THE RADIUS OF COMPARISON OF $C(X)$

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We prove that if X is a compact metric space, then
$$\mathrm{rc}(C(X)) \geq \frac{\dim(X) - 7}{2}.$$
This improves a result of Elliott and Niu in 2013, in which the lower bound is in terms of $\dim_{\mathbb{Q}}(X)$, but our additive constant is not as good.

Elliott and Niu used K-theory and the Chern character. At least implicitly, there are vector bundles in our proof, but they are all stably trivial, so Chern classes and the Chern character don't help. We use a characterization of $\dim(X)$ in terms of extensions of maps from closed subsets of X to spheres.