Simulink-2-Tiny allows users of Matlab Simulink® to get all the benefits of TinyCore and TinyTools with their existing DSP modelling suite.

Simulink-2-Tiny provides a Simulink® library of models that produce bit-accurate simulation of each TinyCore instruction. Developing DSP using these instructions therefore gives an exact simulation of the algorithm’s performance when running on a TinyCore.

All of the standard Simulink® blocks can be combined with the TinyCore blockset, giving the developer the ultimate flexibility for creating and testing a DSP algorithm.

The TinyCore blockset is accompanied by a Netlist extractor tool. This isolates all of the TinyCore instructions and outputs a Netlist detailing their interconnectivity from a hierarchical Simulink® design.

Simulink® and Simulink-2-Tiny replace TinyDraw as the graphical programming interface, as the extracted Netlist feeds the standard TinyTools suite - including the powerful TinyOpt optimising compiler.

Simulink-2-Tiny enables a DSP algorithm created in Simulink® to be optimised and running on a low-gate-count TinyCore in real-time and with full real-time parameter control within seconds without the delay and “code-bloat” normally associated with such tools.

Since Simulink-2-Tiny enables a single suite to be used for DSP development, simulation and algorithm completion, this creates an incredibly fast development process and a shortened time to market.

The full range of TinyCore instructions are provided for use in Simulink®.

Overview

Features

- Bit-accurate TinyCore simulation.
- Fully compatible with standard Simulink® blocks.
- Netlist extractor provides compatibility with TinyTools.
- No need to recode a DSP design – Simulink® models are the source code.
- Simulation bit width can be matched to that of the target TinyCore.
- Compatible with hierarchical Simulink® models.
- Standard test and analysis signals can be used in the Simulink® environment to analyse results.