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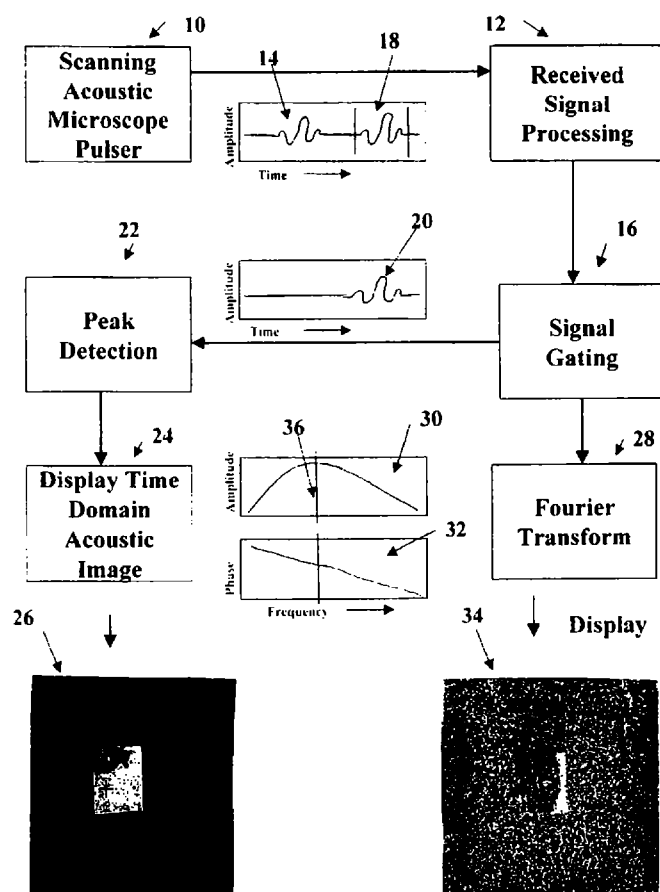
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Blvd., Elk Grove Village, IL 60007 (US).(72) Inventors: **ORAVECZ, Michael, G.**; 1113 Dickens lane,
Naperville, IL 60564 (US). **PEN, Lei**; 2773 Palm Springs
Lane, Aurora, IL 60504 (US). **KESSLER, Lawrence, W.**;
430 Blue Ash Drive, Buffalo Grove, IL 60089 (US). **GUO,**
Zhiqi; 1425 South Wolf Road, Prospect Heights, IL 60070
(US).(74) Agents: **FELDMAN, Steve, E.** et al.; Welsh & Katz, LTD,
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(54) Title: FREQUENCY DOMAIN PROCESSING OF ACOUSTIC MICRO IMAGING SIGNALS



(57) **Abstract:** An acoustic microscopy imaging method and apparatus comprising scanning a target using a scanning acoustic microscope pulse (10) to beam an acoustic pulse into a target, a receiver (12) to sense, amplify and process the time domain acoustic signal modified by and returned from the target, whereupon the time domain signal is gated using gate (18) to isolate a pixel representative signal segment (20), which is then peak detected (22) are displayed as a time domain acoustic image (24), whereupon signal segment (20) is also subject to Fourier transformation (28) to produce either an amplitude versus frequency waveform (30) and/or a phase versus frequency waveform (32), thereby permitting the simultaneous display of both time domain and frequency domain waveforms in either a side-by-side manner or as a superimposition of both images.

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