Market Opportunity:
Real time magnetic resonance imaging (RT-MRI) is often used for dynamic imaging of the heart, abdomen, upper airway, and other applications that involve movement. A key drawback of RT-MRI, however, is that artifacts or distortions (specifically off-resonance effects) may be present in an image. Current solutions for correcting these distortions involve slower scans and require additional measurements and data. Although these solutions may improve the image quality, the images still contain unacceptable errors. A technique that corrects these distortions is required for accurate diagnosis and effective treatment. In order to help grow the MRI market, which is projected to be worth $7.19 billion by 2021, this issue must be addressed.

USC Solution:
USC researchers have developed a technique for correcting these distortions that allows for faster scans and does not require additional measurements or data. In some cases, USC’s technique produces images that are 50% sharper than the images produced by the current solutions.

Value Proposition
- Sharper images
- Faster scans
- No additional measurements or data

Keywords:
Off-resonance correction, deblurring, real-time MRI, speech imaging, cardiac imaging

Applications
- Real-time MRI
- Scan plane localization

Stage of Development
- Experimentally validated
- Available for exclusive and non-exclusive license

Intellectual Property
Status:
Software available

Key Publications:
Correction of Dynamic Off-Resonance in Spiral 2D Real-Time MRI of Speech (submitted)

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