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Gluing vertex algebras.

We show that under suitable conditions, module categories for two vertex operator algebras can be glued along a braid-reversed tensor equivalence to obtain a vertex operator algebra extension of the tensor product of the two original algebras. Conversely, a vertex operator algebra extension of two suitable commuting subalgebras yields a braid-reversed equivalence of module categories for the subalgebras. These results hold for example when the module categories under consideration are semisimple braided ribbon categories with possibly infinitely many objects; examples arise from affine Lie algebras at admissible and generic levels. (Received September 17, 2019)