CLAIMS

1. A print cartridge comprising:

a memory device comprising:

quantized coefficients derived from a compression of a difference table including a plurality of difference nodes in which each difference node represents a value that is a difference of a value of a node of a color table and a value of a corresponding node of a reference table, the quantized coefficients useable to produce a reconstructed difference table; and

a plurality of residue nodes in which each residue node represents a value that is a difference of a value of a node of the color table and a value of a corresponding node of the reconstructed difference table,

wherein the quantized coefficients and the plurality of residue nodes are accessible by a printing device to reconstruct a color table and perform a color transformation between color spaces when printing.

2. The print cartridge of claim 1, wherein the memory device comprises a residue table that includes the plurality of residue nodes.

3. The print cartridge of claim 2, wherein the memory device comprises a residue bit assignment table useable to decode the residue table.

4. The print cartridge of claim 3, wherein the residue bit assignment table indicates how many bits are assigned to each residue node of the plurality of residue nodes.

5. The print cartridge of claim 1, wherein the quantized coefficients are based on coefficients derived from application of a discrete cosine transform on the difference table.

6. The print cartridge of claim 1, wherein the quantized coefficients comprise a data stream of quantized coefficients.

7. The print cartridge of claim 6, wherein the data stream of quantized coefficients is a one-dimensional data stream of quantized coefficients.

8. The print cartridge of claim 1, wherein the memory device comprises a compressed version of the quantized coefficients and the plurality of residue nodes, the compressed version derived from lossless compression of the quantized coefficients and the plurality of residue nodes.

9. The print cartridge of claim 8, wherein the quantized coefficients are useable to produce the reconstructed difference table based on inverting the compression.

10. The print cartridge of claim 1, wherein the memory device further comprises a coefficient bit assignment table that includes information related to a number of bits assigned to each of the quantized coefficients.

11. The print cartridge of claim 1, wherein the memory device comprises a bitstream of the quantized coefficients, a bitstream of a coefficient bit assignment table, a bitstream of the plurality of residue nodes, and a bitstream of a residue bit assignment table.

12. The print cartridge of claim 11, wherein the bitstreams of the coefficient bit assignment table and the residue bit assignment table are compressed with a lossless compression.

13. The print cartridge of claim 1, further comprising a print material reservoir storing a print material.

14. The print cartridge of claim 1, further comprising a reservoir storing black ink or toner.

15. The print cartridge of claim 1, wherein the quantized coefficients are derived from a lossy compression of the difference table.

16. A print cartridge, comprising:

a memory device comprising:

quantized coefficients derived from a compression of a difference table including a plurality of difference nodes in which each difference node represents a value that is a difference of a value of a node of a color table and a value of a corresponding node of a reference table, the quantized coefficients useable to produce a reconstructed difference table; and

a residue table including a plurality of residue nodes in which each residue node represents a value that is a difference of a value of a node of the color table and a value of a corresponding node of the reconstructed difference table,

wherein the quantized coefficients and the plurality of residue nodes are accessible by a printing device to reconstruct a color table and perform a color transformation between color spaces when printing.

17. The print cartridge of claim 16, wherein the memory device further comprises a coefficient bit assignment table useable to decode the quantized coefficients, the coefficient bit assignment table including information related to a number of bits assigned to each of the quantized coefficients.

18. The print cartridge of claim 16, wherein the memory device further comprises a residue bit assignment table useable to decode the residue table, the residue bit assignment table indicating how many bits are assigned to each residue node of the residue table.

19. The print cartridge of claim 16, further comprising a reservoir of black toner or ink, and wherein the color table is a monochromatic color table.

20. The print cartridge of claim 16, wherein the quantized coefficients are useable with the reference table on a printing device to provide the reconstructed difference table.

21. A print cartridge comprising:

a memory device comprising a compressed data structure 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 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 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 useable to decode the residue table, the residue bit assignment table indicating how many bits are assigned to each residue node of the residue table,

wherein the quantized coefficients and the plurality of residue nodes are accessible by the printer to reconstruct a color table and perform a color transformation between color spaces when printing.

22. The print cartridge of claim 21, wherein the compressed data structure is a losslessly compressed data structure.

23. The print cartridge of claim 22, wherein the lossless compression is a Lempel-Ziv-Markov chain Algorithm compression.

24. The print cartridge of claim 21, wherein the quantized coefficients are derived from a lossy compression of the difference table.

25. The print cartridge of claim 21, wherein the quantized coefficients are quantized with a fixed step size using the lossy compression.

26. The print cartridge of claim 21, 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.

27. The print cartridge of claim 21, wherein the compressed data structure further comprises a coefficient bit assignment table derived from the quantized coefficients, the coefficient bit assignment table useable to decode the quantized coefficients, the coefficient bit assignment table including information related to a number of bits assigned to each of the quantized coefficients.

28. The print cartridge of claim 21, wherein the residue bit assignment table is derived from the residue table.

29. The print cartridge of claim 21, comprising black print material.