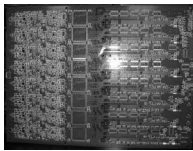


# A Multimedia Example for IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control

(Please Click on Icons – Visit: <http://www.ieee-uffc.org/tr/>)

**Abstract** - This page shows some examples of multimedia files. It is also available at: <http://www.ieee-uffc.org/tr/mexample.pdf>. For submission of multimedia manuscripts to TUFFC, please follow "Information for Contributors" at: <http://www.ieee-uffc.org/tr/contrib.pdf>.

**Color Picture:** The grayscale photo below is a typical example that appears in the IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control (TUFFC). Authors may use the icon link to include a color on-line version of their grayscale pictures in their manuscripts (only include a color version when necessary). The color picture must be in JPEG (Joint Photographic Expert Group) or GIF (Graphics Interchange Format) format to reduce file size and to decrease the bandwidth usage on the TUFFC server.



[File size: 180KB; Format: JPEG; Color 24 bits; Resolution: 1024X777 pixels]

**Fig. 1.** An eight-layer printed circuit board (PCB) used primarily for multi-channel ultrasound signal reception and storage. The board was designed in the Ultrasound Lab at the University of Toledo, led by Dr. Jian-yu Lu. It is one of the many PCBs designed for a high-frame rate medical ultrasound imaging system. The system consists of 128 linear, high-voltage, and 12-bit arbitrary waveform generators for synchronized generation of ultrasound signals or for other research purposes.

**Movies:** Please click on the movie icon to see a movie. The two movies below give you an idea on the file size versus movie quality. "VCD quality" here means 1150kb/s for video and 224kb/s for 16-bit MP2 stereo audio at 44.1KHz sampling rate.

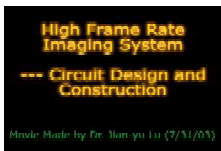


**Movie**  
[File size: 1130KB; Format: MPEG1; Resolution: 320X240; Duration: 13 seconds]

**Movie**  
[File size: 2290KB; Format: MPEG1 at VCD quality; Pixels: 320X240; Duration: 13 seconds]

**Fig. 2.** An introduction to the Ultrasound Lab at the University of Toledo.

**Movies and Animations:** Please click on the movie icons to see movies or animations.



**Movie**  
[File size: 808KB; Format: MPEG1; Resolution: 320X240; Duration: 9 seconds]

**Movie**  
[File size: 1585KB; Format: MPEG1 at VCD quality; Pixels: 320X240; Duration: 9 seconds]

**Fig. 3.** Circuit design and construction of the imaging system.

**Animation**  
[File size: 739KB; Format: GIF; Color: 32 bits; Resolution: 360X240; Number of slides: 16]

**Animation**  
[File size: 289KB; Format: GIF; Color: 32 bits; Resolution: 180X120; Number of slides: 22]

**Movies and Animation:** Please click on the movie icons to see movies or animation.



**Movie**  
[File size: 785KB; Format: MPEG1; Resolution: 320X240; Duration: 9 seconds]

**Movie**  
[File size: 1548KB; Format: MPEG1 at VCD quality; Pixels: 320X240; Duration: 9 seconds]

**Fig. 4.** Software development for the imaging system.



**Animation**  
[File size: 222KB; Format: GIF; Color: 32 bits; Resolution: 360X240; Number of slides: 8]

**Movies and Animation:** Please click on the movie icons to see movies or animation.



**Movie**  
[File size: 796KB; Format: MPEG1; Resolution: 320X240; Duration: 9 seconds]

**Movie**  
[File size: 1635KB; Format: MPEG1 at VCD quality; Pixels: 320X240; Duration: 9 seconds]

**Fig. 5.** Construction of the imaging system.



**Animation**  
[File size: 225KB; Format: GIF; Color: 32 bits; Resolution: 360X240; Number of slides: 5]

**Movies and Animation:** Please click on the movie icons to see movies or animation.



**Movie**  
[File size: 715KB; Format: MPEG1; Resolution: 320X240; Duration: 8 seconds]

**Movie**  
[File size: 1408KB; Format: MPEG1 at VCD quality; Pixels: 320X240; Duration: 8 seconds]

**Fig. 6.** Test of the imaging system.



**Animation**  
[File size: 551KB; Format: GIF; Color: 32 bits; Resolution: 360X240; Number of slides: 11]

**Sound Only:** Please click on the sound icon to hear greetings from Dr. Jian-yu Lu, the Editor-in-Chief of the IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control.



[File size: 98KB; Format: MP3; Bit rate: 96kb/s (radio quality); Duration: 8 seconds]

**Other Animations:** An icon animation and an IEEE TUFFC letter animation can be viewed by clicking on the movie icons:



**Animation**  
[File size: 188KB; Format: GIF; Color: 32 bits; Resolution: 231X130; Number of slides: 131]



**Animation**  
[File size: 17KB; Format: GIF; Color: 32 bits; Resolution: 100X100; Number of slides: 31]