

# 1 Dummy title

2 Authors omitted for double-bind review.

3 Unspecified Institution.

## 4 Abstract

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6 dolor. Aliquam eleifend suscipit lacinia. Maecenas quam mi, porta ut lacinia sed, convallis ac  
7 dui. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse potenti.

8 **2012 ACM Subject Classification** Dummy classification

9 **Keywords and phrases** Dummy keyword

10 **Digital Object Identifier** 10.4230/LIPIcs.CVIT.2016.23

## 11 1 Formal

$id ::= t \mid C$	
$T ::= \text{This } n. Cs$	
$CD ::= C = E$	class declaration
$CV ::= C = LV$	evaluated class declaration
$D ::= id = E$	declaration
$DL ::= id = L$	partially-evaluated-declaration
$DV ::= id = LV$	evaluated-declaration
$L ::= \text{interface } \{Tz; amtz; \} \mid \{Tz; Ms; K\}$	literal
$LV ::= \text{interface } \{Tz; amtz; \} \mid \{Tz; MVs; K\}$	literal value
$amt ::= T \ m(Txs)$	abstract method
$mt ::= T \ m(Txs) \ e?$	method
12 $Tx ::= T \ x$	parameter-declaration
$M ::= CD \mid mt$	member
$MV ::= CV \mid mt$	
$Mid ::= C \mid m$	member-id
$K ::= \text{constructor}(Tx)$	constructor
$e ::= x \mid e. m(es) \mid e.x \mid \text{new } T(es)$	expression
$E ::= L \mid t \mid E <+ E \mid E(Cs = T)$	library-expression
$\mathcal{E}_V ::= \square \mid \mathcal{E}_V <+ E \mid LV <+ \mathcal{E}_V \mid \mathcal{E}_V(Cs = T)$	context of library-evaluation
$\mathcal{E}_v ::= \square \mid \mathcal{E}_v. m(es) \mid v. m(vs \ \mathcal{E}_v \ es) \mid \mathcal{E}_v.x \mid \text{new } T(vs \ \mathcal{E}_v \ es)$	
$v ::= \text{new } T(vs)$	
$p ::= DLs; DVs$	program
13 $S ::= Ds \ e$	source code

14 To look up the value of a type in the program we will use the notation  $p(T)$ , which is defined  
15 by the following, but only if the RHS denotes an  $LV$ :



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## 23:2 Dummy title

$(; \_, C=L, \_)(\text{This}0.C.Cs) := L(Cs)$   
 $(id=L, p)(\text{This}0.Cs) := L(Cs)$   
 $(id=L, p)(\text{This}n+1.Cs) := p(\text{This}n.Cs)$   
 To get the relative value of a trait, we define  $p[t]$ :  
 $(DLs; \_, t=LV, \_)[t] := LV[\text{This}\#DLs]$   
 To get a the value of a literal, in a way that can be understand from the current location  
 $(\text{This}0)$ , we define:  
 $p[T] := p(T)[T]$   
 And a few simple auxiliary definitions:  
 $Ts \in p := \forall T \in Ts \bullet p(T)$  is defined  
 $L(\emptyset) := L$   
 $L(C.Cs) := L(Cs)$  where  $L = \text{interface? } \{ \_ ; \_, C=L, \_ ; \_ \}$   
 $L[C=E'] := \text{interface? } \{ Tz ; MVs C=E' Ms ; K? \}$   
 where  $L = \text{interface? } \{ Tz ; MVs C=\_ Ms ; K? \}$

28     – towel1:.. //Map: towel2:.. //Map: lib: T:towel1 f1 ... fn  
29     MyProgram: T:towel2 Lib:lib[.T=This0.T] ...   –

30     — **References** —————