



Terason : Recipient of the  
2007 North American Technology Innovation Award



*“Partnering with clients to create innovative growth strategies”*

## **2007 North American Technology Innovation Award Award Recipient: Terason**

The 2007 Frost & Sullivan North American Technology Innovation Award in the field of portable ultrasound systems is conferred upon Terason, a division of Teratech Corporation based at Burlington, MA, for the development of two innovative systems called the Terason t3000™, the t3000 Echo™ system. The significance of the system lies in its best-in-class image quality and function that are comparable to the high-end cart-based ultrasound systems but only at a fraction of the price. They are the world's only ultrasound system powered by an off the shelf commercial PC.

Premium image quality, seamless network capability and significantly lower cost than premium cart based systems consist of two key components a system-on-chip engine and an off the shelf MacBook PC. An array of transducers easily connected to the systems allows clinicians to performance any ultrasound exam at the point of patient care anywhere. This simple approach allows greater flexibility and more rapid development to continuously improve image quality, workflow and lowers cost at the same time. The PC open architecture allows easy future enhancements and updates for investment protection.

Over the years the sizes of the Integrated Circuit chips have shrunk exponentially. Now the size of an IC is thinner than a piece of human hair. This advancement allows Terason unique patented system-on-chip to integrate significant more channels and more functionality on the same foot print. As a result, Terason imaging systems continue to improving its spatial and temporal resolution and the overall image quality. Combined with back end PC signal processing, the advancement has enabled real-time Cardiac Resynchronization Therapy (CRT) tools on a portable handheld system.

In addition to brining high end image quality to an off the shelf commercial Mac Book PC, Terason's patented system-on-chip technology running with Windows applications, enables images, loops, and reports to be easily transferred to standard word-processing and presentation software applications with cut-and-paste simplicity for medical reports, clinical or scientific presentations and research. The wireless and Ethernet connectivity are built in. Digital Imaging and Communications in Medicine (DICOM) export and integration with voice command is seamless. One Button™ optimization simplifies the beginning of each exam by automatically adjusting a wide variety of ultrasound imaging controls such as time gain compensation (TGC). During the exam, routine tasks are accomplished with a single keystroke, as opposed to using multiple knobs and sliders and touch screens on a standard ultrasound system.

Terason's PC-based design supports shared-memory direct communication with other applications running on the same computer; as a result, it is extremely easy and fast to embed Terason ultrasound application into MRI, CT, Angiogram or any other imaging modality for real time imaging without exposing patients to extended radiation. Terason has successfully embedded its ultrasound solution into radiation therapy planning, angiography image-guided conventional and noninvasive surgery, and image-guided therapeutic treatments. Terason partners include NOMOS, Siemens, BrainLab, Endocare, and ACS.

Terason has more than 36 granted patents, and many more patent applications with extensive coverage on all ultrasound-related functions and applications. Terason is the company to receive the first patents on portable ultrasound, software-based scan conversion, software-based Doppler processing, PC-based ultrasound architecture, integrated 2D-array for real-time 3D/4D ultrasound etc.

Terason is the innovator and world's leader in integrating patented ultrasound microsystem

technology with a commercial laptop. This unique system-on-chip architecture provides high performance and cost effective ultrasound solution to the point of patient care, and enables other imaging suppliers to embed it into their technology. Terason is entrusted by thousands of clinicians and partners throughout the world for ultrasound diagnosis and interventional guidance. Please call 1-781-270-4143 ext 1043 or email [grace@terason.com](mailto:grace@terason.com) for further information.



#### **About Frost & Sullivan**

Frost & Sullivan, the Growth Consulting Company, partners with clients to accelerate their growth. The company's Growth Partnership Services, Growth Consulting and Career Best Practices empower clients to create a growth focused culture that generates, evaluates and implements effective growth strategies. Frost & Sullivan employs over 45 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from more than 30 offices on six continents. For more information about Frost & Sullivan's Growth Partnerships, visit <http://www.frost.com>.

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