

Mutex in PROMELA

Algorithm 1

David Kendall

Mutex in PROMELA I

```
#define FORBIDDEN 0
#define ALLOWED 1

bit entry = ALLOWED;
byte n = 0;

proctype P() {
    do
        :: (entry == ALLOWED);
           entry = FORBIDDEN;
           /* critical section */
           n = n + 1;
           assert (n == 1);
           /* end critical section */
    od
}
```

Mutex in PROMELA II

```
    n = n - 1;
    entry = ALLOWED;
    /* non-critical section */
    do
        :: (true) -> skip
        :: break
    od
od
}

init {
    atomic {
        run P(); run P()
    }
}
```