1038-05-244 **Jennifer Vandenbussche** and **Douglas B. West*** (west@math.uiuc.edu), Department of Mathematics, University of Illinois, 1409 W. Green Street, Urbana, IL 61801-2975. *Independence number of 2-factor-plus-triangles graphs.*

A *2-factor-plus-triangles graph* is the union of two 2-regular graphs with the same vertex set, such that one of them consists of disjoint triangles. Let $\mathcal{G}$ be the family of such graphs. These include the famous "cycle-plus-triangles" graphs shown to be 3-choosable by Fleischner and Stiebitz. The independence ratio of a graph in $\mathcal{G}$ may be less than 1/3; we prove that it is always at least 1/4, with equality only for disjoint unions of copies of one 12-vertex graph. However, $\mathcal{G}$ contains infinitely many connected graphs with independence ratio less than 4/15. Motivated by a question of Erdős, we also construct graphs in $\mathcal{G}$ with girth 7 and independence ratio less than 1/3, but girth 8 guarantees ratio 1/3. Finally, unions of two 2-factors consisting of 3-cycles are 3-choosable. (Received February 11, 2008)