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

(a) $\forall n: \text{nat} \cdot M_n = n \land T_n = t$

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

(b) $\forall n: \text{nat} \cdot M_{w+n} = n-t \land T_{w+n} = t-n$

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

(c) $\forall n: \text{nat} \cdot M_{r+n} = n \land T_{r+n} = t$

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

(d) $M_w = t-1 \land T_w = t-1$

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