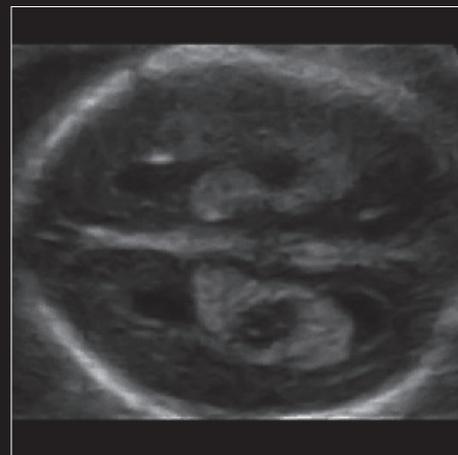




ORIGINAL



PROCESSED WITH GOPiCE US



2D ENHANCED

BRAIN SCAN

Note the contrast and edge enhancement of structures behind the leading skull bone in the processed image. Images courtesy of Prof. Anders Selbing, Karolinska University Hospital, Sweden

GOPiCE® US

REAL-TIME VOLUMETRIC IMAGE ENHANCEMENT FOR ULTRASOUND 3D IMAGES

QUICK FACTS

Ultimate speckle and noise reduction by volumetric 3D filtering

High speed real-time enhancement thanks to the latest GPU technology

Improved visibility in deep tissue and behind the skull bone

Improved image quality for both projections and MPR views



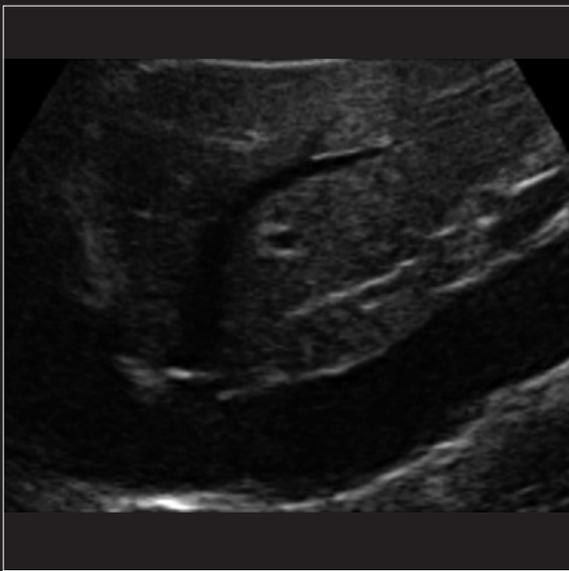
Three-dimensional ultrasound applications produce much more information than traditional 2D technology. The increased information in 3D images/volumes is efficiently used by ContextVision's GOP® technology for removal of speckle and noise while maintaining edges and small structures in the image.

Advances within 3D/4D ultrasound are now pushed yet another step forward in image quality. By utilizing information from adjacent image planes in the 3D stack, the GOPiCE US software processes and delivers a clearer image than ever seen before.

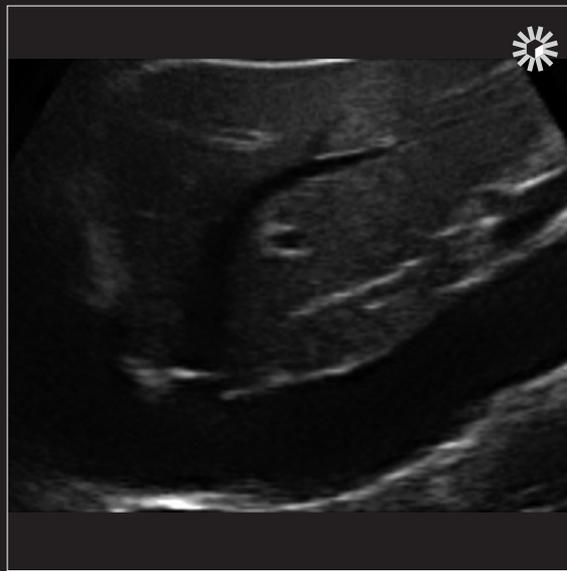
The GOPiCE US' improved image quality is apparent both in 3D/4D-rendered images (e.g. fetuses' facial features) and in MPR views, enabling a clear image and increased throughput as well as better visualization of the tissue and improved diagnostic value. The improved image quality also leads to bet-

ter performance from non-specialized ultrasound users.

The GOP algorithm, developed by ContextVision, is adaptive and mimics the human visual system in its method of finding image structures. The algorithm distinguishes between true information and artifacts such as noise and speckle. GOPiCE US therefore provides reliable improvement both in surface rendered images and MPR views, and is capable of sharpening diagnostically significant structures while simultaneously suppressing noise and speckle.



ORIGINAL



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ADULT LIVER

Notice the contrast and edge enhancement.

GOPiCE® US SPECIFICATIONS

Delivered as an SDK and including an API description and customized parameter files, GOPiCE US software is easily integrated into modern software-based ultrasound systems. Used with a high-performance GPU (Graphics Processing Unit) board, it is capable of handling up to 20 volumes/s (256×256×256 voxels) or up to 200 volumes/s in SPR* mode. With Core i7-2700K @ 3.50 GHz 16 Gb up to 3 volumes/s (256×256×256) or up to 30 volumes/s in SPR mode. GPU-based image enhancement allows you to free CPU resources, which can then be used for other tasks.

Software Development Kit

GOPiCE US SDK includes a dynamic link library, a console example program with source code, a license setup program, and application programming interface (API) documentation. Available for PC with Windows XP or Windows 7.

Operation

The operation runs from PC RAM memory to PC RAM memory or GPU memory.

Parameter Adjustments

The operation is customized with parameter files delivered by ContextVision according to different usage scenarios and/or anatomies. Parameters are read from files. ContextVision's professional medical imaging engineers provide support for tuning these parameters.

Data Formats

8-bit monochrome or 32-bit single-precision floating point voxel data. Maximum volume size is limited by memory on GPU board or PC RAM memory.

Performance

With NVIDIA GTX 580 up to 20 volumes/s (256×256×256 voxels) or up to 200 volumes/s in SPR mode. With Core i7-2700K @ 3.50 GHz 16 Gb up to 3 volumes/s (256×256×256) or up to 30 volumes/s in SPR mode.

Licensing

SafeNet Sentinel SuperPro USB dongle and/or Hardware ID.

Technology Base

ContextVision's proprietary adaptive algorithms are based on the GOP technology. All implementations are customized and optimized for quality and speed without introducing any artifacts.

NOTE

ContextVision's quality management system is certified as conforming to the requirements of SS-EN ISO 13485:2003.

* SPR (Single Planar Reconstruction)
A limited part of the original volume is volumetrically processed to produce a single B-mode image.

Since 1983, ContextVision has been a leading provider of image enhancement software to the global medical imaging industry, with the versatile GOP® technology at the core of all our imaging solutions. We play a key role in helping manufacturers by offering clinicians unparalleled diagnostic image quality, ultimately providing patients with better care. ContextVision continues to offer the latest software and expertise within ultrasound, x-ray, magnetic resonance imaging, mammography, fluoroscopy and computed tomography. Our groundbreaking technology and lengthy expertise have granted us a pioneer position within 2D/3D/4D image enhancement across multiple modalities.

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