The time-to-market requirements are forcing companies
and designers to review their tools and methodologies.
In this paper we have implemented, from scratch, two MP3
hardware decoders using SystemC, one at the RTL level and the
other at the Behavioral level. We have validated them using the
ISO reference specification and synthesized using TSMC 0.13um
technology. To accomplish that, we took 6 designers for 12 months
in the RTL level and 1 designer for 3 months to make 14 design
points in the Behavioral level. We have compared the results and
showed that the better Behavioral design point is faster then the
RTL design and uses almost the same area. The 14 design points
were also analyzed in respect to area, power consumption, energy
consumption and latency.