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A Scalable Parallel Force-Directed Graph Layout Algorithm

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Anna Tikhonova　and Kwan-Liu Ma

根据重要度多阶段计算，在每阶段中进行并行。第一阶段是计算最重要的一部分节点，第二阶段时再固定前一阶段的节点位置基础上加入次重要的节点。

在并行的设计上：分的目标是让每个处理器的总 degree 数接近而非 vertex 数。避免了节点跨处理器的移动，只在处理器内部计算力引导，处理器之间只计算相互的影响。

给出了思路和结果分析，但没有具体可参考的伪代码。

在其 Future Work 中：

Additional structural information about a graph is sometimes known in advance. For example, it may be known that the graph has **a tree-like structure** or that it is bipartite. With this knowledge, an algorithm designed to perform well on a specific type of graph can be used to produce more aesthetically pleasing layouts and result in better running times.

在我们的任务中，找一个人的 n 度邻居得到的图更像是个 tree，可能可以在这方面做一些改进。

https://github.com/j-rock/tutte-your-stuff

Using Haskell + OpenGL to demonstrate force-directed graph drawing.

Implemented so far:

Tutte's algorithm (1963)

Fruchterman and Reingold's algorithm (1991)

Walshaw's algorithm (2003)