

Synthetic Aperture Ultrasound Imaging with Robotic Tracking Technique

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Goals:

- The goal is to achieve higher resolution through robotic synthetic aperture ultrasound imaging.

Significance:

- Overcome the limitation of ultrasound image resolution restricted by physical size of US transducer.
- Enable to visualize deep sight in high resolution.

Results:

1. 1mm accuracy ultrasound calibration
2. Synthetic aperture algorithm development and simulation evaluation
3. Experimental validation

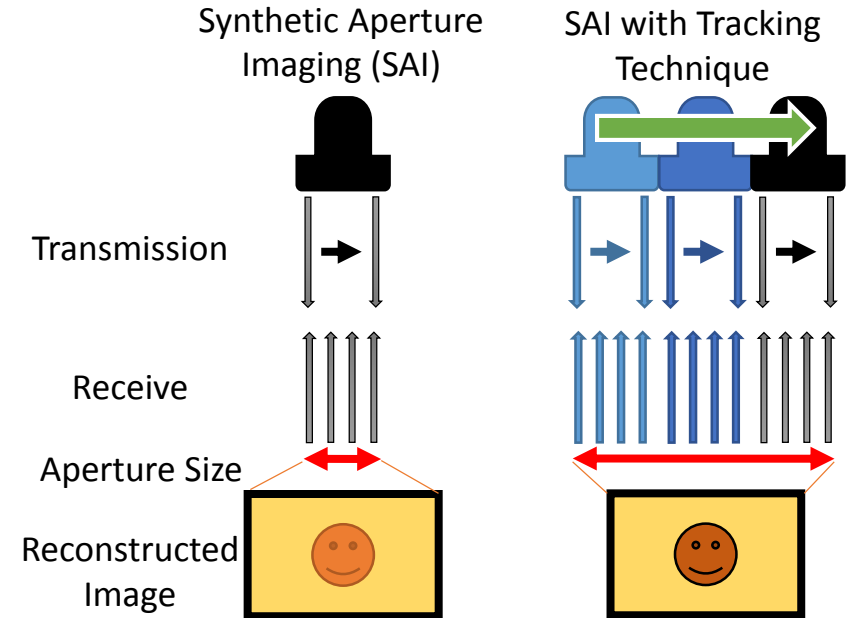


Fig1: Concept of robotic synthetic aperture

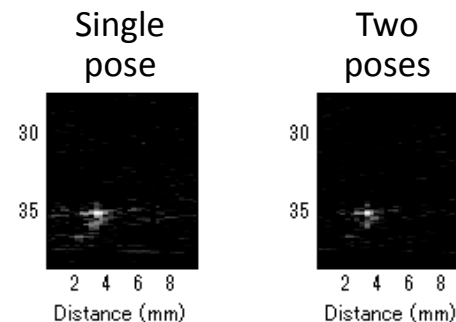


Fig2: Experimental Results

