ACTUS latex equations

cet

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Contents

1 PAM equations

$$\boxed{\vec{t}^{PP} = \begin{cases} \varnothing & \text{if PPEF} =' N' \\ (\vec{u}, \vec{v}) & \text{else} \end{cases}} \text{ where } \begin{cases} \vec{u} = S(s, \text{PPCL}, T^{MD}) \\ \vec{v} = O^{ev}(\text{CID}, \text{PP}, t) \\ s = \begin{cases} \varnothing & \text{if PPAIX} = \varnothing \wedge \text{PPCL} = \varnothing \\ \text{IED} + \text{PPCL} & \text{else if PPAIX} = \varnothing \\ \text{PPAIX} & \text{else} \end{cases} \end{cases}$$

$$\boxed{\vec{t}^{PY} = \begin{cases} \varnothing & \text{if PYTP} =' O' \\ \vec{t}^{PP} & \text{else} \end{cases}}$$

$$\boxed{\vec{t}^{FP} = \begin{cases} \varnothing & \text{if FER} = \varnothing \vee \text{FER} = 0 \\ S(s, \text{FECL}, T^{MD}) & \text{else} \end{cases}} \text{ where } s = \begin{cases} \varnothing & \text{if FEAUX} = \varnothing \wedge \text{FECL} = \varnothing \\ \text{IED} + \text{FECL} & \text{else if FEAUX} = \varnothing \\ \text{FEAUX} & \text{else} \end{cases}$$

$$\boxed{\vec{t}^{IP} = \begin{cases} \varnothing & \text{if IPNR} = \varnothing \\ S(s, \text{IPCL}, T^{MD}) & \text{else} \end{cases}} \text{ where } s = \begin{cases} \varnothing & \text{if IPAIX} = \varnothing \wedge \text{IPCL} = \varnothing \\ \text{IPCED} & \text{else if IPCED} \neq \varnothing \\ \text{IED} + \text{IPCL} & \text{else if IPAIX} = \varnothing \\ \text{IPAIX} & \text{else} \end{cases}$$

$$\boxed{\mathbf{Md}_{t_0} = \text{MD}}$$

$$\boxed{\mathbf{Nt}_{t_0} = \begin{cases} 0.0 & \text{if IED} > t_0 \\ R(\text{CNTRL}) \times \text{NT} & \text{else} \end{cases}}$$

$$\boxed{\mathbf{Ipnr}_{t_0} = \begin{cases} 0.0 & \text{if IED} > t_0 \\ \text{IPNR} & \text{else} \end{cases}}$$

$$\boxed{\mathbf{Ipac}_{t_0} = \begin{cases} 0.0 & \text{if } \mathbf{IPNR} = \varnothing \\ \text{IPAC} & \text{else if IPAC} \neq \varnothing \\ Y(t^-, t_0) \times \mathbf{Nt}_{t_0} \times \mathbf{Ipnr}_{t_0} & \text{else} \end{cases}}$$

$$\boxed{\mathbf{Feac}_{t_0} = \begin{cases} 0.0 & \text{if } \mathbf{FER} = \varnothing \\ \text{FEAC} & \text{else if FEAC} \neq \varnothing \\ Y(t^{FP-}, t_0) \times \mathbf{Nt}_{t_0} \times \mathbf{FER} & \text{else if FEB} =' N' \\ \frac{Y(t^{FP-}, t_0)}{Y(t^{FP-}, t^{FP+})} \times \mathbf{FER} & \text{else} \end{cases}}$$

$$\boxed{\text{POF\_PP\_PAM}() = X^{\text{CURS}}_{\text{CUR}}(t) \cdot f(O^{ev}(\text{CID}, \text{PP}, t))}$$

$$\boxed{\text{POF\_PY\_PAM}() = \begin{cases} X^{\text{CURS}}_{\text{CUR}}(t) \cdot R(\text{CNTRL}) \cdot \text{PYRT} & \text{if PYTP} =' A' \\ c \cdot \text{PYRT} & \text{if PYTP} =' N' \\ c \cdot \max(0, \mathbf{Ipnr}_{t^-} - O^{rf}(\text{RRMO}, t)) & \text{if PYTP} =' I' \end{cases}}$$

where $c = X^{\text{CURS}}_{\text{CUR}}(t) R(\text{CNTRL}) Y(\mathbf{Sd}_{t^-}, t) \mathbf{Nt}_{t^-}$

$$\boxed{\text{POF\_FP\_PAM}() = \begin{cases} R(\text{CNTRL}) \cdot c & \text{if FEB} =' A' \\ c \cdot Y(\mathbf{Sd}_{t^-}, t) \cdot \mathbf{Nt}_{t^-} + \mathbf{Feac}_{t^-} & \text{if FEB} =' N' \end{cases}} \text{ where}$$

$c = X^{\text{CURS}}_{\text{CUR}}(t) \cdot \text{FER}$

$$\boxed{\text{POF\_PRD\_PAM}() = X^{\text{CURS}}_{\text{CUR}}(t) R(\text{CNTRL})(-1)(\text{PPRD} + \mathbf{Ipac}_{t^-} + Y(\mathbf{Sd}_{t^-}, t) \mathbf{Ipnr}_{t^-} \mathbf{Nt}_{t^-})}$$

$$\boxed{\text{POF\_IP\_PAM}() = X^{\text{CURS}}_{\text{CUR}}(t) \mathbf{Isc}_{t^-} (\mathbf{Ipac}_{t^-} + Y(\mathbf{Sd}_{t^-}, t) \mathbf{Ipnr}_{t^-} \mathbf{Nt}_{t^-})}$$

$$\boxed{\mathbf{Ipnr}_{t^+} = \min(\max(\mathbf{Ipnr}_{t^-} + \Delta r, \text{RRLF}), \text{RRLC})} \text{ where } \Delta r = \min(\max(O^{rf}(\text{RRMO}, t) \text{RRMLT} + \text{RRSP} - \mathbf{Ipnr}_{t^-}, \text{RRPF}), \text{RRPC})$$

$$\boxed{\mathbf{Nsc}_{t^+} = \begin{cases} \mathbf{Nsc}_{t^-} & \text{if SCEF} = [x]0[x] \\ \frac{O^{rf}(\text{SCMO}, t) - \text{SCIBD}}{\text{SCIBD}} & \text{else} \end{cases}}$$

$$\boxed{\mathbf{Isc}_{t^+} = \begin{cases} \mathbf{Isc}_{t^-} & \text{if SCEF} = 0[x][x] \\ \frac{O^{rf}(\text{SCMO}, t) - \text{SCIBD}}{\text{SCIBD}} & \text{else} \end{cases}}$$

$$\boxed{\mathbf{Pmxt}_{t_0} = \begin{cases} \text{PRMXT} & \text{if PRMXT} \neq \varnothing \\ \text{NT}\left(\text{ceil}\left(\frac{Y(s, T^{MD})}{Y(s, s + \text{PRCL})}\right)\right)^{-1} & \text{else} \end{cases}}$$

$$\boxed{\text{POF\_PR\_LAM}() = X^{\text{CURS}}_{\text{CUR}}(t) R(\text{CNTRL}) \mathbf{Nsc}_{t^-} \mathbf{Pmxt}_{t^-}}$$

$$\boxed{\mathbf{Ipcb}_{t_0} = \begin{cases} 0.0 & \text{if } t_0 < \text{IED} \\ R(\text{CNTRL})\text{NT} & \text{else if IPCB} =' NT' \\ R(\text{CNTRL})\text{IPCBA} & \text{else} \end{cases}}$$