

$$\begin{aligned}
A &== [ns : \mathbb{F}\mathbb{N}_1] \\
AInit &== [A' \mid ns' = \emptyset] \\
New &== [\Delta A; n? : \mathbb{N}_1 \mid ns' = ns \cup \{n?\}] \\
MSF &== [\Xi A; m! : \mathbb{N}_1 \mid ns \neq \emptyset; m! = \max ns]
\end{aligned}$$

Store the two max seen so far as they are observed.

$$\begin{aligned}
C5 &== [c, d : \mathbb{N} \mid c \geq d] \\
C5Init &== [C5' \mid c' = 0] \\
C5_{New} &== [\Delta C5; n? : \mathbb{N}_1 \mid c' = \text{if } c < n? \text{ then } n? \text{ else } c; d' = \text{if } d < n? \text{ then } n? \text{ else } d] \\
C5_{MSF} &== [\Xi C5; m! : \mathbb{N} \mid m! = c]
\end{aligned}$$

$LI5$
$A; C5$
$c = 0 \Rightarrow ns = \emptyset$ $c \neq 0 \Rightarrow (ns \neq \emptyset \wedge c = \max ns)$

$C5_{MSF2}$
$\Xi C5$ $ma!, mb! : \mathbb{N}$
$ma! = c$ $mb! = d$