A Colax Colimit Construction of Biresiduation Algebras

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We introduce a gluing construction for integral biresiduation algebras, formulated as a colax colimit in the order-enriched category of such algebras and subhomomorphisms. Conversely, every duo biresiduation algebra admits a canonical decomposition into principal nuclear images and can be recovered by gluing these local pieces. We also present criteria determining when the resulting algebra is Tanaka or duo divisible, showing how global algebraic properties are encoded by the transition maps.