

ASV()

* **

ASV(Advanced Safety Vehicle;)

가 , ,



I.

ASV(Advanced Safety Vehicle;)

I.

II. ASV

III. ASV

IV.

가 , ,

[1].

ASV

‘ , ‘ ,

가

* ETRI /
** ETRI /

가

[2].

, 가

40%

가

가

가

ABS(Anti-

lock Braking System) ESP(Electronic Stability Program)

가

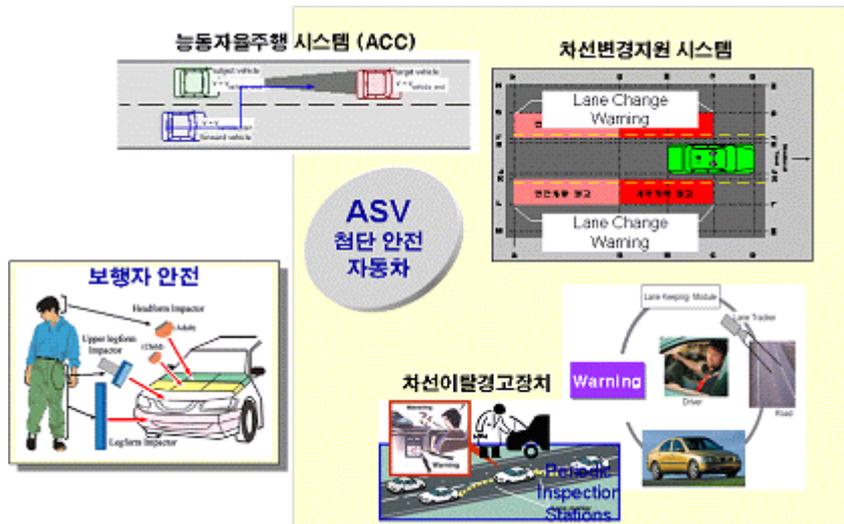
IT

가

ASV 가

, ASV

가



< >:

(KATRI), “

,” 2005. 9.

(1) ASV

.....

(ASV), (Automated Highway System: AHS), (Vehicle Information and Communication System: VICS), (Driver Information System: DIS), GPS

ACC(Adaptive Cruise Control: ASV), ASV, ASV 가 ACC(), LKS(Lane Keeping System:), APS(Automatic Parking System:) . ASV GM, 3 , BMW, 가 ASV ACC() UWS() UWS, Rear Monitoring ASV ASV

II. ASV

1.

ASV / , . AFS(Advanced Front-lighting System: 가) , APS()

ACC, FVCWS(Forward Vehicle Collision Warning System), LDWS(Lane Departure Warning System), SOWS(Side Obstacle Warning System),

TIWS(Traffic Impediment Warning System), MALSO(Maneuvering Aids for Low Speed Operation)

2.

(Lane Change Decision Aid System: LCDAS)

가

(subject vehicle)

(target vehicle)

가

가

(LDWS)

가

. LDWS

()

(CCD)

(, , , , ,)

HUD(Head-Up-Display)

가

가

가

가

(Forward Collision Avoidance Assistance System: FCAAS)

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가 , 가 ,

ACC 가

(Electric Control Unit: ECU)

가 , 가 , 가가

[3].

3. •

CCD

, CCD

2

3

HUD

가 ,

가 .

ABS 가 ,

ASV

가 .
가

ABS ECU(Electrical Control Unit)

ABS 가

ASV

가 가
가

1990 ,

76~77GHz, 60GHz ,
76~7GHzrk 가 . ASV CCD

50m

5~20m

(In-Vehicle Dilemma Zone Warning System: DZWS)

DSRC

[4].

4.

ITS(Intelligent Transport System)

ITS

(TG)

(cashless)

가 (Electronic Toll Collection System: ETCS), (Advanced Cruise-Assist Highway System: AHS)

ITS

[5].

III. ASV

1.

ASV 가 ACC(), LKS(), APS() . Majesta, Estima, Harrier LKS, ACC, PCS(Pre Crash Safety;), AFS(가) , President, Cima, Primera ACC, LKS, PCS, AFS , Odyssey, Accoed, Inspire ACC, LKS(), PCS, AFS , Grands, Pajero LDWS(Lane Departure Warning System:), ACC, APS, FRMS (Front Rear Monitoring System:) , Legacy LDWS, ACC, PCS [6].

ASV 1991 , 가, ASV ASV . , 3 2005 ASV

< 1> ASV

	1	2	3
	1991~1995	1996~2000	2001~2005
	가		,
		,	,
	,	,	,

< >: , ; 2005.

1279 2007. 1. 17.

. ASV Radar Cruise Control with Brake Control, Lane Keeping Assist, Pre-Crash Safety System .

1995 PDC(Preview Distance Control:),
1998 PAS, 2000 LDWS, 2001 LKS

[7].

1 , 2 ASV LKS, ACC, PCS, AFS
. Stop-and-Go Rada-Based ACC

stop-and-go

rada-based automotive cruise control system 2004 .

0mph 19mph ,

가

2005 9

[8].

ASV ACC, LKS, PCS, AFS . 2005 9

‘ASV’

120 , 200m

가 . ‘ASV-3’ (ETC)

5.8MHz , 가

가

가 . 가

가 [9].

ASV ACC, LKS, PCS, AFS .

ACC automotive safety ,

. 2004

ACC

, , , 350Z , SUV, Quest
, SUV, 135I , G35 , FX35 SUV 가
. 2004 가 가

LDWS
 가
 LDW , M45 FX SUV
 , ,
 [10].

2.

ASV GM, , 3
 , , BMW, 가 ASV
 [11].

GM XLR ACC Forewarn GM XRL
 . Forewarn AA
 100m
 ,
 2002 XKR ACC , Rostra Precision
 Globl Cruise Conrol 가 cruise control (10
) .

3.

ACC UWS() . BMW 6
 UWS, ACC, FRMS , 5 UWS . M Class UWS,
 FRMS , Stilo UWS . XJ UWS, ACC
 , Passat UWS [11].
 RadarNet

, collision avoidance, urban collusion warning, stop-and-go feature, parking assistance,
 airbag precrash warning .
 2001 840 가 Dense Traffic 가 , 'stop-and-go' ACC
 forward-looking radar

bulk ACC

DAF Trucks N.V., EDAS Deutschland GmbH microwave division, ERA Technology Ltd.,
 Groeneveld Groep B.V., United Microwave Semiconductors S.A.S 가
 forward looking radar 7 multi-channel Rf

< 2> ASV

가			
		GM	Seville, XRL ACC
	"		UWS, ACC, Pre-Safe E-Class, S-Class
	"	BMW	UWS, RMS, ACC 7, 5
	"		UWS, AFS, ACC A8
	"		Dodge Ram 1500 ACC
	"		Carrera ACC
	"		UWS Passat
	"		Range Rover, LR3 ACC
	"		UWS, ACC XJR, XKR
	"		BLid Spot Information System(BLIS)
	"		UWS Stilo
	"		LKS, UWS, ACC, PCS, AFS Lexus
	"		UWS, ACC, LDWS, RMS
	"		ACC, LKS, PCS, AFS Odyssey, Accord
			LDWS, ACC, APS, FRMA Grands, Pajero
			LDWS, ACC, PCS Legacy
			, Lane-Keeping Assist, Free Crash Safety
			Parking Assist System,
			cruise control Forewarn GM XRL
	"	TRW Automotive	ACC
	"	Eaton VORAD Tech	ACC
	"	WABCO	ACC
	"	Continental Temic	ACC
	"	Bosch	2 ACC
	"	Siemens VDO Automotive	ACC,
	"	A.D.C GmbH	ACC
	"	Visteon Corporation	, ACC
	"	Autocruise	77GHz ACC
		Valco	ACC

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.....

, stop-and-go
 angular view 가 .
 가 2001 Distronic Adaptive Cruise Control S-Class CL-Class
 . distronic adaptive cruise control
 . cruise control 20%
 ,
 pictogram .
 (DTR) S . 2005 10 S
 가 , 가
 , 가
 TRW Adaptive Cruise Contro Paeton
 TRW ACC . Cruise control detect 150m
 가 on 가 /
 가

4.

1990 ASV 가 ,
 ABS,
 ACC CCD , ECU
 Rear Monitoring ASV UWS,
 ETRI 77GHz MMIC
 , MMIC

< 3> ASV

	- Intelligence Coupe) e-Car 'HIC(High-technology UWS, AFS, RMS UWS
	- UWS, AFS
GM	- SM7 UWS, RMS
	- UWS, RMS
	- ECU
	- ASV ECU, Combo A/V 2004 20%
	- Gunn Diode NRD Guide - Scanning (polarization), Narrow beam NRD

< >: KDB

IV.

1.

, ASV ASV ASV
ASV ASV
가 가 가

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, ASV
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2.

가 . 가 가
가 . 4

ASV
ASV
가 .

가 ,

ASV

ASV

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- [1] , “ , ” 2005.
- [2] KISTI, “ , ” 2005.
- [3] , “ , ” 『 』 . 2005. 12., p.24.
- [4] KISTI, “ , ” 2005.
- [5] KISTI, “ , ” 2005.

[6] , “ , ” 2005.

[7] KISTI, “ , ” 2005.

[8] www.toyota.co.jp

[9] www.honda.co.jp

[10] www.nissan.co.jp

[11] , “ , ” 2005.

[12] , “ , ” 『 』 2005. 12., p.24.

[13] Global Industry Analysts, Inc., “Adaptive Cruise Control Systems,” January 2005.