About EvoLucid®

When the EvoLucid engine was originally proposed to NSF as an asynchronous, real-time-stimulus-driven software processing model for a project for the US Army, we, the researchers of the MIT Research Laboratory for Electronics Silicon Systems Laboratory, immediately recognized its value.

While it is theoretically possible to simulate any system on any other, there are definite limitations on real-time systems which pose problems that are difficult for traditional sequential-processing hardware and software to accommodate. Even parallel-processing doesn't solve many of the most difficult issues found in real-world environments.

For the RLE-SSL, the EvoLucid structure is uniquely suited to these tasks in a way that nothing which has come before it was suited.

EvoLucid has the speed and short-task-latency traditionally found in analog computing models – it can solve complex problems in rapidly-changing environments stochastically, but with the speed of a real-time operating system.

More importantly, procedural and static modeling using EvoLucid is much simpler than it is with previously available systems – an XML editor or GUI-based designer takes most of the complexity out of the design phase – leaving the scientist or engineer with a much easier time of it than ever was possible before.

MIT has committed to co-development of a hardware processing platform using (initially) FPGA techniques, but eventually to be implemented using MIT's newly-developed carbon nanotube semiconductor process (CNSP), in which the current fast crossbar switching engine has also been rendered.

There is literally no other technology currently available with these characteristics – ease of programming, real-time speed and stochastic execution. EvoLucid is the RLE-SSL's choice for these reasons.