Modélisation comportementale des circuits analogiques et mixtes en langage VHDL-AMS

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Abstract : The inventors are nowadays capable to integrate on a same flea to study the millions of transistors; this augment increases the complexity of the systems and makes difficult the simulations. The apparition of the new VHDL-AMS standard = (IEEE1076-1993+IEEE1076.1-1999) solved the problem while permitting the modelling the behavior of a complete system, to the various levels of abstraction, and in different technological domains (electric, mechanical, thermal,…..). The objective of work fixed, of is to present the application of this recent technique on a mixed system (Analogical /Numeric). It is about simulating a buckle to bolting of phase locked loop (PLL circuit) with the help of the VHDL-AMS language .The role of the PLL is to control the electronic or non electronic systems. The circuit so chosen understands the analogical parts and the numeric parts simulated by the same language and in the same environment. For it we used the VHDL-AMS language in order to describe the behavior of the circuit, and to validate it us used the tool SMASH 4.3 developed by the society DOLPHIN integration.

Keywords : VHDL-AMS, VHDL, modelisation comportementale, PLL