$+b$ to $-b$: Take B's complement of all odd index digits of i_{+b}; subtract (in base $-b$ arithmetic) the number $\cdots B0B0B0$ from the previous result.

$-b$ to $+b$: Add $\cdots B0B0B0$ (again in base $-b$ arithmetic) to i_{-b}; take B's complement of all odd index digits.

Proofs for these are similar to that given by Agrawal. These algorithms are interesting but are probably not of practical value, since base $-b$ arithmetic is used.

3) Agrawal's comments about the relative merits of alternative approaches for base -2 arithmetic are technically valid, but academic, since I consider base -2 to be inferior to base $+2$ except for special applications of the type suggested by Zohar [1]–[3]. Future developments may well prove me wrong, and indeed I shall be most pleased if this happens.

References

[1] S. Zohar, "Fast hareware Fourier transformation through counting," *IEEE Trans. Comput.*, vol. C-22, pp. 433–441, May 1973.
[2] ——, "The counting recursive digital filter," *IEEE Trans. Comput.*, vol. C-22, pp. 338–347, Apr. 1973.
[3] ——, "New Hardware realizations of nonrecursive digital filters," *IEEE Trans. Comput.*, vol. C-22, pp. 328–338, Apr. 1973.

Comments on "On the Number of Classes of Binary Matrices"

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The solution to the problem of counting of $m \times n$ matrices of zeros and ones under 1) row and columns permutations and 2) row and columns permutations together with columns complementations is given in Harrison's[1] paper. The first problem is more complicated than the second one, since the author claims the second is "an easy generalization" of the first.

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[1] M. A. Harrison, *IEEE Trans. Comput.*, vol. C-22, pp. 1048–1051, Dec. 1973.

The first problem, under more general assumptions, is solved explicitly in [1]. The restriction

$$0 \leqslant S \cdot j \leqslant l$$

is imposed on the number $S \cdot j$ of the elements in a row of matrix under consideration in [1].

The main result of Harrison's paper follows from [1] as a particular case of $l = k$, where k is the length of the row.

It should be noted also, that [1] is mentioned in [2] (see Section III-H) and is included in references to [2] as [567].

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[1] Y. L. Sagalovich, "The number of types of equivalent matrices," *Prob. Per. Infor.*, vol. 9, pp. 218–229, 1961.
[2] W. H. Kautz, "A survey and assessment of progress in switching theory and logical design in the Soviet Union," *IEEE Trans. Electron. Comput.*, vol. EC-15, pp. 164–195, Apr. 1966.