```
monitor RW_Controller {

  int nr = 0, nw = 0;  ## (nr == 0 ∨ nw == 0) ∧ nw <= 1
  cond oktoread;     #  signaled when nw == 0
  cond oktowrite;    #  signaled when nr == 0 and nw == 0

  procedure request_read() {
    while (nw > 0) wait(oktoread);
    nr = nr + 1;
  }

  procedure release_read() {
  nr = nr - 1;
  if (nr == 0) signal(oktowrite);  # awaken one writer
  }

  procedure request_write() {
    while (nr > 0 || nw > 0) wait(oktowrite);
    nw = nw + 1;
  }

  procedure release_write() {
    nw = nw - 1;
    signal(oktowrite);       # awaken one writer and
    signal_all(oktoread);    # all readers
  }

}
```

Figure 5.5 Readers/writers solution using monitors.