Global invariant *RING*:

```
T[1] is blue ⇒ ( T[1] ... T[token+1] are blue ∧
                 ch[2] ... ch[token%n + 1] are empty )
```

actions of `T[1]` when it first becomes idle:

```
color[1] = blue; token = 0; send ch[2](token);
```

actions of `T[2], ..., T[n]` upon receiving a regular message:

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

actions of `T[2], ..., T[n]` upon receiving the token:

```
color[i] = blue; token++; send ch[i%n + 1](token);
```

actions of `T[1]` upon receiving the token:

```
if (color[1] == blue)
  announce termination and halt;
color[1] = blue; token = 0; send ch[2](token);
```

Figure 9.16 Termination detection in a ring.