Funcons-beta: Continuing *

<center>The PLanCompS Project</center>

<center>`Continuing.cbs` | PLAIN | PRETTY</center>

Continuing

[*Datatype*   continuing
    Funcon   continued
    Funcon   finalise-continuing
    Funcon   continue
    Funcon   handle-continue]

Meta-variables $T <:$ values

Datatype   continuing ::= continued

continued is a reason for abrupt termination.

Funcon   finalise-continuing$(X : \Rightarrow T) : \Rightarrow T$ | null-type
    $\rightsquigarrow$ finalise-abrupting(X)

finalise-continuing(X) handles abrupt termination of X due to executing continue.

Funcon   continue : $\Rightarrow$ empty-type
    $\rightsquigarrow$ abrupt(continued)

continue abruptly terminates all enclosing computations until it is handled.

Funcon   handle-continue$(\_ : \Rightarrow$ null-type$) : \Rightarrow$ null-type

handle-continue(X) terminates normally when X terminates abruptly for the reason continued.

Rule $$\frac{X \xrightarrow{\text{abrupted( )}} X'}{\text{handle-continue}(X) \xrightarrow{\text{abrupted( )}} \text{handle-continue}(X')}$$

Rule $$\frac{X \xrightarrow{\text{abrupted(continued)}} \_}{\text{handle-continue}(X) \xrightarrow{\text{abrupted( )}} \text{null-value}}$$

Rule $$\frac{X \xrightarrow{\text{abrupted}(V :\sim \text{ continuing})} X'}{\text{handle-continue}(X) \xrightarrow{\text{abrupted}(V)} \text{handle-continue}(X')}$$

Rule   handle-continue(null-value) $\rightsquigarrow$ null-value

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