ISO/IEC JTC 1/SC 29/WG 1
(ITU-T SG16)

Coding of Still Pictures

JBIG
Joint Bi-level Image Experts Group

JPEG
Joint Photographic Experts Group

TITLE: Additional Information on the HTJ2K Call for Proposals

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1 Background

This document adds information to the High Throughput JPEG 2000 (HTJ2K) Call for Proposals ("CfP").

2 Subband Type

The htj2k_blk structure detailed at Section C.4.1 of the CfP does not contain a field to identify the type of subband to which a code-block belongs. While it might not be important to all proposed solutions, it is important to the Reference Block Coder Library and Anchor Block Coder Library, since the JPEG 2000 Part 1 block coder modifies its coding contexts in accordance with the subband orientation, i.e. whether the subband is of type LL, LH, HL or HH.

An orientation field is therefore added to the htj2k_blk structure as follows:

```c
struct htj2k_blk {
    // Read-only fields first
    int width, height; // block dimensions
    int stride; // Separation between successive block rows
    int orientation; // LL_BAND, HL_BAND, LH_BAND or HH_BAND
    size_t sample_offset; // location in `samples32` array
    int Kmax; // num magnitude bit-planes -- sub-band specific

    // Fields that might be written by proponent binaries
    int missing_msbs; // read-write
    int passes; // read-write
    int ht_pass_lengths[88];
};
```

3 Memory Requirements

The detailed description of the proposed algorithm requested in Section B.4.1 of the CfP should also include a description of the memory requirements for CPU-based implementations.