Input : find-better-parent request
Data: curr_dist = distance to current parent
lat = requesting node's latitude
lon = requesting node's longitude
pos = (lat,lon)
Output: new parent for requester

```
1  begin
2      best_dist = INTEGER_MAX;
3      best_idx = -1;
4      // find best parent locally
5      for child : self.children do
6          dist = euclidean_distance(pos, child_pos);
7          if dist < best_dist then
8              best_dist = dist;
9              best_idx = children.current_idx;
10         end
11     end
12     request random_sibling from self.parent;
13     receive best_rand, best_rand_dist // best child from random
           sibling and requesting node's distance to best child
14     if best_rand_dist < best_dist then
15         return best_rand, best_rand_dist
16     else
17         return children[best_idx], best_dist
18     end
19 end
```

Algorithm 1: Parent selection at requesting node's grandparent