Virtual prototypes? simulation time of increasingly complex Multi-Processor System-on-Chip (MPSoc) is dramatically increasing and as a result, simulation continues to demand higher simulation speed for SoC exploration potential. This is achievable by distributing a simulation and running it concurrently in a loosely synchronized setting. Over the past decade, SystemC/TLM has become the industry standard for the development of virtual prototypes.

In this thesis, manually distributed, loosely-synchronized simulation peers are to be investigated, which are connected with each other using the Concurrent Model Interface (CoMix). CoMix approach combines speedup, accuracy, independence, and ease-of-use of a distribution solution that does not need modification of SystemC simulation kernel.

The SystemC/TLM applications could be cut at the communication connections and TLM binding sockets manually with minimal user interaction, connected to interconnectors that are registered on CoMix, which uses TCP/IP sockets for remote communications.

Both, centralized and peer-to-peer distribution topologies are to be considered.

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