For a contraction $T \in B(H)$ of class $(C_{\cdot 0})$, that is $SOT - \lim_{n\to\infty}(T^*)^n = 0$, there exists a weak-$*$-continuous functional calculus for H^∞, the algebra of bounded holomorphic functions, first introduced by Sz.-Nagy and Foiaş. In 1986, T. Miller, R. Olin and J. Thomson proved a corresponding uniqueness statement: any continuous unital algebra homomorphism $\pi : H^\infty \to B(H)$ with $\pi(z) = T$ is weak-$*$-continuous and hence uniquely determined by $\pi(z)$.

I will talk about a modified proof of the T. Miller, R. Olin and J. Thomson theorem. Using these modifications one can show for a large class of reproducing kernel Hilbert spaces $\mathcal{H}_K$, including the Drury-Arveson space or the Dirichlet space on the unit ball, that the multiplier functional calculus for K-contractions, satisfying in addition a suitable $C_{\cdot 0}$-condition, is weak-$*$-continuous and hence uniquely determined. This is joint work with Michael Hartz.