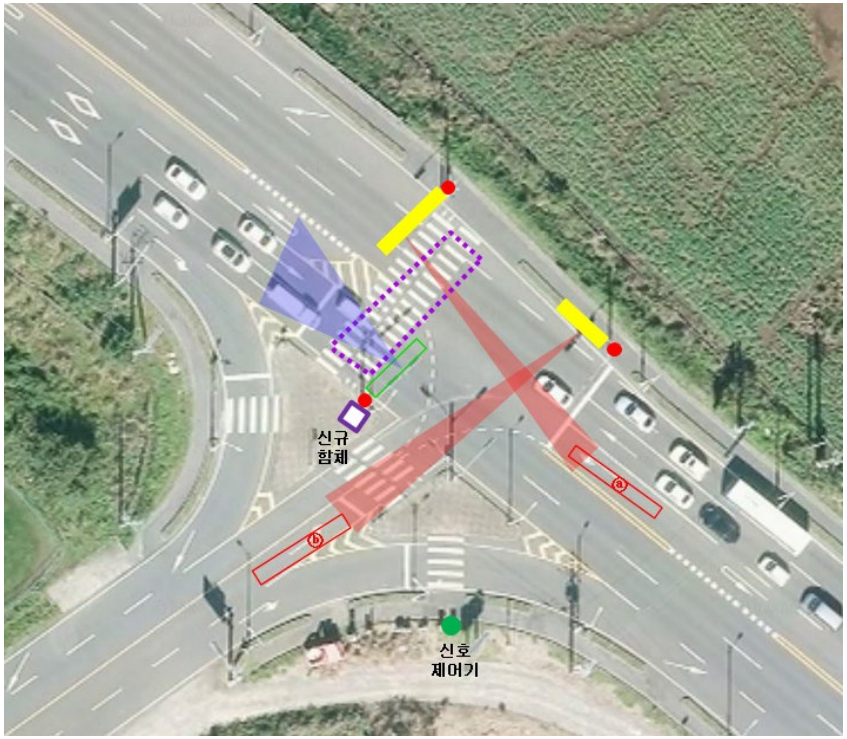
Smart Left-turn at NamYoung int.

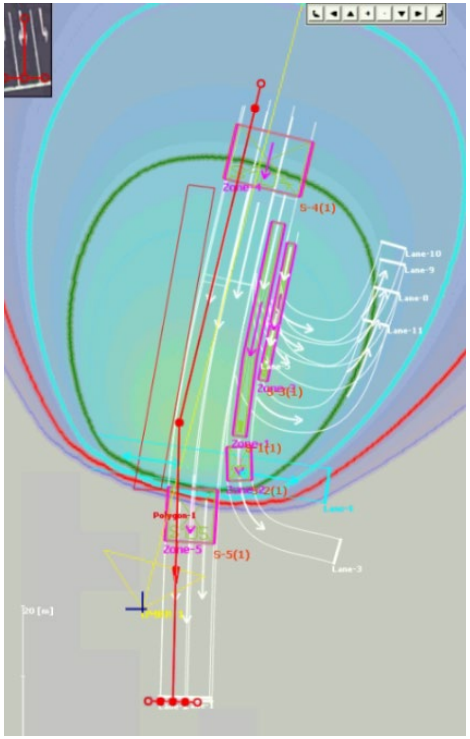


objectives: only when radar detects left-turn car, it turns on left-turn signal

challenge: removing remaining ghosts after U-turn

Smart Left-turn at SungBul int.





objectives: traffic volume counting, headway, queue, classification, left-turn signal

requirements

< final accuracy of classification >

	small	big
radar	130	10
correct	125	7
accuracy	96%	
total	**96%**	

< final accuracy of statistics >

	right turn	straight	left turn
radar	11	176	7
correct	11	179	7
accuracy	100%	98%	100%
total	**98%**	0.98	

< final accuracy of left-turn >

20201016(YunJi) left-turn tests

연번	time	구분		note
		incoming	outgoing	
76	1620	wp	wp	
77	1620	wp	wp	
78	1622	**imp**	wp	inquiring
79	1624	wp	wp	
80	1628	wp	wp	
81	1632	wp	wp	
82	1632	wp	wp	
83	1632	wp	wp	
84	1634	wp	wp	
85	1640	wp	wp	
86	1641	wp	wp	
87	1643	wp	wp	
88	1644	wp	wp	
89	1647	wp	wp	
90	1649	wp	wp	
91	1649	wp	wp	
92	1651	wp	wp	
93	1651	wp	wp	
94	1653	wp	wp	
95	1653	wp	wp	
96	1655	wp	wp	
97	1655	wp	wp	
98	1657	wp	wp	
99	1657	wp	wp	
100	1659	wp	wp	
	accuracy	**99.0%**	**98.0%**	

※ wp: worked properly
imp: worked improperly

— Jeju's requirements —

classification: upwards of 95%

statistics: upwards of 95%

left-turn: upwards of 95%

queue: upwards of 95%

headway: upwards of 95%