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

$$
\begin{array}{|l}
\multicolumn{1}{l}{AM2SF} \\
\Xi A \\
m1!, m2! : \mathbb{N}_1 \\
\hline
\#\, ns > 1 \\
m1! = max\ ns \\
m2! = max\ (ns \setminus \{m1!\}) \\
\hline
\end{array}
$$

Store the two max seen so far as they are observed. Must be $c = 0 \wedge d = 0$ to ensure two MSF are unique.

$C5 == [c, d : \mathbb{N} \mid (c = 0 \wedge d = 0) \vee c < d]$
$C5Init == [C5' \mid c' = 0 \wedge d' = 0]$
$C5MSF == [\Xi C5;\ m! : \mathbb{N} \mid m! = c]$

$$
\begin{array}{|l}
\multicolumn{1}{l}{LI5} \\
A;\ C5 \\
\hline
c = 0 \Rightarrow ns = \varnothing \\
(c > 0 \wedge d = 0) \Rightarrow ns = \{c\} \\
d > 0 \Rightarrow (\{c, d\} \subseteq ns \wedge c = max\ ns \wedge d = max(ns \setminus \{c\})) \\
\hline
\end{array}
$$

$$
\begin{array}{|l}
\multicolumn{1}{l}{C5New} \\
\Delta C \\
n? : \mathbb{N}_1 \\
\hline
\textbf{if}\ n? > c1\ \textbf{then}\ c' = n? \wedge d' = c \\
\textbf{else}\ (\textbf{if}\ (n? > d \wedge n? < c)\ \textbf{then}\ c' = c \wedge d' = n? \\
\textbf{else}\ c' = c \wedge d' = d) \\
\hline
\end{array}
$$

$$
\begin{array}{|l}
\multicolumn{1}{l}{C5MSF2} \\
\Xi C5 \\
ma!, mb! : \mathbb{N} \\
\hline
ma! = c \\
mb! = d \\
\hline
\end{array}
$$