Search for Single Top Quark Production at DØ LIANG LI, University of California, Riverside, DZERO COLLABORATION — Protons and antiprotons are collided in Run II at the Fermilab Tevatron at a center of mass energy of 1.96 TeV. We present results of an improved search for single top quark production in these collisions using a dataset of approximately 360 pb$^{-1}$ collected with the DØ detector. This analysis considers both production modes, s-channel $tb$ and t-channel $tqb$, and makes use of secondary-vertex tagging to identify jets originating from $b$ quarks as well as neural networks to separate the expected signals from backgrounds.