Relations between various boundaries of relatively hyperbolic groups

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Abstract. Suppose a group $G$ is relatively hyperbolic with respect to a collection $\mathbb{P}$ of its subgroups and also acts properly, cocompactly on a $CAT(0)$ (or $\delta$–hyperbolic) space $X$. The relatively hyperbolic structure provides a relative boundary $\partial(G, \mathbb{P})$. The $CAT(0)$ structure provides a different boundary at infinity $\partial X$. In this article, we examine the connection between these two spaces at infinity. In particular, we show that $\partial(G, \mathbb{P})$ is $G$–equivariantly homeomorphic to the space obtained from $\partial X$ by identifying the peripheral limit points of the same type.