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Joseph E. Bonin* (jbonin@gwu.edu), Department of Mathematics, The George Washington University, Washington, DC 20052. *A Construction of Infinite Sets of Intertwines for Pairs of Matroids.*

An intertwine of a pair of matroids is a matroid such that it, but none of its proper minors, has minors that are isomorphic to each matroid in the pair. One motivation for studying intertwines is their role in problems concerning the excluded minors for the union of two minor-closed classes of matroids. Brylawski, Robertson, and Welsh independently asked whether two matroids can have infinitely many intertwines. This problem was settled in the affirmative in unpublished work by Vertigan in the mid-1990's. We give a new construction of infinite sets of intertwines for a broad class of pairs of matroids. We also treat some of the properties of these intertwines. Several open problems will be posed. (Received November 29, 2009)