

Optimization 1: Early detection and $2N+1+\log(N)$ bits

```
procedure DFSblue(s,i)
  s.color[i] := cyan
  for all t  $\in$  post(s) do
    if t.color[i]=cyan and s or t  $\in$  Acc then ExitCycle
    if t.color[i]=white and  $\neg$ t.red then DFSblue(t,i)
  if s  $\in$  Acc then s.count++; DFSred(s,i)
  s.color[i] := blue
```

```
procedure DFSred(s,i)
  s.color[i] := pink
  for all t  $\in$  post(s) do
    if t.color[i]=cyan then ExitCycle
    if t.color[i] $\neq$ pink and  $\neg$ t.red then DFSred(t,i)
  if s  $\in$  Acc then s.count--; await s.count=0
  s.red := true
```