Docket #: S11-376

Intelligent Suggestions for Furniture Layout

Stanford researchers have designed an intelligent software system that assists users by suggesting furniture arrangements that are based on interior design guidelines. This system incorporates the layout guidelines as terms in a density function and generates layout suggestions by rapidly sampling the density function using a hardware-accelerated Monte Carlo sampler. The results demonstrate that the suggestion generation functionality measurably increases the quality of furniture arrangements produced by participants with no prior training in interior design. This concept can also be applied to designing other layouts such as commercial space, lighting, and other 3D concepts.

Video

Applications

- For people moving into a new home or remodeling homes
- For customers considering buying a new piece of furniture
- For customers experimenting with different layouts, before purchasing the furniture

Advantages

- Inexpensive
- Intelligent system
- Based on interior design principles
- Can be translated to layout of commercial interior space, lighting design, and other 3D concepts

Publications

- US patent application 13/690,238: Method and System for Interactive Layout
- Paul Merrell, Eric Schkufza, Zeyang Li, Maneesh Agrawala, and Vladlen Koltun. Interactive furniture layout using interior design guidelines. ACM Transactions on Graphics. 30(4) article 87, July 2011.
- project minisite

Patents

- Published Application: 20130222393

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