What is SoCLib

- SoCLib is an open platform for virtual prototyping of multi-processors system on chip (MP-SoC).
- The core of the platform is a library of SystemC simulation models for virtual components (IP cores), with a guaranteed path to silicon.
- The project is funded by the french ?'Agence Nationale pour la Recherche'.
- It involves 6 industrial companies and 11 laboratories? which are working together to build this platform

You may want to have a look at FeaturesDescription, or [GetAccount get an account]

SoCLib Library

Code

- SoCLib Components General Index : contains documentation about the hardware components (IP cores) available in the SoCLib library.

Installation, usage

- Installation Notes : how to install the SoCLib platform on your computer

Development

- Adding new components to the library : the rules to follow to add a new IP core to the library.
- Soclib Cc is the current build system for SoCLib platforms

SoCLib OS & Middleware

- MutekA : OS kernel for MPSoCs with support for POSIX threads
- MutekH : exo-kernel based OS kernel for MPSoCs with support for POSIX threads
- MutekS : Optimised, static OS for DSX
- MWMR : Hardware / Software communication middleware

SoCLib Tools

- <u>DSX</u> : Design Space Exploration tool
- <u>SystemCASS</u> : Fast SystemC simulation kernel
- <u>SoCView</u> : Interactive simulation environment for debug and instrumentation
- <u>GdbServer</u> : A GDB server for multi-processor architectures
- <u>MemoryChecker</u> : A memory access error checker similar to valgrind.
- <u>VCI Validation</u> : A library for the validation of the VCI protocol (CABA and TLM-T versions)
- <u>GAUT</u> : A high-level synthesis tool allowing to generate automatically systemC CABA and TLM-T files.

SoCLib Resources

Mailing list

The dev@? Mailing list is public and targets general discussion about SoCLib component development.

To join the list, either

- send an email to dev-subscribe@?;
- see <u>http://www.soclib.fr/wws/info/dev</u>.

Writing and design guides

- <u>General SoCLib Rules</u> : general rules regarding the SoCLib components.
- <u>CABA Writing Rules</u> : rules to write SystemC CABA simulation models.
- <u>TLM-T Writing Rules</u> : rules to write SystemC TLM-T simulation models.
- <u>Processor Modeling</u> : a general method to write generic processor models.
- Endianness considerations? : Endianness rules in SoCLib

Miscelaneous

- <u>Critères Pour Plate-Forme TLM-T</u> : criteria defined for writing TLM-T simulation models.
- <u>SoclibCc/DesignGuide</u> is an attempt to justify the choices made in soclib-cc
- Models of documents? to be used by the project partners
- <u>Frequently asked questions</u>: When things goes wrong
- <u>Benchmark</u>: A few shared benchmarks

Tutorials

- <u>?DSX tutorial</u>
- <u>Motion-JPEG and OS tutorial</u>

Posters and publications

- PosterICT-Soclib-V5-HD.pdf