Random walk and induced Dirchlet form on self-similar set

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We define a class of quasi-simple random walks on the symbolic space of the self-similar sets K. For this walk, we can identify the Martin boundary $\mathcal{M}$ with K. Hence there are induced harmonic structure and Dirichlet form on K. We show that this Dirichlet form corresponds to the fractional Laplacian $(-\Delta)^{\beta/2}, 0 < \beta < 2$ in the classical case.