

Teraptor

Designer

Player

Channels

Programmable System Design and Development Tools

Teraptor Designer brings architecture specification and modeling to programmable system design. Teraptor Designer includes languages for processor and system modeling and a comprehensive set of meta-model driven tools for software development, model export, customized RTL code generation (offered as a service), test case generation and verification.

Teraptor Player plays debug-enabled heterogeneous multi-core and multi-component system models. These virtual platforms can be used for various phases of system development and testing.

Teraptor Channels (planned) are ready to use set of components that can be used to kick-start system design using Teraptor Player.

Teraptor helps in creating the next generation of low power and high performance programmable application specific processors and systems. Teraptor can significantly improve productivity and bring scalability to product development processes. Realize business benefits within weeks of adding Teraptor to your strategy

Benefits for Embedded Software Developers

- ✓ *Create software before the hardware platform is ready for development.*
- ✓ *Execute a large number of tests in parallel.*
- ✓ *Evaluate software quickly against different system and processor configurations.*

Benefits for System Designers

- ✓ *Integrate processor and system design.*
- ✓ *Achieve superior performance and power usage.*
- ✓ *Enable efficient direct connection architectures.*
- ✓ *Develop hardware and software components in parallel.*
- ✓ *Distribute demos electronically and receive early feedback.*
- ✓ *Simulate hardware defects for validating safety critical systems.*
- ✓ *Reduce time to market; target higher price points.*
- ✓ *Quickly generate product variants for multiple markets.*

Benefits for Processor Designers

- ✓ *A single concise formal specification of processor architecture.*
- ✓ *Enables the creation of configurable processors.*
- ✓ *Reduced time and cost of creating software developer tools.*
- ✓ *Simplified development of application specific processors.*
- ✓ *Automated processor verification.*
- ✓ *Limited circulation of confidential processor architectures.*

Teraptor Solution Overview

<p style="text-align: center;">Languages</p> <ul style="list-style-type: none"> ● SMDL for processor Modeling ● SSDL for system modeling ● C/C++/System-C for device modeling (Requires third party tools) <p style="text-align: center;">Validation Platform</p> <ul style="list-style-type: none"> ● Instruction Set Simulator ● Cycle Accurate Simulator ● Teraptor Player – System Simulator <p style="text-align: center;">Verification Tools</p> <ul style="list-style-type: none"> ● Model space exploration ● Test case generation ● Model verification 	<p style="text-align: center;">Development Tools</p> <ul style="list-style-type: none"> ● Assembler, Linker and Object File Tools ● Code Generator ● Debugger <p style="text-align: center;">Model Export</p> <ul style="list-style-type: none"> ● Model export tool for GNU GCC compiler ● Model export tool for HTML documentation (Planned) ● Custom RTL generation tools (Offered as service) <p style="text-align: center;">Education and Consulting</p> <ul style="list-style-type: none"> ● Modeling ● Embedded Software ● System Design
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Customer Success

Teraptor was used for modeling and developing a complex VLIW processor architecture for digital video application. A complete working prototype was created using Teraptor tools within 6 months – which included the entire range of activities from processor modeling, software tool chain development, application porting (over 100,000 lines of C++ code), verification, debugging, performance analysis and performance optimizations. Teraptor has been successfully used for modeling several popular processors.

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Next Steps To learn more or to request a proposal, contact sales@sankhya.com or visit <http://www.sankhya.com/contact.html>

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