20130107
JMO

Digi Comm TEXT:

ISBN 9780072957167
Digital Communications, 5th Ed.
John Praxis

Bookstore	$165.25 used
Amazon	$110.99 used
Bookholders	$120.97 used

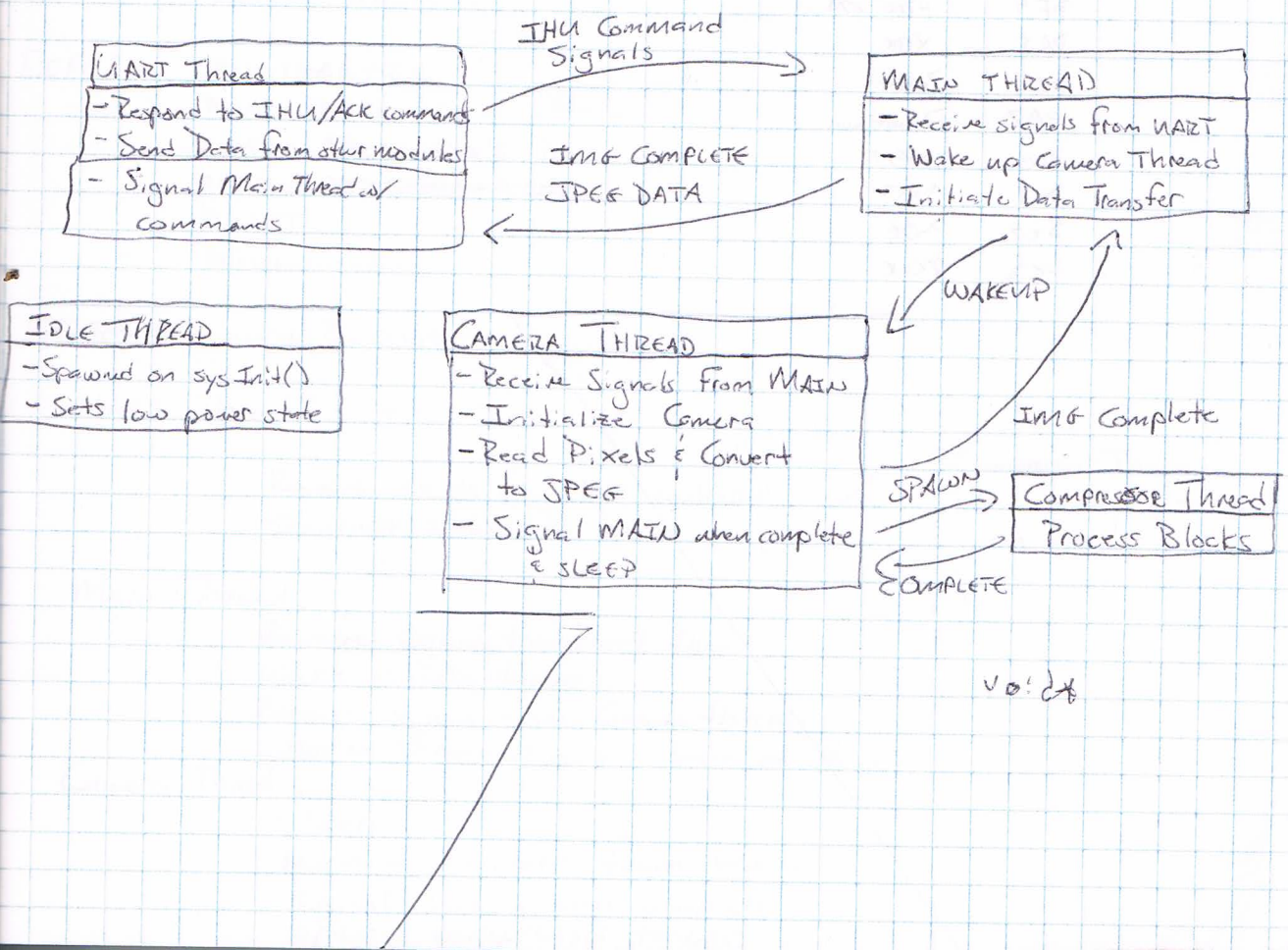
TODO for Today

- SPI Read Bytes
- JPEG Test Space Pics
- Camera I2C work

SPI Read Bytes works

Jpeg space test pics done

Used to make slides for PDR



Void

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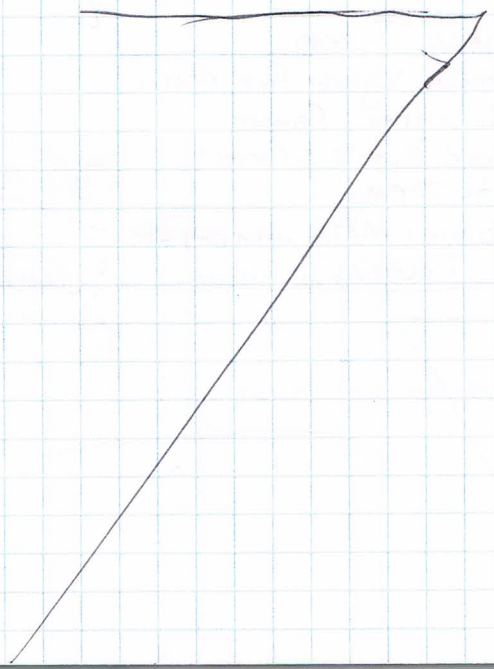
HARDWARE Interfaces

Interface	Pins		Used By	Specification
UART 3	PB11	TXD	UART Thread	19.2 kbaud 8N1
	PB12	RXD	IHU	
SPI 1	PA4	NSS	Main Thread	32 Mbit SPI Flash
	PA5	SCK	~~Main~~ Camera Thread	66 MHz max speed
	PA6	MISO	SPI Flash	
	PA7	MOSI		
I2C 1	PB8	SCL	Camera Thread	400 kHz SCCB
	PB9	SDA	Camera	
FIFO	PF0	D0	Camera Thread	Dual Port DRAM FIFO Interface
	~~PF7~~ ↓	D7	Camera	
	PF8	VSYNC	FIFO	
	PF9	HREF EN		
	PA8	XCLK		
	PA1	Reset		
	PA2	Powerdown		
	PC0	WEN		
	PC1	~RST		
	PC2	~OE		
	PC3	RCLK		



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Interface Progress:

UART3: TX BYTES ✓
RX BYTES ✓
PARSING ✓
Documentation ✓ (inline and header)

Waiting on: ICD w/ IHU

SPI 1: ~~TX~~ WRITE BYTE ✓
WRITE BYTES ✓
READ BYTE ✓
HIGH SPEED READ BYTES ✓
ERASE SECTOR/BLOCK ✓
Documentation (inline only)

TODO: Header Documentation

I2C 1: WRITE REGISTER
READ REGISTER
CONFIGURE CAMERA
Documentation

FIFO: INITIALIZE
READ BYTE
READ ~~5x~~ 640x8 Row
~~READ 320x240 BLOCK~~
RESET
Documentation

~~Inter~~ Threading & Related

UART Thread:

Receive events from HW controller ✓
Transmit Signals to main

Main Thread:

Receive Signals from uart thread
Wake Camera thread
Receive signals from Camera thread
Change Thread Priorities Based on State

Camera Thread:

Sleep
respond to wake from main
Signal main when complete
spawn compressor thread

Compressor Thread
- Return msg-t status on exit

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System Operation