

The Two-Process One-Bit Algorithm

```
--algorithm OneBit{
  variable  $x = [i \in \{0, 1\} \mapsto \text{FALSE}]$ ;
  fair process (  $P \in \{0, 1\}$  )
  {  $ncs$ :- while ( TRUE )
    { skip;
      e1:  $x[self] := \text{TRUE}$ ;
      e2: if (  $\neg x[1 - self]$  ) {  $cs$ : skip }
        else { if (  $self = 0$  ) { goto e2 }
              else { e3:  $x[1] := \text{FALSE}$ ;
                    e4: while (  $x[0]$  ) { skip } ;
                        goto e1
                    }
              }
        } ;
      f:  $x[self] := \text{FALSE}$ 
    }
  }
}
```