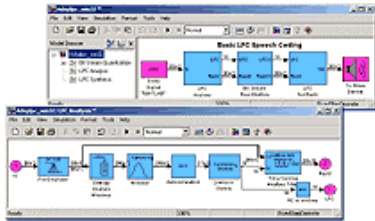# **SUNDANCE** Announces compatibility between **Multi-FPGA systems** and *Simulink*® **from MathWorks**

**Chesham, U.K.** (September 18, 2003) – Sundance Multiprocessor Technology Ltd., the world leading manufacturer of DSP-based data acquisition and processing solutions today announces compatibility of its products to *Simulink*® from *MathWorks,* the leading developer and supplier of technical computing software in the world. *Simulink*® is the fundamental tool for engineering and scientific work in model based and system-level designs.

*"Modularity, flexibility and scalability are design features that keep becoming more important with the increasing complexity of real-time embedded systems. Moreover, the need to build and simulate systems building blocks in short periods of time is essential to have more time to be focused on algorithms and proof of concepts. Sundance can offer both the above design features with their 'Lego' systems and the tools compatible with Simulink for VHDL and DSP code generation",* explains **Dr. Fabio Ancona**, Director of Sundance's European Sales Operation.

## **About Sundance Products and** *Simulink/Matlab*

- *Simulink*® is a simulation and prototyping development tool for modeling, simulating, and implementing real-world dynamic systems. Data acquisition, environment control and processing power provided by Sundance products as the front-end of any system is complemented by *Simulink*® to build target applications. User interface is in a form of block diagrams that are intuitive and easy to understand.

- Digital Hardware (HW) systems are a feasible alternative to Software (SW) systems (for instance, computers, PC's and DSP's), offering a much better cost/performance ratio in a wide variety of practical applications, ranging from very high speed to very low power systems. On the other hand, HW systems are less flexible than SW systems, therefore their use is more appropriate for regular and seldom varying algorithms, while SW systems are

**EDITORIAL ENQUIRIES**

**USA**
*Sundance DSP Inc.*
Dr. Nory Nakhaee
4790 Caughlin Parkway 233, Reno, NV 89509-0907, U.S.A.
Tel: (775) 827-3103
Fax: (775) 827-3664
email: NoryN@sundance.com
www: http://www.sundance.com

**MIDDLE, SOUTH, EAST EUROPE**
*Sundance Italia S.R.L.*
Dr. Fabio Ancona
16030 S. Salvatore di Cogorno 55/3
Genova, Italy
Tel: +39 0185 385193
Fax: +39 0185 385370
email: mailto:FabioA@sundance.com
www: http://www.sundance.com

**NORTH EUROPE & REST OF THE WORLD**
*Sundance Multiprocessor Technology Ltd.*
Mr. Flemming Christensen
Chiltern House, Waterside, Chesham
Bucks, HP5 1PS, England
Tel: +44 (0)1494 793167
Fax: +44(0)1494 793168
email: FlemmingC@sundance.com
www: http://www.sundance.com

more appropriate whenever the user desires to update the algorithm frequently, or when the algorithm is less regular or a high computational burden is not required.

There is a wide variety of techniques to design and simulate HW systems, ranging from gate-level schematics up to functional-level C-like description languages (for instance, System-C or VHDL). Unfortunately all such techniques require a long experience in the development of HW systems and such a deep knowledge is only available from a limited number of electrical engineers (or equivalent).

As an alternative, the well-known Simulink™ language and design environment from The Mathworks allows the user to easily describe, simulate, tune, debug and optimise, for instance, signal processing and control systems. Unfortunately, Simulink™ has no capability of describing HW circuits and systems, therefore it cannot be used for this purpose.

The **SMT6040** HW development tool fills the gap between Simulink™ and digital HW systems, allowing anybody to describe, simulate, tune, debug and optimise HW systems, and ultimately programme the FPGA board in a straightforward and transparent way.

Several are several the advantages of the **SMT6040** approach. Among others:

➢ Straightforward and user-friendly approach to the design of digital HW (sub)systems.

➢ Simple reuse of existing Simulink™ models, possibly developed for SW systems

➢ Accurate and fast cosimulation of the HW subsystem interacting with associated SW subsystems and, when existing, with external devices and systems.

➢ Strong interaction with MATLAB™, which makes automatic evaluation of performance and optimisation of relevant HW parameters (for instance, <u>resolution</u>, sampling rates, etc.)

Within **SMT6040**, HW systems are edited and simulated by means of the Simulink™ environment, which has been upgraded to improve the description of HW systems. All HW blocks are taken from an Extended Blocks Library supplied with **SMT6040**, which supports (in HW) most blocks from the basic Simulink blockset.

• No complicated steps and calling different utilities – you are just a **mouse click away** from defining your system and executing it in real time on Sundance products. The VHDL is then supplied to an automatic chain made of Leonardo Spectrum for VHDL synthesis and EDIG generation and the Xilinx place&router: the .bit file is then automatically generated, including the HW interfaces.

_Simulink_[®] is a Registered Trademark of MathWorks Inc.

The price starts from 2995 $US. Call us for details!

For more information, pricing and availability please contact:

In *USA*: Sundance Digital Processing Inc.

In *South, Middle* and *East Europe*: Sundance Italia S.r.l.

In *North Europe* and *Rest of the World*: Sundance Multiprocessor Technology Ltd.

**About Sundance**

Sundance, a *Texas Instruments* Third Party, is a leading supplier of single and multi-processor embedded systems based on DSP/FPGA technology for Real-Time applications. It sells COTS modules for flexible, modular, scalable and cost-effective building-blocks solutions.

The range now includes many special purpose modules and allows Sundance to act as a 'one-stop' shop for system designers and manufacturers offering high performance and cost effective solutions in the field of DSP such as Wireless, Telecommunications, Networking, Audio, Imaging/Video, Data Acquisition, Control Systems, Automotive, Military, Space Technology, Research, etc.

The company was founded in 1989 with Headquarters in Chesham UK and offices in USA and ITALY. Sundance is ISO 9000 compliant.

*More information on our products can be found at*

## www.sundance.com

This press release is available at *http://www.sundance.com/SMT- VHDL-Math Drv_pr.htm*

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