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Transmission of harmonic functions and the Cauchy, Faber, and Schiffer operators.

Let Γ be a Jordan curve, and let Ω_+ and Ω_- be the components of its complement in the Riemann sphere. Given a harmonic function h on Ω_+ , we call a harmonic function on Ω_- with the same boundary values the transmission of h . There is a transmission that is bounded with respect to the Dirichlet semi-norm if and only if the curve is a quasicircle. We discuss this result and its relation to other characterizations of quasicircles in terms of the Cauchy, Faber, and Schiffer operators. (Received August 31, 2021)