An $\mathbb{R}$-tree is a metric space such that between any two points there is a unique geodesic segment. An $\mathbb{R}$-tree is richly branching if the set of points with at least 3 branches of a non-trivial length is dense. We consider bounded, pointed $\mathbb{R}$-trees as metric structures in an appropriate continuous signature. The theory $\text{rb}R_{T,r}$ of “richly branching” pointed $\mathbb{R}$-trees with radius $r$ is the model companion of the theory of $\mathbb{R}$-trees of radius at most $r$. We take a model $M$ of $\text{rb}R_{T,r}$ and consider the space of points at distance $r$ from the basepoint. We show that the theory of such spaces and the theory of richly branching $\mathbb{R}$-trees are bi-interpretable, and outline results about the topology of spaces of endpoints in $\mathbb{R}$-trees. This is joint work with C. Ward Henson. (Received February 03, 2020)