

**Kelarev, A. V.; Quinn, S. J.; Smolřková, R.**  
**Power graphs and semigroups of matrices.** (English) Zbl 1043.20042  
Bull. Aust. Math. Soc. 63, No. 2, 341-344 (2001).

By the power graph of a semigroup  $S$  the authors mean the directed graph with the set of vertices  $S$  and with edges  $(u, v)$  where  $u, v \in S$  and  $v$  is a power of  $u$  but  $v \neq u$ . Infinite groups whose power graphs satisfy a certain technical finiteness condition were characterized by the first two authors [in Contributions to general algebra 12. Klagenfurt, Verlag Johannes Heyn, 229-235 (2000; Zbl 0966.05040)]. In this note the result is extended to the case where  $S$  is an infinite semigroup of  $n \times n$  matrices over a division ring or a semigroup of  $n \times n$  monomial matrices over a group.

Reviewer: Jan Okniński (Warszawa)

**MSC:**

**20M20** Semigroups of transformations, relations, partitions, etc.  
**05C25** Graphs and abstract algebra (groups, rings, fields, etc.)

Cited in **43** Documents

**Keywords:**

semigroups of matrices; power graphs

**Full Text:** [DOI](#)

**References:**

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