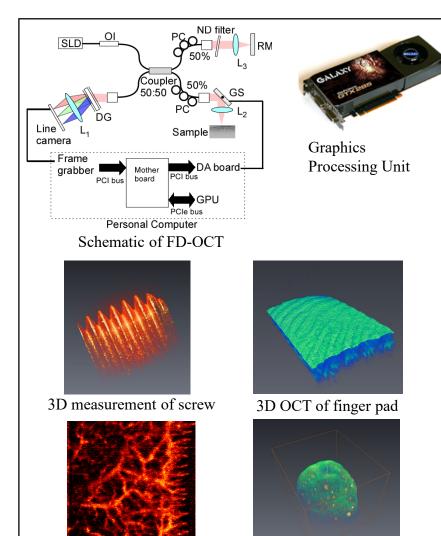
Development of Real-time OCT system using GPU

OCT images of the ovary of mouse

Associate Professor Yuuki Watanabe



OCT angiography

Content:

OCT (Optical Coherence Tomography) is a biological tomographic imaging method using low coherence interferometer. We can image bioligical samples with depth of $2 \sim 3$ mm with resolution of about 10 µm by irradiating weak near-infrared light. In our laboratory, in order to display tomographic images in real time for medical diagnosis and product inspection, we are developing optical interferometry technology using high speed line camera and high speed image processing method using GPU (Graphics Processing Unit) for . In the developed OCT system, it is possible to visualize 2D image of the internal structure and a slight change in the interior (eg, change due to blood flow inside the living body) in real time by data acquisition over the video rate and high speed signal processing. Since optical measurement is non-contact, it can be used for threedimensional shape measurement of industrial products besides bioligical samples.

Appealing point:

We can immediately respond to improvements in hardware and software that meet your needs.

Yamagata University Graduate School of Science and Engineering Research Interest : Biomedical Optics, Signal Processing

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