Let $t$ be an extended natural time variable. Is the following specification implementable?

(a) $\forall n: \text{nat} \cdot \mathcal{M}_n = n \land \mathcal{T}_n = t$

§ No. If $w > 0$ and $n = 0$ we are writing a message that was already sent.

(b) $\forall n: \text{nat} \cdot \mathcal{M}_{w+n} = n-t \land \mathcal{T}_{w+n} = t-n$

§ No. When $n=1$ we are specifying a time $t-1$ that is before now $t$.

(c) $\forall n: \text{nat} \cdot \mathcal{M}_{r+n} = n \land \mathcal{T}_{r+n} = t$

§ No. If $w > r$ and $n=0$ then $r+n < w$, so we are writing a message that was already sent.

(d) $\mathcal{M}_w = t-1 \land \mathcal{T}_w = t-1$

§ No because the time of this message $t-1$ is before now $t$. 