Metronomefb

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Metronomefb is a driver for the Metronome display controller. The controller is from E-Ink Corporation. It is intended to be used to drive the E-Ink Vizplex display media. E-Ink hosts some details of this controller and the display media here http://www.e-ink.com/products/matrix/metronome.html .

Metronome is interfaced to the host CPU through the AMLCD interface. The host CPU generates the control information and the image in a framebuffer which is then delivered to the AMLCD interface by a host specific method. The display and error status are each pulled through individual GPIOs.

Metronomefb is platform independent and depends on a board specific driver to do all physical IO work. Currently, an example is implemented for the PXA board used in the AM-200 EPD devkit. This example is am200epd.c

Metronomefb requires waveform information which is delivered via the AMLCD interface to the metronome controller. The waveform information is expected to be delivered from userspace via the firmware class interface. The waveform file can be compressed as long as your udev or hotplug script is aware of the need to uncompress it before delivering it. metronomefb will ask for metronome.wbf which would typically go into /lib/firmware/metronome.wbf depending on your udev/hotplug setup. I have only tested with a single waveform file which was originally labeled 23P01201_60_WT0107_MTC. I do not know what it stands for. Caution should be exercised when manipulating the waveform as there may be a possibility that it could have some permanent effects on the display media. I neither have access to nor know exactly what the waveform does in terms of the physical media.

Metronomefb uses the deferred IO interface so that it can provide a memory mappable frame buffer. It has been tested with tinyx (Xfbdev). It is known to work at this time with xeyes, xclock, xloadimage, xpdf.