Learning Neeman's K-theory

This is work in progress.

A. Neeman defined a K-theory for triangulated categories and proved that

$$\mathrm{K}^{\mathrm{Quillen}}(\mathcal{H}) \;\approx\; \mathrm{K}^{\mathrm{Neeman}}(\mathcal{C})\ ,$$

where $\mathcal{H}$ is the heart of a bounded t-structure on a triangulated category $\mathcal{C}$ (Theorem of the heart). Since Neeman worked with Verdier triangulated categories, he had to use models for the diagrams appearing in his definition, which prevented his theory from being functorial with respect to exact functors $\mathcal{C} \to \mathcal{C}'$ between triangulated categories.

We attempt to replace Neeman's models with n-triangles taken from the Heller triangulated context, in order to obtain a functorial definition still yielding the Theorem of the heart. Many of Neeman's arguments seem to work in this context. We present a possible strategy, and consider the presumed key step in more detail.