

Spanning USA

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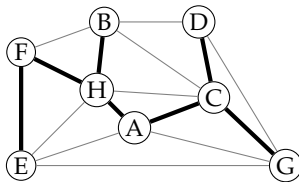
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Results

The following table summarizes our results:

| Input file | MST total weight |
|-----------------------|------------------|
| USA-highway-miles.txt | 16598.0 |
| tinyEWG-alpha.txt | 181.0 |

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



Implementation details

We implemented Prim's MST algorithm, using index priority queue (IndexMinPQ). After evaluating the first node and corresponding edges, we chose the one with least weight. After we connect them, we add new set of edges of new node to priority queue. And we continue so on, till we get MST. The total running time for implementation is $O(V^3 + \log^2 E)$.