
ALGORITHM 1: *calCodeOverlay*($G, PASS, \langle V, R \rangle, \langle V, S \rangle$)

```
1: code_overlay  $\leftarrow 0$ 
2: for  $r \in R$  do
3:   /*  $s_{last}$  is the last segment that is loaded to region  $r$  following  $PASS$  */
4:   Initialize  $mem\_state[r] \leftarrow s_{last}$ 
5: end for
6: for  $i \in [0, |PASS| - 1]$  do
7:    $s_{cur} \leftarrow getSegment(\langle V, S \rangle, i)$ 
8:    $r_{cur} \leftarrow getRegion(\langle V, R \rangle, i)$ 
9:   if  $s_{cur} \neq mem\_state[r_{cur}]$  then
10:     $code\_overlay \leftarrow code\_overlay + T_c(C_{s_{cur}})$ 
11:     $mem\_state[r_{cur}] \leftarrow s_{cur}$ 
12:   end if
13: end for
14: return code_overlay
```
