
Algorithm 3 **expandList**(Entry e_P in R-tree R_P for indoor POIs, List $list$ of entries in R-tree R_I)

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1:  $ubFlow \leftarrow 0$ ;  $list2 \leftarrow \emptyset$ 
2: for each entry  $e_I \in list$  do
3:   for each sub-entry  $e'_I$  in  $e_I.node$  do
4:     if  $e_P.mbr$  intersects  $e'_I.mbr$  then
5:        $ubFlow \leftarrow ubFlow + e'_I.count$ 
6:        $list2 \leftarrow list2 \cup \{e'_I\}$ 
7: if  $list2 \neq \emptyset$  then
8:    $Q.enqueue(\langle e_P, list2, ubFlow \rangle)$ 
```
