

**Algorithm 1**  $d2dDistance$ (Source door  $d_s$ , destination door  $d_t$ )

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1: initialize a min-heap  $H$ 
2: for each door  $d_i \in \mathcal{S}_{door}$  do
3:   if  $d_i \neq d_s$  then
4:      $dist[d_i] \leftarrow \infty$ 
5:   else
6:      $dist[d_i] \leftarrow 0$ 
7:    $enheap(H, \langle d_i, dist[d_i] \rangle)$ 
8:    $prev[d_i] \leftarrow \text{null}$ 
9: while  $H$  is not empty do
10:   $\langle d_i, dist[d_i] \rangle \leftarrow deheap(H)$ 
11:  if  $d_i = d_t$  then
12:    return  $dist[d_i]$ 
13:  mark door  $d_i$  as visited
14:   $parts \leftarrow D2P_{\square}(d_i)$ 
15:  for each partition  $v \in parts$  do
16:    for each unvisited door  $d_j \in P2D_{\square}(v)$  do
17:      if  $dist[d_i] + G_{dist}.f_{d2d}(v, d_i, d_j) < dist[d_j]$  then
18:         $dist[d_j] \leftarrow dist[d_i] + G_{dist}.f_{d2d}(v, d_i, d_j)$ 
19:        replace  $d_j$ 's element in  $H$  by  $\langle d_j, dist[d_j] \rangle$ 
20:         $prev[d_j] \leftarrow (v, d_i)$ 

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