

This paper presents a sample-based technique to predict the switching activity of digital circuits. It is an improvement to PowerSC, a SystemC library extension that enables a fast and easy-to-use way of gathering switching activity from SystemC descriptions. The experimental results reveal that it can dramatically reduce the monitoring time of the simulation, with a minimal loss of accuracy with respect to estimates provided by an industrial tool. Several tests realized in a case study with a real-world design obtained reductions in the monitoring time of up to 99% with average errors of no more than 0.05%.