Algorithm 2 DistanceGraphConstruction(Devices D, Device weights W)

$G_{dd}(V, E, \mathcal{L}_V, \mathcal{L}_E) \leftarrow (D, \emptyset, W, \emptyset)$
for each device $r_i \in D$ **do**
    for each device $r_j \in D$ and $r_j \neq r_i$ **do**
        if $(r_i, r_j) \in G_{dd}.E$ **then**
            continue
        find the indoor shortest path P from r_i to r_j
        if there is no other device on P **then**
            add edge (r_i, r_j) to $G_{dd}.E$ with the weights between them
        else
            for each pair of consecutive devices r_k and r_l on P **do**
                if $(r_k, r_l) \in G_{dd}.E$ **then**
                    continue
                else
                    add edge (r_k, r_l) to $G_{dd}.E$ with the weights between them
return G_{dd}