Proof of a conjecture of Kenyon and Wilson on semicontiguous minors.

In their paper on circular planar electrical networks (arXiv:1411.7425), Kenyon and Wilson showed how to test if a network is well-connected by checking that \( \binom{n}{2} \) minors of the response matrix are positive. In particular, they proved that any contiguous minor of a response matrix can be expressed as a Laurent polynomial in the central minors. Interestingly, the Laurent polynomial is the generating function of domino tilings of a weighted Aztec diamond. They conjectured that any semicontiguous minor can also be written in terms of domino tilings of a region on the square lattice. In this paper we present a proof of the conjecture. (Received July 02, 2015)