Electronic Journal of Linear Algebra ISSN 1081-3810
A publication of the International Linear Algebra Society
Volume 15, pp. 201-209, July 2006

ELA
http://math.technion.ac.il/iic/ela

SUBDIRECT SUMS OF S-STRICTLY DIAGONALLY DOMINANT MATRICES*

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Abstract. Conditions are given which guarantee that the k-subdirect sum of S-strictly diagonally dominant matrices (S-SDD) is also S-SDD. The same situation is analyzed for SDD matrices. The converse is also studied: given an SDD matrix C with the structure of a k-subdirect sum and positive diagonal entries, it is shown that there are two SDD matrices whose subdirect sum is C.

AMS subject classifications. 15A48, 15A18, 65F15.

Key words. Subdirect sum, Diagonally dominant matrices, Overlapping blocks.

*Received by the editors 29 March 2006. Accepted for publication 10 July 2006. Handling Editor: Angelika Bunse-Gerstner.

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