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Photographic Fractal Trees.

A wide variety of fractal trees have been created using photographic imagery. Raw photographs are manipulated and sometimes combined to create building blocks. Each building block branches from a single large trunk to two or more smaller branches. These building blocks are used to construct trees via an iterative process. With each iteration, the trunks of multiple smaller copies of the building block, that have been rotated and sometimes reflected, are arranged adjacent to the smaller branches of a larger building block. The building blocks are designed in such a manner that the joints between different sized blocks are seamless. A set of assembly rules is consistently followed from one iteration to the next, with anywhere from 6 to 40 iterations used to create a fractal tree. Trees have been constructed using this technique that are in some cases relatively realistic, and in other quite fantastical. Randomness in the construction process has also been explored, with the use of dice to generate random numbers dictating the construction rules for each iteration. Randomness can lead to the creation of significantly more natural looking trees. (Received September 21, 2010)