

Motorway traffic related VACS – Autonomous systems

System	Description	Sources of info
Active Green Driving (AGD)	Autonomous system that carries on board all technology and logic necessary for the identification and imposing of “green speeds”	Hoeger et al, 2011
Adaptive Cruise Control (ACC)	Autonomous system that carries on board all technology and logic necessary to preserve the desired gap from the preceding vehicle	Zwaneveld and van Arem, 1997; Fancher et al, 1998; Swaroop and Rajagopal, 1998; Bose and Ioannou, 1999, 2001, 2003; VanderWerf et al, 2001, 2002; Li and Shrivastava, 2002; Davis, 2004, 2006, 2007; Zhang and Ioannou, 2004; Bishop, 2005; Ioannou and Zhang, 2005; General Motors Corporation, 2005; University of Michigan and General Motors Corporation, 2005a, 2005b; Rajamani et al, 2005; Visser, 2005; Jiang and Wu, 2006; Rajamani, 2006; Yi and Horowitz, 2006; Alkim et al, 2007; Ioannou et al, 2007; Kesting et al, 2007a, 2007b, 2008, 2010; Viti et al, 2008; Yuan et al, 2009; Pueboobpaphan and van Arem, 2010; Xiao and Gao, 2010; Kessler et al, 2012; Tapani, 2012; Benmimoun et al, 2012, 2013; http://www.eurofot-ip.eu/en/intelligent_vehicle_systems/acc/ [accessed 11.03.2013]
Fuel Efficiency Advisor (FEA)	Autonomous system that carries on board all technology and logic necessary for the identification of fuel efficient speeds	Kessler et al, 2012; http://www.eurofot-ip.eu/en/intelligent_vehicle_systems/fea/ [accessed 11.03.2013]
Full Speed Range Adaptive Cruise Control (FSRA)	Autonomous system that carries on board all technology and logic necessary to preserve the desired gap from the preceding vehicle	Minderhoud, 1999; Ehmanns and Spannheimer, 2004; Bishop, 2005; Alkim et al, 2007; Viti et al, 2008; Hoeger et al, 2011; Shladover, 2012a; iMobility Forum, 2013
Highway Pilot (HP)	Autonomous system that carries on board all technology and logic necessary to preserve the desired gap from the preceding vehicle	iMobility Forum, 2013; Hoeger et al, 2011
Intelligent Speed Adaptation (ISA)	V2I cooperation is necessary to perform its functions in full extent; in an elementary form it may operate as autonomous system with fixed and on-board stored or adaptive speed limits	Tampère et al, 1999; Carsten and Tate, 2000, 2005; Varhelyi and Makinen, 2001; Biding and Lind, 2002; Hegeman, 2002; Hogema et al, 2002; Liu and Tate, 2004; Bishop, 2005; van Driel, 2007; Boriboonsomsin et al, 2008; Doecke and Woolley, 2010; Marchau et al, 2010; SWOV, 2010; Hoeger et al, 2011; Vlassenroot et al, 2011a, 2011b; Benmimoun et al, 2012; Blum et al, 2012; Kessler et al, 2012; iMobility Forum, 2013
Lane Change Decision Aid System (LCDAS)	Autonomous system that carries on board all technology and logic necessary to support lane change and merge vehicle manoeuvres; V2V cooperation has been suggested to enhance its capabilities	Godbole et al, 1997; Jula et al, 1999, 2000; Smith et al, 2003; Tideman et al, 2007; Visvikis et al, 2008; Popescu-Zeletin et al, 2010; Habenicht et al, 2011; Wan et al, 2011; Bartels et al, 2012; Tomar and Verma, 2012; Knake-Langhorst et al, 2013
Low Speed ACC (LSACC)	Autonomous system that carries on board all technology and logic necessary to preserve the desired gap from the preceding vehicle	Minderhoud, 1999; Benz et al, 2003; SINTEF et al, 2004; Bishop, 2005; van Driel, 2007; van Driel and van Arem, 2008, 2010