1077-60-1748 **Marina Skyers*** (mas207@lehigh.edu). *Primitive Recursive Representations of "Skorokhod Sequences" for the Standard Normal.*

For $n > 1$ and $0 < x < 1$, $S_n(x) := \sum_{i=1}^{n} R_{n,i}(x)$, with $R_{n,i}(x) := -1^{1+x_i}$, where x_i is the ith dyadic coefficient for x (for dyadic rationals, choose the tail of 0's). With $X_n := \frac{S_n}{\sqrt{n}}$, $(X_n|n > 1)$ converges in distribution to the standard normal on $(0, 1)$ (CLT), but almost sure convergence fails badly. Skorokhod's construction gives $\widetilde{X_n}$ equal in distribution to X_n, such that $\left(\widetilde{X_n}|n > 1\right)$ converges almost surely to the standard normal. With $\widetilde{S_n} := \sqrt{n}\widetilde{X_n}$, we give an explicit computation of $\widetilde{S_n}$ and show that, for some sequences $\widetilde{\mathbf{R}_n} := \left(\widetilde{R_{n,i}}|i = 1, \ldots, n\right)$ of independent random variables taking on values $-1, 1$ with equal probability, and depending only on the first n dyadic coefficients, $\widetilde{S_n} = \sum_{i=1}^{n} \widetilde{R_{n,i}}$. We further show there are many representations of each $\widetilde{\mathbf{R}_n}$ that are close to those for the $(R_{n,i}|i = 1, \ldots, n)$, above. We have isolated a family of such representations that in a suitable sense is uniformly primitive recursive and has other pleasant properties. (Received September 21, 2011)