



GPU-Based Adaptive Beamformer for Medical Ultrasound Imaging

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Minimum Variance (MV) adaptive beamforming technique is attractive as it is capable of producing high quality images with narrow mainlobe width and low sidelobe level. However, because of its substantially higher computational requirements, realizing MV in real-time is difficult. Recent advancements in commodity Graphical Processing Units have made very high performance computing possible at very affordable price. The use of GPUs, which are programmable devices with a high level of parallelism, can accelerate the computations of the beamforming process. In this paper, our primary results of implementing simple adaptive beamformer on GPU were presented.