

$termvar, x, y$ term variable

$index, i, j, k$

$term, t, r, s, n$

$::=$

x
 contra
 $\lambda x : T. t$
 $t_1 t_2$
 $\Box t$
 $\Diamond t$
 $\blacksquare t$
 $\blacklozenge t$
 $\text{let } \Box t_1 : T = t_2 \text{ in } t_3$
 $\text{let } \blacksquare t_1 : T = t_2 \text{ in } t_3$
 $\text{let } \Diamond t_1 : T = t_2 \text{ in } t_3$
 $\text{let } \blacklozenge t_1 : T = t_2 \text{ in } t_3$
 (t)

S

term

variable
 unary functions
 function application
 past necessity functor
 past possibility functor
 necessity functor
 possibility functor
 past necessity elim
 necessity elim
 past possibility elim
 possibility elim

$form, type, A, B, C, T$

$::=$

\perp
 $\Box A$
 $\blacksquare A$
 $\Diamond A$
 $\blacklozenge A$
 $A \rightarrow B$

formula and type

false or the empty type
 past necessity
 necessity
 past possibility
 possibility
 implication

Γ, Δ

$::=$

\emptyset
 A
 $x : T$
 Γ, Γ'

type context

empty context
 formula el
 typed el
 append

$\boxed{\Gamma \vdash A}$