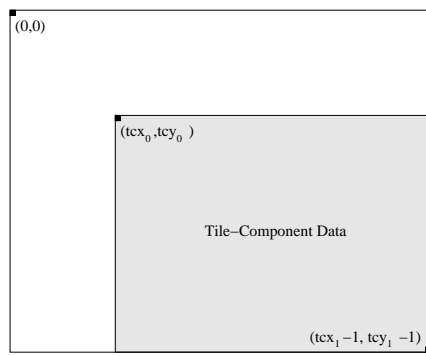**ISO/IEC JTC**

The JPEG-2000 Still Image Compression Standard

codec. The baseline codec is simply the core (or minimal functionality) coding system for the JPEG-2000 standard. Parts 2 (i.e., [15]) and 3 (i.e., [16]) describe extensions to the baseline codec that are useful for certain specific applications such as intraframe-style video compression. In this paper, we will, for the most part, limit our discussion to the baseline codec. Some of the extensions proposed for inclusion in Part 2 will be discussed briefly. Unless otherwise indicated, our exposition considers only the baseline system.

For the most part, the JPEG-2000 standard is written from the point of view of the decoder. That is, the decoder is defined quite precisely with many details being normative in nature (i.e., required for compliance), while many parts of the encoder are less rigidly

TABLE I
PARTS OF THE ST

(0,0)

(tcx_0, tcy_0)

Tile–Component Data

$(tcx_1 - 1, tcy_1 - 1)$

LL_0

LH_{R-2} $\quad$ HH_{R-2}

If the most significant bit plane is

significance pass.

K. Tier-2 Coding

In the encoder, tier-1 encoding is followed by tier-2 encoding. The input to the tier-2 encoding process is the set of bit-plane coding passes generated during tier-1 encoding. In tier-2 encoding, the coding pass information is

sition refers to precinct number, and the sorting keys are listed from most significant to least significant. For example,

creased, the rate decreases, at the cost of greater distortion. Although this rate control mechanism is conceptually simple, it does have one potential drawback. Every time

JPEG–2000 Signature Box

File Type Box

JP2 Header Box
Image Header Box
Color Specification Box
⋮

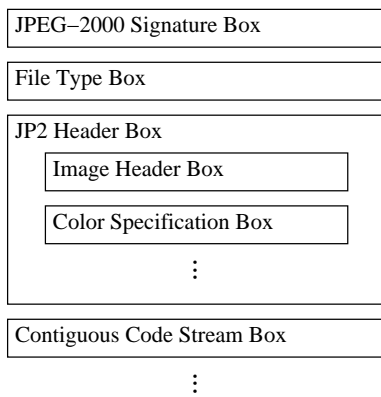| Contiguous Code Stream Box |
|---|

⋮

Fig. 16. File format structure.

specification of image sequences to support trivial animation effects.) Each contiguous