THE A_∞ DRINFELD CENTRALIZER AS A HOMOTOPY LIMIT

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Abstract:
By a theorem by Street, the Drinfeld center can be described as a bilimit of a (truncated) cosimplicial diagram. I will explain how to generalize this picture to dg-categories. Elias and Hogancamp recently introduced an A_∞ centralizer of a monoidal dg-category, defined through explicit data. I will show that this centralizer arises as a homotopy limit of a cosimplicial diagram built from A_∞ functor categories.
As a consequence, we conclude that the A_∞ centralizer is a concrete dg-model for Lurie's infty-categorical centralizer on the infty-category of dg-categories, and thus can be inherited with an E2-algebra structure, i.e. a braiding.