

MFC2

Variables : send-creds, recv-creds, maxcreds

: ~~send-creds~~ $\text{recv-creds} = \frac{\text{max-creds}}{N}$ ($N = \text{number of members}$)

: min-threshold (0.2 by default)

Sender Send msg :

- if send-creds - size ≥ 0 :
 - send-creds = send-creds - size
 - send msg
- else
 - ~~block until size credits are available~~
 - diff = size - send-creds
 - send-creds = 0
 - block until diff credits are available
 - ~~send~~ Multicast SEND-CREDITS msg

Receive msg :

- Detect msg
- if msg.src != self :
 - recv-creds -= msg.size
- if recv-creds \leq min-threshold :
 - ~~send~~ New-creds = max-recv-creds - recv-creds
 - recv-creds = max-recv-creds
 - ~~send~~ Multicast REPLENISH (new-creds) msg

Receive SEND-CREDITS msg

- New-creds = max-recv-creds - recv-creds
- recv-creds = max-recv-creds
- Multicast REPLENISH (new-creds) msg

Receive REPLENISH (^{creds} ~~msg~~) msg

- Send-creds = MIN (send-creds + creds, max-creds)
- Unblock potentially blocked sender

send

~~if length <= credits → credits -= length
→ send~~

```
while length > credits || credits == 0 :  
    if credits == 0  
        . send credit request  
        . block  
    else  
        . length = length - credits  
        . credits = 0  
end-while
```

- credits = credits - length
- send message
- if credits <= min-threshold
 . credits += (max credits · $\frac{1}{N}$) → unblock
 . send credits ($\frac{1}{N}$)

receive (length)

- ignore if self == sender !!
- credits -= length (min: 0) (~~if self != sender~~)
- if credits <= min-threshold →
 . credits += $\frac{1}{N}$ → unblock
 . send $\frac{1}{N}$ credits

receive credits (N)

- ignore if self == sender !
- credits += N
- unblock