Spanning USA report

Dennis Sadeler Shapira and Jonas Lomholt
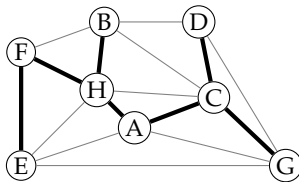
April 23, 2015

Results

The following table summarizes our results:

Input file	MST total weight
USA-highway-miles.txt	16598
tinyEWG-alpha.txt	181

The MST we found in tinyEWG-alpha.txt can be drawn like this:

Implementation details

We implemented the algorithm of Prim using the first-in-first-out
(FIFO) priority queue. In order to check connectivity we assign a
boolean to each vertex to keep track whether the vertex has yet been
visited or not.

The total running time for implementation $O(m \log n)$.