ALGORITHM 6: *calCodeOverlayDeepPre(G, PASS, STATUS, <V,R>, <V,S>)*

```
1: Initialize code_overlay ←0
2: for r ∈ R do
3:    /* s_last is the last segment that is loaded to region r following PASS */
4:    Initialize mem_state[r] ← s_last
5: end for
6: for j ∈ [0, |PASS| − 1] do
7:    s_cur ← getSegment(<V,S>, j)
8:    r_cur ← getRegion(<V,R>, j)
9:    if s_cur ≠ mem_state[r_cur] then
10:      i ← (j − 1 + |PASS|)%|PASS|
11:      while getRegion(<V,R>, i) ≠ r_cur do
12:         i ← (i − 1 + |PASS|)%|PASS|
13:      end while
14:      < max_start, max_period > ← findMaxPeriod(PASS, STATUS, i, j)
15:      cost ← T_c(C_{s_cur})
16:      overhead ← setDMABusy(PASS, STATUS, cost, max_start, j)
17:      code_overlay ← code_overlay + overhead
18:      mem_state[r_cur] ← s_cur
19:   end if
20: end for
21: return code_overlay
```