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**Magnetic Resonance Imaging on Cardiovascular System for Scanned Image Quality Improvement** RICHARD KYUNG, HWANKYU SONG, JEONG H. (PETER) YOON, CRG-Choice Research Group — Magnetic Resonance Image is one of the most widely used technologies to detect, diagnose, and study various diseases. However, there exist some drawbacks to the technology, such as ringing artifact and long scanning time. The purpose of the present research is to develop a more efficient low pass filter or filter function, in order to increase the resolution of the scanned image, decrease the Ringing Artifact, and decrease the time required to produce the image. In this paper, a nonconventional approach and a new filter function were proposed and tested on the cardiovascular system using the MATLAB. Using the proposed filter allowed scanned images of the cardiovascular system to be constructed faster than when square function or Gaussian function was used as filters. To improve the sharpness of the MRI image of the cardiovascular system from low contrast MRI films, high pass filter and specific filter in MATLAB was used. Also, noise removal of the magnetic resonance image using Fourier transform and mathematical morphology was presented, achieving a good tradeoff between resolution of the cardiovascular system image and computer running time.

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