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ON GAUSSIAN ELIMINATION AND DETERMINANT FORMULAS FOR MATRICES WITH CHORDAL INVERSES: CORRIGENDUM

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The statement of Proposition 2.2 (p.437) published by the author in Bull. Austral. Math. Soc. Vol. 46 (1992) pp.435–440 is incorrect. The correct version follows.

PROPOSITION 2.2. *Let G be chordal and $\sigma = [v_1, \ldots, v_n]$ be a perfect scheme for G. Assume that $R \in \Omega$ is invertible, $R^{-1} \in \Omega_G$, and $R(X_k)$ and $R(\{v_k\} \cup X_k)$ are invertible for $k = 1, \ldots, n$, where X_k are given by (1.1). Denote by $D = (diag(D_k))_{k=1}^n$ the diagonal matrix obtained after reducing R by Gaussian elimination by successively choosing the $(v_n, v_n), \ldots, (v_1, v_1)$ diagonal entries to act as pivots. Then D_{v_k} equals the Schur complement of $R(X_k)$ in $R(\{v_k\} \cup X_k)$ for $k = 1, \ldots, n$. If the spaces $H_1, \ldots, H_n$ are finite dimensional and R satisfies the above conditions, then (by the convention $\det R(\emptyset) = 1$)*

$$\det R = \prod_{k=1}^{n} \frac{\det R(\{v_k\} \cup X_k)}{\det R(X_k)} \tag{2.1}$$

PROOF: The same as the original, except line 9 on page 438, where $(v_1, v_1), \ldots, (v_n, v_n)$ should be changed into $(v_n, v_n), \ldots, (v_1, v_1)$. ∎

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