Wavelet Meeting Notes 8/27/2014

Updates:

Bonnie posted a spreadsheet listing Phases for Development (I-IV) and assignments for tasks.

1. General policies for code
   1. Code should be developed for GPU and C++ or equivalent, so that benchmarking can be done at each stage
2. There should be a list of questions on items
3. Log of testing and implementation
   1. Round trip timing, forward, backward, and comparison
4. Policies on Data

Phase I: Complete forward and back including

1. Quantization (Lloyd’s algorithm—David working on this)
2. Run length encoding—David
3. Thresholding –Bonnie
4. Errors measured through mean square error
5. Writing the compressed file—Ed already implemented this.

Phase II: Cut-off with measure of error

We need an outline for this work

Phase III: tiling, CFD 9.7, codebook based on quantization

Phase IV: 3-D compression

Performance metrics: Drazen to look at Ed’s info and write a proposal for metrics

FTP account: send username to Bonnie

Look into QUANT for a description of a codebook.

Bonnie: 1) Github—Meeting minutes

2) Matlab code with quant. and thresholding (from Serge)

3) JPEG

4) Medical images posted

Q: use host for tiling (Octave)?

Q: parallel sort, threshold on GPU (need buffer format from Ed, API or not?)

Need framework for the application (data and calling protocol)

Serge: 1) Provided matlab code

2) posted articles

3) 3-d data set, NASA (Bonnie has contact), geophysical from U.T. Austin

4) Oct. 6th deadline for abstract, March 17-20 presentation, 50 minutes, 2 people

Need: Design session between Bonnie and David (and others?) to look at formats and protocols.

Need: Determine how the performance will be evaluated.

Questions open: padding, filters, tiling with overlapping tiles, runlength versus entropy encoding.

Wavelet Meeting Notes 9/3/2014

Brief meeting David and Bonnie; I had a connectivity issue.

Anupam is talking to contacts at Stanford for medical image data.

Anupam is also to look at Phase II-IV tasks as a potential project for him (I suggested something

in III-IV)