A procedural approach for thermal visualization on buildings

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Thermal behaviour analysis on buildings is an important goal for all tasks involving energy flow simulation in urban environments. One of the most widely used simplified thermal models is based on an electrical analogy, where nodes are set to simulate and solve a circuit network. In this paper we propose a procedural approach for automatically locate the nodes of the circuit, according to the building structure. We provide a conceptual technique to efficiently visualize thermal variations over time in buildings. We show that we can simulate and visually represent the variations of the interior temperatures of a building over a period of time. We believe that the technique could be helpful for rapid analysis for changing building parameters, such as materials, dimensions or number of floors.

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