CLAIMS

1. A print cartridge comprising:

a memory device (100; 400; 604) comprising a compressed data structure (102; 402; 602) to construct a one-dimensional color transformation table for a printer, the data structure comprising:

quantized coefficients derived from a compression of a difference table (104; 404; 616) including a plurality of difference nodes in which each difference node represents a value that is to be combined with a corresponding node of a reference table, the quantized coefficients useable to produce a reconstructed difference table;

a residue table (106; 408; 618) including a plurality of residue nodes in which each residue node is to be combined with a corresponding node of the combination of the reconstructed difference table and the reference table; and

a residue bit assignment table (410) useable to decode the residue table (408).

2. The print cartridge of claim 1, wherein the residue bit assignment table (410) is to indicate how many bits are assigned to each residue node of the residue table (408).

3. The print cartridge of claim 1 or 2, wherein the quantized coefficients were generated via a discrete cosine transform, and are to be decompressed using an inverse discrete cosine transform process to thereby obtain the decompressed difference table.

4. The print cartridge of one of claims 1 - 3, wherein each difference node that represents a value that is to be combined with a corresponding node of a reference table comprises a difference of value of a node of an original color table and a value of a corresponding node of a reference table.

5. The print cartridge of one of claims 1 - 4, wherein each residue node that is to be combined with a corresponding node of the combination of the reconstructed difference table and the reference table comprises a value that is a difference of a value of a node of the original color table and a value of a corresponding node of the reconstructed difference table.

6. The print cartridge of one of claims 1 - 5, wherein the memory device (100; 400; 604) comprises a losslessly compressed data structure (102; 402; 602).

7. The print cartridge of claim 6, wherein the lossless compression is a Lempel-Ziv-Markov chain Algorithm compression.

8. The print cartridge of one of any one claims 1 - 7, wherein the quantized coefficients are derived from a lossy compression of the difference table.

9. The print cartridge of claim 6, wherein the quantized coefficients are quantized with a fixed step size using the lossy compression.

10. The print cartridge of one of claims 1 - 9, wherein the quantized coefficients are to be reconstructed using a cosine bit assignment table stored on the printer or cartridge, and multiplied by a fixed step size to obtain the decompressed difference table.

11. The print cartridge of one of claims 1 - 10, wherein the compressed data structure further comprises a coefficient bit assignment table (406) derived from the quantized coefficients, the coefficient bit assignment table (406) useable to decode the quantized coefficients, the coefficient bit assignment table (406) including information related to a number of bits assigned to each of the quantized coefficients.

12. The print cartridge of one of claims 1 to 11, wherein the values of the residue bit assignment table (410) are derived from the residue table (408).

13. The print cartridge of one of claims 1 - 12, comprising black printer material.

14. The print cartridge of one of claims 1 - 13, wherein the memory device (100, 400, 600) is to be operably coupled to another computing device having another memory (706), the other memory (706) storing the reference table.

15. System (600) comprising the print cartridge of one of claims 1 - 14, wherein the memory device (604) is operably coupled to another computing device (702) that includes an inherent print capability, the computing device (702) having a processor (704) and memory (706) to read and apply the compressed color table (602), the memory (706) storing the reference table.