

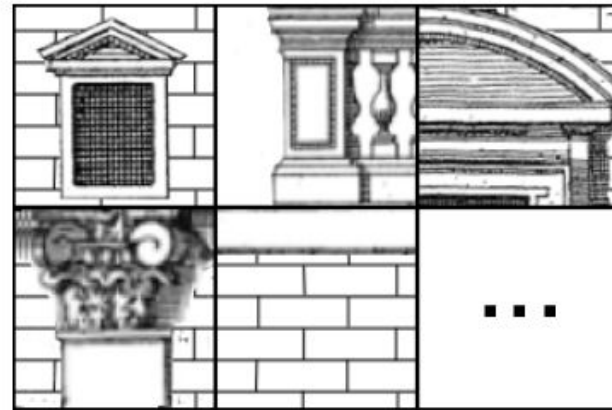
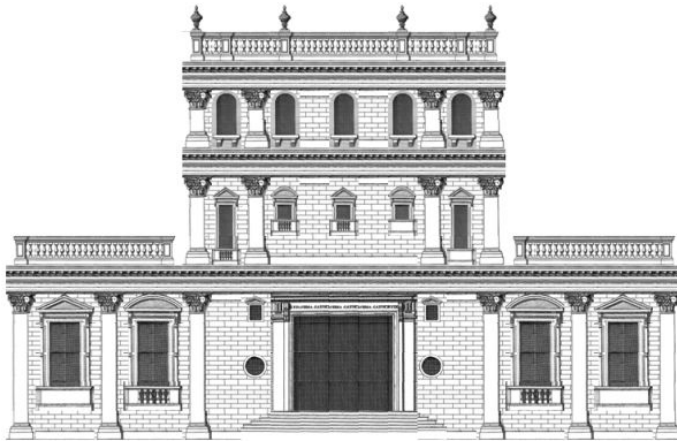
Synthesis of Tiled Patterns

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Oct 10, 2014

Article

- ◆ Yeh, Yi-Ting, et al. "Synthesis of tiled patterns using factor graphs." ACM Transactions on Graphics (TOG) 32.1 (2013): 3.

What is Synthesis of Tiled Patterns

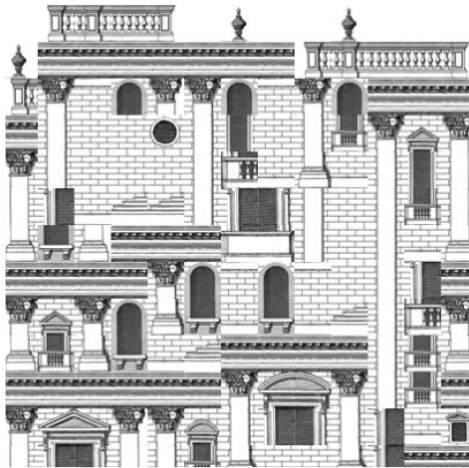


- ◆ Tiled pattern. The left picture is a original design, and the right one are some tiles with patterns cutted from the right one.

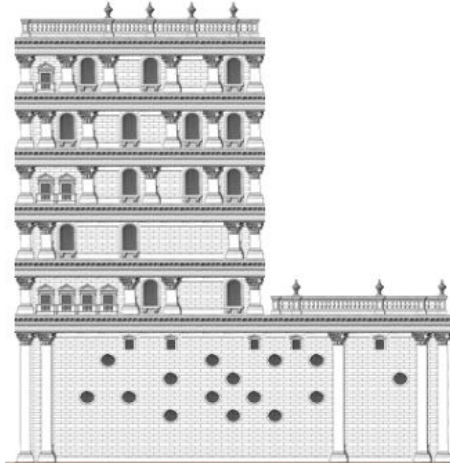
What is Synthesis of Tiled Patterns

- ◆ Then we want to generate some new designs automatically under some constraints. And these new designs must look natural.
 - ◆ No seams
 - ◆ Restricted by the exemplar

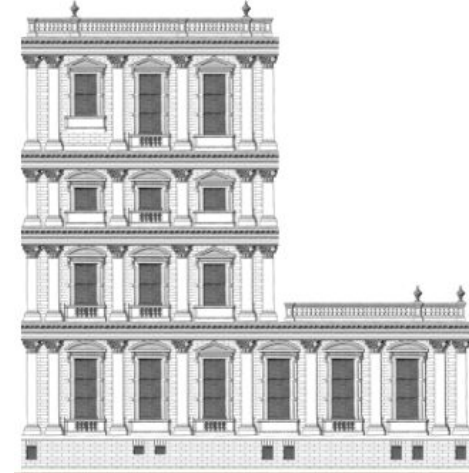
What is Synthesis of Tiled Patterns



with seams



unacceptable



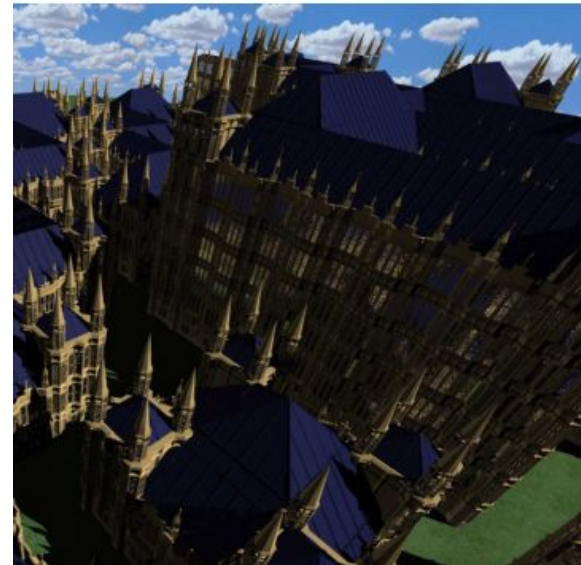
target

Why is Synthesis of Tiled Patterns

- ◆ Essential reason
 - ◆ My laptop can meet the requirement of the experiment.
 - ◆ It is brilliant and looks like minecraft.

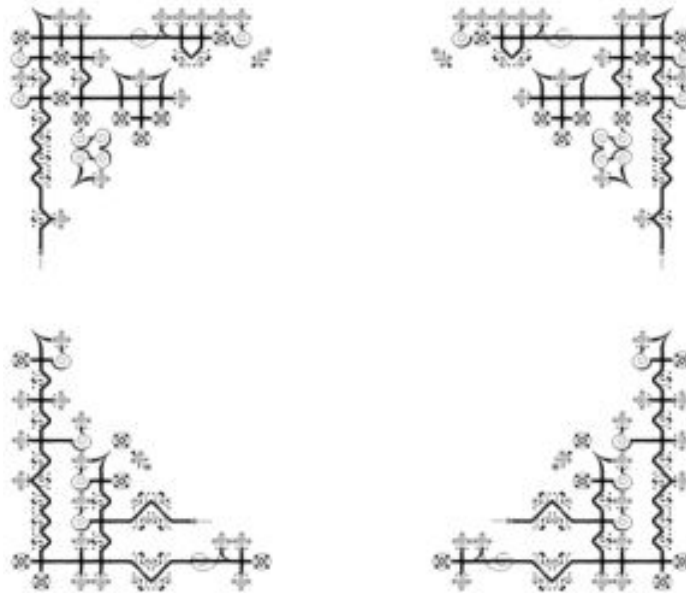
Why is Synthesis of Tiled Patterns

- ◆ It can give inspirations to artists.
- ◆ It can generate maps in a tile-based game.



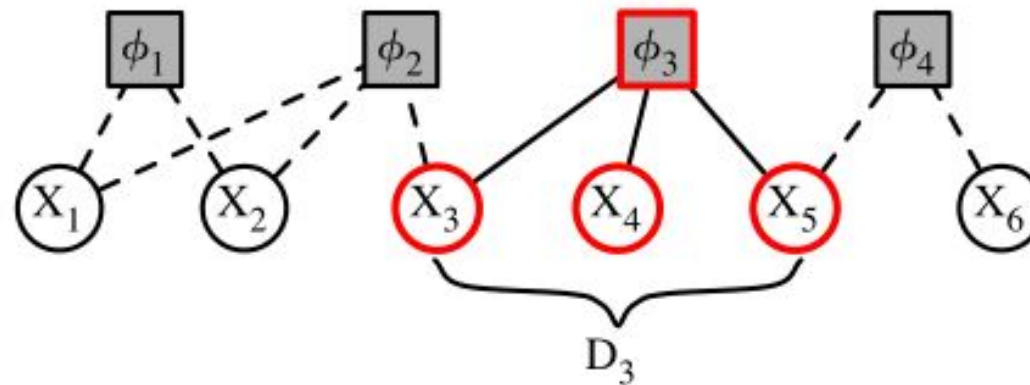
Why is Synthesis of Tiled Patterns

- ◆ It also can synthesize decorative patterns automatically.



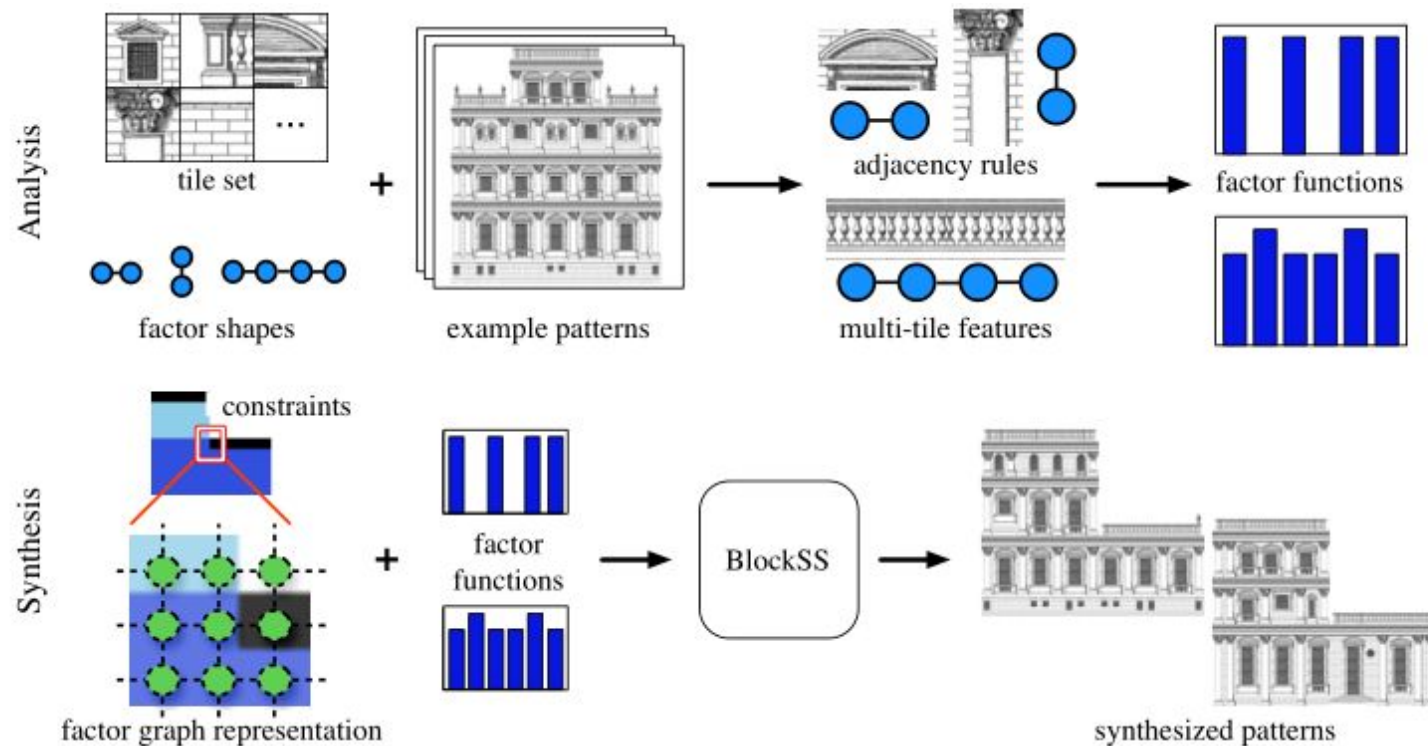
What is in this article

- ◆ Two steps: analysis and synthesis
- ◆ Two contributions: factor graphs and BLOCKSS



What is in this article

Pipeline:



Evaluated by KL-divergence

What is the improvement

Generate animations automatically.

Automatically learning the structure and parameters.

A better sampler

Build 3D scene with this algorithm



Thank you for your valuable time!

