The Electronic Journal of Linear Algebra.
A publication of the International Linear Algebra Society.
Volume 1, pp. 59-63, November 1996.
ISSN 1081-3810. http://gauss.technion.ac.il/iic/ela

ELA

THE COMBINATORIALLY SYMMETRIC P-MATRIX COMPLETION PROBLEM*

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Abstract. An n-by-n real matrix is called a P-matrix if all its principal minors are positive. The P-matrix completion problem asks which partial P-matrices have a completion to a P-matrix. Here, we prove that every partial P-matrix with combinatorially symmetric specified entries has a P-matrix completion. The general case, in which the combinatorial symmetry assumption is relaxed, is also discussed.

Key words. P-matrix, completion problem, combinatorial symmetry

AMS(MOS) subject classification. 15A48

* Received by the editors on 27 February 1996. Final manuscript accepted on 12 November 1996. Handling editor: Daniel Hershkowitz.

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