ISO/IEC JTC 1/SC29/WG1 N77014
77th Meeting, Macau, China, October 23-27, 2017

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

SOURCE: WG1

PROJECT: ISO/IEC 15444 (JPEG 2000)

STATUS: Final

REQUESTED ACTION: Public Distribution

DISTRIBUTION: Public

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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:

```
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.