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In many applications the simulations performed by the finite element method lead to a nonsymmetric system matrix. This is often the consequence of nonlocal coupling between the degrees of freedom. Consequently, solving the matrix equation can be unwieldy despite the sparsity of the matrix. As such, preconditioning can be a vital step in the solution process. Two factors that characterize a viable preconditioner are the extent to which its action on the system matrix relates to that of the system matrix inverse and the number of nonzero entries. Preconditioning related to block LU-type factorization built by employing a multilevel reordering strategy is often a desirable solution. Throughout the process of constructing these preconditioners, a balance between the quality of the preconditioner and the fill-in of the related Schur complement submatrix is needed. In particular, the initial choice of partial reordering and the consequent effects will be considered. (Received September 22, 2015)