

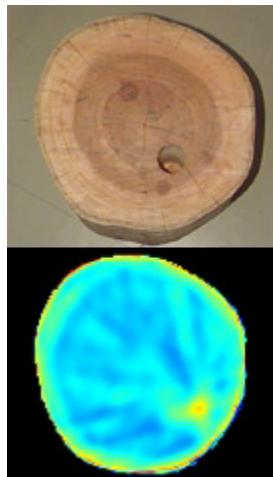
# Ultrasound Medical Imaging and Medical Treatment

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## Illustration



Measurement of ultrasound velocity



Ultrasound CT imaging



Medical Acoustics

## Content:

### Acoustic Imaging

We have reported that these combination techniques adopted for high speed three dimensional ultrasound imaging. A combination of coded excitation and synthetic aperture focusing technique enables data collection at a high frame rate and focusing at any depth. The dynamic range of the ultrasound images was approximately 35db in our system.

### Ultrasound CT for Wood

Wood has an anisotropic property for the sound velocity. The sound velocity is different between the path through the center (radial) and the path near the edge (tangential). This anisotropic property makes ring-shaped artifacts on the edge side of an ultrasound velocity CT image. However, the anisotropic acoustic property has not been considered for the imaging process in the conventional ultrasound CT methods. To avoid this ring-shaped artifact, we improved the conventional ultrasound velocity CT method with consideration of the anisotropic property.

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