

task S.FEEDTEAM

$x = i = 0$

while True do

 [chunk] $\leftarrow O$

$[x, \text{chunk}] \rightarrow P_i$

$D[x] = P_i$

$i = (i + 1) \bmod |T|$

$x = (x + 1) \bmod \text{MAX_CHUNK_NUMBER}$

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function  $P_k$ .BUFFERDATA
    PROCESSMSG
    chunk.to.play =  $x$ 
    while  $x < \text{chunk.to.play}$  or  $(x - \text{chunk.to.play}) < B/2$  do
        PROCESSMSG()

function  $P_k$ .PROCESSMSG
    if  $x \geq 0$  then
        PROCESSCHUNKMSG
    else
        PROCESSCONTROLMSG

function  $P_k$ .PROCESSCHUNKMSG
    if  $\text{buffer}[x\%B].\text{chunk\_number} = x$  then
        PROCESSDUPLICATECHUNK
    else
        PROCESSNEWCHUNK

function  $P_k$ .PROCESSDUPLICATECHUNK
    [prune  $x$ ]  $\rightarrow \text{sender}$ 

function  $P_k$ .PROCESSNEWCHUNK
     $\text{buffer}[x\%B] = [x, \text{origin}, \text{chunk}]$ 
    if  $\text{sender} \neq S$  then
         $\text{debt}[\text{sender}] = \text{debt}[\text{sender}] - 1$ 
         $\text{forward}[P_k] = \text{forward}[P_k] \cup \text{sender}$ 
    for all  $P_i \in \text{forward}[\text{origin}]$  do
         $\text{pending}[P_i] = \text{pending}[P_i] \cup x$ 
    for all  $\text{chunk\_number} \in \text{pending}[\text{neighbor}]$  do
         $\text{buffer}[x\%B] \rightarrow \text{neighbor}$ 
         $\text{pending}[\text{neighbor}] = \text{pending}[\text{neighbor}] \setminus x$ 
         $\text{debt}[\text{neighbor}] = \text{debt}[\text{neighbor}] + 1$ 
        if  $\text{debt}[\text{neighbor}] > D$  then
            for all  $\text{peers.list} \in \text{forward}$  do
                 $\text{peers.list} = \text{peers.list} \setminus \text{neighbor}$ 
             $\text{neighbor} =$ 
function  $P_k$ .PROCESSCONTROLMSG
    if  $x = \text{request}$  then
         $\text{origin} = \text{buffer}[\text{chunk}\%B].\text{origin}$ 
         $\text{forward}[\text{origin}] = \text{forward}[\text{origin}] \cup \text{sender}$ 
    if  $x = \text{prune}$  then
         $\text{origin} = \text{buffer}[\text{chunk}\%B].\text{origin}$ 
         $\text{forward}[\text{origin}] = \text{forward}[\text{origin}] \setminus \text{sender}$ 
    if  $x = \text{hello}$  then
         $\text{Peer.add\_neighbor}(\text{sender})$ 
    if  $x = \text{goodbye}$  then
        for all  $\text{peers.list} \in \text{forward}$  do
```