Funcons-beta: Continuing

The PLanCompS Project

`Funcons-beta/Computations/Abnormal/Continuing/Continuing.cbs`*

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 :⇒ T) :⇒ T | null-type
  ⇝ finalise-abrupting(X)

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

Funcon continue :⇒ empty-type
  ⇝ abrupt(continued)

continue abruptly terminates all enclosing computations until it is handled.

Funcon handle-continue(_ :⇒ null-type) :⇒ null-type

*Suggestions for improvement: `plancomps@gmail.com`.
Issues: `https://github.com/plancomps/CBS-beta/issues`.

$\mathsf{handle\text{-}continue}(X)$ terminates normally when X terminates abruptly for the reason $\mathsf{continued}$.

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

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

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

$$\textit{Rule}\ \mathsf{handle\text{-}continue}(\mathsf{null\text{-}value}) \rightsquigarrow \mathsf{null\text{-}value}$$