Project Communication Architecture for the ICIP60 Digital PBX

The project ComICIP60 - Communication Architecture for the ICIP60 Digital PBX is being developed by LISHA in cooperation with ICIP60 producer, Intelbras S/A. The project aims to develop a structure optimized for communication between heterogeneous components that are part of the ICIP60 PBX. This card is basically composed by five digital signal processors (DSPs), one ARM9 and one embedded softcore on an FPGA, which use different communication interfaces (HPI, MII and PAR) and need a common communication channel for exchanging messages and data. Ethernet was chosen as the common interface, creating the need for adaptation of communication interfaces and analysis of the impacts in adapting native bus of each processor, such as latency and determinism.