Costs of various FIFOs

	Single Producer		Multiple Producer	
	Report Full	Overwrite on Full	Report Full	Overwrite on Full
Report Empty				
“null” on Empty				
Report Empty				
“null” on Empty				

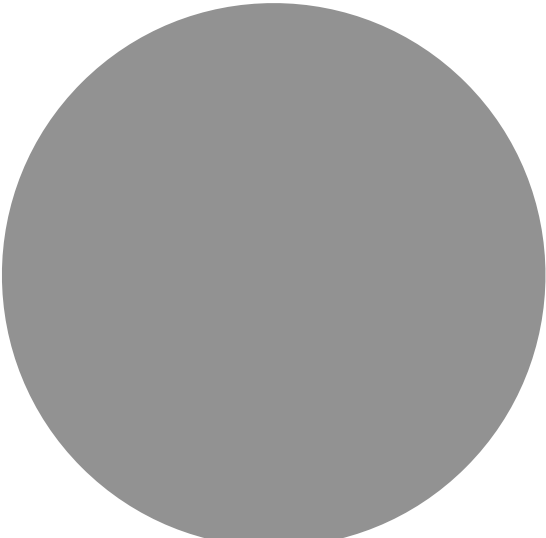
Wait free on read

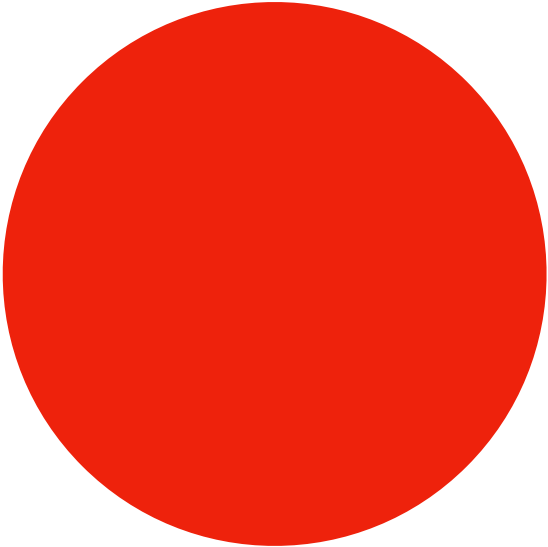
Not wait free on write or read

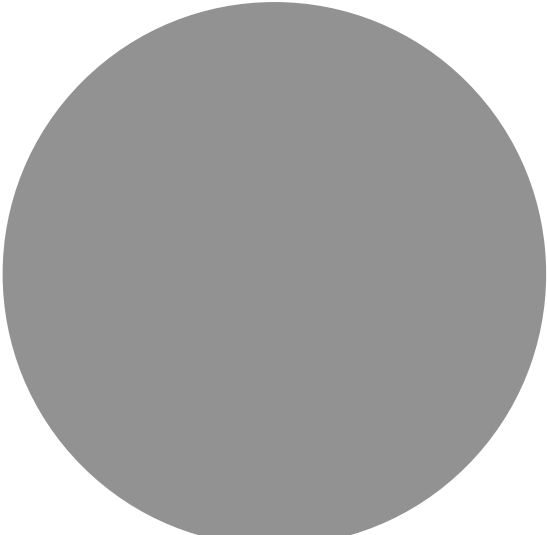
Wait free on write

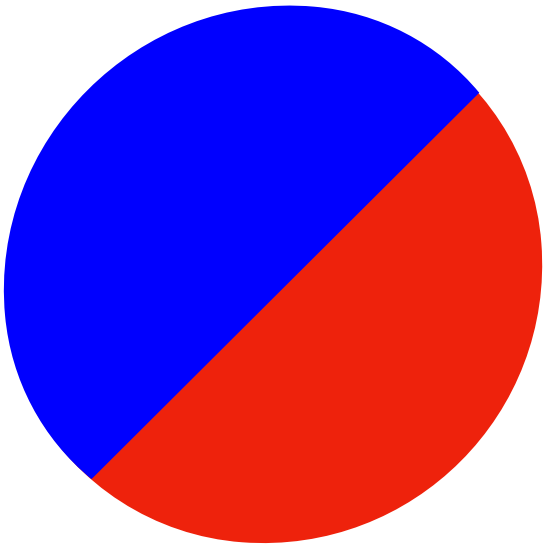
Wait free on read and write

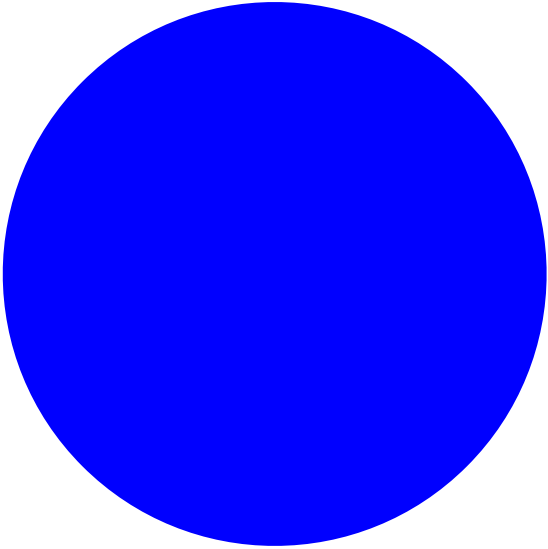
67

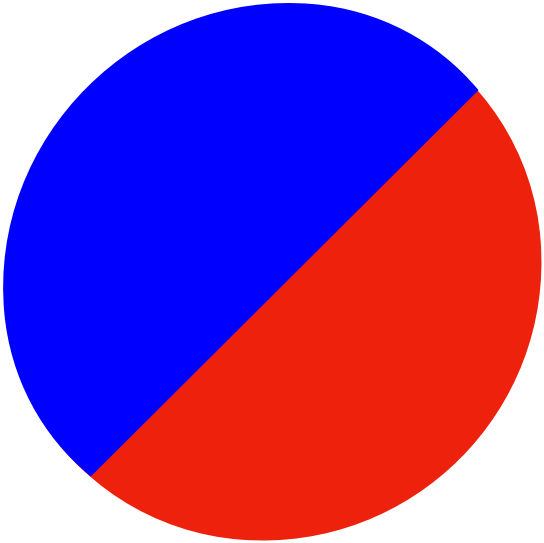


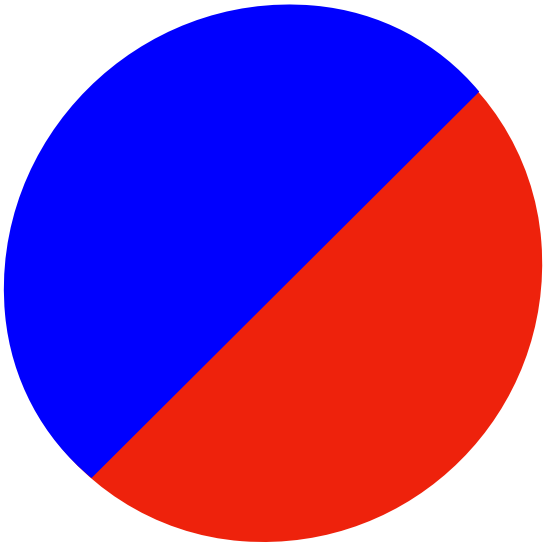


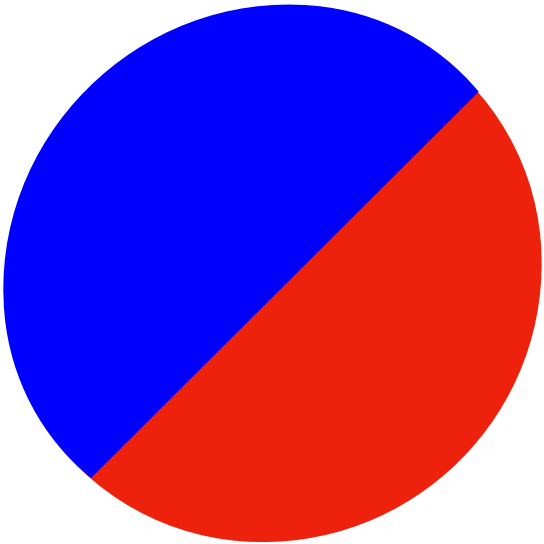


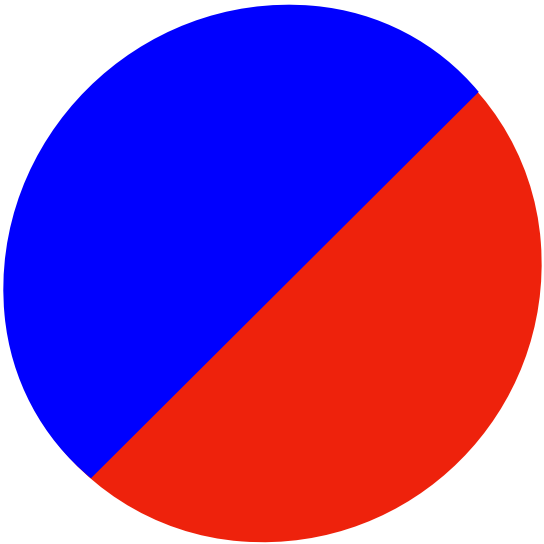


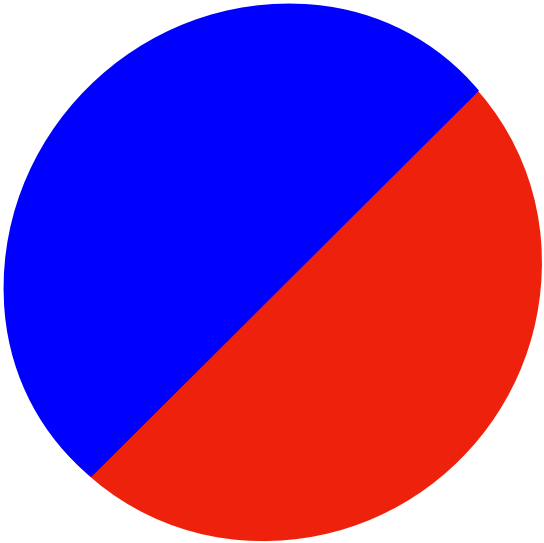


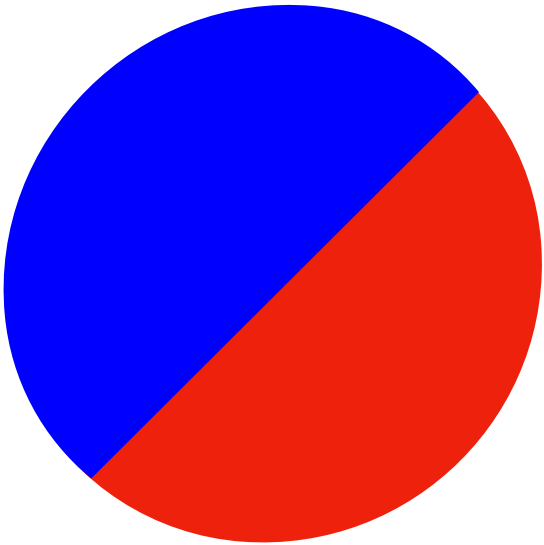


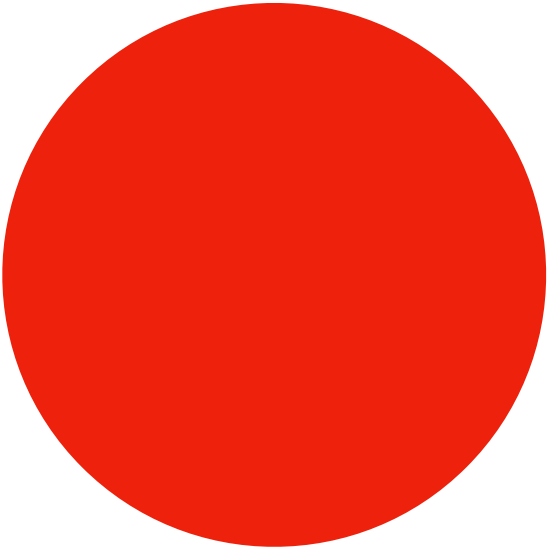


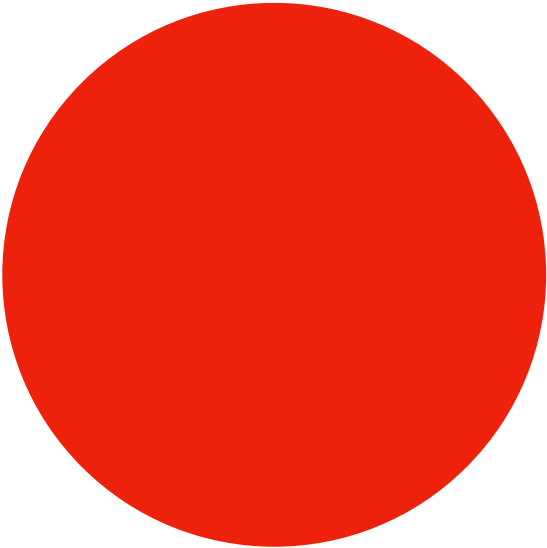


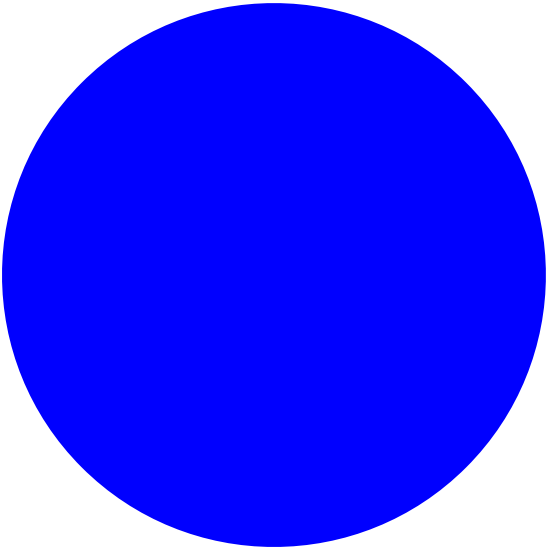


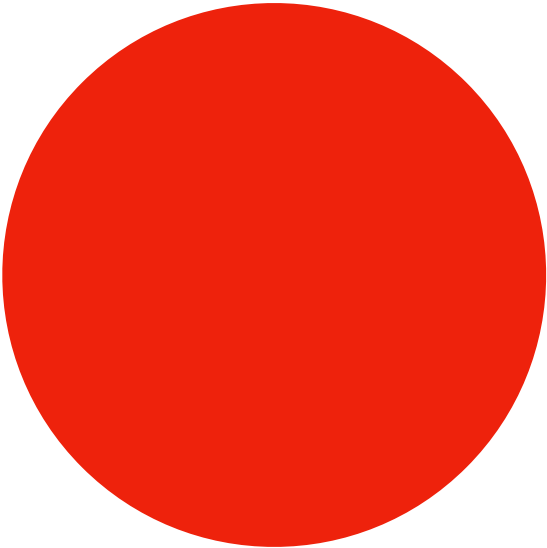


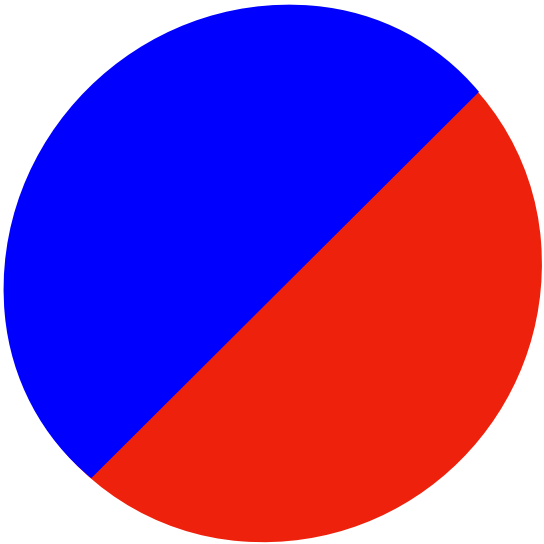


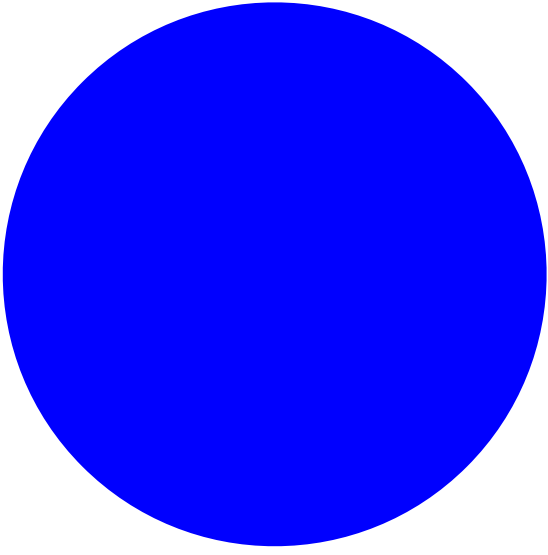


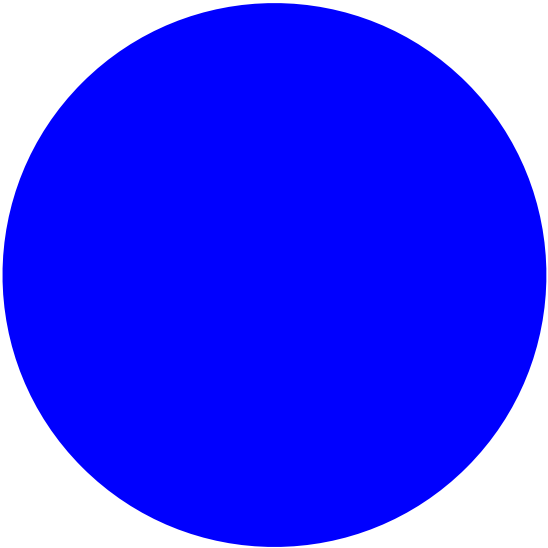


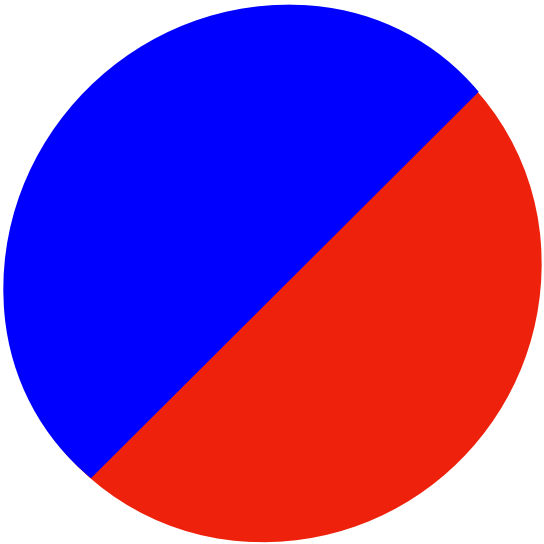


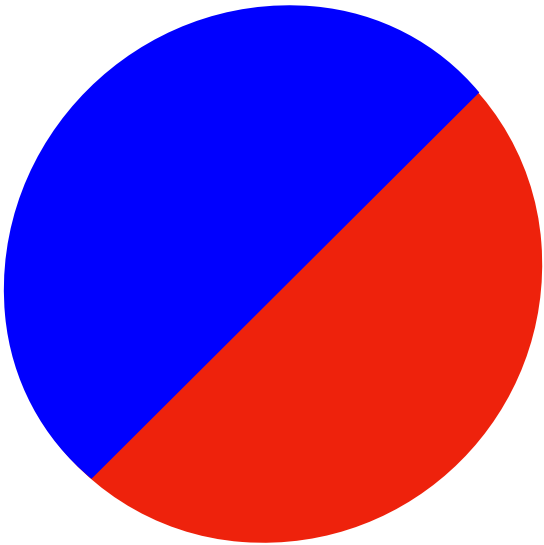












Costs of various FIFOs

Wait free on read

Wait free on write

Wait free on read and write

Not wait free on write or read

`farbot`'s FIFO

- Supports all 16 variants
- Most general variant is 60% slower than boost's fifo
  - 5x faster than naïve solution (i.e. single producer, single consumer with spin locks)
- Other variants are comparable in speed with boost's fifo
- All variants are TSAN compatible (no false positives)

Alexander Krizhanovsky: http://natsys-lab.blogspot.com/2013/05/lock-free-multi-producer-multi-consumer.html