



C arrives at $t=0$, starts being scheduled at $t=0$.
It finishes its last bit at 110.

Q arrives at $t=65$, starts being scheduled at $t=110$.
It finishes its last bit at 270.

Schedule times
are relative to
the time at which
the encoded block
is received

HOWEVER...

its first gap must be scheduled at 65

because Q arrives
45ms later than C.

$$\text{last scheduled time (=110)} - \text{now (=65)} = 45$$

To know what 'now' is, the epoch time of the last
scheduled time must be recorded.

When a block arrives when we're still playing

C arrives at epoch 120000 (made up).

Q arrives at epoch 120045 ← figures

start at $\max(0, \text{last epoch scheduled} - \text{now})$

Schedule - - - -

last epoch scheduled = now

So Q: $\max(0, 120110 - 120045)$

$\max(0, 65) = \underline{\underline{65}}$ ✓ i.e. in 65ms.

When a block arrives after we've finished playing

Block "A". Arrives at 120300. last ^{epoch} scheduled time = 120270.

Schedule at $\max(0, 120270 - 120300)$

$\max(0, -30) = 0$ i.e. NOW

First block.

Detect no previous blocks, set last epoch scheduled = now

Schedule at $\max(0, \text{last epoch scheduled} - \text{now}) = 0$

i.e. NOW

↙ or initialise last epoch scheduled to now on startup.

