

# Spanning USA Report

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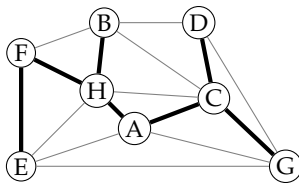
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## Results

The following table summarizes our results:

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

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



## Implementation details

We implemented Prim's algorithm(eager version), using an indexed priority queue. It is used for finding the edge with the minimum weight, which is connecting the MST to the vertices not belonging to the MST. The total running time is  $O(m \log(n))$ .