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Tailwind™ from Blackhawk™ Extends Texas Instruments DSP/BIOS™ to Support POSIX®

Dallas and Mount Laurel, N.J. (October 15, 2008) – Blackhawk™, a leading maker of digital signal processor (DSP) hardware and software development tools, today announced the availability of Tailwind™, a POSIX-compliant layer for DSP/BIOS™ software kernel. Tailwind™ supports Texas Instruments' (TI) TMS320C6000™ high performance digital signal processors (DSP) for applications including high-definition (HD) digital video, audio and broadband infrastructure.

Tailwind is composed of a comprehensive set of API functions from the POSIX standard including real-time extensions, threads and core services, such as process control, signals, timers and file operations. Tailwind's API sits entirely above the DSP/BIOS kernel providing users with well-defined and standardized operating system services on which to design reliable and robust application software. These standardized operating system interfaces enhance programmers' productivity by encouraging them to comply with proven and efficient programming practices, which is the core of DoD's mandated Joint Technical Architecture (JTA) OS Services.

POSIX, or Portable Operating System Interface, is a set of standards specified under IEEE Std. 1003 and accepted by ISO, IEC and ANSI. These standards govern how to write application source code so that the applications are portable between operating systems. The most well-known POSIX standard is IEEE Std. 1003.1 (ISO Std. 9945), also known as "POSIX.1". POSIX is most commonly used to provide a standardized programming interface for porting applications and is well known by today's programmers, especially those developing general purpose processor (GPP) applications on Linux for the ARM®-based TI devices.

With Blackhawk's Tailwind POSIX-compliant layer, adapting DSP-based applications to meet today's requirements, such as software communications architecture (SCA) requirements imposed on software defined radio (SDR), is now a reality. SDR technology implements dynamically configurable and upgradable software for application both in commercial products, such as public safety radios, general radios and walkie-talkies, and in military applications, such as Joint Tactical Radio Systems (JTRS).

“Blackhawk’s Tailwind layer contains all the necessary SCA services providing a tremendous advantage to SDR applications running on TI DSPs,” said Ram Sathappan, SDR marketing manager at TI. “Developers can also seamlessly interface to the common object request broker architecture (CORBA), which permits dissimilar processors, operating systems and networks to interoperate over a common communications protocol.”

Besides providing a complete set of SCA-required POSIX interfaces, Tailwind™ includes numerous other services and capabilities, e.g. timeout support for blocking functions. All of these services and capabilities are aimed at supporting source code portability, an increasingly important requirement for systems that are currently being developed for commercial applications and government contracts.

Tailwind™ supports TI’s C6000™ DSP platform, which includes the TMS320C64x™ and TMS320C64x+™ cores. In addition, Tailwind also supports Code Composer Studio™ (CCStudio) v3.3 integrated development environment (IDE), C6000 DSP compiler versions 6.0.x and 6.1.x, socket libraries (TI NDK 1.93/1.94) and TMS320C6455 and TMS320C6416 DSP Software Kit (DSK) target boards.

Pricing and Availability

Available Distributions for Tailwind are:

- Evaluation (limited runtime)
- Standard distribution (binaries, link libraries, examples)
- Full source-code distribution

Tailwind pricing starts at \$500 for a fully-functional evaluation, with standard product options ranging in price from \$10,000 to \$15,000 depending on type of distribution and intended end-user licensing. Contact Blackhawk or an authorized Blackhawk Reseller for a quotation and please visit www.blackhawk-dsp.com/resellers.aspx for a complete list of resellers worldwide.

About the Texas Instruments Developer Network

Blackhawk is a member of the TI Developer Network, a community of respected, well-established companies offering products and services based on TI analog and digital technology. The Network provides a broad range of end-equipment solutions, embedded software, engineering services and development tools that help customers accelerate innovation to make the world smarter, healthier, safer, greener and more fun.

About Blackhawk

Blackhawk™ is a brand of EWA Technologies, Inc., of Herndon, Virginia, that designs and builds hardware and software for the rapid development of DSP-based applications for a wide variety of vertical markets. Blackhawk™ is a member of the TI Developer Network and the first to develop a USB-based JTAG emulator for TI DSPs. For more information on Blackhawk, please visit <http://www.blackhawk-dsp.com>

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