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Model bicategories and their homotopy bicategories

In [1], we give a definition of model bicategory and w -homotopy, which are natural generalizations of Quillen's notions ([2]). For any model bicategory \mathcal{C} , denote by \mathcal{C}_{fc} the full sub-bicategory of the fibrant-cofibrant objects. We prove that the bicategorical localization of \mathcal{C} with respect to the class of weak equivalences can be constructed as a bicategory $\mathcal{H}o(\mathcal{C})$ whose objects and arrows are those of \mathcal{C}_{fc} and whose 2-cells are classes of w -homotopies up to an equivalence relation. The pseudofunctor $\mathcal{C} \xrightarrow{r} \mathcal{H}o(\mathcal{C})$ which yields the localization is constructed by using a notion of fibrant-cofibrant replacement in this context.

REFERENCES:

- [1] Descotte M.E., Dubuc, E., Szyld M., Model bicategories and their homotopy bicategories, *arXiv:1805.07749* (2018).
- [2] Quillen D., Homotopical Algebra, *Springer Lecture Notes in Mathematics* 43 (1967).

*Joint work with E. Dubuc and M. Szyld.