

Global invariant *GRAPH*:

```
token has value V ⇒  
  ( the last V channels in cycle C were empty ^  
    the last V processes to receive the token were blue )
```

actions of $T[i]$ upon receiving a regular message:

```
color[i] = red;
```

actions of $T[i]$ upon receiving the token:

```
if (token == nc)  
  announce termination and halt;  
if (color[i] == red)  
  { color[i] = blue; token = 0; }  
else  
  token++;  
set j to index of channel for next edge in cycle C;  
send ch[j](token);
```

Figure 9.18 Termination detection in a complete graph.