Minimum Cut Algorithm

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The graph read from text file input. An edge is then chosen at random with uniform probability over the graph. The two end points corresponding to this randomly chosen edge are contracted to form a super-node. When contracting the graph, all edges incident to the original vertices are connected to new super-node. Any self-loops which arise from this contraction are eliminated. This selection of a random edge and contraction of the connected vertices is done iteratively. The graph has one vertex less after each contraction. The algorithm is repeated until the graph contains only two super-nodes. The result is cut on the original graph, and consists of a number of edges that connect the two resilient super-nodes in the end. The algorithm is randomized and does not always return the minimum cut upon a single call; repeated calls are made.