**********Draft**********

Working Software & Hardware

05/08/21

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https://github.com/develone/catzip.git
git branch -a
* master

commit 9891c9e3e4cb578584b8006ce58337862bb0def6 (HEAD -> master, origin/master, origin/HEAD)
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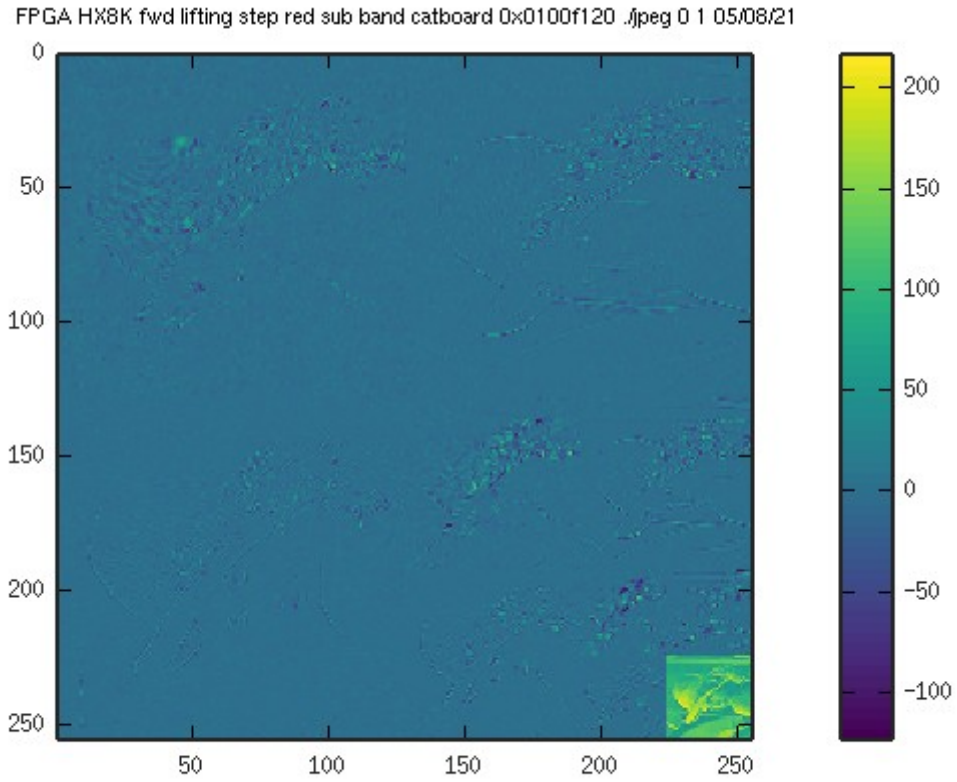
Date: Wed Feb 12 16:28:22 2020 -0700

    work around to build speechpp.bin, hellopp.bin, and linepp.bin

/arm-wbregs version
00800010 (VERSION) : [....] 20200617



y2= 134.498

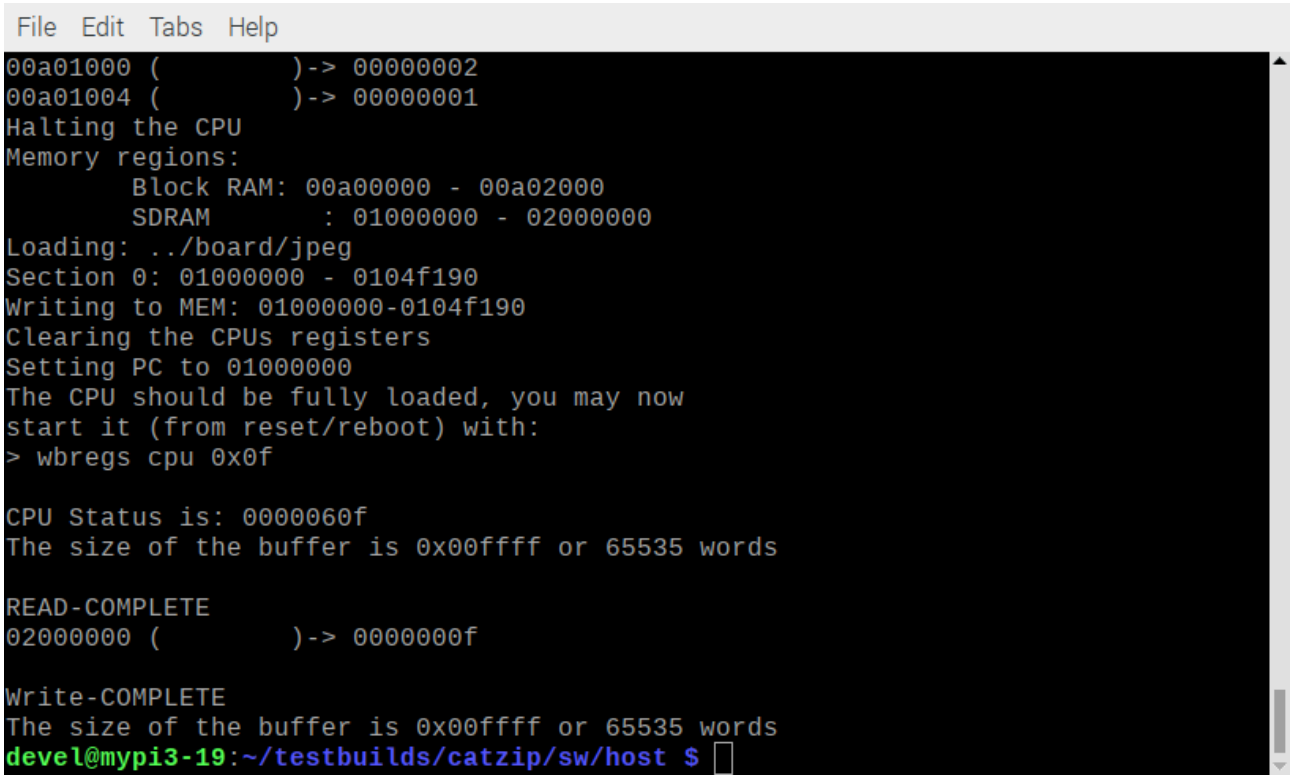
Loading the C program in FPGA

```
File  Edit  Tabs  Help
Read https://www.octave.org/bugs.html to learn how to submit bug reports.
For information about changes from previous versions, type 'news'.

octave:1> rgb
octave:2> quit
devel@mypi3-19:~/testbuilds/catzip/sw/host $ ./runjpeg.sh
00a01000 (        )-> 00000002
00a01004 (        )-> 00000001
Halting the CPU
Memory regions:
        Block RAM: 00a00000 - 00a02000
        SDRAM      : 01000000 - 02000000
Loading: ../board/jpeg
Section 0: 01000000 - 0104f190
Writing to MEM: 01000000-0104f190
Clearing the CPUs registers
Setting PC to 01000000
The CPU should be fully loaded, you may now
start it (from reset/reboot) with:
> wbregs cpu 0x0f

CPU Status is: 0000060f
The size of the buffer is 0x00ffff or 65535 words
```

Running the C program in fpga.

```
File  Edit  Tabs  Help
< Wa812055
> K00000000
< Wb210c4c
> K00000000
Command port disconnect
Command port is now connected
< A02000001Wf
> A02000001K00000000
Command port disconnect
. ptrs.inpbuf = 0x100f120 buf_red = 0x104f198
. fwd_inv = 0x10cf1a0
. x = 0xe22247c sp = 0x7c z = 0x7c
. x = 0xde22083 sp = 0x83 z = 0x83
. x = 0xe221475 sp = 0x75 z = 0x75
. x = 0xe32207b sp = 0x7b z = 0x7b
. x = 0xa812055 sp = 0x55 z = 0x55
. x = 0xb210c4c sp = 0x4c z = 0x4c
. spliting blue sub band
. fwd lifting step only
. w = 0x100 wptr = 0x104f198 alt =  0x108f198 fwd_inverse =  0x10cf1a0 fwd_inver
.  =  0x1
. starting red dwt
. in singlelift
```

Reading data from fpga to be displayed with Octave


File Edit Tabs Help
00a01000 (   )-> 00000002
00a01004 (   )-> 00000001
Halting the CPU
Memory regions:
Block RAM: 00a00000 - 00a02000
SDRAM : 01000000 - 02000000
Loading: ../board/jpeg
Section 0: 01000000 - 0104f190
Writing to MEM: 01000000-0104f190
Clearing the CPUs registers
Setting PC to 01000000
The CPU should be fully loaded, you may now
start it (from reset/reboot) with:
> wbregs cpu 0x0f
CPU Status is: 0000060f
The size of the buffer is 0x00ffff or 65535 words
READ-COMPLETE
02000000 (   )-> 0000000f
Write-COMPLETE
The size of the buffer is 0x00ffff or 65535 words
devel@mypi3-19:~/testbuilds/catzip/sw/host $