$name, t, x, v$				
$stamp, i$				
m				
$ident,\ t_i,\ x_i,\ v_i$	$::=$			
	$\|$	$name_i$		
s	$::=$			Module expressions
	$\|$	p		access to a structure
	$\|$	$\textbf{struct}\, d\, \textbf{end}$		structure construction
	$\|$	$\textbf{functor}\,(x_i : S)\, s$	bind x_i in s	functor abstraction
	$\|$	$s\,(p)$		functor application
	$\|$	$s :> S$		signature ascription
	$\|$	$s\,\{x_i \leftarrow p\}$	M	substitution
	$\|$	$s\,\{d \leftarrow p\}$	M	
	$\|$	$s\,/\,p$	M	
	$\|$	(s)	M	
d	$::=$			Structure bodies
	$\|$	ϵ		
	$\|$	$c\,;\,d$	bind cbinders(c) in d	
	$\|$	$d_1\,;\,c\,;\,d_2$	M	
	$\|$	$d\,\{x_i \leftarrow p\}$	M	substitution
	$\|$	$d\,/\,p$	M	
	$\|$	(d)	M	
c	$::=$			Definitions
	$\|$	$\textbf{type}\, t_i = T$	cbinders $= t_i$	type binding (non generative)
	$\|$	$\textbf{datatype}\, t_i$	cbinders $= t_i$	type creation (generative)
	$\|$	$\textbf{structure}\, x_i = s$	cbinders $= x_i$	structure binding
	$\|$	$\textbf{val}\, v_i = M$	cbinders $= v_i$	value binding
	$\|$	$c\,/\,p$	M	
	$\|$	(c)	M	
S	$::=$			Signature expressions
	$\|$	$\textbf{sig}\, D\, \textbf{end}$		simple signature
	$\|$	$\textbf{functor}\,(x_i : S_1)\, S_2$	bind x_i in S_2	functor signature
	$\|$	$S\,/\,p$	M	strengthening
	$\|$	$S\,\{x_i \leftarrow p\}$	M	substitution
	$\|$	$S\{n_i \leftarrow p.n \| n_i \in BV(D)\}$	M	substitution
	$\|$	(S)	M	
D	$::=$			Signature bodies
	$\|$	ϵ		
	$\|$	$C\,;\,D$	bind Cbinders(C) in D	
	$\|$	$D_1\,;\,C\,;\,D_2$	M	
	$\|$	$D\,/\,p$	M	strengthening
	$\|$	(D)	M	
C	$::=$			Specifications
	$\|$	$\textbf{type}\, t_i$	Cbinders $= t_i$	opaque type specification

	$\vert$	$\textbf{type}\, t_i \ = \ T$	Cbinders $= t_i$	manifest type specification
	$\vert$	$\textbf{structure}\, x_i \ : \ S$	Cbinders $= x_i$	structure specification
	$\vert$	$\textbf{val}\, v_i \ : \ T$	Cbinders $= v_i$	value specification
	$\vert$	$C \,/\, p$	M	strengthening
	$\vert$	$(\ C\ )$	M	
T	$::=$			Types
	$\vert$	t_i		lexical type reference
	$\vert$	$p\,.\,t$		structure-based type reference
	$\vert$	$T_1 \ \rightarrow \ T_2$		function type
	$\vert$	$T\{n_i \leftarrow p.n \vert n_i \in BV(D)\}$	M	substitution
	$\vert$	$(\ T\ )$	M	
p	$::=$			Structure paths
	$\vert$	x_i		lexical structure reference
	$\vert$	$p\,.\,x$		structure-based structure reference
E	$::=$			Typing contexts
	$\vert$			
	$\vert$	$E\ ;\ C$		
	$\vert$	$E_1\ ;\ C\ ;\ E_2$	M	
	$\vert$	$E\ ;\ \textbf{rev}\, D$	M	
M	$::=$			Terms
	$\vert$	v_i		Lexical term reference
	$\vert$	$p\,.\,v$		Structure-based term reference
	$\vert$	$\lambda\, v_i \ : \ T\,.\,M$	bind v_i in M	Function expression
	$\vert$	$M_1\, M_2$		Function application
	$\vert$	$\textbf{let}\, d\, \textbf{in}\, M$		Lexical binding
	$\vert$	$M\ \{\ v_i \ \leftarrow \ V\ \}$	M	substitution
	$\vert$	$M\{n_i \leftarrow p.n \vert n_i \in BV(d)\}$	M	substitution
	$\vert$	$(\ M\ )$	M	
V	$::=$			Values
	$\vert$	$\lambda\, v_i \ : \ T\,.\,M$		
cV	$::=$			Definition values
	$\vert$	$\textbf{type}\, t_i \ = \ T$		
	$\vert$	$\textbf{datatype}\, t_i$		
	$\vert$	$\textbf{structure}\, x_i \ = \ sV$		
	$\vert$	$\textbf{val}\, v_i \ = \ V$		
sV	$::=$			Module values
	$\vert$	$\textbf{struct}\, dV\, \textbf{end}$		
	$\vert$	$\textbf{functor}\,(\ x_i \ : \ S\ )\, s$		
dV	$::=$			Structure body values

	$\vert$	ϵ		
	$\vert$	$cV\ ;\ dV$		
Δ	$::=$			Value environments
	$\vert$			
	$\vert$	$\Delta\ ;\ c$		
	$\vert$	$\Delta_1\ ;\ c\ ;\ \Delta_2$	M	
	$\vert$	$\Delta\ ;\ \mathbf{rev}\ d$	M	
terminals	$::=$			
	$\vert$	$\rightarrow$		
	$\vert$	$\vdash$		
	$\vert$	$\approx$		
	$\vert$	$\leftarrow$		
	$\vert$	$\mapsto$		
	$\vert$	λ		
	$\vert$	$\rightsquigarrow$		
formula	$::=$			
	$\vert$	*judgement*		
	$\vert$	$x_i \notin BV(E)$		
pathE	$::=$			
	$\vert$	$E \vdash p \mapsto S$		
WFtype	$::=$			
	$\vert$	$E \vdash T\,\mathbf{type}$		
WFsig	$::=$			
	$\vert$	$E \vdash D\,\mathbf{decl}$		
	$\vert$	$E \vdash S\,\mathbf{signature}$		
eq	$::=$			
	$\vert$	$E \vdash T \approx T'$		
sub	$::=$			
	$\vert$	$E \vdash S <: S'$		
	$\vert$	$E \vdash D <: D'$		
	$\vert$	$E \vdash C <: C'$		
typ	$::=$			
	$\vert$	$E \vdash s : S$		
	$\vert$	$E \vdash c : C$		
	$\vert$	$E \vdash d : D$		
	$\vert$	$E \vdash M : T$		
pathDelta	$::=$			

$$
\begin{array}{lll}
 & | & \Delta \vdash p \mapsto s \\
\\
\mathit{reduce} & ::= & \\
 & | & \Delta \vdash M \leadsto M' \\
 & | & \Delta \vdash c \leadsto c' \\
 & | & \Delta \vdash d \leadsto d' \\
 & | & \Delta \vdash s \leadsto s' \\
\\
\mathit{deltaE} & ::= & \\
 & | & \vdash \Delta : E \\
\\
\mathit{judgement} & ::= & \\
 & | & \mathit{pathE} \\
 & | & \mathit{WFtype} \\
 & | & \mathit{WFsig} \\
 & | & \mathit{eq} \\
 & | & \mathit{sub} \\
 & | & \mathit{typ} \\
 & | & \mathit{pathDelta} \\
 & | & \mathit{reduce} \\
 & | & \mathit{deltaE} \\
\\
\mathit{user\_syntax} & ::= & \\
 & | & \mathit{name} \\
 & | & \mathit{stamp} \\
 & | & m \\
 & | & \mathit{ident} \\
 & | & s \\
 & | & d \\
 & | & c \\
 & | & S \\
 & | & D \\
 & | & C \\
 & | & T \\
 & | & p \\
 & | & E \\
 & | & M \\
 & | & V \\
 & | & cV \\
 & | & sV \\
 & | & dV \\
 & | & \Delta \\
 & | & \mathit{terminals} \\
 & | & \mathit{formula}
\end{array}
$$

$\boxed{E \vdash p \mapsto S}$

$$\frac{}{E_1\,;\,\mathbf{structure}\,x_i\;:\;S\,;\,E_2 \vdash x_i \mapsto S\,/\,x_i}\quad\textsc{pathE1}$$

$$\frac{E \vdash p \mapsto \mathbf{sig}\,D_1\,;\,\mathbf{structure}\,x_i\;:\;S\,;\,D_2\,\mathbf{end}}{E \vdash p\,.\,x \mapsto S\{n_i \leftarrow p.n | n_i \in BV(D_1)\}}\quad\textsc{pathE2}$$

$\boxed{E \vdash T\,\mathbf{type}}$

$$\frac{}{E_1\,;\,\mathbf{type}\,t_i\,;\,E_2 \vdash t_i\,\mathbf{type}} \quad \text{WF}\textsc{type}1$$

$$\frac{}{E_1\,;\,\mathbf{type}\,t_i = T\,;\,E_2 \vdash t_i\,\mathbf{type}} \quad \text{WF}\textsc{type}2$$

$$\frac{E \vdash p \mapsto \mathbf{sig}\,D_1\,;\,\mathbf{type}\,t_i\,;\,D_2\,\mathbf{end}}{E \vdash p\,.\,t\,\mathbf{type}} \quad \text{WF}\textsc{type}3$$

$$\frac{E \vdash p \mapsto \mathbf{sig}\,D_1\,;\,\mathbf{type}\,t_i = T\,;\,D_2\,\mathbf{end}}{E \vdash p\,.\,t\,\mathbf{type}} \quad \text{WF}\textsc{type}4$$

$$\frac{\begin{array}{c}E \vdash T_1\,\mathbf{type}\\ E \vdash T_2\,\mathbf{type}\end{array}}{E \vdash (\,T_1 \to T_2\,)\,\mathbf{type}} \quad \text{WF}\textsc{type}5$$

$\boxed{E \vdash D\,\mathbf{decl}}$

$$\frac{}{E \vdash \epsilon\,\mathbf{decl}} \quad \text{WF}\textsc{decl}1$$

$$\frac{\begin{array}{l}E \vdash T\,\mathbf{type}\\ E\,;\,\mathbf{type}\,t_i = T \vdash D\,\mathbf{decl}\end{array}}{E \vdash (\,\mathbf{type}\,t_i = T\,;\,D\,)\,\mathbf{decl}} \quad \text{WF}\textsc{decl}2$$

$$\frac{E\,;\,\mathbf{type}\,t_i \vdash D\,\mathbf{decl}}{E \vdash (\,\mathbf{type}\,t_i\,;\,D\,)\,\mathbf{decl}} \quad \text{WF}\textsc{decl}3$$

$$\frac{\begin{array}{l}E \vdash S\,\mathbf{signature}\\ E\,;\,\mathbf{structure}\,x_i : S \vdash D\,\mathbf{decl}\end{array}}{E \vdash (\,\mathbf{structure}\,x_i : S\,;\,D\,)\,\mathbf{decl}} \quad \text{WF}\textsc{decl}4$$

$$\frac{\begin{array}{l}E \vdash T\,\mathbf{type}\\ E\,;\,\mathbf{val}\,v_i : T \vdash D\,\mathbf{decl}\end{array}}{E \vdash (\,\mathbf{val}\,v_i : T\,;\,D\,)\,\mathbf{decl}} \quad \text{WF}\textsc{decl}5$$

$\boxed{E \vdash S\,\mathbf{signature}}$

$$\frac{E \vdash D\,\mathbf{decl}}{E \vdash (\,\mathbf{sig}\,D\,\mathbf{end}\,)\,\mathbf{signature}} \quad \text{WF}\textsc{sig}1$$

$$\frac{\begin{array}{l}E \vdash S_1\,\mathbf{signature}\\ E\,;\,\mathbf{structure}\,x_i : S_1 \vdash S_2\,\mathbf{signature}\end{array}}{E \vdash (\,\mathbf{functor}\,(\,x_i : S_1\,)\,S_2\,)\,\mathbf{signature}} \quad \text{WF}\textsc{sig}2$$

$\boxed{E \vdash T \approx T'}$

$$\frac{}{E_1\,;\,\mathbf{type}\,t_i = T\,;\,E_2 \vdash t_i \approx T} \quad \textsc{eq}\text{T}1$$

$$\frac{E \vdash p \mapsto \mathbf{sig}\,D_1\,;\,\mathbf{type}\,t_i = T\,;\,D_2\,\mathbf{end}}{E \vdash p\,.\,t \approx T\{n_i \leftarrow p.n | n_i \in BV(D_1)\}} \quad \textsc{eq}\text{T}2$$

$$\frac{}{E \vdash T \approx T} \quad \textsc{eq}\text{T}3$$

$$\frac{E \vdash T_2 \approx T_1}{E \vdash T_1 \approx T_2} \quad \textsc{eq}\text{T}4$$

$$\frac{E \vdash T_1 \approx T_2 \quad E \vdash T_2 \approx T_3}{E \vdash T_1 \approx T_3} \quad \textsc{eq}\text{T5}$$

$$\frac{E \vdash T_1 \approx T_3 \quad E \vdash T_2 \approx T_4}{E \vdash (T_1 \to T_2) \approx (T_3 \to T_4)} \quad \textsc{eq}\text{T6}$$

$\boxed{E \vdash S <: S'}$

$$\frac{E \vdash S_2 <: S_1 \quad E\,;\, \mathbf{structure}\, x_i : S_2 \vdash S_1' <: S_2'}{E \vdash \mathbf{functor}\,(x_i : S_1)\, S_1' <: \mathbf{functor}\,(x_i : S_2)\, S_2'} \quad \textsc{sub}\text{S1}$$

$$\frac{E \vdash D <: D'}{E \vdash \mathbf{sig}\, D\, \mathbf{end} <: \mathbf{sig}\, D'\, \mathbf{end}} \quad \textsc{sub}\text{S2}$$

$\boxed{E \vdash D <: D'}$

$$\frac{}{E \vdash \epsilon <: \epsilon} \quad \textsc{sub}\text{D1}$$

$$\frac{E \vdash C <: C' \quad E\,;\, C \vdash D <: D'}{E \vdash C\,;\, D <: C'\,;\, D'} \quad \textsc{sub}\text{D2}$$

$$\frac{E\,;\, C \vdash D <: D'}{E \vdash C\,;\, D <: D'} \quad \textsc{sub}\text{D3}$$

$\boxed{E \vdash C <: C'}$

$$\frac{}{E \vdash (\mathbf{type}\, t_i) <: (\mathbf{type}\, t_i)} \quad \textsc{sub}\text{C1}$$

$$\frac{}{E \vdash (\mathbf{type}\, t_i = T) <: (\mathbf{type}\, t_i)} \quad \textsc{sub}\text{C2}$$

$$\frac{E \vdash T_1 \approx T_2}{E \vdash (\mathbf{type}\, t_i = T_1) <: (\mathbf{type}\, t_i = T_2)} \quad \textsc{sub}\text{C4}$$

$$\frac{E \vdash S_1 <: S_2}{E \vdash (\mathbf{structure}\, x_i : S_1) <: (\mathbf{structure}\, x_i : S_2)} \quad \textsc{sub}\text{C5}$$

$$\frac{E \vdash T_1 \approx T_2}{E \vdash (\mathbf{val}\, v_i : T_1) <: (\mathbf{val}\, v_i : T_2)} \quad \textsc{sub}\text{C6}$$

$\boxed{E \vdash s : S}$

$$\frac{E \vdash p \mapsto S}{E \vdash p : S} \quad \textsc{type\_s}1$$

$$\frac{E \vdash S\, \mathbf{signature} \quad x_i \notin BV(E) \quad E\,;\, \mathbf{structure}\, x_i : S \vdash s : S'}{E \vdash \mathbf{functor}\,(x_i : S)\, s : \mathbf{functor}\,(x_i : S)\, S'} \quad \textsc{type\_s}2$$

$$\frac{E \vdash s : \mathbf{functor}\,(x_i : S')\, S \quad E \vdash p \mapsto S'' \quad E \vdash S'' <: S'}{E \vdash s\,(p) : S\,\{x_i \leftarrow p\}} \quad \textsc{type\_s}3$$

$$\frac{E \vdash d : D}{E \vdash \textbf{struct}\, d\, \textbf{end} : \textbf{sig}\, D\, \textbf{end}} \quad \text{TYPE\_S4}$$

$$\frac{\begin{array}{l} E \vdash S_1\, \textbf{signature} \\ E \vdash s : S_2 \\ E \vdash S_2 <: S_1 \end{array}}{E \vdash s :> S_1 : S_1} \quad \text{TYPE\_S5}$$

$\boxed{E \vdash c : C}$

$$\frac{\begin{array}{c} E \vdash T\, \textbf{type} \\ t_i \notin BV(E) \end{array}}{E \vdash \textbf{type}\, t_i = T : \textbf{type}\, t_i = T} \quad \text{TYPE\_C1}$$

$$\frac{t_i \notin BV(E)}{E \vdash \textbf{datatype}\, t_i : \textbf{type}\, t_i} \quad \text{TYPE\_C2}$$

$$\frac{\begin{array}{c} E \vdash s : S \\ x_i \notin BV(E) \end{array}}{E \vdash \textbf{structure}\, x_i = s : \textbf{structure}\, x_i : S} \quad \text{TYPE\_C3}$$

$$\frac{\begin{array}{c} E \vdash M : T \\ v_i \notin BV(E) \end{array}}{E \vdash \textbf{val}\, v_i = M : \textbf{val}\, v_i : T} \quad \text{TYPE\_C4}$$

$\boxed{E \vdash d : D}$

$$\frac{}{E \vdash \epsilon : \epsilon} \quad \text{TYPE\_D1}$$

$$\frac{\begin{array}{l} E \vdash c : C \\ E ; C \vdash d : D \end{array}}{E \vdash c ; d : C ; D} \quad \text{TYPE\_D2}$$

$\boxed{E \vdash M : T}$

$$\frac{}{E_1 ; \textbf{val}\, v_i : T ; E_2 \vdash v_i : T} \quad \text{TYPEM1}$$

$$\frac{E \vdash p \mapsto \textbf{sig}\, D_1 ; \textbf{val}\, v_i : T ; D_2\, \textbf{end}}{E \vdash p . v : T\{n_i \leftarrow p.n | n_i \in BV(D_1)\}} \quad \text{TYPEM2}$$

$$\frac{\begin{array}{l} v_i \notin BV(E) \\ E \vdash T_1\, \textbf{type} \\ E ; \textbf{val}\, v_i : T_1 \vdash M : T_2 \end{array}}{E \vdash \lambda\, v_i : T_1 . M : T_1 \rightarrow T_2} \quad \text{TYPEM3}$$

$$\frac{\begin{array}{l} E \vdash M_1 : T_1 \rightarrow T_2 \\ E \vdash M_2 : T_1 \end{array}}{E \vdash M_1\, M_2 : T_2} \quad \text{TYPEM4}$$

$$\frac{\begin{array}{l} E \vdash d : D \\ E ; \textbf{rev}\, D \vdash M : T_1 \\ E ; \textbf{rev}\, D \vdash T_1 \approx T_2 \\ E \vdash T_2\, \textbf{type} \end{array}}{E \vdash \textbf{let}\, d\, \textbf{in}\, M : T_2} \quad \text{TYPEM5}$$

$\boxed{\Delta \vdash p \mapsto s}$

$$\frac{}{\Delta_1\,;\,\textbf{structure}\,x_i\;=\;s\,;\,\Delta_2\;\vdash\;x_i\;\mapsto\;s\,/\,x_i}\quad\textsc{pathDelta1}$$

$$\frac{\Delta\;\vdash\;p\;\mapsto\;\textbf{struct}\;d_1\,;\,\textbf{structure}\,x_i\;=\;s\,;\;d_2\,\textbf{end}}{\Delta\;\vdash\;p\,.\,x\;\mapsto\;s\,\{\,d_1\;\leftarrow\;p\,\}}\quad\textsc{pathDelta2}$$

$\boxed{\Delta\;\vdash\;M\;\rightsquigarrow\;M'}$

$$\frac{}{\Delta_1\,;\,\textbf{val}\,v_i\;=\;V\,;\,\Delta_2\;\vdash\;v_i\;\rightsquigarrow\;V}\quad\textsc{redMvar}$$

$$\frac{\Delta\;\vdash\;p\;\mapsto\;\textbf{struct}\;dV_1\,;\,\textbf{val}\,v_i\;=\;V\,;\;dV_2\,\textbf{end}}{\Delta\;\vdash\;p\,.\,v\;\rightsquigarrow\;V\{n_i \leftarrow p.n | n_i \in BV(dV_1)\}}\quad\textsc{redMpath}$$

$$\frac{}{\Delta\;\vdash\;(\,\lambda\,v_i\;:\;T\,.\,M\,)\;V\;\rightsquigarrow\;M\,\{\,v_i\;\leftarrow\;V\,\}}\quad\textsc{redMapp}$$

$$\frac{}{\Delta\;\vdash\;\textbf{let}\;dV\;\textbf{in}\,(\,\lambda\,v_i\;:\;T\,.\,M\,)\;\rightsquigarrow\;\lambda\,v_i\;:\;T\,.\,\textbf{let}\;dV\;\textbf{in}\;M}\quad\textsc{redMlet}$$

$$\frac{\Delta\;\vdash\;M_1\;\rightsquigarrow\;M_3}{\Delta\;\vdash\;M_1\,M_2\;\rightsquigarrow\;M_3\,M_2}\quad\textsc{redMapp\_ctxt1}$$

$$\frac{\Delta\;\vdash\;M_1\;\rightsquigarrow\;M_2}{\Delta\;\vdash\;V\,M_1\;\rightsquigarrow\;V\,M_2}\quad\textsc{redMapp\_ctxt2}$$

$$\frac{\Delta\;\vdash\;d_1\;\rightsquigarrow\;d_2}{\Delta\;\vdash\;\textbf{let}\;d_1\;\textbf{in}\;M\;\rightsquigarrow\;\textbf{let}\;d_2\;\textbf{in}\;M}\quad\textsc{redMlet\_ctxt1}$$

$$\frac{\Delta\,;\,\textbf{rev}\;dV\;\vdash\;M_1\;\rightsquigarrow\;M_2}{\Delta\;\vdash\;\textbf{let}\;dV\;\textbf{in}\;M_1\;\rightsquigarrow\;\textbf{let}\;dV\;\textbf{in}\;M_2}\quad\textsc{redMlet\_ctxt2}$$

$\boxed{\Delta\;\vdash\;c\;\rightsquigarrow\;c'}$

$$\frac{\Delta\;\vdash\;s_1\;\rightsquigarrow\;s_2}{\Delta\;\vdash\;\textbf{structure}\,x_i\;=\;s_1\;\rightsquigarrow\;\textbf{structure}\,x_i\;=\;s_2}\quad\textsc{rec\_c\_str\_ctxt}$$

$$\frac{\Delta\;\vdash\;M_1\;\rightsquigarrow\;M_2}{\Delta\;\vdash\;\textbf{val}\,v_i\;=\;M_1\;\rightsquigarrow\;\textbf{val}\,v_i\;=\;M_2}\quad\textsc{rec\_c\_val\_ctxt}$$

$\boxed{\Delta\;\vdash\;d\;\rightsquigarrow\;d'}$

$$\frac{\Delta\;\vdash\;c_1\;\rightsquigarrow\;c_2}{\Delta\;\vdash\;c_1\,;\,d\;\rightsquigarrow\;c_2\,;\,d}\quad\textsc{red\_d\_d\_ctxt1}$$

$$\frac{\Delta\,;\;cV\;\vdash\;d_1\;\rightsquigarrow\;d_2}{\Delta\;\vdash\;cV\,;\,d_1\;\rightsquigarrow\;cV\,;\,d_2}\quad\textsc{red\_d\_d\_ctxt2}$$

$\boxed{\Delta\;\vdash\;s\;\rightsquigarrow\;s'}$

$$\frac{\Delta\;\vdash\;p\;\mapsto\;sV}{\Delta\;\vdash\;p\;\rightsquigarrow\;sV}\quad\textsc{red\_s\_path}$$

$$\frac{}{\Delta\;\vdash\;(\,\textbf{functor}\,(\,x_i\;:\;S\,)\,s\,)\,(\,p\,)\;\rightsquigarrow\;s\,\{\,x_i\;\leftarrow\;p\,\}}\quad\textsc{red\_s\_ftorapp}$$

$$\frac{}{\Delta\;\vdash\;s:> S\;\rightsquigarrow\;s}\quad\textsc{red\_s\_seal}$$

$$\frac{\Delta\;\vdash\;d_1\;\rightsquigarrow\;d_2}{\Delta\;\vdash\;\textbf{struct}\;d_1\,\textbf{end}\;\rightsquigarrow\;\textbf{struct}\;d_2\,\textbf{end}}\quad\textsc{red\_s\_str\_ctxt}$$

$$\frac{\Delta \vdash s_1 \leadsto s_2}{\Delta \vdash s_1\,(\,p\,) \leadsto s_2\,(\,p\,)} \quad \textsc{red\_s\_ftorapp\_ctxt}$$

$\boxed{\vdash \Delta : E}$

$$\frac{}{\vdash \,:\,} \quad \textsc{delta}\mathrm{E1}$$

$$\frac{\begin{array}{c}\vdash \Delta : E \\ E \vdash cV : C\end{array}}{\vdash \Delta;\, cV : E;\, C} \quad \textsc{delta}\mathrm{E2}$$

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Definition rules:        67 good    0 bad
Definition rule clauses: 142 good    0 bad
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